Citizenship and Environmental Sustainability

A Survey Study on Swedish Lund University Students

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Abstract

Throughout the pursuit of environmental sustainability, the attention placed on governments' responsibility to reduce environmental degradation has progressively decreased and rather, began focusing on the attitudes and behaviours of individuals. Overtime, this increasing attention placed on the individual highlighted the central role which citizens have in creating and pushing for a sustainable society. Scholars such as Dobson and Micheletti have come up with new forms of citizenship which showcase the strive for environmental sustainability.

By using environmental, ecological, and sustainable citizenship as foundations, this thesis aimed at developing a mode of citizenship on which to research environmental attitudes of Swedish Lund University Students. Sweden is often referred to as one of the most progressive countries in the fight for climate change and environmental awareness, and through derived categories of ecologically sustainable citizens and a quantitative methodological approach, surveys have been used to empirically identify if ecologically sustainable citizenship can be found within the sample, and which practices respondents had embedded in their everyday life.

The results have shown that although none of the respondents belong to the established categorization of ecologically sustainable citizenship, the identified behaviours and attitudes showcase that the development of norms with a pro-environmental orientation are affecting the multi-faceted nature of citizenship.

Key words: environmental sustainability, environment, citizenship, students, survey
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1 Introduction

Overtime, the acceptance that climate change is occurring and is a threat to human welfare has increased. Highly discussed in the Swedish public debate, the notion of environmental sustainability has been high on the agenda for the past 30 years (Bradley et al., 2008, p.70). A wave of environmentalism began in Sweden in the 1960s, allowing Sweden to become one of the first nations to fight pollution. (Martin et al., 1993, p.223). Following this, in the 1970s, Sweden managed to place the environment on the UN agenda and organized the first major international environmental meeting, the Stockholm Conference in 1972 (Læssøe & Öhman, 2010, p.3), and subsequently, the United Nations Conference on Environment and Development, held in Rio de Janeiro in 1992, presented the Agenda 21 action plan on sustainable development, and Sweden was one of 178 countries to adopt it (Breiting & Wickenberg, 2010, p.14). It was not until the mid-1990s, where the then Minister of Finance Göran Persson proclaimed that Sweden should become an 'international driving force' to create ecological sustainable development and aimed at transforming the Swedish welfare state to a 'greener' welfare state (Lundqvist, 2010, p.2). Sweden is nowadays regarded as a leading country engaged in sustainability, and Swedes are often ranked highly when considering environmentally conscious attitudes, due to the society-wide's pursuit of sustainability (OECD, 2014, p.13).

The discourse around environmental sustainability takes a strong stance in identifying current patterns of growth as being unsustainable. Questions concerning how to solve environmental issues, as well as who should be held responsible and to what degree, have been analyzed from many perspectives. The attitudes and behaviors of individuals have begun to over shine the responsibility placed on governments to pursue environmental sustainability. (Matti & Jagers, 2008, p.2). Environmental problems are progressively more and more understood as being the result of cumulative actions from individuals leading unsustainable lifestyles, and while corporations and states are in no way seen as innocent, further individual involvement in the pursuit of environmental sustainability has also had spillover effects to in turn to affect institutional practices. One of these being the relationship between the environment and citizenship.

Due to the extent of environmental issues, the changes necessary to establish long-lasting sustainability principles in society have been identified as being so drastic that citizenship, a complex yet deeply embedded notion, has also in turn been affected (Davidson, 2004, p.169). Following the expansion of the political context from the nation state to a more globalized approach, citizenship has been analyzed from multiple lenses –amongst them, environmental degradation, which also in turn recognized the multi-faceted nature of citizenship and the many

dimensions in which rights and responsibilities fall under within this scope (Davidson, 2004, p. 168).

It is no surprise then that different scholars (Dobson, 2003, 2007, 2009, 2010; Micheletti, 2006, 2012) have suggest alternative models of citizenship as to address environmental challenges and to push for environmental sustainability. This, to engage citizens in a more profound manner and to motivate individuals to act based on their values as to have long-term changes rather than temporary fixes. Sweden therefore provides the ideal setting to study citizenship and sustainable practices.

1.1   Aim and Research Question

Ultimately, environmental sustainability requires active participation from citizens. Data from the 2016 European Social Survey shows that 60% of Swedes believe that the world's climate is in fact changing,[1] and 52,2% believe that climate change is caused mainly or entirely by human activity,[2] showing that there is in fact an awareness to the issue.

An interesting new manner of empirically looking at the relationship between Swedes, citizenship, and sustainability is through Swedish younger generations. The UN (2013), among many other scholars (Gustafsson, 2012; Hall et al., 1999; Vromen & Collin, 2010), have started to acknowledge and research youth participation in society, due to their ability to contribute to the decision-making process in new and dynamic ways. Peace building, non-violent revolutions, and using new technologies to mobilize communities are common mannerism engaged by the younger generations. The opportunities for younger generations to participate in the decision-making process largely depend on external factors such as political, socioeconomic and cultural contexts, therefore Sweden should in theory provide an effective field for younger generations to push for change regarding environmental sustainability. An enabling environment is a crucial aspect to establish meaningful youth participation, and it also aids in the promotion of internationally agreed agendas (UN Youth, 2013, p. 1). Knowing this, is the Swedish youth, specifically students, incorporating aspects of more sustainable modes of citizenship in their everyday life to counteract climate change and pursue environmental sustainability?

This research thus aims at answering the following research question:
-   Can Lund University students be categorized as ecologically sustainable citizens?

With the following sub questions:

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[1] D19. You may have heard the idea that the world's climate is changing due to increases in temperature over the past 100 years. What is your personal opinion on this? Do you think the world's climate is changing? (European Social Survey, 2016)

[2] D22. Do you think that climate change is caused by natural processes, human activity, or both? (European Social Survey, 2016)

- Under which category of established, budding, or stunted citizen can they be placed within?
- Using factor analysis, which behaviours involved with ecologically sustainable citizenship fit together?

This thesis attempts to develop an operational definition of a mode of citizenship researching environmental attitudes and beliefs, through the creation of empirically observable dimensions by using the three similar yet differing foundations of environmental, ecological, and sustainable citizenship. Within a quantitative survey lens, citizen behaviour will be analysed regarding their attachment or disinterest to the values committed with ecologically sustainable citizenship. In all, to see how and in what manners citizens contribute to environmental sustainable development.

1.2   Relevance of Study

Scholars Jagers and Matti (2010) argue that research on citizenship embedded with sustainable ideals has largely focused on theoretical principles, rather than empirically approaching the matter. This has thus resulted in shortcomings when attempting to identify beliefs and values in line with the theoretical approach of environmental, ecological, or sustainable citizenship.

The relevance of this study stems from the importance which individual attitudes not only have on behavioural choices, but also the possibility of an environmentally sustainable society with engaged citizens. As previously mentioned, the field of citizenship has greatly evolved, and its multifaceted nature has expanded the previously traditional idea that citizenship is strictly a relationship between one and their government, involving voting, following laws, and so on. New dimensions such as biodiversity and nature, global well-being and equality have extended citizenship to include an awareness in addition to one's nation state and provided a deeper understanding of the consequences of actions beyond time and space. Micheletti and Stolle (2012) state that these new nuances on citizenship have shifted the focus to universal values of democracy and human rights, identifying how past events and habits involved with human and environmental oppression have shaped the outlook of less fortunate people, as well as a new understanding of how individual consumer behaviour has a large effect on conditions of animals, workers, and nature (Micheletti & Stolle, 2012, p. 91). Environmental, ecological and sustainable citizenships support a global sustainable development and bring lifestyles and attitudes into the citizenship discourse.

1.2.1   Conceptual Definitions

Sustainable development does not solely include environmental awareness, but rather, it goes beyond long term ecological sustainability. The World Conservation Strategy (IUCN, UNEP, WWF, 1980), a report created with insight from scientists,

advisors, government agencies and conservation organizations (Palmer, 1998, p.60) defined sustainability as a need for integration between economic development and environmental preservation, the need to understand environmental concerns within a socio-economic and political context, as well as establishing a joint concern between the environment and development. (IUCN, UNEP, WWF, 1980). Although this Strategy comes alongside a wide variety of critiques, ranging from being too concerned on preserving the environment in its current state, to its overly simplistic view on the relationship between man and the environment, it provided for a larger debate to begin on the notion of sustainability on a worldwide forum (Palmer, 1998, p. 61).

Sustainable development is thus the larger notion in which environmental sustainability is placed within. The focus of this study is on the third pillar of sustainability, focusing on environmental protection. Although the three pillars of economic, social, and environmental development are interlinked, there is further importance placed on environmental sustainability due to the deterioration of life-support systems (Goodland, 1995, p.5).Environmental sustainability can be defined as the state where the demands placed on the environment can be sustained without preventing individuals from living well across time and space, or, more simply, as the "maintenance of natural capital" (Goodland, 1995, p.10).

1.2.2 Delimitations

Within the international community, Scandinavians are often regarded as those which are more prone to carry out environmentally conscious behaviours, especially Swedes (Jagers, 2009, p.22). This geographical sphere thus provides the perfect setting to research the best-case scenario when it comes to pro-environmental orientations, keeping in mind however that the institutional arrangement in Sweden, alongside the clear mandate the country has in pursuing sustainability, creates perfect and straight forward conditions for its citizens to be environmentally conscious. Due to this limitation, the aim of this thesis has also dealt with identifying behaviours which really differentiate individuals who actively strive for change in comparison to those who solely adhere to community norms.

Moreover, this thesis will use Swedish university students as respondents, mainly due to availability. This therefore poses the limitation of not being able to generalize to the greater youth population, or to the Swedish national context. Researchers such as Orlander (2003) argue that the main way in which young people engage in political participation is through grassroot manners. Through internet campaigns, mobilization of peers, boycotting and buycotting, and many more approaches, young people use a range of political strategies to push for what they believe in (Micheletti & Stolle, 2006). Therefore, the strive for environmental sustainability may be identified in differing manners than what one would expect.

Lastly, the scope of thesis is clearly limited, and although relevant to the field of research on citizenship and environmentally conscious behaviour, it solely manages to provide a humble contribution to the overall picture.

1.3   Outline of the Thesis

The outline of the thesis is as follows.

First, throughout the literature review section, an overview of the field on citizenship will be presented, including the three similar yet different notions of environmental, ecological, and sustainable citizenship; as well as their strengths and limitations.

Having set the foundations, the subsequent theoretical framework section presents a derived definition of citizenship, encompassing characteristics from the previously mentioned environmental, ecological, and sustainable citizenships, as well as a developed categorization of the ecologically sustainable citizen. As to answer my research question, this section also presents three dimensions; namely the political, consumer, and social ones, which will be empirically tested out through my data collection.

Following this, the methodology section is introduced, which presents surveys as my chosen method and dwells deeper in the precise ways the three dimensions will be empirically tested by providing clear behaviours which will be explored, by operationalizing the three previously presented political, social, and consumer dimensions.

This method thus leads into the following results section, which through three different levels of analysis will be able to showcase which behaviours are more common than others, how Swedish Lund University students may be categorized, and if there are any underlying factors which can explain if some behaviours are correlated in explaining ecologically sustainable citizenship. Finally, a discussion and conclusion section will be presented to analyse the results and wrap up the thesis.

2   Literature Review

The following section will shortly present the large area of citizenship studies and its multi-faceted nature, and then introduce three specific citizenship standpoints from which to begin with. Environmental, ecological, and sustainable citizenship will present the field and aid identifying trends and arguments relevant to the research question. Previous studies will be discussed as to point out different tendencies in the literature.

2.1   The Disputed Notion of Citizenship

There are many challenges related to the understanding of the notion of citizenship. Siim & Squires (2008) identify two main limitations. The first acknowledges that while citizenship used to be regarded as a specific characteristic of a nation-state, it is now increasingly being understood and operationalized within the framework of multi-level governance, where local, regional, and global practices have widened its notion and emphasized its multi-layered essence (Siim & Squires, 2008, p.1). The second issue is that citizenship is increasingly being altered by group recognition claims, meaning the emphasized approach from specific groups rights and inequalities, broadening the scope of diversity within citizenship itself (Siim & Squires, 2008, p.1).

T.H. Marshall (1950) was one of the first to develop a basis for the conception of citizenship by diving it into three elements; namely civil, political, and social (Marshall, 1950, p.10). He continues by describing the civil element, which is composed of the "rights necessary for individual freedom" (Marshall, 1950, p.10); the political element, namely "the right to participate in the exercise of political power, as member of a body… or as an elector of the members of such body" (Marshall, 1950, p.11); and lastly, the social element, which he describes as "the … range from the right … of economic welfare and security, to the right to share to the full in the social heritage… according to the standards prevailing in society" (Marshall, 1950, p11). Marshall's (1950) framework based on principles of equality, solidarity, and freedom, has become a key reference in any citizenship study (Siim & Squires, 2008, p.2) and has allowed citizenship to be viewed both as equal rights and respects as well as a tool to study political and social developments in societies.

While citizenship has been identified as being a problematic concept due to its multi-faceted nature, it has been argued that even environmental issues can be analysed from a citizenship perspective (van Steenbergen, 1994, p.1). Since the mid-1970s environmental movements have gained momentum, resulting in a global

awareness. Turner (1986) has emphasized the role of social movements in the expansion of citizenship rights, and scholars have argued that environmentalism will be the next force in the development of a new "greener" citizenship (van Steenbergen, 1994, p. 143).

In the light of contemporary issues, scholars have developed new notions of citizenship which encompass notions of sustainability, namely Dobson and Micheletti.

2.2   Dobson's Conceptions of Citizenship

Dobson (2003;2007;2009;2010) is an acknowledged theorist in the field of citizenship and the environmental field. In Dobson's writings he argues that a common method nowadays used to promote environmentally responsible behaviour by governments involve fiscal measures, where citizens are offered financial incentives, as well as penalties, to alter their behaviour. Unfortunately, Dobson argues that these methods do not provide long lasting results. They prevent individuals to engage in political deliberation by compelling them to change their behaviours in a short amount of time, without any significant changes to their attitudes. While behaviours signify the expression of feelings, beliefs, and thoughts through actions, it is attitudes which in practice shape this response as they are the mind's predisposition to ideas, values, and institutions. Therefore, while changes to individuals' attitudes can easily result in a change in individuals' behaviours, the opposite does not seem as likely (Dobson, 2007, p.279). Dobson (2009) argues that fiscal incentives should not be completely ignored as a mechanism in the pursue of sustainability, however, they cannot be used as a sole method.

Dobson focus is thus on developing a notion of citizenship which strives for a sustainable society, as to not only change behaviours, but affect attitudes, and has consequently developed two versions of citizenship, namely environmental and ecological citizenship.

2.2.1 Environmental Citizenship

The notion of 'environmental citizenship' is closely connected to the field of sustainable development, as this standpoint clarifies what pushes for environmentally conscious behaviour. Individuals, through a disciplinary manner, need to be made more aware of environmental problems and thus become more environmentally responsible. Moreover, the notion of 'citizen' brings about not only obligations towards the community, but also rights (Horton, 2003, p. 1). Uneven environmental rights, such as a lack of clean air, or unhealthy working conditions connect this notion to other issues, such as politics of class, gender and ethnicity (Horton, 2003, p.2). Environmental citizens thus give their consent to the

state to define environmental rights for their wellbeing and can claim said rights as well as recognizing a responsibility in respecting these rights and duties for the wellbeing of others (Humphreys, 2009, p.172).

Environmental citizenship refers to the liberal approach to citizenship, placed exclusively in the public sphere (Dobson, 2003, p.89). The contractual relationship between citizen and state is emphasized, and further, citizens enjoy a sense of reciprocity between one another as environmentally conscious behaviour is seen as a duty for all (Humphreys, 2009, p.172). Consequently, this notion is territorially bound to one's state. This territorial aspect poses an issue when speaking of environmental problems. Dobson's environmental citizenship fails to acknowledge the globalized aspect of environmental issues, and that there may be instances where rights granted to citizens may be overruled by larger bodies of law which may promote the degradation of the environment (Humphreys, 2009, p. 172), such as the recent withdrawal of the United States from the Paris Agreement, which was met with countless protests and critiques, unfortunately with no success.

2.2.2 Ecological Citizenship

On the other hand, Dobson defines 'ecological citizenship' as a post-cosmopolitan form of citizenship (Dobson, 2003, p.89), based on critiquing the territorial idea of citizenship. This conception of citizenship deals with non-contractual responsibilities, is non-territorial and is based on the concept of ecological footprints (Humphreys, 2009, p. 173). Being active in both the private and public sphere, ecological citizenship has asymmetrical obligations, where not all citizens are required to reduce their ecological footprint to the same extent. Dobson argues that those who live in wealthy industrialized states tend to have a larger ecological footprint than those living in less developed countries, and thus argues that these individuals have a further obligation to reduce their footprint. He also continues by stressing the importance of the private realm when speaking of citizenship, as ecological citizenship is concerned with the results of individual acts.

Ecological citizens are not solely concerned with reducing their own footprint, but also seeking to do justice for those who are unable to themselves (Humphreys, 2009, p. 173). This refers to individuals who have opportunities to challenge actors and to give a voice to those who are unable to participate in the policy process.

This non-territorial form of citizenship takes into consideration the globalized world and for example, the consequences of purchasing global goods, which in turn influences one's ecological footprint (Dobson, 2003, p.84). This emphasizes the essence of Dobson's idea of ecological citizenship, placing individual responsibility which goes beyond space and time.

2.3   Micheletti's Sustainable Citizenship

Micheletti is a scholar who has focused her work on several aspects of citizenship, and alongside the scholar Stolle, define sustainable citizenship where "people should do all they possibly can to help improve social justice and safeguard nature to make the world a better place in which to live" (Micheletti & Stolle, 2010, p.89). This definition was developed on the United Nations World Commission on Environment and Development's (1987) definition on sustainable development, namely as practices that meet "the needs of the present without compromising the ability of future generations to meet their own needs" (UNCED, 1987, p.41). Sustainable development not only involves governments, but also NGOs, individuals, corporations and much more, therefore emphasizing how citizenship is spreading into new domains and highlighting new aspects which fall beyond the public sphere (Micheletti & Stolle, 2012, p.90).

This mode of citizenship is thus focused on the way individuals and institutions assess concerns about the general welfare of humans and nature and act accordingly in their everyday life. This mode of citizenship goes beyond the basic understanding of voting, obeying laws, and so on. It also encompasses deeper understandings of global human welfare, biodiversity, and nature, emphasizing a growing individual responsibility towards caretaking and equity (Micheletti & Stolle, 2012, p.91).

A central aspect of sustainable citizenship is the focus on responsibilities rather than on rights. All individuals and institutions should take responsibility and be concerned with supporting and safeguarding nature and social justice even if there is a lack of payoff (Micheletti & Stolle, 2012, p.90). The authors argue that the basis of this is that individuals should be able to assess how their practices may reflect social and environmental inequalities of the past, as well as how current lifestyles may have a negative effect on the welfare of other humans, animals, and nature in general, both at current times and in the future. This type of citizenship does not only encompass individuals as citizens but stresses the practices of businesses and consumers; as policy-makers as well as scholars focused on sustainable development identify them as crucial actors in the problem-solving sphere (Micheletti & Stolle, 2012, p.90). In all, this type of citizenship encompasses both private and public activities, and functions further outside of formal political institutions in comparison to other common notions of citizenship.

2.4   Review of Environmental, Ecological, and Sustainable Citizenship Characteristics

The following table summarises the characteristics of the three approaches to citizenship described above.

	Environmental Citizenship	Ecological Citizenship	Sustainable Citizenship
Strand	Liberal	Post-Cosmopolitan	Post-Cosmopolitan
Sphere	Public	Public and Private	Private, Public, and beyond
Rights vs. Responsibilities	Rights (contractual)	Responsibilities (non-contractual)	Responsibilities (non-contractual)
Territory	Territorialy bound	Non-territorialy bound	Non-territorialy bound
Values	Justice and Fairness	Justice, Care and Compassion	Social Justice and Equality

Table 1 Review of Characteristics belonging to Environmental, Ecological, and Sustainable Citizenship

2.5   Previous Literature on Environmental, Ecological, and Sustainable Citizenship

Although the field of citizenship has been analysed from multiple aspects and scholars, the field of citizenship intertwined with the environment is a relatively young research area, thus the limited amount of research carried out in this sphere. Due to the limited studies, it is challenging to identify methodological trends within the literature, as they seem to involve both quantitative and qualitative approaches. Nevertheless, a few general trends in the field were uncovered.

A clear trend in the literature is the model of citizenship studied when addressing environmental behaviours overtime. Environmental citizenship studies are rare and solely describe its emergence, while most of the field is occupied by studies carried out on ecological citizenship, where authors began studying the private sphere and individual actions. Finally, it seems that the literature is heading strongly towards studies on sustainable citizenship, focusing on political consumerism embedded in sustainable economic practices.

Clearly referencing to Dobson's definition of the ecological citizen, Wolf et al. (2009) aimed at exploring the normative claims of ecological citizenship by analysing how participants in Canada responded to climate change (Wolf et al., 2009, p.504). The case study was carried out to test how ecological citizenship responsibilities are perceived and then enacted. This research was carried out with participants who were identified as key actors on climate topics as well as participants who were to represent the population at large (Wolf et al., 2009, p.508). Findings reported a strong sense of collective responsibility, where most of the participants shared the belief that acting on climate change is part of being 'a good citizen' (Wolf et al., 2009, p.513). Furthermore, intergenerational solidarity, as well as international solidarity, were identified as strong factors in the research, where the participants often referred to children, alongside the effects of climate change

in other countries, emphasizing that they easily connected environmental conscious behaviour to factors outside of their immediate realm (Wolf et al., 2009, p. 514). In all, the researchers felt that ecological citizenship was already present in this community, stating that "this analysis presents strong evidence that practising ecological citizenship motivates individuals' responses to climate change ... The participants in this research recognise and enact their individual responsibility and thus take a necessary first step toward changing the way in which civic responsibilities for global problems like climate change are structured" (Wolf et al., 2009, p.519).

Yet another research is that from Carolan (2007) on the identification of ecological citizenship, who carried out a study focused on a non-profit seed bank, Seed Savers Exchange (SSE), which saves and sells fruit and vegetables. Their research aimed at answering the question whether SSE had the ability to embed individuals with commitments to the human and non-human realms by having a tactile experience with seeds, fruits, and vegetables (Carolan, 2007, p. 16). By having the participants walk around the centre and feeling the seeds, fruits, and vegetables, as well are carrying out interviews with the participants involved, their results were that practices and attitudes can be changed through a 'tactile space' of learning. The findings claim that the changes in attitudes were felt by the participants also after having left the space, "…it appears that SSE, in making such abstract and often only indirectly known phenomena as "genes" and "biodiversity" more meaningful to individuals, deeply affected how visitors of this space came to view these entities. And in some cases, those effects appeared to remain with individuals even after they had left the grounds of SSE. In those instances, then, something similar to ecological citizenship appears to have emerged" (Carolan, 2007, p.19). The author bases this decision by arguing that even if one is aware of their own ecological footprint, they will probably not be able to significantly reduce it without having a feedback mechanism, which tactile spaces and tactile experiences can provide (Carolan, 2007, p. 7).

Another study carried out on ecological citizenship is the one by Jagers (2009). Using a quantitative approach, his aim was to test whether ecological citizens exist, who they are, and what factors can justify their presence (Jagers, 2009, p.18). Also basing his work directly on Dobson's definition of an ecological citizen, Jagers (2009) carried out a survey on 3000 Swedes between the ages of 15-85 and found that about 25% of respondents can be identified as ecological citizens and continues by identifying the four factors which he believes to affect this willingness. The first factor is ideology, arguing that the more left wing the individual is the more likely he is willing to act. The second factor is the individual interest in the environment. The third, and most significant factor, is how severely the participants viewed the environmental threat. The fourth and final factor the author identifies is age, where the youngest the person, the higher the willingness to act (Jagers, 2009, p.33).

Although methodological trends are challenging to identify in this field, there is clearly a strong trend concerning researching consumption behaviours, as it is considered a common area where individuals can showcase citizenship practices.

Seyfang (2006) investigated with a mixed method approach whether ecological citizenship, basing the definition on consumption in the private sphere, could

influence daily household choices, namely their consumer behaviour focused on the purchasing of local organic food. The results showed that the initiative of organic food networks actively promoted ecological citizenship, as both the organization and the consumers began expressing ecological citizenship values such as justice, awareness of their ecological footprint, and solidarity (Seyfang, 2006, p.393). The author concluded the study by addressing the influence which ecological citizenship can have on policy research as well as on motivations for sustainable consumption.

Micheletti et al. (2012) have also studied the role of sustainable citizens and the significance of everyday consumption. They argue that the role of citizen and consumer are highly linked together, and that everyday patterns of consumption allow us to understand the multifaceted concept of political consumerism (Micheletti et al., 2012, p. 141) The authors used a cross-national survey approach on Swedish citizens and focused on the political acts of boycotting and buycotting. Their results showed high levels of boycotting and buycotting in both younger and older age groups, reflecting labelling schemes for consumers to make sustainable choices easily (Micheletti et al., 2012, p.157). These results lower the threshold for sustainable citizenship practices, however, a high percentage of young Swedes state that they purposefully purchase goods due to environmental, political and ethical reasons, signifying that their choices are at least somewhat based on processes of sustainable development (Micheletti et al., 2012, p.158). Furthermore, their results also tapped into citizenship beliefs, and their interpretation of results states that the respondents had connected their consumption choices to the three expectations argued to promote a healthy political community, namely solidarity, duty, and information seeking. Although the authors state that they cannot claim whether these indications can clearly foreshadow the emergence of sustainable citizenship, they generalize that political consumers adjust their choices to different degrees, considering not only their own needs, but also those involved with safeguarding their environment and other human beings (Micheletti et al., 2012, p. 158).

A tension easily identifiable is that of the definition of the mode of citizenship itself. While many authors refer to Dobson for his coinage of environmental and ecological citizenship, there is still confusion during the years before Dobson's distinction. For example, Burgess & Harrison (1998) carried out surveys and in-depth discussions with residents in cities in the United Kingdom and in The Netherlands, to see how communication between leaders and locals could strengthen the pursuit of sustainability. In the results they claim that between the two countries, environmental citizenship was seen in differing ways, where in The Netherlands the focus was on success through the individual voluntary level and projects focused on the actions in the private sphere. However, a defining characteristic of environmental citizenship is that it is placed exclusively in the public sphere, thus this study would nowadays refer to ecological citizenship.

It can be hard to identify where the field is going precisely, however it is noticeable that the focus has shifted from governmental regulation to encompass individuals, and how their choices also have significant impacts in the safeguarding of resources. As to study the degree to which these types of citizenship practices affect the general political process, other practices aside from political consumerism may be identified in the future as points of departure for further research.

3 Synthesis: Deriving a Theoretical Framework

As to be able to answer the research question, following the literature review the subsequent section provides a theoretical framework which will be then used to analyze the data. Here a new version of citizenship based on environmentally conscious behaviors, through the interrelated concepts of environmental, ecological and sustainable citizenship is developed, alongside defined characteristics to then empirically observe whether Swedish Lund University students can be identified within this type of citizenship.

The three notions of environmental, ecological, and sustainable citizenship have undistinguishable similarities and fall under the same umbrella with a common aim, to have a community striving for sustainability, safeguarding nature, resources and fellow human beings, as well as considering past and future challenges, and incorporating these values and ideals in their everyday choices. Nevertheless, the basic characteristics of them differ, thus not making them all adapt to be studied following the same ideals.

First, this research follows the post-cosmopolitan strand as opposed to the liberal one. This is because, unlike the liberal strand focused on the individual maximization of utility, post-cosmopolitanism emphasises the non-reciprocal approach to obligations, as the burden of climate change is not created by all individuals equally, thus crucial if we are to acknowledge that every individual has different lifestyles as well as beliefs and differing ecological footprints. To compare, following a liberal point of view where individuals aim at maximising their own liberty would be counterproductive as this would ultimately remove the focus of moral responsibility.

Directly related to the post-cosmopolitan strand, the focus here will be on the private sphere. Post-cosmopolitanism emphasizes the inclusion of the private sphere as it is virtually impossible to strive for sustainability and environmentally conscious behaviour if citizens are not willing to make changes in their day to day choices. Nevertheless, for this specific research any sphere beyond it has been disregarded, as seen in sustainable citizenship. This is because my study is strictly taking in individual citizenship practices, therefore to tap into corporations and businesses, although crucial stakeholders in the pursuit of sustainability, does not fall within my scope.

Concerning the differing characteristics of rights versus responsibilities, this thesis will focus on the notion of responsibility following the idea that the relationship between citizens itself should raise a common goal for present and future generations, thus having an embedded attitude towards the greater good. This, in contrast to the notion of rights, which creates a territorial obligation

concerning the relationship which it builds between the state and the individual. This directly connects to the chosen non-territorial aspect, as one cannot deny the consumption of global goods for examples, or more generally, that our ecological footprints are not delimited by space and time. Furthermore, including the notion of rights in this research would widen the scope to include the relationship between state and citizen, such as laws and regulations, straying away from the original focus.

A couple of aspects must be cleared up. Since all the features of ecological citizenship have been chosen, this brings up the question of why not solely use this approach on citizenship rather than intertwining the three. It is important to first note a factor which could cause confusion. As is seen in his book 'Green Political Thought' (2007), as well as in more recent contributions (Dobson, 2009, p.125), Dobson uses the terms "environmental citizenship" and "ecological citizenship" interchangeably, however the two differ if we are to consider the origins of the terms themselves. Dobson (2003) states that although the two different notions of citizenship are set in different manners, neither of them is superior to the other, and rather, they are both heading in the direction of a sustainable society.

Although these two types of citizenship differ on several levels, they are spheres which overlap, and which mutually reinforce each other. Individuals can claim reciprocal rights as environmental citizens, which thus leads to identifying the moral claims of these rights, and those with a larger ecological footprint recognize their impact on the environment, and as ecological citizens, identify these non-reciprocal obligations where they must lower their footprint. This connection between ethics and civil responsibility highlights the way the two spheres overlap (Humphreys, 2009, p.175). Following the notion that environmental and ecological citizens have deep rooted values concerning the environment, rather than following external stimuli such as fiscal measures, Dobson (2010) subsequently summarized environmental and ecological citizenship in his writings as both focusing on the common good and encompasses a moral and ethical approach (Dobson, 2010, p. 38). All things considered, as the scholar himself began using the two terms environmental and ecological citizenship interchangeably, and other such as Humphreys (2009) have argued that the two are undeniably interlinked and overlap in practice, it would have been an error to not mention it in this research as the two can be mutually reinforcing.

Moreover, there is a crucial aspect of sustainable citizenship which, even if not mentioned in the above table, is of valuable interest to this research. The focus of sustainable citizenship is directly related to that of sustainable development, encompassing all its three pillars, namely economic growth, environmental protection, and socio-political equity (Micheletti et al., 2012, p. 144). While on the other hand, ecological citizenship focuses on ecological principles with an emphasis on the care for the environment (Dobson, 2007, p.15). Therefore, if we were to focus solely on sustainable citizenship, the focus of environmental sustainability would shift to include social and economic sustainability as well.

To conclude, from this point onward and to not create any confusion, the mode of citizenship which will be defined and therefore tested in the following section will be referred to as 'ecologically sustainable citizenship'.

To keep with the focus, and derived from the three notions of environmental, ecological, and sustainable citizenship, the operationalized definition of citizenship which this thesis will be looking at can be proposed as follows:

The ecological sustainable citizen pushed by a moral responsibility:

- *Willingly seeks out and takes part in events and organizations with a pro-environmental orientation with both local and global aims;*
- *Consumes and purchases goods keeping in mind that private environmentally related actions have publicly environmentally related consequences;*
- *Seeks out to minimize their own ecological footprint and support as well as encourage others in doing the same.*

3.1 Dimensions

Since the data will be collected from Lund University students, according to the above definition the specific dimensions involved with ecologically sustainable citizenship should be more clearly explained. This is done to frame this research as having a three-pronged approach, as well as provide further insight on what led to the definition. University students, following the assumption that they are over the legal age, can showcase citizenship practices, however they still come across barriers. Financial barriers are arguably the most prevalent ones; as there are clear limitations to spending habits and thus limitations to showcasing citizenship practices when it comes to consumerism. Nevertheless, to contrast the financial limitation, it can be argued that students have a much more flexible schedule and are able to organize their time as they please. Therefore, the above definition stemmed from the belief that there are three main dimensions in which students can express their citizenship practices in pursuit of environmental sustainability which are not blocked by barriers.

3.1.1 Political Dimension

Political strategies engaged with environmentally conscious behaviour and sustainable development have been around for many years, and while the effectiveness of them depends on the authors of said strategy, the system in place which can strengthen or weaken a strategy, and even on the nature of the strategy itself, it is the citizens which are key. They are the factor which in the end prove indispensable to the success or failure of a strategy, and they often serve as the ones which kickstart a process.

This dimension pertains itself with behaviours clearly aiming at making a difference on a larger scale and identifying the role of the individual in relation to the role of larger institutions which directly affect their lives. It is crucial for citizens to be involved and active concerning their government. However, it would have created several issues to focus on the most common manners of political

engagement for this research, in this case, voting, as Sweden has elections every four years and since University students are minimum 18 years old, it is unlikely that all survey respondents would have participated in any elections. Therefore, other aspects had to be identified. In this case, students participating in organizations and events focused on civic engagement has been linked to participation in the political process later in life (Morgan & Steb, 2001, p. 156).

3.1.2 Consumer Dimension

Consumer behaviour is one of the main opportunities where individuals have the possibility to showcase their citizenship by deciding what goods and what amounts of them to purchase, as well as from whom. Consumerism is an important aspect of sustainability, as nowadays it can be argued that we live in a capitalist environment tailored around hectic schedules, where there is an abundance of one-time use products, products created by cruel foreign labour, and companies polluting our environment to achieve cheaper modes of production.

Even though it can be argued that the responsibility of the causes of these issues should directly be placed upon governments and businesses, my theoretical framing of citizenship highlights the individual moral responsibility which affects citizens. The consumer dimension is based on producer choices built on attitudes. This dimension has a vast importance when carrying out studies on university students as a substantial amount of marketing attention is given to the younger generation, due to the over-generalization that there is a higher concern for personal appearance and social status which comes alongside brands (Micheletti & Stolle, 2006, p.1). This statement however falls short of generalizability, as many young people are thoroughly involved in the fight against the consumer-based society, as political consumerism was ranked the highest mechanism in which young people engage in political activities in a study on young Americans aged between 15-25 (Orlander, 2003, p.1).

3.1.3 Social Dimension

Based on the notion that norms, rules, and beliefs affect human behaviour, the social dimension shapes individuals in behaving socially even before they enter society. The social dimension can be linked to sustainability as the pursuit of a humane life for all members of society. (Dempsey et al., 2011, p.290). States have become predominantly involved in sustainable development especially since 2008, where over half of the world's population resulted in living in urban areas (United Nations Population Fund, 2007). This has thus shaped the social world which communities interact within. Factors such as cultural traditions, community, and participation proved to be important aspects when aiming for inclusion and justice (Dempsey et al., 2011, p.291).

The social dimension will focus on the behaviour of individuals in their local sphere, as dictated by their beliefs and values. It can be argued that Sweden has

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supported an environmentally conscious platform for its citizens to live in, facilitating norms and values which thus affect environmental behaviour. However, there is no clear obligation for citizens to partake in sustainable practices, rather, it is up to the individuals themselves to decide whether to take the extra step.

3.1.4 Justification

A three-pronged approach has been undertaken as it will aid in illustrating three distinct manners which citizens engage in to portray environmentally conscious behaviour. The political, consumer, and social dimensions provide a foundation for the definition of citizenship given above. As to fully make a change and strive for sustainable development, citizens must be politically involved, be aware of their choices as consumers, and have a moral responsibility towards their community. While the three are concordant dimensions, it is not implied that they all occur at the same time. While focusing on one specific dimension would have rendered further in-depth knowledge on a specific aspect, the three separate ones allow me to further dwell into the definition of citizenship and identify a larger number of attitudes and behaviours involved in the complexity of environmentally conscious behaviour.

The behaviour of an individual citizen is not solely constructed based on their political participation, their consumerism, or their behaviour within society. It is rather a spectrum of choices and actions which overlap and reinforce each other continuously. By using this approach of looking at three dimensions, light can be shed on different mechanisms which can push a citizen to help solve environmental problems. The precise manners in which the three dimensions will be studied will be emphasized in the methodology.

Following the theoretical framework on ecologically sustainable citizenship, categories as to establish whether these types of citizens exist must be denoted.

The categories of ecologically sustainable citizens are thus as follows,
- Established ecologically sustainable citizens are those who engage in pro-environmental behaviours all the time;
- Budding ecologically sustainable citizens are those who engage in pro-environmental behaviours most of the time; and;
- Stunted ecologically sustainable citizens are those who engage in pro-environmental behaviours barely ever.

Going forwards, collecting the survey data and carrying out three different levels of analysis will allow to shed light on whether differing behaviours in the three dimensions are more common than others, identifying whether there any relationships between the data which do not seem immediately apparent, how Swedish Lund University students fall upon the previously mentioned categorization, and finally, to identify whether the different behaviours from the three dimensions fall together.

3.2 Limitations

This theoretical approach comes nonetheless with some limitations.

The first issue to consider is free-riding, or also referred to as the tragedy of the commons. Environmental, ecological and sustainable citizens regard the environment as a common resource, meaning that no one can be excluded from benefitting from it, although the resource is finite (Dobson, 2010, p.19). Since this citizenship bases its problem-solving approach on individual action, it is likely that some individuals will abstain from environmentally conscious citizenship practices as they expect others to do so for them (Micheletti & Stolle, 2012, p. 113). As Hardin (1968) initially developed the concept, this "tragedy" occurs when individuals decide not to maintain a resource since they cannot be excluded from it, and thus rely on others for maintenance. A suggested model of response to the free-rider problem is in fact environmental education from an early age. Keeping in mind that this study will focus on Sweden, this limitation can be overcome to a certain extent by relying on environmental education which takes place in Swedish schools (Lassøe & Öhman, 2010, p.1). Nevertheless, it is also impossible to assume that all citizens take the same responsibility when it comes to environmentally conscious behaviour, therefore this limitation must always be kept in mind.

Moreover, individuals can be told about ecological sustainable citizenship practices and take part in carrying them out but for other reasons that those embedded in the notion itself (Micheletti & Stolle, 2012, p.113). This can be explained by individuals in a community which are vegetarians or vegans. Although they may be aware of the environmental cost which encompasses meat-eating, they still may be skewed towards a vegetarian or vegan lifestyle due to other purposes, such as price, health benefits, and so on. This emphasizes other values which are not directly related to the notion of sustainable citizenship and therefore causes some theoretical issues. However, with a clear and narrowed down methodological approach, this issue can be avoided to a large extent by explicitly asking participants their motives.

A final limitation which should be addressed is the question on the effects of individual actions, concerning the greater structures which individual activity is based in. It cannot be ignored that citizens act within institutional, social, economic and cultural contexts which not only shapes but also constraints citizens (Sáiz, 2005, p. 176). To counteract this, external structures have the capability to affect citizens' impact on the environment, as shown in the project 'Sustainable Households: environmental policy and everyday sustainability', carried out by the Swedish Environmental Protection Agency in 2011. They concluded that "Social and personal norms play an important role in explaining the prevalence of environmentally friendly activities …, but at the same time individual responsibility has its limits. Collective measures … are often needed to promote environmentally friendly activities for which otherwise the personal sacrifices become too burdensome" (Swedish Environmental Protection Agency, 2011, p.12).

4 Methodology

Following a deductive approach from the theoretical framework, an appropriate methodological conception is crucial in defining the observable implications of ecologically sustainable citizenship. Following the research question, a quantitative method has been used.

It is important to note however that the difference between qualitative and quantitative research is not as clear cut as to consider the two opposites. Studies can lean more to one side or the other of the spectrum, resulting in a research being mostly qualitative or mostly quantitative, depending on the approach (Creswell, 2014, p.32). This study therefore can be regarded as being mostly quantitative, due to the presence of minimal qualitative aspects within the quantitative approach, to be later explained. I have chosen to use a mostly quantitative approach as they can provide a numerical description of trends, attitudes and behaviours of a population buy taking the experiences from a sample of said population. Using a qualitative approach within this research would have solely provided me with data from a limited set of individuals, thus limiting me to smaller amounts of data, and the inability to even remotely generalize, which, when speaking of citizenship, is a crucial limitation.

4.1 Ontology and Epistemology

Ontology and epistemology have become contested issues in social science research due to the lack of agreement on the positions which researchers yield in terms of the two. Marsh and Stocker (2010), two renowned scholars in the field of social science research, claim that one's epistemological position has clear methodological implications, where positivists follow quantitative methods and interpretivists follow qualitative methods.

However, several scholars have disagreed with Marsh and Stocker's (2010) categorization, arguing that methodological approaches in research should not be affected by any ontological and epistemological assumptions, rather, they should be guided by the research question (Grix, 2002, p.180; Creswell, 2014, p.3). Following this, the theoretical framework of a study is also in charge of guiding a researcher into the most effective choice of method.

My research therefore is placed both in an anti-foundationalist ontology, following a constructivist and interpretivist epistemology; as well as a foundationalist ontology following a positivist epistemology. Considering the aims of this specific research, disregarding one of these two approaches would not allow

me to gather the data which I believe to garner the best results to answer my research question.

The constructivist epistemology suggests that reality is created by an individual's interaction with the world, therefore constructed rather than found (Gray, 2004, p.20), as individuals interpret information differently; such as information on climate change and the notion of citizenship, and therefore have differing responses. A constructivist approach argues that individuals carry out some actions rather than others based on ideas, beliefs, norm, or other interpretive filters. Therefore, individuals carry out environmentally conscious behaviour by the meanings which they attach to specific actions. These meanings are often based on social and historical norms and are developed through individuals' interactions and keep into consideration the specific contexts in which individuals live in (Creswell, 2014, p.8). Since citizenship is argued to be a social construct which has its foundations in society, I believe that a constructivist approach is valuable to the research. On the other hand, I am unable to differentiate myself from a positivist epistemology as well following my quantitative approach. Thus, argues that social phenomena, such as in this case, the notion of citizenship, are directly observable. I believe that my research implicitly falls under a positivist epistemology, rather than explicitly.

The tensions between a foundationalist and anti-foundationalist approach in this research can be summarized by stating that all the behaviours and beliefs involved in citizenship for environmental sustainability are socially embedded, however, by being empirically measured, we can identify common behaviours and how they relate to one another.

4.2   Survey Design & Case Selection

The methodological design of this research follows a survey design. The primary purpose of survey designs is to describe attitudes, behaviour and other characteristics in groups of people (Maruyama & Ryan, 2014, p. 391).

The design will follow a cross-sectional survey approach. This approach is characterized by the collection of data occurring at the same point in time from the participants. This is done both due to feasibility regarding time constraints, as well as the strong ability to prove or disprove assumptions at a precise instance. Furthermore, since individual perceptions are constantly affected by multiple spheres; including social, cultural, and economic aspects, it fits within my aim to explore how individuals behave as ecologically sustainable citizens at a specific point in time.

The precise mode of data collection employed in my research is internet-based questionnaires on the Google Forms platform, as well as physically handing out and collecting surveys in person. I have chosen these methods due to several reasons. First, internet-based surveys are considered an extremely cost-effective method to gather data. Moreover, this method allows me to exclude interviewer bias, as research has shown that the way questions are asked verbally can influence

participants' responses (Maruyama & Ryan, 2014, p. 397). This method also allows for the respondents to take their time when answering the questions and not feel pressured or rushed through the survey, which is especially crucial in this case as the participants may have to consider their responses carefully when it comes to attitude questions. Yet another reason why I have chosen this design is due to the degree of anonymity which the respondents have received. It was however necessary to also employ in person administration of the survey as it was very challenging to reach a decent number of respondents solely through the internet.

A feature of the surveys is both close and open-ended questions. They[3] have allowed me to gather both standard information from the respondents through the operationalized dimensions to be described later, as well as giving the respondents a chance to dwell into any issues which they believe to be important and add any aspect which the survey may have left out. The close-ended questions are far more straightforward for the participants and result in simpler coding and analysing. Furthermore, they can remind respondents of some aspects which they may have otherwise overlooked (Heath & Johns, 2010, p.60). On the other hand, the open-ended questions have given me the opportunity to dwell deeper. This is so the respondent can give more information if they believe that an aspect has been left out or has not been given enough attention, and thus allowing me as the researcher to have a deeper understanding behind their choices.

The specific types of questions used in the survey are verbally denoted[4] rating scales, as well as simple "yes or no" questions. Rating scales are questions characterized by comparing different notions on a common scale, usually numerically based from one to ten, or verbally based. Having verbally denoted rating scales improves validity and reliability as they aid in clarifying meanings on the points (Krosnick, 1999, p. 544).

For my research I have chosen to employ nonprobability sampling, where the participants are chosen based on their availability (Creswell, 2014, p.148). I have chosen this method both due to the time constraints and convenience, as well as due to the specific aspects of the participants which I believe will render further fruitful results. The form of nonprobability sampling used is convenience sampling, where respondents are chosen due to their accessibility to the researcher (Blair & Blair, 2015, p. 17). This type of sampling also involves volunteer sampling, which, when using internet-based surveys, are very common are respondents freely choose to respond.

The sample is made up of Swedish Lund University students in differing faculties; with a minimum age of 18 due to ethical reasons, and who thus have individual control on their choices as a citizen. Scholars have debated on the usage of university students in attitude studies, however Lynch (1999) argued that having a homogenous respondent population is preferred and that using the responses from a set of people from the "real" world is no more generalizable than using students. Furthermore, he argued that using random sampling led to further errors in variance because of the countless background factors which are not considered in studies.

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[3] See Appendix 1 for survey
[4] Scale will follow "Always – Often – Every Now and Then – Rarely – Never"

Since students mostly have similar characteristics, they provide higher correlation (Peterson, 2001, p. 454). Furthermore, it cannot be contested that students over the age of 18 are still citizens and carry out actions based on their own individual beliefs. Since this study is solely focused on Lund University students, where the age, experience, social class, and intellect are variables which will most likely result to having little variance, I do not aim to be able to generalize to the greater population in Sweden, but rather, to remain in the bubble of Lund University.

Nevertheless, it must be considered that students usually belong to groups with narrow age ranges and who have the possibility to obtain higher levels of education.

This decision of an individual unit has been made to identify in what ways Lund University students behave as ecologically sustainable citizens in their own day to day life. Therefore, the population on which conclusion will be drawn to reflect Swedish university students in Lund, Sweden.

4.2.1 Reliability and Validity

Reliability refers to the measure of how reproducible the survey data is. In any research some error will be present, and when speaking of surveys, they broadly belong to two categories; random error, which is the mode of error which occurs within all research, and measurement error, which is based on the performance of a specific instrument when collecting data (Litwin, 1995, p. 6). A measure which my research uses to increase reliability a practice engaged in implementing multiple questions or items to measure the same issue, in this case, each dimension. Scholars have argued that data sets are much richer if several questions are used to study a specific aspect (Litwin, 1996, p.21).

On the other hand, validity refers to how well the research measures what it is set out to measure. Face validity, meaning a review by an individual not involved with my research project (Litwin, 1995, p. 34) has been carried out, to see whether they identify any issue which as the researcher I could have missed out on. Furthermore, content validity, meaning a review by an individual who have some basic knowledge on the content of my research (Litwin, 1995, p.34) has also taken place. This has been done to be confident that the survey questions include every aspect which is needed for my research, as well as pointing out aspects which should not be included.

4.2.2 Limitations

Several limitations must be addressed. First, although all researchers want their data to be as accurate as possible, errors such as response errors, where the responses given lack accuracy, can always occur, so it is valuable to keep this in mind.

When using a cross-sectional survey approach, it is complex to be able to rule out alternative explanations for the relationship between the variables, as well as removing the possibility of analysing changes over time. This thus leads to argue whether the specific time frame chosen provides representative results at all.

However, keeping in mind the economic and time constraints which come along with this specific research, a cross-sectional approach is the most fitting. Moreover, citizenship is a notion which changes over time as previously discussed. Therefore, the only manner to empirically observe it is doing so at once instance in time.

There are also several limitations which come alongside internet-based questionnaires. Although there is a very low cost with internet-based questionnaires, these types of surveys often have relatively low response rates, thus the handing out in person. Furthermore, a key issue is that written instructions are not always as clear as verbal ones and, in this case, as the researcher, I was unable to aid misunderstandings. To diminish this limitation, simple, concise and clear instructions have been used as well as engaging in validity checks which has allowed me to sense if any further changes were to be made when it came to comprehension.

Close-ended questions also have their weaknesses. A pre-determined list of answers may exclude issues which respondents find important and may prevent them from putting in effort in answering the questions. However, as previously mentioned, open-ended questions present in the survey will allow for improved validity in this case. Connected to this limitation, is that of rating answers and the mid-way response. It is very common for individuals who are filling out a survey to stray from the extreme responses and remain in the "safe" mid-way ones as to not be extreme, thus this also needs to be kept in mind.

A final limitation to consider is that of social desirability. Social desirability argues that there are social norms which guide behaviours, and individuals tend to overreport behaviours which are considered 'good' and underreport those which are considered 'bad' (Kreuter, 2008, p. 848). Since the survey is based on what individuals believe to be a 'good' mode of environmentally sustainable behaviour, it is likely that they may have overreported their environmentally conscious behaviours and beliefs rather than objectively state their actions. Studies have shown that self-administration lessens social desirability effects, since the respondent is independently and anonymously answering questions and therefore does not feel obliged to adhere to social norms (Kreuter, 2008, p. 848).

Ethical implications are also to be considered.

Firstly, voluntary participation has been stated at the start of the survey, so no individual asked to take part feels obliged in any way to answer the questions. Within the introductory section of the survey, the purpose, intent, motivations and use of personal data is clearly specified, alongside matters concerning confidentiality and anonymity, which have both be protected. This has thus allowed the participants to be fully informed before they begin the survey and can individually decide whether to take part or not. None of the respondents in the sample have been minors since they will be attending higher education, therefore there has been no need for an informed consent of a guardian or such. Finally, the survey asked the gender identification of respondents, keeping in mind an option for any participant who does not feel comfortable revealing their gender, and for any participants who do not adhere to traditional binary measures of gender.

4.3   Observable Implications

In this section, the three dimensions have been operationalized to identify clear behaviours which have been the bases for the survey questions. Behaviours linked to underlying attitudes have been chosen and presented below to verify that the survey would be able to ask questions which would truly make a distinction between individuals following ecologically sustainable citizenship practices as defined by the underlying moral responsibility, and those who do not.

4.3.1   Political Dimension

A clear example of student participation in the political dimension occurred on June 12, 2015 at Lund University. The Fossil Free Lund University Campaign, signed by 1800 students and 183 staff members over a two-year period (Fossil Free Sverige, 2015) bound Lund University to divest direct holdings from coal, oil, and gas companies within 5 years. This initiative mobilized countless individuals and showcased the extent to which university students can organize themselves in other as to achieve aims in global and local struggles for the future.

Keeping in mind this previous example, the political dimension will be tested out considering the events and opportunities for Lund University students to engage themselves in many activities outside of formal studying hours, specifically related to activities with a pro-environmental orientation. It is assumed that ecologically sustainable citizens will seek out, be interested and engage in these types of activities at the university and beyond. The questions will be as following, with "yes" or "no" as possible answers:

- I am planning to attend/have attended events which are part of Lund's Sustainability Week (Hållbarhetsveckan i Lund) this April 2018
- I actively look for events organized by Lund University concerned with sustainability
- I engage myself in one way or another with organizations (For example: student organizations, NGOs, charities, etc) involved in sustainability

Moreover, an open-ended question asking the participants if they could identify further mechanisms:

- Are there any other ways in which you engage in politics to support sustainability? (For example: protesting, voting for green parties, etc.?)

4.3.2   Consumer Dimension

It is individuals who, by choosing to purchase or not to purchase products, portray the needs and wants of a community and showcase to businesses and such what is important to consumers.

Although I have referred to the financial limitations which come alongside being a student, there are several consumer choices which are not directly affected by budgeting. For example, the choice of whether to eat meat or not is rarely ever based on financial factors, but rather on choices focused on other aspects, such as health, the environment, or on animals. In my research the consumer dimension will be based in fact on food choices and the reasoning behind said choices. The consumer dimension will be based on scenarios where a larger or smaller budget would not have an impact on the choice made by the individual. This, as it is assumed that one chooses to eat meat or not based on beliefs rather than a budget; as well as refraining from purchasing certain goods. Identifying whether students incorporate committed changes to their lifestyle, it is assumed here that ecologically sustainable citizens choose not to eat meat, prefer eco-labelled goods, and try minimizing their waste due to consequences on the environment, rather than due to other reasons.

The questions will be as following, with "always", "often", "every now and then", "rarely" and "never" as possible answers:

- I follow a meat-free diet mainly because of the effect it has on the environment
- I choose food products keeping in mind the amounts of plastic waste I produce
- I am more likely to purchase eco-labelled foods to reduce negative effects on the environment

Moreover, an open-ended question asking the participants if they could identify further mechanisms:

- Are there any other ways in which you as a consumer act to push for sustainability? (For example: buying second hand, avoiding products made in sweatshop conditions, etc.?)

4.3.3 Social Dimension

An example which to consider when speaking of the social dimension is that of Sweden and recycling. According to the Swedish Institute (2017), it was thanks to several implementations such as recycling stations no more than 300 meters from residential areas and tax management, which resulted in a change of 38% of recycled household waste in 1975 to now over 99%, in one way or another (Swedish Institute, 2017). A strong encouragement to both consumers and producers by the Swedish state has allowed to develop a solid social and cultural responsibility; while still aiming for better results.

The social dimension will also tackle social media engagement from students. Social media has become a tool for citizens to connect and engage with issues, as well as environmental challenges. With the social media's ability to reach vast amounts of individuals in a short period of time, even local climate issues have been broadcasted on a global scale to spread awareness. Moreover, many members of younger generations use multiple social media platforms daily.

Here the assumption is that an ecologically sustainable citizen not only recycles but is also aware of specific mechanisms embedded in recycling specific materials, such as small electronics, due to the need for extra effort when managing the waste; as well as uses their personal social media accounts to spread and engage in environmental behaviours.

The questions will be as following, with "always", "often", "every now and then", "rarely" and "never" as possible answers:

- I take the time to properly recycle my waste
- I am aware on how to recycle small electronics and take the extra time to do so correctly
- I use my social media accounts to keep up with climate related initiatives
- I use my personal social media accounts to support and spread environmental messages

Moreover, an open-ended question asking the participants if they could identify further mechanisms:

- Are there any other ways in which you act "sustainably" in a social manner? (For example: environmental volunteering, pushing other to recycle, etc.?)

4.4   Data Collection & Analysis

The data was collected both on the Google Forms platform and manually, then exported to SPSS for statistical analysis.

Concerning the first level of analysis, namely the descriptive statistics, the data was manually exported to SPSS and then analysed using the software.

The second level of analysis was also carried out using SPSS, where the three categorizations of the ecologically sustainable citizen were operationalized and measured them as so.

The third level was also carried out on SPSS and was factor analysis. Factor analysis can aid in summarizing multiple questions into factors to simply the interpretation process. The aim of the three political, consumer, and social dimensions was to measure whether respondents reflected those specific dimensions in ecologically sustainable citizenship. This research has followed a more exploratory approach to factor analysis, as no factor loading model has been previously prepared. Rather, the aim of this analysis is to test in what manner the items in each dimension flow together on constructs. Within the social sciences, it is uncommon to assume that a data set encompasses uncorrelated items. We begin here with the assumptions that the items in the political, consumer, and social dimension will have correlations between them. Because of this assumption, the results were interpreted from the rotated component matrix, which will be further explored in the results.

4.5   Respondent Demographics

The survey was conducted through the Google Forms platform and in person between the 20th and 27th of April 2018. In all, 142 individuals responded. Amongst these, 46 responses were collected electronically while the remaining 96 were physically collected by handing out the survey in person at different faculties. However, eight respondents have been excluded since they did not belong to the sample.

As all members of the sample are Swedish Lund University students, none of the respondents were below the age of 18 or surpassed the 35-year mark, as often students are a younger group of society. As visible from the graph, 83,6% of respondents (n=112) are between the ages of 18 and 25, while 16,4% of respondents (n=22) are between the ages of 26-35. The age ranges were carried out in this way as shorter lists of options reduce respondent fatigue, and, keeping in mind the focus on youth in this research, smaller age ranges were not deemed necessary. Although options for higher age ranges were available, no respondents resulted in being over 35.

Age

		Frequency	Percent
Valid	18-25	112	83,6
	25-36	22	16,4
	Total	134	100,0

Table 2 Age of Respondents

The survey respondents identified as 64,2% female (n=86) and 35,8% male (n=48). None of the 134 respondents identified as non-confirming or preferred not to respond. Although some scholars argue that females are more likely to respond to surveys, survey non-response behaviour is still complex to understand and is influenced by several factors such as survey length and the presentation of the survey itself. Considering that this was a non-probability sample and that I as a researcher had to reach out to whomever was available, the gender division is completely up to random occurrences.

Gender

		Frequency	Percent
Valid	Male	48	35,8
	Female	86	64,2
	Total	134	100,0

Table 3 Gender Identification of Respondents

Finally, the respondents all belonged to one of the eight faculties listed in the survey. Lund University has ten faculties, however two have been excluded, namely Campus Helsingborg, as the students in said faculty do not study in Lund most of

the time and thus would be more challenging to administer the survey to, and the School of Aviation, for the same purposes. As is seen from the graph, the largest section of respondents, 31,3% (n=42), belong to the Faculty of Social Sciences, followed by the Faculty of Engineering with 23,9% (n=32), the School of Economics and Management with 12,7% (18), the Faculty of Medicine with 11,9% (n=16), the Faculties of Humanities and Theology with 10,4% (n=13), the Faculty of Law with 6,7% (n=8), the Faculty of Science with 2,2% (n=4), and finally, the Faculty of Fine and Performing Arts with 0,7% (n=1).

Faculty

		Frequency	Percent
Valid	Faculty of Engineering (LTH)	32	23,9
	Faculty of Science	3	2,2
	Faculty of Law	9	6,7
	Faculty of Social Sciences	42	31,3
	Faculty of Medicine	16	11,9
	Faculties of Humanities and Theology	14	10,4
	School of Economics and Management	17	12,7
	Faculty of Fine and Performing Arts	1	,7
	Total	134	100,0

Table 4 Faculties of Respondents

4.1   Cross-Tabulations

Cross-tabulations have been used to state whether the categorical variables regarding the demographics have any significant association with the results. Namely, whether age, gender, or faculty of the respondents have any statistical difference in relation to ecologically sustainable citizenship practices.

QUESTIONS	AGE Significance	Gender Significance	Faculty Significance
I am planning to attend/have attended events which are part of Lund's Sustainability Week (Hållbarhetsveckan i Lund) this April 2018	0,874	0,292	0,367
I actively look for events organized by Lund University concerned with sustainability	0,454	0,886	0,509
I engage myself in one way or another with organizations (For example: student organizations, NGOs, charities, etc.) involved in sustainability	0,548	0,588	0,484
I follow a meat-free diet mainly because of the effect it has on the environment	0,448	0,250	0,145
I choose food products keeping in mind the amounts of plastic I produce	0,431	0,834	0,395
I am more likely to purchase eco-labelled foods to reduce negative effects on the environment	0,584	0,784	0,576
I take the time to properly recycle my waste	0,059	0,545	0,141
I am aware on how to recycle small electronics and take the extra time to do so correctly	0,349	0,406	0,270
I use my social media accounts to keep up with climate change related initiatives	0,915	0,928	**0,042**
I use my personal social media accounts to support and spread environmental messages	**0,002**	0,717	0,483

Table 5 Chi-Squared Tests Significance Results

By using the categorization of ecologically sustainable citizens we are then able to interpret results.

A priori categorization of ecologically sustainable citizens, as framed previously, and operationalized to be able to empirically measure the responses:

- Established ecologically sustainable citizens are those who answer "always" or "often" 100% of the time;
- Budding ecologically sustainable citizens are those who answer "always" or "often" at least 50% of the time; and;

Stunted ecologically sustainable citizens are those who answer "always" or "often" less than 50% of the time[5].

Choosing the significance level at p=0.05 and carrying out the chi-squared test for independence we can interpret the results.

As seen from the table of results presented above, only two combinations of variables provide us with statistical significance, bolded in the table for ease. Firstly, the age demographic and the fourth question in the social dimension, namely *"I use my personal social media accounts to support and spread environmental messages"* have a significance of 0,002, less than the chosen significance level 0,05, therefore concluding that if we are aware of one's age then, to a certain extent, we can predict the usage of social media accounts to support and spread environmental messages.

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[5] For the political dimension, established ecologically sustainable citizens will be those who answer "yes" 100% of the time, budding ecologically sustainable citizens will be those who answer "yes" at least 50% of the time, and stunted ecologically sustainable citizens will be those who answer "yes" less than 50% of the time.

Crosstabulation of the question

"I use my personal social media accounts to support and spread environmental messages"

% within Age

	Age		
	18-25	25-36	Total
Always	0,9%		0,7%
Often	2,7%	18,2%	5,2%
Every Now and Then	9,8%	9,1%	9,7%
Rarely	40,2%	4,5%	34,3%
Never	46,4%	68,2%	50,0%
Total	100,0%	100,0%	100,0%

Table 6 Crosstabulation of fourth social dimension question and age demographic

As we can see from the specific chi-squared test, only 3.6% of respondents aged between 18 and 25 can be considered established ecologically sustainable citizens regarding this specific survey question, while when we consider the respondents between the ages 25 and 36 18,2% of them can be considered established. Moreover, 86,8% of respondents between the ages of 18 and 25 are categorized as stunted ecologically sustainable citizens, in comparison to the 72,7% of people aged between 25 and 36. This shows that the older group in the survey is more likely to use their personal social media accounts to support and spread an environmental message, which is a result which goes against the literature, as several studies showed how younger individuals are more likely to engage in environmentally conscious behaviours. This result goes against the results which were identified in the previous literature, where many authors empirically found out that the younger the individual, the more likely they are to engage in pro-environmental behaviours.

The second combination of variables which provided statistical significance are faculty and the third question in the social dimension, namely *"I use my social media accounts to keep up with climate related initiatives"*. Again, with a significance of 0,042, less than the chosen significance level 0,05, concluding that to if we know a respondent's faculty then, to a certain extent, we can predict whether they keep up with climate related initiatives via their social media.

Crosstabulation of the question

"I use my social media accounts to keep up with climate related initiatives"

% within Faculty

	Faculty								
	Faculty of Engineering (LTH)	Faculty of Science	Faculty of Law	Faculty of Social Sciences	Faculty of Medicine	Faculties of Humanities and Theology	School of Economics and Management	Faculty of Fine and Performing Arts	Total
Always	6,3%	33,3%	11,1%	4,8%			5,9%		5,2%
Often	15,6%	66,7%	22,2%	16,7%	18,8%	14,3%	11,8%		17,2%
Every Now and Then	25,0%		44,4%	26,2%	25,0%	57,1%		100,0%	26,9%
Rarely	40,6%		22,2%	33,3%	18,8%	21,4%	35,3%		30,6%
Never	12,5%			19,0%	37,5%	7,1%	47,1%		20,1%
Total	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

Table 7 Crosstabulation of third social dimension question and faculty demographic

From this question we can see the clear differences between faculties. The first noticeable result is that 100% of students from the Faculty of Science can be described as established ecologically sustainable citizens when looking at their responses to said question. This is an extreme result, since none of the other faculties go beyond 33.3% (Law Faculty) of respondents being able to be described as established ecologically sustainable citizens. Also, we can see clear differences if we consider stunted ecologically sustainable citizens. The respondents from the School of Economics and Management were by far the most stunted, with 82,4% of respondents falling into that category, while within the Faculty of Social Sciences, Medicine and Engineering the values are of 52,3%, 56,3% and 53,1% of respondents respectively. However, we must keep in mind the sample size here. Overall, there were only three respondents who belonged to the Faculty of Science, while if we compare, 42 in the Faculty of Social Sciences. Therefore, even if this result shows statistical significance, if the sample were more spread out we may have gotten differing results.

All things considered, the overall picture shows a lack of significance between the three demographics and the survey responses. When speaking of the age demographic this is not so surprising, since the survey divided the respondents in two groups only, namely those belonging to the interval of 18-25 and those belonging to the interval of 26-35. If the responses had allowed individuals to insert their precise age, then we may have festered more in-depth results. Thus, this must also be kept into consideration as a limitation.

Gender is also an unexpected response, due to the vast literature engaged in studying the relationship between gender and environment. The chi-squared tests showcase that no survey question was dependent on gender. This can also be argued from the point of view of Sweden as a developed country in many ways, and in this case specifically, in gender equality. Much of the literature on gender and the environment encompasses environmental degradation in gender-specific ways in

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developing countries such as India and Nepal (Agarwal, 1992; Nightingale, 2006). It can thus be assumed that the female respondents of this survey are in no way affected by gender-specific environmental degradation and thus do not have a stronger push in becoming active agents fighting for environmental preservation.

I believe that the most unanticipated is the faculty demographic. It is common to assume that one's educational direction does reflect values and interests of an individual. For example, it would be expected of an individual studying Sustainability Science or Human Ecology to be further invested in environmental sustainability in comparison to an individual studying Mathematics or Mechanical Engineering for example. However, the results do not point in this direction apart from in the one previously mentioned case. A possible explanation to this could be the argument in the literature which states Nordic individuals, and in particular, Swedes, are very environmentally conscious and thus have an embedded moral responsibility in their attitudes which is not affected by educational choices. It would be possible to see a difference in this result if the research had focus specifically on programmes within the University, for example administering the survey to those attending an education directly related to environmental sustainability in comparison to others who can be deemed as far away as embedding environmentally sustainable goals in the students. This may have provided further statistical significance on the effect of faculty to the survey answers.

5 Results 1: Descriptive Statistics

The following section presents the first level of analysis, the aggregate results from the administered survey and is structured according to the three dimensions. This section will showcase which behaviours are more likely to be carried out by the sample. Following this, variance results are presented.

5.1 Political Dimension

POLITICAL DIMENSION	YES	NO	TOTAL
I am planning to attend/have attended events which are part of Lund's Sustainability Week (Hållbarhetsveckan i Lund) this April 2018	19,4% (26)	**80,6%** **(108)**	100% (134)
I actively look for events organized by Lund University concerned with sustainability	19,4% (26)	**80,6%** **(108)**	100% (134)
I engage myself in one way or another with organizations (For example: student organizations, NGOs, charities, etc.) involved in sustainability	22,4% (30)	**77,6%** **(104)**	100% (134)

Table 8 Political Dimension Close-Ended Responses

In the first section of survey following the demographics questions, the respondents were asked to answer the three questions portrayed above by simply answering "yes" or "no". In this case, the "yes" responses were in line with the political dimension of ecologically sustainable citizens. The responses to the three close-ended questions asked in the survey show that the majority of the 134 surveyed Swedish Lund University students do not reflect the derived established ecologically sustainable citizen in relation to the previously operationalized political dimension.

The results presented in Table 8 above represent the active engagement of Swedish Lund University students in activities and events beyond their formal schedule, rather, engagement which solely individuals who have a deep interest and concern for environmental sustainability would partake in. Nevertheless, it is important to keep in mind that the survey was unable to probe into the deeper understandings of why such large percentages of the respondents do not fall into the definition of an established ecologically sustainable citizen according to the political dimension. Many factors can dictate why or why not an individual would voluntarily participate in an event or an organization, ranging from personality traits to other social elements. Nevertheless, it is clear to see through the results the continuity of responses for the three questions, which all stayed along the same percentages.

It was hypothesized here that individuals which reflect established ecologically sustainable citizenship will display a high engagement with events and

organizations with a pro-environmental orientation. The results have so far demonstrated that Swedish Lund University students which responded to the survey do not relate to the political dimension of an established ecologically sustainable citizen.

The political dimension section of the survey ended with an open-ended question where the respondents were able to state whether there were any other political mechanisms in which they engage in to support environmental sustainability.

Table 9 Political Dimension Open-Ended Question

POLITICAL DIMENSION OPEN-ENDED QUESTION
Are there any other ways in which you engage in politics to support sustainability? (For example: protesting, voting for green parties, etc.)

The main way respondents identified themselves as acting in a political manner to support environmental sustainability was voting. When speaking of political behaviour, very often the first mechanism which comes to mind is voting, so it is no surprise that many respondents connected this question to the Swedish Green Party, the Miljöpartiet, concerning Swedish elections. The responses here differed between having voted in an active sense, stating the intention to vote in the upcoming 2018 elections, and signifying that environmental sustainability is a very important factor for them when deciding who to vote for. The main mentioned mechanism, voting for the Swedish Miljöpartiet, clearly showcases this, as the fundamental values of said party are the fight against climate change and fighting nuclear power, as well as a clear ideology based on solidarity with the ecological system, future generations, and the people of the world (Miljöpartiet de gröna, 2013, p. 3)

A smaller number of respondents also identified further mechanisms of political engagement in their pursuit of environmental sustainability. The main manners were signing protest lists, protesting, and supporting specific organizations, the two mentioned being Greenpeace and the Swedish Beekeeper Association (SBR). This differentiated from the respondents as not being directly engaged with NGOs and organizations as such, but rather, providing their support to such entities in more implicit manners. Furthermore, the two organizations identified in the responses, Greenpeace and the Swedish Beekeeper Association, also fall under this scope, as Greenpeace is well known in its mandate to address issues facing climate change, marine reserves, forests, nuclear weapons, as well as chemicals, and the Swedish Beeker Association with the care of bees and engaging in influencing laws and regulations which can negatively affect the beekeeping, such as pesticide use.

Moreover, a handful of respondents also highlighted their educational choices as being manners in which they support environmental sustainability, by naming the university programmes which they are currently enrolled in.

Although the title of the survey had the words "environmental sustainability", the questions regarding the political dimension were not framed to clearly specify that as solely the term "sustainability" was used, which obviously entails more factors such as social and economic sustainability. This was also done to see whether respondents would automatically place themselves in the political dimension of an ecologically sustainable citizen, focusing on their moral

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responsibility towards the environment. In this sense, the answers from the open-ended question showcased the awareness of environmental issues and a tendency towards a pro-environmental position.

5.2   Consumer Dimension

CONSUMER DIMENSION	ALWAYS	OFTEN	EVERY NOW AND THEN	RARELY	NEVER	TOTAL
I follow a meat-free diet mainly because of the effect it has on the environment	24.6% (33)	24.6% (33)	**29.9% (40)**	9% (12)	11.9% (16)	100% (134)
I choose food products keeping in mind the amounts of plastic I produce	8.2% (11)	**35.1% (47)**	27.6% (37)	23.9% (32)	5.2% (7)	100% (134)
I am more likely to purchase eco-labelled foods to reduce negative effects on the environment	17.9% (24)	29.9% (40)	**34.4% (46)**	14.9% (20)	3% (4)	100% (134)

Table 10 Consumer Dimension Close-Ended Responses

Following the political dimension, the respondents were asked to answer three questions framed around the consumer dimension by answering on a verbally denoted rating scale "always", "often", "every now and then", "rarely", or "never". Here, the responses associated with the "always" and "often" options were the ones in line with the consumer dimension of an established ecologically sustainable citizen. The responses to the three close-ended questions asked in the survey show that the majority of the 134 surveyed Swedish Lund University students lean more to reflect the characteristic of a budding ecologically sustainable citizen in relation to the previously operationalized consumer dimension, rather than a stunted one.

From the first question results show that 49.2% of respondents stated that they refrain from eating meat because of the effects it has on the environment "always" or "often", alongside another 29.9% who responded that they do so "every now and then". Vegetarianism and veganism have overtime become more common practices and readily available lifestyles in stable democracies (Micheletti & Stolle, 2012, p. 106). This spread of meat-less diets portrays the choice of citizens to reconsider what goods they are consuming and to engage in political consumption.

In the second question, the most significant number of respondents claimed that they "always" or "often" choose food products keeping in mind the amounts of plastic waste they produce, with an overall 43.3%, alongside an extra 27.6% who say they do so "every now and then". Although known for its lower cost and durability, the awareness of the dangers of plastic have become more and more common. Most plastic is in fact non-biodegradable, and the ones that are heavily rely on many external factors, such as temperature, oxygen, and specific types of

microorganisms (Hopewell et al., 2009, p. 2116). Consequently, high amounts of plastic debris are accumulating in landfills, oceans, and other environments. The results of this question showcase that in one way or another at least 43.3% of respondents are aware of the environmental consequences which can arise from plastic and attach this knowledge to their food purchasing habits.

The final question in the consumer dimension shows that 47.8% of respondents "always" or "often" purchase eco-labelled foods as to reduce the negative effects it has on the environment, alongside an additional 34.4% who do so "every now and then". Eco-labels have been shown to affect consumer choices by providing a simple and straightforward manner for individuals to adopt more sustainable consumption patterns (Horne, 2009, p. 180). Focusing on the aspect of environmental sustainability, this question has eliminated the issue on whether respondents purchase eco-labelled goods due to product differentiation or increased choice for goods in a growing environmentally conscious setting. On average, thus not necessarily, eco-labelled goods are also more expensive than non-eco-labelled goods. Considering the common financial barrier which comes along with being a student, the high number of respondents who claim that "always" or "often" purchase eco-labelled good for environmental reasons really show the underlying attitude of a pro-environmental behaviour, namely a moral push for environmental sustainability.

It was hypothesized here that individuals which reflect established ecologically sustainable citizenship ideals will display high engagement with factors related to environmentally conscious behaviour. The results have so far demonstrated that a majority of Swedish Lund University students which responded to the survey relate to the consumer dimension characteristic of an ecologically sustainable citizen. It can be concluded here that a significant share of the respondents in fact have a predisposition to engage in political consumerism to promote environmental sustainability.

The consumer dimension section of the survey also ended with an open-ended question where the respondents were able to state whether there were any other mechanisms in which they considered their role as a consumer and in which they engage in to support environmental sustainability.

CONSUMER DIMENSION OPEN-ENDED QUESTION
Are there any more ways in which you as a consumer act to push for sustainability? (For example: buying second hand, avoiding products made in sweatshop conditions, etc.)

Table 11 Consumer Dimension Open-Ended Question

A significant majority of the respondents identified shopping second hand as a consumer mechanism which they use to push for sustainability, with some clarifying their motives and emphasizing issues with fast fashion and overconsumption. Lund as a city has many second-hand stores and the quality of the items up for sale is often checked as to avoid selling broken or unusable items, thus making this behaviour very available to its citizens.

Through the open-ended question, the issue of transport was also commonly brought up by respondents. Many wrote that they avoid taking flights when they

can or even altogether and rely on trains when travelling long distances. Moreover, riding bicycles when in the city and avoiding driving a car were also identified. These behaviours align with the definition of a morally aware ecologically sustainable citizen, as the respondents were actively stating their avoidance of cars and other transport mechanisms which are regarded as being harmful to the environment, giving up their comfort for the greater good.

These issues brought up by the respondents add a deeper dimension to this study, as to not face any issue with financial barriers which come when being a student, no behaviours which were identified in the operationalization of the three dimensions were depending on a large budget, thus barely any questions on significant shopping habits or travelling were asked. However, due to the vast number of respondents which willingly brought these behaviours up in the open question, it does strengthen the respondent's awareness and underlying moral responsibility towards environmental sustainability. A common belief is that self-interested motives shape and affect our behaviour, thus going against the basic moral responsibility which is associated with ecologically sustainable citizenship. Nevertheless, these two behaviours highlighted in the open-ended question showcase the moral responsibility felt by respondents, as giving up luxury and commodities for an environmental sake in fact does stand by ecologically sustainable citizenship.

5.3   Social Dimension

SOCIAL DIMENSION	ALWAYS	OFTEN	EVERY NOW AND THEN	RARELY	NEVER	TOTAL
I take the time to properly recycle my waste	**50.7%** **(68)**	40.3% (54)	5.2% (7)	3.7% (5)	0% (0)	100% (134)
I am aware on how to recycle small electronics and take the extra time to do so correctly	**38.8%** **(52)**	35.1% (47)	17.9% (24)	6% (8)	2.2% (3)	100% (134)
I use my social media accounts to keep up with climate change related initiatives	5.2% (7)	17.2% (23)	26.1% (35)	**31.3%** **(42)**	20.1% (27)	100% (134)
I use my personal social media accounts to support and spread environmental messages	0.7% (1)	5.2% (7)	9.7% (13)	34.3% (46)	**50%** **(67)**	100% (134)

Table 12 Social Dimension Close-Ended Responses

Following the questions regarding the consumer dimension, the respondents were asked to answer four more questions based on the social dimension by again answering on a verbally denoted rating scale "always", "often", "every now and then", "rarely", or "never". Also, in this case, the responses associated with the

"always" and "often" options were the ones in line with the social dimension of established ecologically sustainable citizens. The responses to the three close-ended questions asked in the survey show that the out of the 134 surveyed Swedish Lund University students there is a divide between the social aspects which have been chosen to be analysed, showing that most of the respondents are very invested in recycling, yet do not engage in citizenship practices in social media.

To not much surprise, recycling practices engaged a clear majority of the respondents, where 91% claimed that they take the time to properly recycle their waste "always" or "often", and 73,9% responded that they take the extra time to properly recycle electronics "always" or "often".

On the other hand, social media engagement results show that most respondents do not showcase established or budding ecologically sustainable citizenship practices on their personal social media accounts. The results here showed that solely 22.4% of respondents say that they keep up with climate change related initiatives "always" or "often", and only 5.9% state that they "always" or "often" use their accounts to support and spread environmental messages. The results in the social dimension can signify the importance of surrounding institutions and its effect on attitudes and behaviours. Recycling and waste management is well-known to be important to Sweden and Swedes. The nearby availability of recycling stations to living areas as well as a common concern for the environment allow citizens to recycle easily. Yet, social media engagement falls in a completely different scope.

The social dimension section of the survey also ended with an open-ended question where the respondents were able to state whether there were any other mechanisms which they consider their role as a member of society and in which they engage in to support environmental sustainability.

SOCIAL DIMENSION OPEN-ENDED QUESTION
Are there any other ways in which you act "sustainably" in a social manner? (For example: environmental volunteering, pushing others to recycle, etc.)

Table 13 Social Dimension Open-Ended Question

Almost all respondents answered this question by pointing out the manners of engagement which they partake in to promote, push, and, learn about sustainability. By far, recycling was mentioned the most times, where many respondents claimed that they push others to recycle often, which falls in line with the responses received from the close ended questions above. The second most mentioned behaviours were promoting a meat free diet and avoiding flying and driving, where for example respondents said that they pushed and inspired their families and friends to make changes regarding these behaviours.

The fact that the respondents emphasized that they were the ones who pushed and inspired people around them does fall into the description of the ecologically sustainable citizen. Furthermore, many respondents pointed out the fact that they also took these conversations and moments as opportunities for them to learn more about sustainability and that it is a topic which often gets discussed in their day to day life.

6 Results 2: Categorizations of Citizens

A priori categorization of ecologically sustainable citizens, as framed previously, and operationalized to be able to empirically measure the responses:

- Established ecologically sustainable citizens are those who answer "always" or "often" 100% of the time;
- Budding ecologically sustainable citizens are those who answer "always" or "often" at least 50% of the time; and;
- Stunted ecologically sustainable citizens are those who answer "always" or "often" less than 50% of the time[6].

The categorization had to be divided as such since each dimension has three questions within it, safe from the social dimension which had four.

The following section will present the results of the categorization of ecologically sustainable citizens, firstly divided by the three dimensions, and then an overall result. This, to be able to categorize the sample.

6.1 Political Dimension

POLITICAL DIMENSION	134 Respondents	
ESTABLISHED	n=7	5,2%
BUDDING	n=17	12,7%
STUNTED	n=110	82,1%

Table 14 Variance in the Political Dimension

The results in the above table show that only 5,2% of the respondents answered with "yes" to all three questions in the political dimension, truly reflecting the established ecologically sustainable citizen. In contrast, a whopping 82,1% responded less than 50% of the time in line with the categorization of ecologically sustainable citizenship, thus being labelled as stunted citizens. If we are to consider the responses given to the political dimension in aggregate terms, these results are no surprise and fall in line with the previous description of results.

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[6] For the political dimension, established ecologically sustainable citizens will be those who answer "yes" 100% of the time, budding ecologically sustainable citizens will be those who answer "yes" at least 50% of the time, and stunted ecologically sustainable citizens will be those who answer "yes" less than 50% of the time.

6.2   Consumer Dimension

CONSUMER DIMENSION	134 Respondents	
ESTABLISHED	n=28	21%
BUDDING	n=30	22%
STUNTED	n=76	57%

Table 15 Variance in the Consumer Dimension

The results in the above table showcase the consumer dimension and how the respondents would be categorized within in. Here, 21% of respondents can be considered established ecologically sustainable citizens due to their consumer choices, 22% as budding, and 57% as stunted. Although most of the respondents in this dimension result as stunted ecologically sustainable citizens, as is in the previous dimension, the amounts of respondents who are established or budding is similar. Moreover, considering that to be categorized as established one must have answered "always" or "often" 100% of the time, a budding ecologically sustainable citizen may still showcase many sustainable practices a clear majority of the time. This result is quite surprising if we keep in mind the aggregate results showcased above, as the consumer dimension seemed to be the one in which respondents seemed to be the most likely to "always" or "often" carry out the behaviours asked. However, it is obvious that from these results this is not the case. It is completely plausible to expect that only some of the respondents would not eat meat, consider how much plastic waste they produce, and buy eco-labelled foods for the environment. This type of analysis has thus allowed us to see that even if aggregately the consumer dimension seemed to be one to give the most hope on ecologically sustainable citizens, only 21% of respondents really reflect the established categorization.

6.3   Social Dimension

SOCIAL DIMENSION	134 Respondents	
ESTABLISHED	n=2	1,5%
BUDDING	n=95	70,9%
STUNTED	n=37	27,6%

Table 16 Variance in the Social Dimension

In the social dimension, the results are not surprising if we keep in mind the ones from the aggregate tables. Here the largest number is that of budding ecologically sustainable citizens, with 70,9% of the sample falling in line with this definition. Since the results from this dimension were so split between the behaviours of recycling and social media engagement, it can explain why such a clear majority falls in the budding definition. If the social dimension had been split between the two behaviours, it would be very probably that a high number of respondents could be identified as established ecologically sustainable citizens when we consider the results from the recycling questions and described as stunted

when we consider the results from the questions on social media engagement. However, since most of the respondents answered "always" or "often" on the first two questions, and then "rarely" or "never" on the last two question, it only makes sense that these results are as so.

6.4   Overall Respondent Categorization

OVERALL	134 Respondents	
ESTABLISHED	n=0	0%
BUDDING	n=49	36,6%
STUNTED	n=85	63,4%

Table 17 Overall Variance

Overall, the results show that no respondent in the sample can truly be labelled as an established ecologically sustainable citizen, having answered "yes" and "always" or "often" on every survey question. Although this is not completely unexpected, also for reasons to be further discussed in following sections, it is surprising to see that most of the sample falls within the definition of a stunted ecologically sustainable citizen, meaning that less than 50% of the responses were "yes", "always, or "often".

Scholars Finnemore & Sikkink (1998) argue that although it is impossible to hypothesize how many individuals in a sample are needed to accept a norm and to then "tip" the process, they claim that empirical studies have suggested a norm tipping point of one third of the sample, where if at least 33.33% of individuals act in a certain manner then the rest in the community will also eventually adhere (Finnemore & Sikknik, 1998, p.901). However, they also claim that there has been no theoretical support as to why, when and where this norm tipping occurs. Although 0% of respondents is an established ecologically sustainable citizen, 36,6% are budding, surpassing this 33,3% mark as set out by Finnemore and Sikkink (1998). This will be further dealt with in the discussion.

7   Results 3: Factor Analysis

Another way to analyse in the data is to statistically measure whether different questions can be categorized as to see what behaviours may be the ones which predict an established ecologically sustainable citizen. Factor analysis can provide this data. The calculated correlation matrix[7] provided the determinant 0,081, and since this value is larger than 0,00001, then it showcases that the items can be correlated and that we can expect some sort of result from the data. Although the value could be larger, it does nonetheless show correlation. No value in the correlation matrix resulted in being too high, namely over 0.8, meaning that no two items have an increasingly shared variance which would mean that they provided answers on the same factors. This allowed to continue with the analysis.

The resulting value of the KMO & Bartlett's test is of 0,753, and in this case, any value over 0,5 showcases correlation, the greater the better. This value allows us to measure the proportion of variance in the variables which can be explained by underlying factors. Moreover, this test showcased statistical significance in the results, as the p value resulted in 0,000, less than 0,005.

The results identified three components which explain 58% of the variance. The component matrix gained from the computation will allow us to identify the three components and with what magnitude they go together.

Rotated Component Matrix[a]

	Component		
	1	2	3
I am aware on how to recycle small electronics and take the extra time to do so correctly	,743		
I choose food products keeping in mind the amounts of plastic I produce	,698		
I take the time to properly recycle my waste	,680		
I am more likely to purchase eco-labelled foods to reduce negative effects on the environment	,607		
I am planning to attend/have attended events which are part of Lund's Sustainability Week (Hållbarhetsveckan i Lund) this April 2018		,825	
I actively look for events organized by Lund University concerned with sustainability		,790	
I engage myself in one way or another with organizations (For example: student organizations, NGOs, charities, etc.) involved in sustainability			,761
I use my personal social media accounts to support and spread environmental messages			,723
I use my social media accounts to keep up with climate change related initiatives			,598
I follow a meat-free diet mainly because of the effect it has on the environment			

Table 18 Rotated Component Matrix of Factor Analysis

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[7] See Appendix 2 for complete Factor Analysis computation

Factor analysis does not provide us with what exactly the possible constructs are. Nevertheless, the fact that the computation identified three factors to begin with shows that the questions can in fact by categorized. The table above automatically excluded any value below 0,5 as the significance is not so high and therefore does not provide us with clear and strong conclusions, as reducing the number of factors on which the variables have low loadings aids the interpretation.

These results show that surprisingly, different questions in different dimensions fall upon the same component. Questions about recycling, eco-foods and producing plastic waste fall strongly on component one, while questions about attending events fall on component two, and finally, social media issues, and being part of an organization, all fall upon the same component three. The first question of the consumer dimension, related to not eating meat for environmental reasons, had a significance less than 0.5 thus the matrix removed it as not being strongly influenced by any component.

It is interesting to see in this case how the data was split by the factor analysis. It would be easy to assume that the behaviours outlined in the political, consumer, and social dimension would fall separately in a component each, but obviously this was not the case. The behaviours which the factor analysis identified as characterizing an ecologically sustainable citizen according to the first component are the two questions in the social dimension concerning recycling, and the questions in the consumer dimension related to the purchasing of eco-friendly food and the awareness of the amounts of plastic waste one produces. All these variables have a variance greater than 0.5 and thus showcase their significance. This component can be connected to waste management, as recycling waste and electronics are clear explicit demonstrations of said component, while avoiding purchasing large amounts of plastic and pesticides present in many non-eco labelled foods can signify prevention of waste in one's surroundings.

The second component specifies the attendance of events as the two questions in the political dimension about Lund University's Sustainability week and general events focused on sustainability organized by the University are the behaviours present.

The third and final component identified behaviours related to the questions on social media engagement and being part of an organization. This component can be interpreted as falling along the lines of personal engagement beyond formal obligations, as partaking in the work of an organization and behaviour on one's private social media are all individual engagement choices.

It is hard to conclude on which component or cluster of behaviours relate the most to an ecologically sustainable citizen as the variance of them all falls along a homogenous slope, where none are too low, and none are too high. Nevertheless, this analysis has provided us with a deep insight on how behaviours that categorize ecologically sustainable citizens fit together.

8   Discussion

In this thesis, by analysing specific behaviours which clearly distinguish a regular citizen from an ecologically sustainable one, an attempt has been made to identify established citizens and highlight characteristics and manners which fall in line with the previously presented definition of the ecologically sustainable citizen through Lund University Students. For the discussion, it is crucial to keep in mind that a vital part of citizenship for environmental sustainability lies with the motivations behind practices which truly showcase ecologically sustainable citizenship, rather than solely the practices themselves. Following the theoretical framework and the derivation of the categories, the results overall showed that 0% of the responding sample can be defined as an established ecologically sustainable citizen, and the majority, 63,4%, can be defined as stunted ecologically sustainable citizens regarding the chosen practices. This goes against the theory and the expectation from the previous literature where it was stated that especially in Sweden citizens with a pro-environmental attitude could be easily identified within the population. However, it must be kept in mind that environmentally conscious behaviour is due to originate from an individual's values and attitudes, thus placing a focus on moral responsibility towards environmental conservation.

First, it is important to note is that no significant correlations were identified between the demographic variables of age, gender and faculty in connection to the survey answers, solely two minimal statistically significant matters between age and social media engagement and faculty and social media engagement. This is also quite surprising, as previously stated, you would expect people with different vocations for example, when considering faculties, to have different levels of interest and engagement in environmental sustainability, however the results clearly did not show this.

The results from the factor analysis also shed further light on how the behaviours fit together to describe an ecologically sustainable citizen. Although one would expect the three dimensions to fall together under the same component, this was not the case, as the analysis resulted in matching different questions together in measuring underlying variables. This result can also be interpreted to reflect the overlapping nature of the dimensions and their basis on a moral responsibility. Ultimately, none of the groups of questions stood out more than others due to their similar variance levels, showing that all three identified factors related to ecologically sustainable citizenship to more of less the same extent.

Overall, there are some manners in which the survey respondents easily identified as common practice for them. Recycling, and in general consumer behaviour, were the clearest mechanisms in which individuals have engaged in ecologically sustainable citizenship practices. However, we must consider the institutional setting in which the respondents showcase these specific behaviours.

It cannot be denied that Sweden not only encourages their citizens to recycle, but also makes the process simple for them. Through the availability of recycling stations, PANT money to be gained back once an individual returns empty cans and plastic bottles, as well as possible fiscal penalties whether neighbourhoods do not properly sort out their waste must have all contributed to establish recycling as part of the average individual's routine. Nevertheless, one cannot deny that there must also be a moral responsibility felt by individuals to properly recycle due to environmental concerns. Behaviours can be shaped by government action, however it is truly attitudes that make a behaviour long-lasting, and since recycling is an integrated part of Swedish living then environmentally conscious attitudes can be identified as part of underlying motives.

The consumer dimension was where the respondents demonstrated ecologically sustainable citizenship practices to the highest extent in the descriptive results. This can be explained also considering the focus placed on political consumerism, not solely in the literature, arguably making it a sphere where individuals are more aware of the effects of their choices. This dimension was also the one which allowed for a more straight-forward result gathering, as consumption choices can be fully based upon attitudes. It is not expected of individuals to purchase or not purchase items due to external factors, meaning that limitations such as social desirability are less likely to happen when one is simply grocery shopping rather than when speaking of more public behavioural choices such as recycling. The results here did not show a clear tendency for the respondents to engage in environmentally sustainable consumer choices, but rather, showcase to a certain extent the growing awareness of the environmental impact of consuming meat, producing high amounts of plastic waste, and the usage of pesticides. The open-ended question managed to further shed some lights on behaviours not mentioned in the questions and support the general conclusion that in the consumer dimension, the respondents do mostly act as ecologically sustainable citizens. The high numbers of respondents claiming that their main manner of shopping for clothes and furniture is second hand, as well as the high attention placed on modes of transport truly highlighted how aware the respondents are about their everyday choices.

Nevertheless, when we compare the results from the aggregate values and from the statistical test it was quite surprising that most of the respondents were identified as stunted ecologically sustainable citizens. This could be obviously because the three questions, while reflecting consumer behaviour, did not per se reflect the same issue all together. If all the three questions were based around eating to avoid environmental degradation, or all engaged in waste production, then the results could have been different. Obviously here only respondents who identify as vegetarian or vegan can be described as established citizens, thus hindering the results by placing this expectation on the respondents. So, even if the aggregate results showcased high hopes for the consumer dimension and environmental sustainability, the actual categorization of citizens highlighted the flaw in that dimension. This growing awareness indicates changes in preferences, showing that people are willing to alter their behaviours due to changing norms. In this case, the awareness of the consequences of eating meat, plastic debris and pesticides can be

interpreted to showcase the growing acceptance of knowledge changing norms, and thus the everchanging behaviour of citizenship.

Speaking of stunted citizens, the lack of engagement in events and organizations as well as in social media are significant results which point in the direction that those are not ecologically sustainable citizenship practices which the respondents engage in. These are quite surprising results as Lund University, different unions and student organization organize events, talks, workshops, and so on quite often, and very effectively disseminate information on social media accounts and throughout faculties. There is a possibility that due to the extent of the advertising on social media and on message boards around faculties students decide to not attend events due to the overwhelming amounts of them, or maybe, they prefer not to engage in university related activities during their free time. However, the political dimension showcased some interesting results if we are to consider the answers from the close-ended questions in comparison to the open-ended ones. Although the close-ended questions all clearly showed that the respondents do not align with the operationalized political dimension of the ecologically sustainable citizen, the responses to the open-question effectively point in the opposite direction. It is possible that the behaviour chosen to test, namely the attendance of events and the participation in organizations, was futile in this sense, as the amounts of variables involved in such a behaviour are more than, for example, choosing to eat meat or not due to environmental reasons, which can be considered a choice resting on one main belief.

On the other hand, the open-ended question showcased an overwhelming majority of the respondents in voting for the Swedish Green Party, who, as aforementioned, has the main mandate of environmental conservation, thus proving that the respondents place high levels of importance on the pursuit of environmental sustainability. This behaviour can be argued to also showcase a strong moral responsibility, as respondents also pointed out that individual engagement can only go so far, and that government legislation should be the first stepping stone for them to truly pursue a sustainable life, as can be seen in responses such as "...however, I believe such changes must start at government and industry levels, if we really want impact", and [*in response to defining their own interpretation of a sustainable life*] "living a normal life where the government enables easy sustainable alternatives such as green energy and public transport". These results fall directly into the variance results, where 82,1% of respondents were categorized as stunted environmentally sustainable citizens in the political dimension. These responses can also be interpreted as calling out for a shift in the discourse, placing the attention back on governments and making sure that they provide citizens with the correct means and attitudes to pursue a sustainable life.

Furthermore, the most unexpected results are those coming from the questions regarding social media. They clearly showcase that in that aspect of the social dimension, the respondents did not align with the definition of the ecologically sustainable citizen. The internet has overtime grown to become a dominant way in which citizenship practices and political behaviour is shown, considering the speed of data sharing, the vastity of free information, and the amounts of individuals which one can reach. All this considered, it is surprising to compare this data to the

one of the open-ended question, where a clear majority of the respondents did in fact state that they often engage in discussion and promote environmentally conscious behaviours to their friends and family. While one is to assume that those discussions are more than often taking place in a face to face setting, it then would not be surprising that individuals who pursue these conversations and who seem invested in inspiring and convincing others to act in a pro-environmental orientation would also use larger platforms such as social media accounts to do the same. However, this was obviously not the case for this research. Possible reasons for this could identify the lack of moral responsibility felt by respondents to share such a message, or external factors such as one's personal relationship with social media.

The final question in the survey following those of the three dimensions was one of the open kind asking the respondents what living in a sustainable manner meant to them, where the respondents were able to answer in whichever manner they pleased. This question allowed me as a researcher to give full freedom to the respondent and to hear from them what behaviours and choices they themselves identified as sustainable. Overall, most of the responses were listing behaviours previously mentioned in the survey, such as purchasing eco-labelled foods over others, recycling, consuming less meat, as well as the other behaviours highly identified in the open-ended question, such as voting for green parties, avoiding fast fashion and avoiding taking the car when possible. There was also a big focus on general consumption, as many respondents identified the need to reassess our choices as a society and to stray away as much as possible from the mainstream consumerist society which overtime has developed to become a standard. Awareness was a factor also noted many times, as respondents clearly linked this with the moral responsibility encompassed in ecologically sustainable citizenship. This was done through statements including phrases such as "minimizing the effect on the planet", "living in a way which makes it possible for others to live", and "living in a way that takes the whole life cycle into account". The sporadic mention of the usage of plastic bags, the importance of purchasing locally, modes of transport and even the awareness of reducing one's own carbon emission clearly signify that knowledge on these issues is common, and that the respondents are fully aware of mechanisms and behaviours in their private and public spheres which influence the environment. Furthermore, the clear identification from respondents of moral responsibility does in fact show that there is a strong base to expect ecologically sustainable citizenship to be identified.

To sum up, the results from the survey clearly show that none of the respondents would be labelled as established ecologically sustainable citizens. However, it does provide some insight on the specific behaviours which they do engage in and which reflect ecologically sustainable citizenship. The results thus showcase a challenge to the developed theory of ecologically sustainable citizenship. On the one hand, a moral responsibility was, to some extent identified, on the other hand, the respondents did not always state that they engaged in behaviours in line with the operationalization of the three dimensions. One explanation to this could be that the respondents felt social desirability when responding to the survey, and thus claimed that they engaged in certain behaviours solely to seem as if they are more sustainable than they truly are, thus lacking the basis of a moral responsibility in

the first place. Another explanation could be that financial barriers present to students do in fact affect more spheres of life than one initially believes, and thus prevents individuals to truly act as sustainable as they would like. Moreover, it can be argued from the opposite point of view that that environmental sustainability is internalized to such a high extent in Sweden that individuals do not feel the need to carry out specific behaviours. For example, it is possible that gender, age and faculty did not result in affecting pro-environmental behaviour because of the high internalization. The same argument can be stated for social media, where the respondents do not feel the need to share or post anything on environmental sustainability since they are raised in a sphere where the basis of ecologically sustainable citizenship, meaning a moral responsibility, is integrated to such a high extent that they just do not feel the need to raise awareness further than discussing with their peers and people around them.

However, it can also be argued that the three dimensions portrayed in this study, although merged and fitting together according to the factor analysis, may not fully aid in identifying established ecologically sustainable citizens. Citizenship is such a vast territory which encompasses so many different aspects of an individual's life that the three dimensions empirically studied in this thesis would not apply to all. For example, not everyone is on social media and not everyone believes in political engagement to make a change and would rather take matters in their own hands.

There are broader implications which arise when we consider the results the data rendered. If we consider Finnemore & Sikkink (1998) norm tipping point of 33.3%, it can be argued that somehow norms associated with citizenship following a pro-environmental orientation are developing within society as 36,6% of the respondents were categorized as budding. Here it must be reiterated that the categorization created for the established ecologically sustainable citizen had the highest possible benchmark, thus hard to achieve. The result over 33,3% as being budding showcases the developing and ever-changing nature of citizenship. In no way is this thesis claiming how long it would take to become an ecologically sustainable citizen, however this data has shown that societal norms are in transition and that individuals are shifting their focus and altering their behaviours to new preferences. It would be interesting to see where exactly these new environmental beliefs are coming from, and how they have changed behaviours overtime. With the growing power of the media and changes in the global climate it is fair to assume that individuals would change their behaviours according. It is possible that if the climate is to degrade further, and citizens believe that governments are not engaged enough in the battle for climate change, citizenship engaged with environmentally conscious behaviour may completely alter to develop more behaviours and more characteristics widening the spectrum.

9 Conclusion & Further Research

My aim for this thesis has been to test whether ecologically sustainable citizenship practices are embedded in Swedish Lund University students' lives, as without citizen participation environmental sustainability would be too challenging to pursue, by attempting to answer the following question:

Can Lund University students be categorized as ecologically sustainable citizens?
- *Under which category of established, budding, or stunted citizen can they be placed within?*
- *Using factor analysis, which behaviours involved with ecologically sustainable citizenship fit together?*

The thesis overall can conclude with the following statement: although the selected sample, namely Swedish Lund University students, did not clearly reflect the ecologically sustainable citizen in the chosen dimensions, there is a clear awareness of the moral responsibility embedded in their individual choices and the engagement which the respondents have in environmental conservation, which leads us to identify the changing nature of citizenship and the development of new norms and values.

While previous literature did identify in many cases the clear presence of environmental, ecological, or sustainable citizens, this research did not do identify ecologically sustainable citizens in such a straight forward manner. Nevertheless, if we are to consider the overall theoretical assumptions of ecologically sustainable citizenship, keeping in mind the results from the open-ended questions as well as the results from the close-ended questions which did not homogeneously fall in line with the theory, it can be argued that the respondents are leaning more towards being identified as ecologically sustainable citizens rather than the opposite.

Some limitations must be addressed in this study. First, since to a certain extent attitudes and a moral responsibility were identified as following a pro-environmental orientation, it can be argued that some questions asked in the survey did not fulfil the scope of identifying ecologically sustainable citizenship practices. This can be particularly said for the political dimension, where the results did not fall in line with the theory. Following the open-ended question in the political dimension, it would have probably been more effective to ask about voting behaviour and environmental sustainability, however this was decided against as previously mentioned, in Sweden citizens vote every four years, and as a researcher I could not be completely sure that every respondent would have voted in the previous elections which took place in 2014 as 84% of them were between the ages of 18-25, so a number of them probably has never voted before. Moreover, since many of the answers of the open-questions reflected what was given as examples

in brackets, it is possible that respondents did not take the time to fully think of mannerisms but rather responded with what was easily reminded to them. A final limitation is that with solely 134 valid responses, the results from this survey cannot be generalized in any manner to the greater population of Sweden, but it may provide a humble insight on Swedish students at Lund University and their relationship with environmental sustainability.

In all, modes of citizenship aiming for a sustainable society not only focus on environmental issues but also on the awareness of the vast power individuals have on affecting society. Nevertheless, these citizenship modes following a pro-environmental focus can be argued to be self-limiting to some extent. Although different individuals carry out different behaviours for different reasons, such as eating vegetarian or organic for health purposes or animal welfare, their actions still influence the environment and politically send out a message. Therefore, it can be argued that the purpose of citizenship practices following a pro-environmental orientation should be expanded to not solely be caused by a deep moral responsibility from an individual, but rather, a spectrum of individual choices and preferences having an environmentally conscious response. Spill over effects of other behaviours which still can be defined as ecologically sustainable citizenship practices still fall within the main aim of the three modes of citizenship outlined above, concisely, the pursuit of sustainability. Therefore, a wider spectrum of behaviours, not solely those pushed by a moral and ethical responsibility would showcase larger amounts of citizens engaged in environmental sustainability.

Although individual engagement is considered necessary in the pursuit of environmental sustainability, it can be argued that citizenship alone cannot provide for the maintaining of the environment by itself, as broader structures of governance including states and companies regularly carry out behaviours to generate environmental degradation.

Further research on acts of citizenship, whether they relate to environmental, ecological, or sustainable citizenship can provide additional data on citizens preference and morals which then a state may feel compelled to mirror. Political decision-makers and future policies may legitimize further individual pro-environmental behaviour through more comprehensive choices. Moreover, a nation-wide study on Swedish youth, regardless of education level, but rather focusing on the big literature on youth engagement in politics following new mannerisms on how they attempt to share sustainability ideals would provide a new outlook. Or, simply focusing on other demographics in Sweden, not solely university students. A qualitative approach to citizenship engaged with pro-environmental behaviours may provide a deeper understanding precisely how individuals understand and enact citizenship. Focusing on what is the individual trade-off between acting sustainably or not could provide a strong insight on incentives.

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11 Appendix

11.1 Survey Design

Thank you for participating.
Throughout this survey, your thoughts and opinions will be used to research the relationship between citizenship and environmental sustainability (Hållbarhet) from the perspective of Swedish Lund University students.
Your participation is entirely voluntary, and you are free to withdraw from the survey at any time.
This survey should only take less than 5 minutes to complete. All answers are completely anonymous. If you have any difficulties or questions, please contact Giulia De Stefano (gi2730des@student.lu.se)

*Required

1. Nationality*
   | Swedish | | Other:_____ |

2. Age*
   | Less than 18 | | 18-25 | | 26-35 | | 36-45 | | 45+ |

3. Gender*
   | Female | | Male | | Non-Conforming | | Prefer not to say | | Other:_____ |

4. Faculty*
   - ☐ Engineering (LTH)
   - ☐ Science
   - ☐ Law
   - ☐ Social Sciences
   - ☐ Medicine
   - ☐ Humanities and Theology
   - ☐ School of Economics and Management
   - ☐ Faculty of Fine & Performing Arts
   - ☐ Other: _____

5. I am planning to attend/have attended events which are part of Lund's Sustainability Week (Hållbarhetsveckan i Lund) this April 2018*
   | Yes | | No |

6. I actively look for events organized by Lund University concerned with sustainability*
   Yes   No

7. I engage myself in one way or another with organizations (For example: student organizations, NGOs, charities, etc.) involved in sustainability*
   Yes   No

8. Are there any other ways in which you engage in politics to support sustainability? (For example: protesting, voting for green parties, etc.)*
   _____
   _____

9. I follow a meat-free diet mainly because of the effect it has on the environment*
   Always   Often   Every Now and Then   Rarely   Never

10. I choose food products keeping in mind the amounts of plastic I produce*
    Always   Often   Every Now and Then   Rarely   Never

11. I am more likely to purchase eco-labelled foods to reduce negative effects on the environment*
    Always   Often   Every Now and Then   Rarely   Never

12. Are there any more ways in which you as a consumer act to push for sustainability? (For example: buying second hand, avoiding products made in sweatshop conditions, etc.)*
    _____
    _____

13. I take the time to properly recycle my waste*
    Always   Often   Every Now and Then   Rarely   Never

14. I am aware on how to recycle small electronics and take the extra time to do so correctly*
    Always   Often   Every Now and Then   Rarely   Never

15. I use my social media accounts to keep up with climate related initiatives*
    Always   Often   Every Now and Then   Rarely   Never

16. I use my personal social media accounts to support and spread environmental messages*
    Always   Often   Every Now and Then   Rarely   Never

17. Are there any other ways in which you act "sustainably" in a social manner? (For example: environmental volunteering, pushing others to recycle, etc.)*
    _____
    _____

18. What does living "sustainably" mean to you?*
    _____
    _____

11.2 Factor Analysis

Correlation Matrix^a

		PD1	PD2	PD3	CD1	CD2	CD3	SD1	SD2	SD3	SD4
Correlation	PD1	1,000	,571	,189	,241	,172	,228	,028	,064	,335	,257
	PD2	,571	1,000	,234	,241	,316	,210	,078	,102	,384	,236
	PD3	,189	,234	1,000	,178	,237	,031	,085	,149	,313	,266
	CD1	,241	,241	,178	1,000	,500	,252	,094	,197	,419	,335
	CD2	,172	,316	,237	,500	1,000	,458	,277	,444	,418	,250
	CD3	,228	,210	,031	,252	,458	1,000	,225	,248	,374	,187
	SD1	,028	,078	,085	,094	,277	,225	1,000	,395	,296	,123
	SD2	,064	,102	,149	,197	,444	,248	,395	1,000	,223	,140
	SD3	,335	,384	,313	,419	,418	,374	,296	,223	1,000	,541
	SD4	,257	,236	,266	,335	,250	,187	,123	,140	,541	1,000
Sig. (1-tailed)	PD1		,000	,014	,002	,024	,004	,375	,230	,000	,001
	PD2	,000		,003	,002	,000	,008	,185	,121	,000	,003
	PD3	,014	,003		,020	,003	,362	,163	,043	,000	,001
	CD1	,002	,002	,020		,000	,002	,140	,011	,000	,000
	CD2	,024	,000	,003	,000		,000	,001	,000	,000	,002
	CD3	,004	,008	,362	,002	,000		,004	,002	,000	,015
	SD1	,375	,185	,163	,140	,001	,004		,000	,000	,078
	SD2	,230	,121	,043	,011	,000	,002	,000		,005	,053
	SD3	,000	,000	,000	,000	,000	,000	,000	,005		,000
	SD4	,001	,003	,001	,000	,002	,015	,078	,053	,000	

a. Determinant = ,081

Correlation Matrix used to identify the dependence between multiple variables, where
PD1,2,3 reflect the three political dimension questions, CD1,2,3 reflect the three consumer
dimension questions, and SD1,2,3,4 reflect the four social dimension questions.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,753
Bartlett's Test of Sphericity	Approx. Chi-Square	324,422
	df	45
	Sig.	,000

The Keiser-Meyer-Olkin test is used to measure whether data is suited for factor analysis. The
results values between 0 and 1, where anything below 0.6 is deemed not adequate for
analysis.

Bartlett's Test of Sphericity checks if there is redundancy between variables that can be summarized with factors. Small values less that the p level of 0.05 indicate that factor analysis can be useful with the data provided.

Component Matrix[a]

	Component		
	1	2	3
SD3	,775		
CD2	,727		
CD1	,627		
SD4	,592		
PD2	,591		
CD3	,565		
SD2		,582	
SD1		,567	
PD1	,531	-,550	
PD3			,590

Key output of principal component analysis carried out before the rotated component matrix.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	3,408	34,083	34,083	3,408	34,083	34,083	2,282
2	1,430	14,302	48,385	1,430	14,302	48,385	2,479
3	1,009	10,092	58,477	1,009	10,092	58,477	2,161
4	,926	9,264	67,741				
5	,819	8,187	75,928				
6	,665	6,653	82,580				
7	,579	5,788	88,368				
8	,468	4,680	93,048				
9	,378	3,781	96,828				
10	,317	3,172	100,000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.