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System Justification, Environmental Perceptions and Sustainable Behaviour in Sweden

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Master's Thesis (30 hp)
Spring 2015

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Acknowledgements

The completion of this thesis has faced many challenges. There are some individuals who deserve extra attention as this essay would not have been completed without their encouragement and kind words. First, I wish to express my sincere gratitude to my supervisor, Tomas Jungert, who has motivated and encouraged me throughout my thesis work. His dedication and knowledge has been a major contributor in this essay and for that I am immensely grateful.

Second, I want to thank each participant who has provided me with their thoughts and ideas in regards to my essay. All of your experiences and feelings is sincerely appreciated and this thesis would be nothing without you.

Lastly, I wish to thank my family and friends who have supported me throughout this process. Your kind and uplifting words have made a real difference and there are not enough words to express how grateful I am for your patience and tremendous support.

Abstract

Consumers' knowledge that unsustainable consumption has a negative effect on the environment does not hinder their engagement in unsustainable consumption patterns. Applying system justification theory, it was of interest to investigate its impact on Swedish citizens' attitudes and behaviours related to sustainable consumption. This study intended to discover why Swedish consumers do not always engage in pro-environmental behaviours. An online questionnaire was composed to measure levels of consumer habits, environmental concern, system justifying tendencies, competence and autonomy support, and identification with the state among Swedish consumers. To investigate the hypothesis that Swedish consumers hold high misconceptions of what sustainability is, participants' open-ended answers were compared to the Brundtland definition of sustainability. All proposed associations were explored using ANOVA, correlation analysis and regression analysis. System justification tendencies was, as hypothesised, associated with higher levels of identification with the state. The hypothesized positive relationship between system justifying tendencies and consumer habits was not significant. Neither was the proposed impact of system justification tendencies on consumer behaviour. Findings showed that Swedish consumers hold relatively large misconceptions of what sustainable consumption is. Also, levels of environmental concern, competence support and gender were found to be good predictors of consumer behaviour in the current study. Implications with these findings and limitations with the study are discussed.

Keywords: System justification, Sustainable consumption, Environmental concern, Brundtland report, Misconceptions of sustainability.

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Introduction

Climate change, including global warming and soil degradation, is one of the greatest concerns facing the world today (Feygina, 2012). Concepts such as sustainability have been used to promote pro-environmental actions as well as to attract people to behave in an environmentally friendly way (Mitra et al., 2011). Despite these efforts and despite a widespread recognition of the existence of climate change, people do not always behave in ways that allow for a positive environmental development (Feygina et al., 2010). People still utilize non-renewable energies such as fossil fuels despite it being one key factor contributing to a rise in temperature across the globe (Intergovernmental Panel on Climate Change, 2007a). In this context, people's consumption patterns appear to have a substantial influence, both on the use of fossil fuels and on how they relate to environmental policies proposed by various authorities (Tobler et al., 2012; Gregory-Smith et al., 2013). Researchers propose that the tendency to justify current socio-economic systems might impact on peoples' evaluation on environmental damage and by extension, what is considered to be sustainably sound (Feygina, 2012). As a consequence, people do not always act in ways that prevent further environmental damage, but rather continue the engagement in destructive cycles such as unsustainable consumer patterns (Feygina et al., 2010). The crucial purpose of this paper is to investigate if psychological processes motivate unsustainable consumption. Does the tendency to compensate for inconsistent cognitions lead people to rationalize unsustainable consumption? More specifically, it is of interest to investigate if the tendency to rationalize the status quo (current socio-economic arrangements) motivates Swedish citizens to consume unsustainably. The following objectives will be considered: a) psychological motivations among Swedish citizens to view current socio-economic arrangements as fair and legitimate, b) the link between such motivations and Swedish citizens' consumer habits, c) the origin of Swedish citizens' perceptions regarding the Swedish socio-economic system, and d) the

possibility that the mere view of the Swedish society as genuine and legitimate results in a misconception of what sustainable consumption is (Filho, 2000; Hanss & Böhm, 2012).

Past studies indicate that Western capitalist societies have similar ideologies and that members of such ideologies, such as Sweden, Japan and the United States, ought to be more inclined to defend the status quo (Jost & Hunyady, 2005). Past studies have shown an intensified presence of defending current socio-economic arrangements in many societies across the globe (Van der Toorn & Jost, 2014). Societies such as United States, New Zealand (Sengupta & Sibley, 2013) and Israel (Chernyak-Hai et al., 2014) show an extending presence of system justifying tendencies, which indicates that members of these societies are more motivated to defend their subsequent society and view it as fair and legitimate. But still it is not fully known how justifications of ones' society affect peoples' decisions to make rational and environmentally sound consumption choices. Due to the necessity of preventing further damage to the environment, research contributing to pro-environmental development is of great importance. The current research aims at investigating psychological motivations that prevent people from consuming sustainably as unsustainable consumption appears to have a negative impact on the environment (Feygina, 2012; Gregory-Smith et al., 2013).

Scientific Evidence for Climate Change

Despite the substantial amount of scientific evidence pointing towards the existence of climate change, people still contest its actuality (Feygina, 2012). Feygina (2012) propose that climate change appears to be common knowledge among a vast majority of people. However, in order to avoid any misperceptions regarding the existence of climate change, legitimate evidence for climate change will briefly be presented.

The Intergovernmental Panel on Climate Change (IPCC) is an organisation created by the World Meteorological Organization and United Nations Environmental Programme, which states that the scientific community expresses a high consensus in regards

to the existence and escalation of climate change (Oreskes, 2004). Their conclusions are based on a broad body of published and peer-reviewed studies as their original purpose was to "evaluates the state of climate science as a basis for informed policy action" (Oreskes, 2004, p. 67). The primary aim of IPCC is to provide an extensive review of climate change and present what implications climate change might have in a broader social context (Feygina, 2012). The reports produced by IPCC entails a large body of scientific work and addresses three primary aspects of climate change; 1) a presentation of the scientific framework investigating climate change, 2) impacts of climate change, necessary adaptations and vulnerability, and 3) future propositions for mitigation. One of the most recent reports concluded that global warming is an unambiguous phenomenon and that the observed average temperatures across the globe show a steady increase since the mid-20th century (Intergovernmental Panel on Climate Change, 2007a). The global temperature is estimated to increase with 0.2 degrees Celsius during the next two decades, and with between 1.8 degrees Celsius to 4.0 degrees Celsius in the future (Intergovernmental Panel on Climate Change, 2007a; Intergovernmental Panel on Climate Change, 2007b). The report further presents extensive evidence which states that such an escalation to 90 percent is the result of an observed increase in anthropogenic greenhouse gas concentrations which primarily includes human use of fossil fuels (Intergovernmental Panel on Climate Change, 2007a). The environmental consequences of global warming and climate change have affected the surrounding landscape as most natural forces have increased in magnitude. Weather conditions across the globe are becoming more extreme causing ground instability, tropical cyclone activity, forest fires and shifts in the overall ecosystem (Intergovernmental Panel on Climate Change, 2007a; Intergovernmental Panel on Climate Change, 2007b). This has a severe impact on humans as it for example enables the growth of bacteria in warmer climates consequently leading to an increase in diseases.

The above presented evidence for the existence of climate change is a reality many people express difficulties to believe and accept (Feygina, 2012). As negative environmental change to some degree appears to be the result of peoples' way of life, people might experience two-faced attitudes and behaviours in regards to climate change (Tobler et al., 2012). For example, in their daily life people are, to a large extent, dependent on the products generated from various industries including electricity, heating and transportation (Feygina, 2012). Processes of producing these products include to burn wood, oil and other natural resources which largely contributes to the release of toxic admissions into the atmosphere (Weart, 2004). Such an environmentally negative behaviour might be easier to justify if the existence climate change is denied. Nevertheless, there are still people who express high concern for the environment and who continue to use fossil fuels despite their awareness of its negative environmental impact. The subsequent question then is why people do this and how they are able to cope with the conflicting cognitions that is the result of contrasting behaviours and attitudes.

Human Relationship to the Environment

Environmental concern is referred to as "a general value orientation towards the environment" (Vainio & Paloniemi, 2014, p. 19). Such concerns have suggested to play a crucial role when looking at behaviours that facilitate pro-environmental development including consumer related behaviours. What is interesting in this context is that despite high individual concern for the environment, people do not always engage in behaviours that are associated with environmental progress (Feygina, 2012). Rather, consumers show low levels of willingness to adopt their behaviours to engage in pro-environmental behaviours. A frequently asked question among researches considers why people do not actively engage in consumption related behaviours that are environmentally friendly, especially when high levels of environmental concern is expressed (Vaninio & Paloniemi, 2014; Truelove & Parks, 2012;

Tobler et al., 2012). In this context it is of interest to notice that public settings more often use expressions such as global warming as opposed to the scientific term climate change. Although they generally refer to the same issue, the expressions are considerably different. Truelove and Parks (2012) point out that climate change is a wider notion, which includes both global warming as well as issues of unsustainability. Climate change specifically refers to all aspects involved when the climate system transforms due to increased rates of greenhouse gases (Brundtland Report, 1987; Truelove & Parks, 2012). But a variation in expressions might result in people being confused as to what behaviours actually result in a negative contribution to climate change (Feygina et al., 2010). Does the use of different terms create a misconception of the notion of sustainability and unsustainable behaviour patterns? It is the belief of this thesis that there is a misconception among Swedish people of what sustainably sound behaviour is. This partly as a result of conflicting cognitions and partly because of how climate change is portrayed and expressed. Such a proposition further advocates that these misconceptions affect peoples' consumer habits as well as their belief in their own capability to consume sustainably. It can thus be hypothesised that the stronger tendencies to justify the current socio-economic arrangements, the greater misconceptions Swedish citizens have of what sustainable consumption is.

Perceived Environmental Concern

The degree to which people actually engage in the belief of climate change appears to be subject to attitudinal biases. The way people perceive that environmental problems actually exist would most likely affect their subsequent behaviour (Gluch et al., 2014; Feygina et al., 2010). But to what extent do people recognize what behaviours contribute to climate change? What factors affect peoples' perception of environmental problems? Research indicate that there are several barriers for individuals to acknowledge the severity of climate change (Feygina, 2012; Van Birgelen, 2009). One obstacle affecting the degree of individual

environmental concern includes the information of what environmentally sound behaviour entails. Truelove and Parks (2012) poses the question if people are aware of how effective their behaviour is to reduce environmental damage. They propose that knowledge plays an important role in peoples' perception of environmental problems and that different types of knowledge are directly associated with environmental friendly behaviours. But as this proposition has been contested, the role of knowledge on environmental concern might be entwined with other factors.

Attitudes and behaviours related to environmental problems have been proposed to differ depending on what kind of society individuals identify themselves with (Feygina, 2012; Vainio & Paloniemi, 2014; Feygina et al., 2010). Thus, individual degree of environmental concern might be expressed differently depending on what society individuals experience a high sense of belonging to (Baumeister & Leary, 1995; Feygina, 2012; Kay et al., 2007; Jost & Hunyady, 2002). Vainio and Paloniemi (2014) studied individual perception on environmental risk and its relationship to individual attitudes toward science. Their focus was on the Nordic countries (Denmark, Finland, Iceland, Norway and Sweden) as the citizens in these countries had expressed high levels of environmental concern (Franzen & Vogl, 2013; European Commission, 2011). Their results indicated an association between avoidance of pro-environmental consumption, reduced environmental concern, and positive attitudes toward science. This line of research proposes that the role of knowledge appears to play a less important role in pro-environmental behaviour compared to what has been suggested by other scholars (Vainio & Paloniemi, 2014; Truelove & Parks, 2012). What was interesting in the study conducted by Vainio and Paloniemi (2014) was that the results showed a particularly strong association between environmental concern and pro-environmental consumption. Thus, in the Nordic countries other constructs, rather than knowledge, might be present when highly environmentally concerned individuals consume unsustainably.

Sustainability and Consumerism

In environmental contexts, sustainability has been used to promote actions towards climate change as well as to attract people to consume in an environmentally friendly manner (Mitra et al., 2011). Sustainable development is a key concept in the current paper as it is a process of change towards a more environmentally sound world. The Brundtland Report (1987) defines sustainable development as the *"development that meets the needs of the present without compromising the ability of future generations to meet their own needs … the concept of 'needs', in particular the essential needs of the world's poor, to which overriding priority should be given; and the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs"* (Brundtland Report, 1987, p. 43). Following this definition, consuming resources beyond environmental capacity is environmentally unsustainable (Lorek, & Spangenberg, 2014). Sustainable consumption then, looks at consumers' behaviour and the degree to which such behaviour leads to pro-environmental development. While this is considered to be the formal definition of what sustainability is, people sometimes express different opinions of what sustainability is and how it should be interpreted (Seyfang, 2004).

Sustainable Consumption and Unsustainable Behaviour

Academic doctrines question if consumer habits prevent sustainable living while media integrate the expression "sustainable living" when discussing environmentally friendly means to ensure for economic stability (Mitra et al., 2011). From a psychological standpoint, behavioural aspects regarding the implementation of sustainable consumption might not be as clear cut. Behavioural processes appear to influence how people justify unsustainable consumption consequently, which makes such habits difficult to change (Feygina, 2012). The tendency for people to compensate for their conflicting cognitions while consuming might help explain why they do not always consume in a sustainable way.

Gregory-Smith and associates (2013) found that consumers engage in incongruent consumer behaviours. Consumers appear to compensate for unsustainable behaviours by engaging in long term choices that are more beneficial for environmental development. This process appears to partly be driven by emotions of guilt, which indicates that consumers who are genuinely concerned about the environment experience cognitive dissonance related to their consumption (Gregory-Smith et al., 2013; Festinger, 1957). But if consumers engage in unsustainable behaviours while simultaneously expressing great environmental concern, they would need to compensate for conflicting attitudes and behaviour. Arguably, engaging in sustainable behaviours might not be enough to compensate for unsustainable consumption, in particular when a consumer is highly concerned about the environment. Thus, there might be other aspects that allow consumers to compensate for their inconsistent behaviours.

Other scholars have proposed that there are different ways that consumers contribute to pro-environmental behaviour. Such ways include to support current initiatives made by current socio-economic arrangements to prevent climate change as well as changing their behaviour to suit a more environmentally friendly lifestyle (Tobler et al., 2012). As pointed out by Minton and Rose (1997) these actions are greatly influenced by other aspects including individual levels of environmental concern. But if consumers act only by supporting current socio-economic arrangements, rather than engaging in direct behaviours which generates sustainability, questions if consumers actually engage in pro-environmental behaviour. It is the belief of the current thesis that unsustainable behaviour patterns increase when consumers are more susceptible to defend current socio-economic arrangements.

System Justification

The theory of system justification holds that there is an underlying tendency for people to rationalize the status quo, that is, defend current socio-economic arrangements while viewing

them as a stable and harmonised system (Van der Toorn & Jost, 2014; Jost et al., 2004; Jost & Hunyady, 2005). The theory of system justification proposes that people have an underlying motivation to view the social order of their society as legitimate and fair (Jost & Banaji, 1994). This tendency has been conceptualized as a motivational process, which seems to operate outside of peoples' cognitive awareness (Jost et al., 2010; Van der Toorn & Jost, 2014). It is a motivational process as its function is to reduce negative affect and justify individual choices of society. Hence, people need to experience safety, trust and hope, which they are allowed by defending the status quo (Jost & Hunyady, 2005). How it operates outside peoples' cognitive awareness is that it tends to manifest itself through various cognitive processes, including rationalization of injustice or denial of a reality such as climate change (Napier & Jost, 2008). The model stems from the theory of cognitive dissonance as the endorsement of system justifying tendencies serves to reduce psychological distress when faced with societal injustice (Jost & Banaji, 1994). The theory of cognitive dissonance holds that when people are faced with inconsistent thoughts and actions, they are motivated to reduce subsequent tension (Festinger, 1957). If, for example, individuals believe that they should always consume products marked as "Fairtrade", but then consume something lacking that label, they need to change their attitude to reduce internal tension. Perhaps they replace their original thought or belief from "only consuming Fairtrade" to "consuming Fairtrade sometimes". They have, as a consequence, alternated their original thought or attitude (consuming only Fairtrade) to suit their behaviour (consuming a non-Fairtrade product). By alternating thoughts to align with behaviour people are allowed to decrease internal tension resulting from conflicting cognitions (Elinder, 2012).

When relating this to pro-environmental behaviour, cognitive dissonance becomes salient in cases where peoples' consumer habits are considerably different, that is if people buy an unsustainable product despite their attitude that one ought to consume

sustainably. If people consume according to principles that they perceive as sustainable and environmentally sound, while simultaneously behaving unsustainably, cognitive dissonance is likely to occur. Gregory-Smith and associates (2013) propose a constant presence of cognitive dissonance in ethical consumption, in particular if consumers express high levels of consciousness of their own contradictory behaviours. This means that the use of a product appears to be somewhat secondary to the consequences of originally consuming it (Starr, 2009). For various reasons, always to consume sustainably might be difficult. Thus, people need to have a tactic to compensate for cognitive dissonance, in particular when their awareness of this dissonance is high. This brings three things to mind; 1) are peoples' trust in companies and power structures, that a product is sustainable, the result of legitimizing the status quo?, 2) compensating cognitions and cognitive dissonance such as "I always buy and consume ecological food (sustainable behaviour) so therefore it is alright for me to buy an air plane ticket to Bangkok (unsustainable behaviour)", 3) peoples' methods of compensating for cognitive dissonance which appear to surface. The psychological aspects operating here needs further explanation as they appear contributing to the extent to which consumers engage in unsustainable behaviours.

Power Structures and Product Choice

Power structures give the impression of being tangled with human behaviour. In extending the meaning of power structures it could be translated to socio-economic arrangements as both concepts make political and socio-economic decisions in a particular society. More specifically, power structures and socio-economic arrangements share a societal function to a) develop and implement plans to make a society operate as it should and b) decide on what factors benefit a particular society short-term and long-term. Scholars propose that endorsement of pro-environmental management are implemented by power arrangements (Hornborg et al., 2012; Thongplew et al., 2014). One complication with such a relationship is

that power structures communicate to consumers by the use of labels, which indicate that a product is produced in a fair and legitimate manner (Hoque, 2014). But the extent to which these labels really show that a product stems from a sustainable source might be a reflection of internal argumentation of consumers. It might in fact be the result of consumers endorsing system justifying beliefs. If system justifying tendencies are present in this context, the likelihood of having faith in labels promoted by current system hierarchies might legitimize the validity of a product. The result of such a validation might subsequently increase the likelihood of a consumer buying it. It is therefore of interest to investigate if there is a relationship between consumer habits and system justifying tendencies. A subsequent question is whether high system justifying tendencies create a misconception of what sustainable consumption is through the endorsement of particular labels associated with sustainability.

System Justification, Threat and Sustainable Behaviour

Research argue that people are generally motivated to view themselves in a positive light and to maintain a positive sense of self (Aronson et al., 1974; Jost et al., 2004). System justification theory proposes that people also have a need to view current socio-economic arrangements as legitimate and morally just as the system reflects on their own self-image (Jost et al., 2004; Jost & Hunyady, 2002). There have been some suggestions that the need to view current socio-economic arrangements as legitimate and just is threatened when people acknowledge and deal with environmental problems. Feygina and colleagues (2010) states that ” *when the social system is threatened by an external (or exogenous) source, such as a foreign military or terrorist attack, the need to justify the system generally manifests itself in terms of increased attention and commitment to defeating the source of the threat*” (Feygina et al., 2010, p. 328). When individuals’ experience high levels of environmental threat, they should therefore be particularly motivated to defend the status quo. The reason for this is that

experiences of environmental threat elicit a perceived loss of self-control and reflect poorly on the self-image (Jost et al., 2003a; Kay & Friesen, 2011). Hence, if people in Sweden perceive that the environment is threatened, and they are highly concerned about the environment, they will be more likely to defend the status quo, especially when they are not consuming in an environmentally friendly way.

Ways of Compensation for Cognitive Dissonance

People are more likely to experience agony when they are exposed to negativity concerning a topic which they truly value (Feygina et al., 2010; Festinger, 1957). This paper proposes that societal injustice and environmental injustice share many common features, in particular in countries where the concern for the environment is high. The endorsement of system justifying methods help to reduce psychological distress and increase general well-being. This process will present itself in any situation where people are subjected to cognitive dissonance (Kay el al., 2007). Subsequently, people who are environmentally concerned ought to feel a greater sense of discomfort when faced with environmentally unsound behaviours and attitudes such as unsustainable consumption (Gregory-Smith et al., 2013). The existence of the desire to maintain the environment while simultaneously engaging in unsustainable consumption would result in a need to compensate for inconsistent behaviours and attitudes. By appealing to the legitimacy of the socio-economic system, consequently engaging in system justifying behaviour, consumers are allowed to compensate for their cognitive dissonance (Feygina et al., 2010). It is the belief of this thesis that individuals who have high levels of system justifying tendencies are more prone to consume unsustainably (Feygina, 2012). Thus, there ought to be a negative association between system justifying tendencies and consumer habits.

System Justification and Environmental Attitudes and Goals

While certain scholars focus on basic needs of individuals, others have considered motivation as goal related (Deci & Ryan, 2000). A goal driven approach might uphold that careful consideration and appreciation of what is sustainable could be seen as an ultimate goal, in particular for people in Sweden who appear to be highly concerned about the environment (European Commission 2011). When behaviours and attitudes that contradict such concerns become salient, the need to compensate for consequent cognitive dissonance will most likely surface. If the goal of an individual is to preserve the environment a subsequent concern for sustainable consumption would plausible as sustainable development is a concept closely linked to the concept of the environment (Truelove & Parks, 2012). System justifying tendencies allow people to compensate for consequent cognitive dissonance by appealing to the legitimacy of the socio-economic system (Feygina et al., 2010). By believing that their behaviour will lead to what is sustainably sound in the end people are able to preserve one ultimate goal: work towards a sustainable world (Vainoi & Paloniemi, 2014). Failure to fulfil this need would mean that they must to compensate for inconsistent behaviour and attitudes that violate one of their basic needs. How, this paper argues, would be done by appeal to the equality of the socio-economic system, thus engaging in system justifying tendencies. With this background, the third hypothesis of this study posits that Swedish people are motivated to view current socio-economic arrangements as fair and legitimate.

National Identity and Social Democracy

The ruling ideology of a society has been proposed to matter when it comes to peoples' motivations to defend the status quo (Friedman & Sutton, 2013; Jost & Hunyady, 2005; Jost et al., 2003a). The degree to which individuals' endorse system justifying beliefs appears to be connected to the dominant ideology of an individuals' society, such as liberal, conservative or socialist values. In the literature, there has been a focus on liberalist countries such as

United States and conservative countries such as Germany (Greenberg & Jonas, 2003; Walker, 2005). Little emphasis, however, has been on socialist societies and the extent to which people in such societies respond to cognitive dissonance associated with system justification, in particular when it comes to sustainable consumption. Feygina (2012) introduced concepts of national identity and political orientation in the context of environmental concern. She proposes that variability in people's political agenda influences the extent to which they endorse system justifying beliefs. She supports the idea that the level of "support for environmentalism" differs depending on peoples' political outlook and degree of national identification (Feygina, 2012, p. 14).

Identification with the State

There seems to be an association between the extent to which Swedish citizens identify with their social system and their commitment to issues put forward by that society (Vainio & Paloniemi, 2014; Kay & Friesen, 2011; Friedman & Sutton, 2013). Research propose that people generally value individual freedom of choice (Jost et al., 2003a). Aspects which might jeopardize peoples' ability to make rational choices could result in an increase in system justifying tendencies. This is particularly true when people feel that they have made a bad choice. For example, people appear to be more likely to engage in system justifying beliefs when they have made unsustainable choices, in particular when they highly identify themselves with the values of their social system (Jost & Hunyady, 2002). Scholars point towards that high voting rates among Swedish citizens' and an increased sense of trusting the system might be a reason for suggesting that Swedish citizens are inclined to an increased sense of identification with the Swedish society (Trädgårdh, 2007; Elinder, 2012). The current paper therefore investigates whether there is an association between Swedish citizens' identification with their social system, their system justifying beliefs and their consumption behaviour.

The Role of Companies in Sustainable Consumption

Not surprisingly, it has been proposed that companies are able to contribute to sustainable consumption by providing consumers with green and environmentally friendly alternatives. But despite companies' initiation to contribute with sustainable products and services, consumers do not always utilize these services. Rather, the lifestyle and social surrounding of consumers appear to be highly determined for consumer patterns and effect peoples' choice of products (Thongplew et al., 2014). Aspects such as sense of self, identification with the state and aspects of social support are traits that might affect consumers' choice of products. Consumers who are highly concerned with the environment, highly identify themselves with the state and are faced with incongruent cognitions should be more likely to engage in system justifying tendencies.

Support and Motivation

System justification theory is of a motivational nature. System justifying tendencies indicate that behaviours related to consumption and peoples' determination to quit consuming unsustainably reveals great challenges (Feygina et al., 2010; Feygina, 2012). Koestner (2008) suggests that despite peoples' commitment to an important goal they often fail to achieve them. Such failure results in a contradictory behaviour as the desired behaviour to attain the desired goal is not fulfilled. Therefore, when people who are concerned about the environment keep having unsustainable consumer habits, they fail to attain their personal goals, such as the enhancement of environmental development (Koestner, 2008; Feygina, 2012). By referring to the legitimacy of current socio-economic arrangements, system justifying beliefs allow people to rationalize their unsustainable behaviour and explain less environmentally friendly actions (Feygina et al., 2010). System justifying tendencies might help explain *how* people are able to rationalize and cope with inconsistent behaviour. This aspect of the "behaviour gap" created by contradictory behaviours and attitudes propose ways

of coping with cognitive dissonance (Vainio & Paloniemi, 2014). Nevertheless, it does not fully explain *why* people fail to consume in a sustainable way and *what* aspects mediate such failure.

Autonomy, Perceived Competence and Relatedness

The degree to which people feel autonomous in the choice of making consumption decisions, experience social fulfilment and connection to others, and experience a general belief in their own ability to consume sustainably might affect their actual consumption behaviour. Williams and associates (2006) consider autonomy and perceived competence in relation to smoking behaviour. People who feel a strong sense of autonomy appear to express greater sense of competence to attain personally important outcomes such as quit smoking. Such outcomes include all goals and concerns that matters for a person and increases their well-being (Gregory-Smith et al., 2013). Since Swedish citizens appear to express relatively high levels of environmental concern, what will happen to the environment might be considered to be a personally important outcome (European Commission 2011).

Self-determination theory considers the motivation behind individual choices. The theory proposes that what partly drives behaviour is the satisfaction of the three motivational needs for competence, autonomy, and psychological relatedness (Deci & Ryan, 2000). On example of how such needs might impact on consumption behaviour is that if a consumer do not experience sufficient competence support to consume environmentally friendly products they might fail to consume sustainably. Thus, the need for competence are not fulfilled consequently having a negative effect on the consumers' general satisfaction, especially if they had a goal of consuming sustainably (Gregory-Smith et al., 2013; Unanue et al., 2014). However, if people experience a lack in their own capability to control pro-environment development, people might turn elsewhere to reclaim a sense of control. Suggestively people might be inclined to appeal to the legitimacy of the system with the

motivation that current socio-economic arrangements exercise greater control over their desired outcome. If people experience low levels of competence support they might feel that current socio-economic arrangements provide them with sufficient competence support which they perceive they lack. That is, they might feel supported to consume a particular product that has been approved and promoted by higher authorities in the Swedish society. They might be under the impression that such authorities might know more about the product including whether it is sustainable or not. For example, Malka and colleagues (2009) have found a link between individual knowledge about climate change and the extent to which individuals' trust in scientist and authorities. Consumers might rely on the system to provide them with services that make them comfortable in buying particular products. This would be particularly true if people experience a high sense of identification with their society which is one reason why the current thesis investigates individual strength in societal identification (Feygina et al., 2010; Luhtanen & Crocker, 1992). Psychological relatedness then embraces the idea that people have a need to interact and stay connected to other people (Deci & Ryan, 2000). This aspect presents another major reason for investigating the degree to which Swedish citizens identify themselves as "Swedes". As has been pointed out in the literature on system justification theory, when individuals strongly identify themselves with their society they ought to have strong faith in the legitimacy and fairness of the system (Kay & Friesen, 2011; Friedman & Sutton, 2013). As a result they appear to be more likely to engage in system justifying beliefs, especially when faced with cognitive dissonance. Thus, the current thesis hypothesises that there is a positive relationship between system justifying tendencies, perceived support for autonomy and competence, and consumer behaviour. More specifically, the greater support to consume sustainably people perceive to get from people around them the more likely they ought to be to defend the status quo. Furthermore, such support might also be related to peoples' consumer habits.

Aim and Hypotheses

The aim of this thesis is to investigate the role of system justification tendencies in sustainable consumption. In regards to previous reading it is hypothesised that:

H1: Swedish citizens hold strong misconceptions of what sustainable consumption is, in particular when consumers have strong tendencies to defend the status quo.

H2: Swedish consumers who are more prone to defend the status quo should display greater tendencies to consume unsustainably.

H3: Swedish citizens should be highly motivated to defend the status quo.

H4: Swedish consumers who are highly environmentally concerned and strongly identify themselves with their society should show greater levels of system justifying tendencies.

H5: *There is positive relationship between system justifying tendencies, individual autonomy and perceived competence, and consumer behaviour.*

Method

Participants

Two hundred and fifty one Swedish residents aged between 21 and 72 participated in this study. Participants were recruited through an online questionnaire using the SurveyMonkey software. Prior to analysis one participant did not meet the set criteria and was therefore discarded. The remaining participants counted two hundred and fifty (53.6 % female, 45.6 % male, 0.4 % reported another gender and, 0.4 % did not report their gender). Respondents mean age was 37.2 years (*SD* = 13.13).

Materials and Procedure

Participants were asked to complete a 38-item questionnaire. The questionnaire consisted of seven self-report scales. Each item was adopted from different sources which all had been previously used. For the purposes of the current study, all items that did not exist in Swedish were translated into Swedish. Prior to the main study, a pilot study with fourteen participants was performed. Subsequent interviews with each participant in the pilot sample was conducted with the aim of discovering misunderstandings or issues related to the translation of the items.

Scale 1: Consumer Habits 1 (CH1)

The aim of this scale was to investigate if participants actively consider if a product is environmentally and sustainably sound when consuming it and their willingness to alternate their behaviour to make it more sustainably sound. The measure deals with the sustainability aspect as it considers active or non-active consumption of technical apparatuses. The measure was adopted from Sonnenberg and associates (2011). The scale has five items on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) and gave a. One item was reversed (Appendix A). In this measure item 1 was removed based on the pilot study.

Scale 2: Consumer Habits 2 (CH2)

The aim of this scale was to investigate day-to-day consumer habits and participants' general value towards pro-environmental consumption. Participants were asked to rate the extent to which they agree with four claims related to their willingness to pay more for products considered to be environmentally friendly, on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). This scale was originally developed by Rokeach (1973) who used three items. With the aim of increasing the accuracy of the scale, a more recent study added a fourth item (Trivedi et al., 2015). Joined Cronbachs alpha for scales Consumer Habits

one and Consumer Habits two was (α = .67) which was considered sufficient in the current paper.

Scale 3: System Justification Tendencies (SJT)

This scale was used to indicate to what extent system justifying tendencies are present among the participants in this study. The scale has been frequently used with the aim to investigate the extent to which people justify the status quo in their own society (Jost et al., 2010; Feygina 2012). Participants were asked to rate the degree to which they agreed or disagreed with 8 items on a 9-point Likert scale ranging from 1 (strongly disagree) to 9 (strongly agree) and pertained to perceptions of the Swedish society to be fair and equal (Appendix B). The scale was adopted from Kay and Jost (2003). Cronbachs alpha measured α = .80 which was above the required threshold.

Scale 4: Identification with State (IS)

This scale indicates the degree to which participants consider themselves to be Swedish or identify themselves as “Swedes”. This scale was originally developed to measure identification with social groups and its relationship to self-esteem (Luhtanen & Crocker, 1992). To further investigate the extent to which individuals identify themselves with their subsequent society Feygina, Jost and Goldsmith (2010) adapted the scale, and this version was used in the current study with changes to target Swedish citizens (Appendix C). The scale had four items on a 7-point likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Cronbachs alpha for the current scale was α = .68.

Scale 5: Environmental Concern (EC)

What perceptions people have with regard to climate change influences their level of concern for the environment (Tobler et al., 2012). This measurement was therefore used to investigate two things. First, to indicate the strength of individual concern for the environment and if

people in Sweden perceive that the environment is threatened (Vainio & Paloniemi, 2014). Second, to explore the association between system justification tendencies and environmental concern. The scale was adopted from Feygina (2012) and was measured on a 6-point Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree) (Appendix D). This scale originally used five items. Because of a low Cronbach alpha (< .65), a principal component analysis was performed to investigate items to potentially remove to increase the reliability. Based on the results, item 5 was excluded which increased the Cronbach alpha to α = .70. The face validity was also increased.

Scale 6: Support for Consumer Behaviour (CB)

The aim of this scale was to measure how support for autonomy and competence affect Swedish citizens' motivation to consume sustainably. For the purpose of this study a 7-item scale was developed. The 4 items measuring autonomy support were adapted from the Support for autonomy scale developed by Jungert et al., (2013), whereas the 3 items measuring competence support were adapted from the Support for competence scale developed by Jungert and associates (2013, June) (Appendix E). Both scales were measured on a 7-point Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree) (Appendix D). Prior to this study all items had been used in a Swedish context and were therefore in Swedish. In the current study, one item measuring autonomy was removed because of low Cronbach alpha value of the scale. After the exclusion of that item both scales had acceptable alpha values (Comptence support: α = .70, Autonomy support: α = .73).

Scale 7: Conceptions of Sustainable Consumption

To measure conceptions of sustainable consumption, an open-ended question was used where participants were asked to indicate how they view the term "sustainable" and what they consider to be sustainable consumption. It aims at discovering participants' interpretation of

the term ‘sustainability’. Participants were asked to answer the following question: “Using one to three sentences, describe what sustainable consumption is to you.” The question was adopted from Hanss and Böhm (2012) who used the question to investigate perceptions of sustainability and sustainable consumption in a Norwegian sample. The purpose of their study was to discover how individual understanding of the sustainability notion influences consumer decisions. Hanss and Böhn (2012) had developed a coding scheme comprising of 33 codes for the purpose of their study. This method was partly adopted in the current study but rather than using five dimensions only four were used to investigate the intended hypothesis. In similarity to Hanss and Böhm’s (2012) study, each code was captured by of the four categories. The categories were: 1) accurately manage natural resources to suit peoples’ present needs without compromising the need for future generations (C1). This category has the closest fit to the Brundland Report (1987), 2) accurately manage natural resources (C2). This category captures responses that partly fits the definition of sustainable consumption, 3) protecting the environment (C3). This category include items which only is a small part of the sustainable consumption, and 4) non-related answers (C4). This category included answers that had a poor or unrelated fit to the sustainability notion. Full coding scheme is summarized in Table 2.

Power, Reliability and Validity Statistics

To determine internal consistency of all items, Cronbach alpha values were computed for each scale. These analyses showed that most values were above or close to the required threshold of .70 (Consumer Habits 1 and Consumer Habits 2: α = .67, System Justification Tendencies: α = .80, Identification with State: α = .68, Environmental Concern: α = .70, Autonomy: α = .70, Competence: α = .73) (Nunnally, 1967). To establish content validity, a senior researcher was asked to review all translated scales that were adopted from relevant reviews. The items were found to be both relevant and adequate for measuring the intended

constructs. To control for the set criteria, three screening questions were included at the end of the questionnaire. The aim of these screening questions was to ensure that study measured the intended audience, Swedish citizens only, and thereby increase external validity. As the current study intended to measure the attitudes and behaviours of Swedish citizens only, participants who did not meet the set criteria were removed from the sample prior to analysis. The screening questions used to control for an appropriate sample was that 1) a participant was required to have been living in Sweden for a period of five years or longer, 2) was older than 18 years, and, 3) was fluent in the Swedish language. With the aim of increasing statistical power, the current study used only 6 variables for the sample size (N = 250) to investigate the hypotheses in regression analyses.

Ethical Considerations

Prior to the study, and in accordance with codes of ethics, an ethics form was filled in and approved by the research advisor. Before participants entered the study they were informed about the purpose of the study as well as what type of questions they would be asked. They were told that their answers would be presented in a consolidated way and that their answers could in no way be connected to them. Following this, participants were asked to give their informed consent by ticking a box stating: “I give my informed consent to participate in this study”. Participants were required to tick this box to continue. Participants had the right to withdraw from participating in the study at any time. Thus, questionnaires that were not fully completed were removed from the study. Participants were also given the opportunity to further contact the researcher with any questions, concern, or if they would like a copy of the final paper. Participants were further informed that the result following the current study would be presented at the end of 2015.

Results

Three analyses were adopted in the current study. First, the open-ended question was analysed using a coding scheme with the intention to examine Swedish citizens' perceptions on sustainable consumption. Second, analysis of variance was conducted to investigate whether there was a relationship between system justifying tendencies and level of misconception held by a participant. Third, regression analysis was performed to investigate the relationship between system justifying tendencies among Swedish citizens' and their consumer habits, environmental concern, level of identification with the state, belief in their own competence to make pro-environmental decisions and the extent to which they feel autonomous to consume sustainably. Table 1 shows semi partial correlations ($R^2\Delta$), unstandardized regression coefficients (B), standardized error of B (SE B) and standardized regression coefficients (β) for the current model.

Based on earlier results it was hypothesised that a minority of participants' are fully aware of what sustainable consumption is. Such misconceptions were hypothesised to be greater if levels of system justifying tendencies are high. It was hypothesised that system justifying tendencies are negatively associated with consumer habits, and positively associated with environmental concern and identification with the state. The current thesis further hypothesised that there is a positive relationship between system justifying tendencies, autonomous motivation and perceived competence, and consumer behaviour. Analysis adjusted for gender, mother tongue, years lived in Sweden, and age. In this sample System Justifying Tendencies was associated with higher levels of Identification with the State (R^2 = .072, $F\Delta$ (1, 19) = 4.36, p = .00) but was not significantly associated to any other item. Identification with the State explained 7.2 % of the total variation in System Justification Tendencies.

To investigate hypothesis one, participants' open-ended answers were compared to the formal definition of sustainability put forward by the Brundtland Report (1987). Using the coding scheme developed by Hanss and Böhm's (2012) each answer was coded into one of four categories described in the method section. Examples of participants' interpretations of sustainable consumption is seen in Table 2. Results showed that 8.9 % (C1) were fully aware of what sustainable consumption entails, 25.1 % (C2) knew to some extent, 55.5 % (C3) had a brief idea of what sustainable consumption was, and 10.5 % (C4) had little or no idea of what sustainable consumption involves (n = 191). The ANOVA conducted to investigate the proposed relationship between *level of misconception* and *system justification tendencies* was not significant (p = .26).

Hypothesis two was investigated by checking for correlations between *consumer habits* (M = 3.65 SD = .64) and *system justifying tendencies*. It was expected to find a strong association between these two items. However, the results show that consumer habits were not significantly associated with system justification tendencies $r(248) = -.05$, $p = .40$.

System justifying tendencies was measured using descriptive statistics to examine the degree to which Swedish participants defend the status quo. On a 9-point Likert scale, where 1 indicates low levels of system justifying tendencies and 9 high levels of system justifying tendencies, the results for hypothesis three indicate that system justifying tendencies (M = 5.0, SD = 1.4) was moderately present among Swedish citizens. Studies conducted in the US have showed that system justification tendencies are particularly high among citizens who experience levels of societal threat (Jost & Huynady, 2002). Such scholars also claim that system justifying tendencies are more endorsed by disadvantaged people. Chickocka and Jost (2014) conducted a study in were levels of system justifying tendencies was investigated in 20 different countries. Their analysis showed that post-communist countries was less prone to defend the status quo compared to countries with other

ideologies. What this means for this study is that first, Swedish citizens' might not experience high levels of system theat. Second, it indicates that the participants in this study might not be representative of disadvantaged citizens in Sweden. Third, the ideology of the Swedish society might have an effect the endorsement of system justifying beliefs among Swedish consumers.

Adopting regression analysis the fourth hypothesis was investigated. It can be recalled that a negative association between system justifying tendencies (dependent variable) and consumer habits was proposed. This hypothesis also suggested a positive association between system justifying tendencies (dependent variable) and environmental concern and identification with the state. Holding gender constant this hypothesis was investigated by inserting *environmental concern* (β = -.10, p = .19), *identification with the state* (β = .26, p = .00), *consumer habits* (β = .04, p = .57), and *system justifying tendencies* into the regression model. As hypothesised there was a significant association between system justifying tendencies and identification with state (β = .26, t (243) = 4.25, p = .00). The analysis found no other support for hypothesis four as neither environmental concern nor consumer habits were significantly associated with system justification tendencies. For all semi partial correlations, regression coefficients and beta values see Table 1.

Regression analysis was employed to investigate if system justifying tendencies (dependent variable) was predicted by autonomy and perceived competence, and consumer behaviour. Inserting *autonomy* and *competence* into the present model, holding gender constant, hypothesis five was investigated. The current analysis did not find any significant associations between system justifying tendencies, autonomy (β = .08, p = .60) and competence (β = .02, p = .77).

Regression analysis was conducted to investigate what factors might impact on consumer behaviour. The aim was to indicate a potential relationship between autonomy,

competence, identification with the state, gender, environmental concern, system justifying tendencies, and consumer habits. The current analysis controlled for gender as previous studies have indicated that women generally tend to express greater levels of environmental concern and appear to consume more sustainably compared to men (Isenhour & Ardenfors, 2009, Feygina, 2012; Goldsmith et al., 2012). This regression model was significant, $R^2 = .34$, $F\Delta$ (6, 242) = 20.445, $p = .00$. While inserting consumer habits as the dependent variable the results showed a significant association of gender ($\beta = -.15$, $p = .01$), competence ($\beta = .20$, $p = .00$), and environmental concern ($\beta = 47$, $p = .00$) on consumer habits. This indicates that individual perception of competence, gender, and environmental concern impact on the degree to which Swedish citizens' consume sustainably (Table 3). While controlling for gender, the significant variables in the current model explained 34% of the variance in consumer habits.

General Discussion

The study was carried out with the aim of explaining how Swedish citizens might rationalize their unsustainable consumer habits. If was of interest to investigate the extent to which system justifying tendencies are present when highly environmentally concerned individuals consume. The role of perceived competence and individual autonomy was also investigated to explore its relationship to consumer habits and system justifying tendencies. The current study further considered Swedish citizens' conceptions of what sustainable consumption is and how such misconceptions might relate to system justifying tendencies.

The first hypothesis read that there is a misconception among Swedish citizens of what sustainable consumption is. Such misconceptions, however, were not related to the extent to which participants' endorse system justifying beliefs. Hypothesis two offers an association between higher levels of system justifying tendencies and an increase in unsustainable consumer habits. Hypothesis three suggests that Swedish citizens' are highly

motivated to engage in system justifying tendencies. It was further hypothesised that if Swedish citizens' are highly concerned for the environment, identify themselves with the system and engage in unsustainable behaviour, they should be more prone to defend the status quo. The fifth hypothesis suggests that there is a positive relationship between system justifying tendencies, individual autonomy and perceived competence, and consumer behaviour.

The results of this study showed that hypothesis one was partly supported. It appears as if Swedish citizens' have some misconceptions of what sustainable consumption is but it did not relate to system justifying tendencies in the current sample. Hypothesis two was not supported in this study, which indicates that Swedish citizens are not likely to engage in system justifying beliefs when consuming unsustainably. The results of the third hypothesis showed that Swedish citizens only justify the status quo to some degree. Thus, the only significant contributor in the current study was identification with the state which indicates that Swedish citizens who highly identify themselves as "Swedes" are more likely to defend current socio-economic arrangements. System justification tendencies were not significantly associated with neither environmental concern nor consumer habits. This means that, in this study, these aspects do not impact on the degree to which Swedish citizens' defend current socio-economic arrangements. No support was found for hypothesis five. Individual levels of perceived autonomy support, competence support, and consumer habits did not affect Swedish citizens' tendencies to endorse system justifying beliefs.

Overall, the results of this study indicate that Swedish citizens are not fully aware of what sustainable consumption is regardless of their tendency to defend the status quo. Nevertheless, the results do not show that system justifying tendencies impact on the Swedish citizens' consumer behaviour. Rather, the outcome of this study indicates other complications of consumer behaviour excluding system justifying tendencies. Analysis

revealed that there was an association of gender, perceived competence, and environmental concern on consumer behaviour. Such a connection points towards that Swedish citizens' consumer habits to a large extent depend on their gender, their perceptions of their competence support to consume sustainably and how concerned they are of the environment.

Misconceptions of Sustainable Behaviour

It can be recalled that the definition of sustainable consumption involve not to consume beyond natures resources in a way which jeopardizes the needs of current and future generations (Lorek & Spangenberg, 2014; Brundtland Report, 1987). The examination of the sustainability expression in this study revealed that despite high levels of environmental concern and a desire to consume sustainably, Swedish citizens' are not fully aware of this definition. Only 9 % of the participants in this study fully captured what sustainable consumption really involve, while 66 % only had a brief or no idea of how to consume sustainably. A lot of focus of participants' answers was on ecological products and "careful consumption" but with no inclination of providing reasons as to why such things might be important to sustainable consumption. Thus, the sustainability expression appears not to be fully captured by the public eye as there seems to be a general agreement that sustainable consumption to a large extent mainly entails to make ecological choices and consuming moderately. This finding supports prior research that people are not fully aware of what sustainable consumption is (Seyfang, 2004; Hanss & Böhm, 2012). The diversity in the answers provided by the participants of how they interpret sustainable consumption illustrates not only of the existence of misconceptions, but also that there is a wide range of such misconceptions that include an extensive variety of topics. Such a variety in interpretations face complications in regards to *what* aspects one ought to focus on to increase awareness of how to consume sustainably as well as *why* it is important to engage in sustainable behaviour.

Implications of Misconceptions of the Sustainability Notion

Filho (2000) proposes that misconceptions of the sustainability notion are subjected to deeper complications such as not taking action to promote sustainable living. One central concern of these complications is that despite a substantial amount of literature on the concept of sustainability, people still maintain their misconceptions and uphold unsustainable behaviours (Filho, 2000). Examples supporting this can be drawn from consumer patterns, in particular in relation to sustainably correct behaviours. For example, consumers who consume unsustainably often compensate for their behaviour by consciously engaging in pro-environmental behaviours shortly after their unsustainable behaviour (Gregory-Smith et al., 2013). This allows consumers to compensate for the subsequent cognitive dissonance experienced when consuming unsustainably.

As proposed above, an explanation for why people maintain their misconceptions relate to the diversity in expressions (Truelove & Parks, 2012; Tobler et al., 2012). As people most often do not directly experience climate change, but rather as a phenomenon which is covered in different media settings, their subsequent perceptions of climate change will most likely be affected (Swim et al., 2009). As a result, peoples' perceptions of the severity of climate change seem disputed which leads to confusions as to what behaviours that are environmentally damaging. Such confusions consequently leads to unsustainable behaviours.

Authoritative Implications of Sustainability

Filho and associates (2015) introduces the idea that certain strategies aimed at increasing awareness of sustainable behaviour, to ensure for pro-environmental development, is ignored by authorities. In the US, such aspects are proposed to include that 1) only some states implement acts which is aimed at benefit humankind, and 2) authoritative focus of the

economic necessities and benefits rather on environmental progress. These expressions highlight the mismatch between higher levels of environmental concern and problem of implementation of sustainable ideas. Henceforth, it advocates for the importance of developing new strategies to ensure for sustainable progress. As misconceptions also seem to show itself in Sweden target of investigation should presumably be to explore what strategies lead to an increased awareness of sustainable development. Party opposing this argument, authors have argued that such misconceptions rather enable the possibility of new formations to encourage pro-environmental behaviours (Feygina et al., 2010; Feygina, 2012). They introduce the concept of "system-sanctioned change" which suggests that the existence of system justifying tendencies, might work as a mean to encourage citizens to perceive pro-environmental behaviour. They argue that in characterising sustainable development as a necessity to "preserving the American way of life" citizens ought to be more motivated to defend aspects which enable this, which include to protect natural resources (Feygina et al., 2010). But as there was no association between system justifying tendencies and level of misconceptions in this study, the extent to which such a suggestion can be implemented into the Swedish society faces certain complications. Still, in appealing to things which Swedes consider important can work as a means to increase sustainable action. Combining the above mentioned aspects, forming strategies to increase knowledge of what sustainable behaviour fully involves, might create a possibility to transform unsustainable behaviour to a drive for change and active engagement. Hence, such engagement would stem from a desire to preserve valued institutions and the Swedish society rather than from a motivation to defend current socio-economic arrangements.

How to Increase Awareness of Sustainable Consumption

Three strategies to increase awareness of what sustainable consumption is will be presented in the current thesis. First, knowledge is frequently discussed in relation to environmentally

sound behaviours. Yet, it does not appear to be the only sufficient indicator to motivate pro-environmental action. While maintaining that knowledge is the strongest predictor, some studies propose that only certain kinds of knowledge affect behavioural intent (Bamberg & Moser, 2007). The effectiveness and content of communicated knowledge therefore ought to be the subject of interest for campaigns aimed at increasing pro-environmental behaviours. The second concept is related to knowledge but rather put emphasis on the role of education. A proposition aimed at implementing new teaching strategies presents the idea that curriculums together with new learning environments might foster competence related to sustainable development (Filho et al., 2015). In changing the way in which sustainable development is taught a greater awareness of its complications can be achieved. Thus, it should be a part of universities and schools to foster knowledge of sustainable development (Filho et al., 2015; Vainio & Paloneimi, 2014). A study made in a Nordic sample found that Swedes were less likely to believe that "science makes pro-environmental behaviour un-necessary" (Vainio & Paloneimi, 2014, p. 24). This indicate that science might be an appropriate tool in Sweden to further raise encouraging ways to think about and work towards sustainable development. Third, knowledge and education need to be implemented in media forums as well as be integrated into product development in companies. Product development and media awareness are two key aspects to implement the sustainability notion into society (Hoque, 2014). Thus, there is a necessity to provide companies with clearer directives in regards to the importance and relevance of implementing sustainable methods (Thongplew et al., 2014; Truelove et al., 2012). This suggestion is supported by various authors who point towards that companies aimed at educating consumers enables them to identify what products enhance pro-environmental development and what products do not (Tanner & Wölfing Kast, 2003).

Filho and associates (2015) propose that sustainable development, and by extension sustainable consumption, can be achieved only when authorities, companies and people work in an alliance to secure the continuation of future generations. Thus, solutions that bring awareness to people of the sustainability concept need to appeal to a general concern for human life. They need to determine the vitality of preserving human values in a way which translate to action to ensure for the continuation of the human race.

Moderately Endorsing System Justifying Beliefs

As hypothesised system justifying tendencies are present among Swedish citizens' but contradictory to what was suggested such beliefs are only endorsed moderately by the participants' in this study. Thus, the tendency to defend current socio-economic arrangements appear to differ in its endorsement in comparison to other countries such as the US (Elinder, 2012; Cichocka & Jost, 2014). This poses an interesting dialog of why there is a difference between societies and what features that might clarify such a difference.

Motivational Theory: Threat and Perceived Control

The reason why Swedish citizens appear less prone to defend current socio-economic systems might be a product of that they find their motivational need satisfied elsewhere. As system justification theory is a motivational theory, individuals who are more inclined to defend current socio-economic arrangements often hold greater motivations to satisfy a range of psychological needs (Jost & Banaji, 1994; Jost et al., 2004). These psychological needs include an increase need to perceive a sense of safety in the current society as well as a sense of control over the societal environment (Cichocka & Jost, 2014). The results of the current paper might indicate that Swedish citizens fulfil these needs elsewhere rather than viewing their society as legitimate and fair. Research within the theory on system justification further proposes that tendencies to defend the status quo are particularly endorsed when citizens

perceive their society as being threatened by an external force (Jost & Hunyady, 2002; Jost & Hunyady, 2005). Kay and Friesen (2001) introduces the idea of system threat which are "events that potentially jeopardize the system's legitimacy in some way, such as terrorist attacks or insufficient responses to natural disasters" (Kay & Friesen, 2011, p. 361). Presumably Swedish citizens might not experience the existence of an external threat jeopardizing the Swedish society as do citizens of societies where levels of system justifying tendencies are high. Subsequently, low levels of perceived threat leads to an increased sense of safety resulting in decreased levels of system justifying beliefs among Swedish citizens.

Trägårdh (2007) proposes a difference between different societies in *how* individuals put their trust to the system. Individual trust appears to be attributed differently depending on society. In other words, citizens who highly identify themselves with Nordic or Western European societies seem more prone to put their faith into politicians' responsiveness (the degree to which political institutions respond to policy measures) rather than political resources (politicians' actual ability to implement reforms) of their subsequent society (Trägårdh, 2007; Wollenbæk et al., 2012). Henceforth, the people in the Nordic countries appear to have more faith in political leaders and their fellow citizens but doubt the political resources to attain important goals. This provides a potential explanation of the results in the current thesis. Swedish citizens' might display lower levels of trust in the resources to reach their goals, such as consuming sustainably, which could be reflected in the results. This offers a way to compensate for external threats and increase a sense of societal control. More specifically, this provides an explanation why people experience a greater sense of control and an increased sense of security over societal outcomes discounting the influence of system justification.

Societal Differences and Social Democracy

Discussions of system justifying tendencies in relation to the ruling ideology of a society are becoming a key theme in the system justification literature. Scholars have discussed the observed difference in the endorsement of system justifying tendencies between citizens in Central and Eastern Europe, and Western capitalist societies (Cichocka & Jost, 2014). Citizens appear less likely to defend the status quo in Western capitalist societies which is, supposing that Sweden is categorized as such a society, consistent with the findings in the current paper. Other doctrines recommend that different ruling ideologies of a society, that is if they are of a liberal, conservative or socialist nature, help in determining the extent to with people defend the status quo (Friedman & Sutton, 2013; Jost & Hunyady, 2005; Jost et al., 2003a). Some research have considered that the citizens in Sweden along with Japan and the United States belong to a politically conservative group consequently holding higher motivations to view their society as legitimate and just (Jost & Hunyady, 2005). According to this paper, this is not to be the case. Walker (2005) advocates that Sweden is a country where socialism is the ruling ideology and that social democracy lies in the core foundation of the Swedish society. Such an ideology is defined using expressions such as freedom and equality, where equal opportunities among all members of that society are frequently being promoted. Alongside with this suggestion, and in alignment with the democratic ideology, the Swedish society might not be as hierarchically ranked as countries portraying higher tendencies to defend current socio economic arrangements. However the political landscape in Sweden is likely to have changed since Walker (2005) advocated for this suggestion. A consideration for the current political landscape in Sweden is therefore of vital importance for future investigations. Sidanius and Pratto (1999) propose that citizens' full endorsement of system justifying beliefs are more probable in societies that are organized hierarchically. In Sweden, being a society where social democracy truly is endorsed, this is one probable explanation for

the moderate levels of system justifying tendencies in the current study. Lower rates of social desirability might be one explanation as to why Swedish citizens do not fully defend current socio-economic arrangements. In some societies system justifying beliefs have been proposed to depend on what is socially desirable (Cichocka & Jost, 2014). In a Portuguese sample it was found that participants showed higher levels of system justifying tendencies when primed with a socially positive social image as supposed to when they were subjected with a less desirable social image (Alves & Correia, 2008). Thus, findings in this paper point towards that Swedish citizens does not necessarily find system justifying tendencies socially desirable.

As stated earlier aspects such as low levels of system threat and lower levels of disadvantaged citizens might be other explanations as to why there only are moderate levels of system justifying tendencies showing in this study. Swedish citizens might not experience high levels of system threat, that the society is threatened by an external force, subsequently only defending the status quo to some extent (Jost & Huynady, 2002). A final explanation for these results is that the current sample is not representative for the whole Swedish population. Previous research propose that citizens belonging to disadvantages groups are more likely to defend current social-economic arrangements compared to citizens belonging to advantaged societal groups (Jost et al., 2003b). Hence, moderate levels of defending the status quo indicate that citizens belonging to disadvantaged groups in Sweden is not truly represented in this research.

The current thesis offers a contribution to this literature as the results propose *how* system justifying tendencies might operate in western societies. It invites to question how citizens of such a social democratic ideology respond to external threats such as environmental damage. Thus, the results indicate that Swedish citizens use other factors to deal with such threats rather than engaging in system justifying beliefs. But what factors help Swedish citizens to deal with external threats, other than the legitimization of the status quo,

needs to be explored further. It also contradicts indications of how the Swedish society previously has been portrayed.

System Justifying Beliefs and System Membership

This research confirmed the association between the endorsement of system justifying tendencies and extent to which individuals identify themselves with their society. Henceforth, those who were more inclined to defend the status quo indicated a greater sense of belonging to the Swedish system.

In alignment with previous research increased perception of belonging to a particular society result in greater sense of positive feelings towards that society. This could be explained using the concept of *system membership* which refers to that an individual's in-group or social system often is perceived as more favourable compared to other groups (Kay et al., 2007). In this case, individuals who highly identify themselves as Swedes experience a strong sense of belonging to the Swedish society, which results in the Swedish society becoming their in-group. Such a position provides a motivation to justify current socio-economic arrangements as the views, norms and rules of the status quo reflects on members' self-image (Kay et al., 2007; Jost & Hunyady, 2002). This creates further desires to defend the way things are and rationalize undesirable decisions that, for example, do not benefit environmental progress or fail to attain important societal goals (Jost & Hunyady, 2002). Jost and colleagues (2003b) refer to this as a comforting function with the aim of reducing internal distress resulting from cognitive dissonance. An individual becomes increasingly motivated to rationalize injustice and often view inequalities as less arbitrary than what they actually are (Kay et al., 2007). Thus, reducing internal distress while increasing an encouraging affect undoubtedly is the source of many system justifying beliefs.

Unsustainable Behaviour and Environmental Concern

The role of environmental concern seemed to affect Swedish citizens' tendency to consume sustainable. As proposed by Vainio and Paloniemin (2014) pro-environmental consumption is associated with, and affected by, levels of environmental concern. The participants of this research expressed high levels of environmental concern, which is consistent with prior results regarding levels of environmental concern in the Nordic countries (Vainio & Paloniemi, 2014; European Commission, 2011). What can be concluded among the participants in the current paper is that the association between environmental concern and consumer habits had nothing or little to do with their potential tendency to defend the status quo. This indicates that other factors might be present in unsustainable consumption even though level of environmental concern explained a big part of consumption behaviour in the current sample. Additionally, when excluding system justifying tendencies the results indicates a clear association between environmental concern and consumer habits. Similarly, Tanner and Wölfing Kast (2003) found that sustainable consumption is facilitated by consumers' attitudes towards ecological products and environmental protection. Such a connection further creates implications in terms of peoples' continued behaviour patterns. The extent to which consumers consume sustainably appears to be related to their level of concern for the environment.

This connection fails to account for inconsistent consumption behaviour among highly environmentally concerned consumers. People still engage in unsustainable consumption despite being highly concerned for the environment. Hence, there ought to be other factors which indicate why highly environmentally concerned individuals continue to consume unsustainably and how they are able to compensate for consequent cognitive dissonance.

Implications for Consumer Behaviour

Implications of these results follow two lines of discussion. First, what additional influences seem to affect peoples' tendencies to consume sustainably have previously received different results. Second, cognitive dissonance resulting from inconsistent consumer behaviour is not explained by a tendency to justify the status quo. This means that consumers need to have other methods for compensating for inconsistent cognitions relating to inconsequent consumer behaviour. A recent study proposes that convenience affect people's consumption patterns (Francis & Davies, 2015). Such an aspect includes the degree to which choosing suitable products is convenient for a consumer. For instance, the convenience of time might be a barrier to buy a particular product. If a consumer is required to go to a store further away to attain a sustainable product, the probability of them choosing a store more conveniently located, consequently consuming an unsustainable product, will increase (Tanner & Wölfing Kast, 2003). Tanner & Wölfing Kast (2003) further discuss specific variables associated with pro-environmental behaviour. They claim that such aspects are better predictors to sustainable behaviour rather than environmental concern as a whole. More specifically, their results indicated that more specific attitudes served as a far stronger predictor of environmentally sound consumption compared to general environmental concern. For example, positive attitudes towards environmental protection was a strong predictor in regards to what product an individual was most likely to buy at a supermarket.

As previously discussed there appear to be a misconception of what products that actually are sustainable. Incongruent beliefs in terms of what the most appropriate consumption choice is appear to be a high predictor among highly environmentally concerned consumers (Francies & Davies, 2015). Reducing such incongruence then, should be the focus for further research. Suggestively by; 1) motivating consumers to engage in sustainable consumption, 2) encourage consumers to consume particular products, 3) make information of

sustainable products more assessable and 4) increase awareness of the sustainability notion, people might have the tools to reduce cognitive dissonance.

The Impact of Competence Support on Peoples' Consumption Patterns

Perceived competence support and higher degrees of environmental concern were found to be high predictors of sustainable consumer behaviour in the current study. The idea of maintaining and preserving the environment through the means of consuming sustainable products therefore, appears to be an important goal among Swedish citizens. The motivation to attaining such a goal seem to increase when an individual simultaneously experience high levels of competence support regarding environmental friendly consumption. If an individual is highly environmentally concerned, and experience greater support from the surrounding, they are likely to perceive themselves as being more competent to make sustainable consumer choices. As a result, they become more likely to consume pro-environmentally. Thus, if people generally believe that they are able to consume sustainably the likelihood of them engaging in pro-environmental behaviour increases considerably. In contrast, autonomy support did not turn out to play a significant role among the participants in this study.

Previously, this paper discussed the possibility of people looking for support to achieve higher perceptions of competence support from other sources. This would be correct especially if they are particularly motivated to make sound sustainable consumer decisions, that is, if they are very environmentally concerned (Feygina, 2012; Vainio & Paloniemi, 2014; Deci & Ryan, 2000; Gregory-Smith et al., 2013). To increase their perceived ability to consume sustainably they might look for other sources externally to themselves to increase their belief in own ability to consume environmentally friendly (De Young, 1996). If peers were unable to provide consumers with increased competence support it was hypothesised that they would appeal to legitimacy of the system. Henceforth, current socio-economic arrangements were believed to provide consumers with necessary support to increase

perceived consumer competence. But as system justifying tendencies was not connected to neither consumer habits nor competence support in the current study, this hypothesis was dismissed.

Competence Support, Powerlessness and Empowerment

In accordance with the findings of Deci and Ryan (2000) the perceived competence showed itself of being a predictor for consumer behaviour. Implications of this finding is that if consumers do not find sufficient support to increase perceived competence they are less likely to consume sustainably. More specifically, motivations to consume sustainably lessen with lower levels of perceived competence support.

One possible explanation for this finding relates to the notion of powerlessness; the feeling of an inability to change a particular situation (Tobler et al., 2012). If people do not have perceived competence support they might experience feelings of powerlessness creating less likelihood of them engaging in pro-environmental behaviours such as sustainable consumption (Kollmuss & Agyeman, 2002; Tobler et al., 2012; Hoque, 2014). If consumers experience an inability to save the environment their subsequent behaviour would be to engage in unsustainable behaviours. Similar findings have been presented by Leiserowitz and colleagues (2012) who found that American adults generally believe that individual actions singlehandedly would not make a difference to sustainable development. In the current study some participants answered alike. It was their belief that no matter their actions, the environment would be destroyed and climate change could not be avoided. This indicates that if consumers perceive less competence support, a feeling of powerlessness might present itself. Consequently, their motivation to consume sustainably will most likely be affected. Through perceived competence support, powerlessness might therefore have a mediating effect on consumer behaviour. On the contrary then, when consumers perceive higher levels of competence support, they might experience empowerment and an increased sense of ability

to pursue specific goals such as consuming sustainably. Empowerment in this context refers to the degree to which people perceive that their actions can lead to a different result (Geller, 1995; Thøgersen, 2005). More specifically, it involves individual feelings of being able to pursue a particular goal. Scholars have proposed that consumers who experience higher levels of empowerment are more inclined to deal with difficulties such as changing daily routines and habits, including consumer habits (Hoque, 2014). With respect to sustainable consumption and environmental concern then, in increasing consumers' perceived competence through empowerment they are enabled to take greater responsibility for the consequences of their unsustainable consumer habits. Suggestively, in order "to make the consumers' sustainable lifestyle more empowered" (Hoque, 2014, p. 375) amplified perceptions of competence among consumers is required.

On a concluding note, feelings of powerlessness and empowerment in relation to perceived competence on consumer behaviour might be an interesting direction for future investigations. Such investigations might reveal tools to increase perceived competence to subsequently empower people to consume sustainably.

The Role of Gender in Sustainable Consumption

In previous studies, gender was shown to play a significant role on the extent to which system justifying beliefs and endorsed on levels of environmental concern and on subsequent consumer behaviour (Feygina et al., 2010). The current study therefore controlled for gender to investigate its impact among Swedish citizens. A significant relationship between gender, consumer habits and environmental concern was found in the present study. The results indicated that women generally were more concerned for the environment and that women appeared to consume more sustainably compared to men. In similarity to other studies women expresses higher likelihood of engaging in pre-environmental behaviours which (Feygina, 2012; Goldsmith et al., 2012; Isenhour & Ardenfors, 2009). In contradiction to these studies

however, system justification was not related to gender differences in pro-environmental behaviour. This indicates that the effect of gender on sustainable consumer behaviour does not relate to levels in system justifying beliefs among the participants in this study. The extent to which Swedish consumers defend socio-economic arrangements in Sweden are not different between women and men which was not surprising given that system justifying tendencies was not a significant predictor of consumer behaviour in this study. But questions as to why women tend to express higher levels of concern for the environment and are more likely to consume sustainably might indicate various things. Some research indicate that women as a group most often is in charge of daily shopping and therefore becomes more aware of "green" campaigns and commercials (Tanner & Wölfing Kast, 2003). But as Sweden has been proposed to be a society were gender equality is more developed compared to societies, this might not be entirely true (Global Gender Gap Report, 2014). It therefore is of great importance to further investigate the relationship between gender, environmental concern and consumer habits in a Swedish context to fully comprehend the results from this study.

Limitations

The current study faces some challenges and limitations which demand further attention. First, the questions regarding consumer habits might be subjected to socially desirable responding. Rather than reflecting on their actual consumer behaviour participants might answer how they wish they would consume. Thus, their responses might reflect how they want to consume as supposed to their real consumption behaviour. As a response to this limitation however it should be noted that as the participants answered the questionnaire anonymously, levels of social desirability are likely to decrease. As no answer could be connected to a particular participant, their answers do not directly reflect on their self-image. Second, this study is not of a longitudinal nature, which indicates that these results do not

have the ability to show patterns of system justifying tendencies and consumer behaviour over time. However, the results point toward interesting aspects in regards to consumer behaviour. Such aspects including environmental concern, competence support and gender and their connection to pro-environmental consumer behaviour need to be considered in future studies. Third, this study has not measured the actual consumer behaviour but rather their proposed consumer habits. Possibly, by using other measurements and methods the results of this study might have been different. Fourth, moderate levels of system justification tendencies among participants in this study indicate that not all groups in Sweden are represented in this sample. Further research ought to focus on a larger sample which includes measurements of what position a citizen has in the Swedish society. This would clarify if Swedish citizens belonging to a disadvantaged group are more likely to defend the status quo compared to citizens belonging to an advantaged group. Additionally, limitations in regards to validity, reliability and generalizability of the current research need to be discussed. Content validity relating to the translation of the scales might not have been sufficient consequently affecting the results. These scales therefore, need to be used in a Swedish context again to establish higher levels of content validity. The results also indicate that internal validity is not fully accounted for. As system justification tendencies did not significantly predict consumer behaviour, other causes are more likely to explain the proposed gap between consumer behaviour and environmental concern and their relationship to sustainability. It also is possible that the screening questions were not fully successful in including the intended audience and thereby not fully account for external validity. The reliability measures presented did not fully reach the appropriate level. Although the measures of consumer habits 1 and consumer habits 2 (α = .67) and identification with state (α = .68) were close to the required threshold of .70 it might not have been sufficient for establish reliability consequently affecting the results. In terms of generalizability, as this study was of an exploratory study more research in a Swedish context

need to be conducted. Thus, as the current paper found a relationship between gender, environmental concern and consumer habits further research is required in a Swedish context to be able to draw more generalizable conclusions. Whether or not misconceptions of the sustainability notion affects this relationship is particular interest.

Future Directions

To fully comprehend the presented results complementary research is necessary. Due to the explorative nature of this study future research ought to be focusing on sustainable attitudes in relation to consumption behaviour. More specifically, studies looking at misconceptions of the sustainability concept, and its relationship to consumer behaviour might give an insight of other patterns that could hinder environmental development. It would be particularly interesting to consider this relationship in a Swedish context and examine how it might change over time. In doing this the proposed issuers relating to validity in the present study could be accounted for. This also might provide ways of further increasing awareness among Swedish citizens of what sustainable consumption is.

Another direction for future research ought to focus on the relationship between competence support and consumer behaviour. Such emphasis might arguably be on reasons as to why decreased levels of perceived competence appear to have a negative impact on consumer behaviour. Perhaps an experimental study, in where participants are placed in one of two groups, one experimental group and one control group. Each group then are faced with a choice between various products associated with different levels of sustainability. If the experimental group are primed with competence support while the other group is not results can reveal the impact on competence support on consumer behaviour. If there is a difference in competence support between the two groups other features such as system justification and system threat might be an interesting continuation to this study. Such a direction might expose

other features that could underlie unsustainable consumer behaviour including a possible impact of system threat.

The findings of this paper also require further investigation in regards to how consumers compensate for cognitive dissonance related to unsustainable consumption. What aspects might decrease cognitive dissonance related to sustainable consumption? In sustainable consumption there ought to be other factors in play as consumers need to have ways of compensating for conflicting cognitions resulting from high levels of environmental concern and unsustainable consumer behaviour.

A final recommendation for further investigations is try and provide explanations as to why Swedish citizens appear only moderately endorsing system justifying beliefs. What other factors might underlie a variation in the endorsement of system justifying tendencies? Does the difference in ideological standing of a society affect individual behaviour and attitudes to their own socio-economic system? Studies comparing levels of system justifying tendencies in disadvantaged versus advantaged Swedish citizens and how levels of endorsement in respective group impact on consumer behaviour might reveal other patterns of consumer behaviour.

Concluding Remarks

The results in the current study demonstrates that consumer behaviour does not relate to tendencies to defend the status quo. Rather it suggests that perceived competence, gender and environmental concern are the primary factors that effects on whether Swedish consumers engage in sustainable or unsustainable behaviours. Such factors invite powerful implications in relation to how to increase consumer awareness of sustainability and how to increase pro-environmental consumption choices. This study further revealed that fallacies regarding the sustainability notion was not at all absent among Swedish consumers. Thus, such high levels

of misconceptions of what sustainable consumption fully means and its impact on consumer behaviour faces great challenges in terms of its application. The vitality of creating motivational means while enhancing positive perceptions towards environmental development could result in higher levels of well-being. This as a result of reaching environmentally important goals. Propositions of increasing awareness of the sustainability notion by appealing to education and media forms might increase Swedish consumers' perceived competence and thus their subsequent consumer behaviour. In decreasing feelings of powerlessness and rather empower consumers to engage in sustainable behaviour patterns, a change in environmentally destructible habits might be observed. The need for a sustainable environment is necessary to ensure the development of mankind. Maintaining nature and its resources enables our world to continue while ensuring for our continued survival.

Let us give future generations the gift of Earth citizenship by first giving it to ourselves.

- Ilchi Lee, author

Table 1

Regression analysis of environmental concern, identification with the state and consumer habits on system justifying tendencies, holding gender constant.

		$R^2\Delta$	B	SE B	β
Step 1	Gender	.04	.57	.17	.21***
Step 2	Gender	.12	.51	.17	.19**
	Environmental Concern		-.17	.13	-.10
	Identification State		.25	.06	.26
	Autonomy		.11	.09	.08
	Competence		.03	.07	.02
	Consumer Habits		.09	.16	.04

*p<.05, **p<.01, ***p<.001

Table 2

Full coding scheme used for participants' interpretation of sustainable consumption. Adopted from Hanss and Böhm (2012).

Code	Code description	Examples of participants interpretations of sustainable consumption (translated responses)
T1, C1	Long-term perspective	Ecological choice which provides for a better future.
T2, C1	Future generations	A thought about future generations' life opportunities.
EN1, C2	Nature/environment	Consumption in a way that does not impact negatively on the environment.
EN2, C2	Resource preservation	Not consuming more of nature and the earth's resources than what it produces.
EN4, C2	Soil/land	To reuse, recycle, and avoid to release toxins into nature.
EN8, C2	Nature preservation	Sustainable consumption is to preserve mine and natures resources in a balanced way.
D1, C2	Social and economic development	A societal responsibility that involves individual intend not ruin our natural resources within a short future.
D4, C2	Problems that needs to be solved	We need to think about our planet before consuming. If we ruin it, then we have no future.

S1, C3	Community aspects	We need to become fewer people.
S2, C3	Human values and attitudes	Feel in your heart what it is that you actually want, and be grateful that you are able to consume products to make your life easier.
S3, C3	Societal development	Toxin free and cradle-to-cradle.
S4, C3	Social welfare	A good idea of how a product ought to be recycled as having a natural process plan for every product that is about to be developed.
S6, C3	Fair trade	Choosing “fair trade” or ecological products.
S7, C3	Politics	Less important with an “ownership society” and rather share/borrow products that we rarely use.
D2, C3	Old and new technologies	Do not consume more than what we can recycle. Long term sales forecasts to avoid over production and avoid great dispose of products.
D3, C3	Research and development	Being aware, engaged, make good choices and read, compare products and discuss.
EN3, C3	Energy	Sun panels and other forms of energy which are natural and renewable without environmental damage.
EN6, C3	Oil	Try to avoid things which are dependent on oil.

EC1, C3	Economics	A product should be produced and prized in a way so that peoples' work conditions are favourable and that they get enough money to live.
EC4, C3	Economic viability	Ecological but realistic, that is, a dominating industry without leading to great consequences for the economy.
R2, C3	Individual behaviour	People should not throw garbage everywhere.
R3, C3	National considerations	Sweden has good local food and is self-sufficient. Transportation from countries outside the Nordic countries is expensive.
R4, C3	Sceptics	I don't think that it mattes in the long run how people in Sweden consume.
R1, C4	Unspecific answers	To shop good products.

C = coding category, all answers has been translated from Swedish.

Table 3

Regression analysis of environmental concern, identification with the state and gender on consumer habits.

		$R^2\Delta$	B	SE B	β
Step 1	Gender	.07	-.33	.08	-.26***
Step 2	Gender	.34	-.19	.07	-.16**
	Environmental Concern		.38	.05	.47***
	Identification State		-.01	.02	-.01
	Autonomy		-.03	.03	-.04
	Competence		.11	.03	.10***
	System Justifying Tendencies		.01	.03	.03

*p<.05, **p<.01, ***p<.001

Appendix A

Consumer Habits 1 (CH1)

Adopted from: Sonnenberg and colleagues (2011)

Measure on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree)

* Indicates reverse-scored items.

"**Please rate to what extent you agree or disagree with the following statements:"**

1. When the energy rating for appliances is available in the store, I will use it because it indicates how effective the appliance uses energy.
2. I will consider the electrical consumption of appliances because it is not good for the environment if appliances consume a lot of electricity.
3. I would prefer appliances that have a reputation of having a long service life because frequent replacement of appliances is harmful to the planet.
4. When the energy rating for appliances is available in the store, I will use it because it indicates what the running cost of appliances will be, and it indicates whether the appliance is environmentally friendly.
5. I would prefer to buy an appliance from a retailer that has a recycling centre for used appliances, because retailers have a responsibility to promote recycling.

Translated items:

"I vilken utsträckning instämmer du med följande påståenden:"

1. När det finns energibetyg på vitvaror, kommer jag att använda mig av det eftersom visar om apparaten är miljövänlig.

2. Jag överväger inte alltid den elektriska förbrukningen av apparater när jag ska köpa varor/när jag använder apparaterna, trots att miljön påverkas negativt om apparater förbrukar mycket el.
3. Jag föredrar apparater som har ett rykte om att ha en lång livslängd eftersom frekvent utbyte av apparater är skadligt för planeten.
4. När det finns energibetyg på vitvaror, kommer jag att använda mig av det eftersom det indikerar vilken driftskostnad apparaten kommer att ha, och det visar om apparaten är miljövänlig.
5. Jag skulle föredra att köpa en apparat från en återförsäljare som har en återvinningscentral för utslitna apparater, eftersom återförsäljarna har ett ansvar för att främja återvinning.

Consumer Habits 2 (CH2)

Adopted from: Trivedi and associates (2015)

Measure on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree)

* Indicates reverse-scored items

"**Please rate to what extent you agree or disagree with the following statements:"**

1. It is acceptable to pay 10 per cent more for groceries that are produced, processed and packaged in an environmentally friendly way.
2. I would accept paying 10 per cent more taxes to pay for an environmental clean-up programme.

3. I would be willing to spend an extra 20 kronor per week in order to buy less environmentally harmful products.
4. I feel proud to have environmental friendly products in my house though they are 10 per cent costlier.

Translated items:

"I vilken utsträckning instämmer du med följande påståenden:"

1. 1. Det är acceptabelt att betala 10 procent mer för livsmedel som produceras, bearbetas och förpackas på ett miljövänligt sätt.
2. Jag skulle säga nej till att betala 10 procent mer i skatt för att bidra till ett miljösanerings-program.*
3. Jag skulle inte vara villig att spendera 20 kronor mer per vecka för att köpa mindre miljöskadliga produkter.*
4. Jag känner mig stolt över att ha miljövänliga produkter i mitt hem även om de är 10 procent dyrare.

Appendix B

System Justification Tendencies (SJT)

Adopted from: Kay and Jost (2003)

Measure uses a 9-point likert scale ranging from 1 (strongly disagree) to 9 (strongly agree).

* Indicates reverse-scored items.

"**Please rate to what extent you agree or disagree with the following statements:"**

1. In general, you find society to be fair.
2. In general, the American political system operates as it should.
3. American society needs to be radically restructured.*
4. The United States is the best country in the world to live in.
5. Most policies serve the greater good.
6. Everyone has a fair shot at wealth and happiness.
7. Our society is getting worse every year.*
8. Society is set up so that people usually get what they deserve.

Translated items:

"I vilken utsträckning instämmer du med följande påståenden:"

1. I allmänhet är det svenska samhället rättvist.
2. I allmänhet fungerar det svenska politiska systemet som det ska.
3. Det svenska samhället måste omstruktureras radikalt.*
4. Sverige är det bästa landet i världen att leva i.

5. De flesta politiska beslut tjänar folkets bästa.

6. Alla i Sverige har en rättvis chans till rikedom och lycka.

7. Vårt samhälle blir värre för varje år.*

8. Samhället är uppbyggt på ett sätt som gör att folk brukar få vad de förtjänar.

Appendix C

Identification with State (IS)

Adopted from: Feygina and associates (2010); Luhtanen and Crocker (1992)

Measure uses a 7-point likert scale ranging from 1 (strongly disagree) to 7 (strongly agree).

* Indicates reverse-scored items.

"**Please rate to what extent you agree or disagree with the following statements:"**

1. In general, being Swedish is an important part of my self-image.
2. My being Swedish is unimportant to my sense of what kind of person I am.*
3. Being Swedish is an important reflection of who I am.
4. Overall, being Swedish has little to do with how I feel about myself.*

Translated items:

"I vilken utsträckning instämmer du med följande påståenden:"

1. I allmänhet, att vara svensk är en viktig del av vem jag är.
2. Att vara svensk har ingen betydelse för vilken typ av person jag är.*
3. Att vara svensk är en viktig återspegling av vem jag är.
4. Att vara svensk har, på det stora hela, lite att med vem jag är som person.*

Appendix D

Environmental Concern (EC)

Adopted from: Feygina (2012)

Measure uses a 6-point scale ranging from 1 (strongly disagree) to 6 (strongly agree).

* Indicates reverse-scored items.

"**Please rate to what extent you agree or disagree with the following statements:"**

1. If things continue on their present course, we will soon experience a major ecological catastrophe.
2. I do not believe that the environment has been severely abused by humans.*
3. I do not believe protecting the environment is an important issue.*
4. It makes me sad to see natural environment destroyed.
5. It is not important for people to change their way of life to protect the environment.*

Translated items:

"I vilken utsträckning instämmer du med följande påståenden:"

1. Om det fortsätter på det här sättet, kommer vi snart att uppleva en stor ekologisk katastrof.
2. Jag tror inte att miljön har blivit allvarligt misshandlad av människor.*
3. Jag tror inte det är någon viktig fråga att skydda miljön.*
4. Det gör mig ledsen att se hur den naturliga miljön förstörs.
5. Det är inte viktigt för människor att ändra sitt sätt att leva för att skydda miljön.*

Appendix E

Autonomy (A) and Competence (C) Support

Adopted from: Jungert and colleagues (2013, June), and Jungert and associates (2013).

Measure uses a 6-point scale ranging from 1 (strongly disagree) to 6 (strongly agree).

* Indicates reverse-scored items.

"I vilken utsträckning instämmer du med följande påståenden:"

1. Människor i min omgivning hjälper mig så att jag känner att jag kan klara av att göra miljövänliga val vid köp av apparater och livsmedel. C
2. Människor i min omgivning tar mina åsikter om miljön på allvar. A
3. Människor i min omgivning låter mig agera i enlighet med mina egna värderingar när jag köper varor och tjänster. A
4. Människor i min omgivning kräver att jag ska konsumera apparater och livsmedel som de förespråkar. A*
5. Människor i min omgivning är bra på att ge mig information jag behöver för att jag ska känna mig säker på hur jag ska konsumera miljövänligt. C
6. Människor i min omgivning låter mig ta mina egna beslut om vilka varor och tjänster jag väljer att köpa. A
7. Människor i min omgivning stöder mig så att jag känner mig bra på att konsumera miljövänligt. C

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