

Equal responsibility, unequal ability

Allocation of environmental responsibility in pro-environmental behavior research

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Master Thesis Series in Environmental Studies and Sustainability Science,
No 2015:012

A thesis submitted in partial fulfillment of the requirements of Lund University
International Master's Programme in Environmental Studies and Sustainability Science
(30hp/credits)



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Sustainability Studies



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Submitted May 11, 2015

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Abstract

Neoliberalism, as a loosely defined set of political beliefs, calls for more individual freedom and autonomy, resulting in increased responsibility for each person to address major societal issues. 'Individualization' is the process by which responsibility for addressing major environmental issues such as climate change is placed on individuals. In this thesis I investigate whether individualization as a neoliberal concept is present in pro-environmental behavior (PEB) research through a comprehensive examination of abstracts from articles in the field. I further explore whether increased individualization present in PEB research hinders the usefulness of the field's contribution to sustainability knowledge by exploring a number of barriers and critiques.

I performed an examination of article abstracts (n=487) published from 2011-2015 found through a keyword search for 'pro-environmental behavior' via the internet search engines Web of Science and Scopus. Depending on how environmental responsibility was framed in the abstract text, I categorized each abstract as 'individualizing', 'non-individualizing' or 'neutral'. An overwhelming majority (72%) of articles were categorized as 'individualizing', with 'non-individualizing' and 'neutral' resulting in 2% and 26% respectively. The most common PEB research in the abstracts included simple, relatively apolitical activities such as recycling, private car use and electricity usage. Also of note was the tendency of the researchers to focus on consumption as a means of addressing major sustainability problems.

Individualization is a well-accepted concept in PEB research but its presence can have a number of negative implications for PEB attempts by researchers to make meaningful contributions to sustainability. With increased individualization, cognitive barriers to PEB are exacerbated as private choices become politicized and increased pressure is put on individuals to act. Moreover, instead of focusing on changes that can be made more easily by producers, researchers expect consumers at the end of the production chain to ameliorate the problems created in large part by producers. Conflicts between sustainability and neoliberal goals are marginalized as environmental goals are framed as compatible with the idea of infinite growth and mass resource extraction. The few studies that have attempted to measure the effectiveness of pro-environmental behaviors in reducing environmental impacts (such as carbon footprint) have found very little correlation between individual PEB and lowered environmental impacts, probably due to other high-impact behaviors, and contextual and structural constraints. I recommend that future PEB research focus on individuals and other actors with the power and capability to make the needed behavioral changes to address sustainability issues.

Keywords: Pro-environmental behavior, environmental responsibility, individualization, academic research, neoliberalism

Word count: 11,409

Acknowledgements

To everyone who has supported me throughout this process: *thank you.*

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1. Introduction

1.1 Problem framing

Can individuals alone save the world? Environmentally-aware and concerned people all hope to do their part to fight major sustainability problems: they ride their bikes, sort their recycling and take shorter showers. But how much impact do these activities actually have? Stepping back, whose responsibility is it to address issues such as climate change or biodiversity loss? Academia contributes to sustainability efforts in many ways including through pro-environmental behavior research, in which academics investigate how to encourage more environmentally-aware behaviors. But whose behavior needs changing?

Pro-environmental behavior research attempts to make useful contributions to sustainability issues through changing how humans interact with the biosphere (Kollmuss & Agyeman, 2002). Studies such as that by Steffen et al. (2015) demonstrate that major reforms in human behavior are needed to maintain our planet's habitability and protect its critical system processes¹. However, to develop the most useful sustainability knowledge possible may require changes to the way that environmental responsibility is framed in pro-environmental research, as more 'individualizing' perspectives exacerbate the already-present barriers to pro-environmental behavior such as feelings of powerlessness, discouragement and gaps between attitudes and willingness to act (Kent, 2009; Maniates, 2001; Scerri, 2009).

The neoliberal paradigm, as a "loosely demarcated set of political beliefs" (Thorsen, 2011, p. 203), has a number of principle characteristics, one of which is the drive for more individual freedom and autonomy resulting in increased responsibility for each individual to address major societal issues (Harvey, 2006). Neoliberalism is pervasive in Western society, and its increased focus on the individual is termed 'individualization' (Kent, 2009). Under this concept behavior change to address global environmental issues is the responsibility of the individual, and achieved through pro-environmental activities such as driving less, eating less meat and buying organic foods (Middlemiss, 2014; Skill, 2012). Very little research, however, has attempted to quantify the actual effectiveness of pro-environmental behaviors in reducing environmental impacts, and the studies that have been undertaken have found little correlation because of contextual and structural constraints, as well as concurrent behaviors

¹ See Steffen et al. (2015) for a complete list of the critical earth system processes and their current risk status.

which negate any reductions in impacts gained (Csutora, 2012; Huddart Kennedy, Krahn, & Krogman, 2015).

In this thesis I investigate whether individualization is supported in pro-environmental behavior research by assessing how responsibility for major environmental issues is framed by researchers: as an individual responsibility or a responsibility of other societal actors as well. Further, I critically explore how individualization impacts pro-environmental behavior research's contribution to meaningful sustainability knowledge through a comprehensive literature review, and examine whether novel approaches to framing environmental responsibility would be beneficial in future research.

1.2 Thesis structure

This thesis is divided into five chapters. Chapter 1 introduces and contextualizes my topic and lists the questions which guide my research. Chapter 2 focuses on the methodology for my research including its design, epistemology and ontology and my process of data collection. Chapter 3 presents the results of my abstract analysis and highlights trends and characteristics of the examined abstracts. My discussion will make up chapter 4 and explores the implications of my results from a perspective of neoliberalism. Finally, my limitations, conclusions and suggestions for further research are presented in chapter 5.

1.3 Problem context

1.3.1 Academia's role in sustainability

A critical way to begin addressing issues of sustainability is through academic research (Kueffer et al., 2012). Academia's relationship to sustainability issues is particularly important because its study is particularly complex. Solutions for sustainability issues not only require input from and cooperation between diverse fields of expertise, but they are also difficult to measure and experiment with as they generally span broad scales in time and space (Kates et al., 2001). However, the science surrounding global sustainability issues is notoriously uncertain and extremely vulnerable to public opinion, diverging stakeholder interests and value systems (Kueffer et al., 2012).

Although sustainability is considered a value-laden discipline, where knowledge that is produced must be interpreted and deliberated upon by scientists, Kueffer et al. (2012) notes that it is critical to ensure that research produced in the sustainability field serves the common interest rather than the interest of a few stakeholders. Because there is a significant risk that information in this field can be used

selectively or misused to promote the special interests, sustainability researchers have increased responsibility for the production of impartial knowledge, its interpretation and use (Kueffer et al., 2012). Some researchers have called for implementing a set of guiding principles to help secure more impartiality in sustainability research (van der Sluijs, Petersen, Janssen, Risbey, & Ravetz, 2008; Wibeck, 2009). As of yet such guiding principles have not been adopted widely and sustainability research remains vulnerable to unconsciously adopting characteristics of dominant discourses, such as neoliberalism, that can undermine research impartiality (Kueffer et al., 2012).

1.3.2 Pro-environmental behavior

The concept of 'pro-environmental behavior' has several definitions, however my focus in this thesis will be that derived from Kollmuss and Agyeman (2002), which defined it as "behavior that consciously seeks to minimize the negative impacts of one's actions on the natural and built world" (p. 240). I utilize this definition because it is based on, and in congruence with, past research from the most prominent pro-environmental behavior studies and models. Research into this area generally focuses on the individual and their behaviors such as turning off household lights when not in use, and product and transport mode choices (Huddart Kennedy et al., 2015; Kollmuss & Agyeman, 2002).

While pro-environmental behavior research tends to be focused on the individual, my aim in this thesis to highlight whether researchers are also taking into considering individuals' unequal capability to preform pro-environmental behaviors or their actual power to affect change. Furthermore, pro-environmental behavior does not necessarily need to be limited to the individual as it is possible that other bodies within society can exhibit pro-environmental behaviors, such as corporations reducing waste in their processes or governments protecting large swaths of forest (Conca, Princen, & Maniates, 2001). In this way, I attempt to understand whether an individualizing approach to pro-environmental behavior change (mostly focused on individuals) is the most effective way to contribute to sustainability.

1.3.3 Environmental responsibility

In this thesis I will define 'environmental responsibility' as the responsibility to make behavior changes in order to address major sustainability issues, such as climate change. In framing environmental responsibility in academic research, I look for *who* this environmental responsibility being allocated to: who is responsible for changing their behavior so that major environmental problems are solved (e.g. individuals, government, business)? I am only interested in responsibility for sustainability issues as my

focus is on how pro-environmental research can contribute the most useful and highest-impact knowledge to sustainability.

1.3.4 Neoliberalism and individualization

A principle goal of neoliberalism is to encourage increasing the responsibilities and control individuals have over their lives as a means of maximizing personal liberty and well-being (Harvey, 2006). Responsibility for not only their own lives, but for collective issues (in this case sustainability) is placed on individuals and removed from major societal actors such as businesses and government; individuals are left to act on their own to fix environmental ‘wrongs’ no matter their origin (Skill, 2012). The freely operating, atomistic individual is responsible for behaving appropriately to address issues while at the same time working together with large numbers of other individuals acting the same way, significant sustainable change can be brought about (Seyfang, 2005; Thorsen, 2011).

Sustainability issues such as climate change and biodiversity loss are framed as individual failures to act appropriately in their decision-making and behaviors (Maniates, 2001). For example, climate change is depicted as an issue of too much individual car use, rather than as an issue of government failure to install bicycle infrastructure or business failure to make more efficient cars. Upstream producers and regulators are seen as being subject to the ‘will of the people’, in that companies produce what the market ‘wants’ and regulators produce policies based on the votes from the citizenry (Conca et al., 2001).

Individualization, especially within the neoliberal discourse², is perceived as having a number of benefits including increased autonomy and increased perception of personal power and freedom (Harvey, 2006; Kent, 2009). However, these benefits may be outweighed by many negatives of increased individualization, such as the unreliability of human action for environmental reasons and the lower ability to affect change as compared to more powerful actors (Seyfang, 2005). A strong reliance on individualization may be creating more barriers to environmental sustainability than it removes, which is especially important for researchers to consider given the urgency of the sustainability issues that humankind is facing.

² Individualization in the neoliberal sense is seen as the most common, however it can also be found in other discourses such as communitarian, multicultural and tribal (Howard, 2007).

1.4 Research aim and research questions

My aim in this thesis is to explore how responsibility for environmental problems is framed within academic research: as primarily an individual responsibility to change their behavior or something which many different levels of society (e.g. government, business) must share. Moreover, because it is not clear if an ‘individualizing approach’ is the most effective way (in terms of actual impacts reduced and ability to act quickly) to address sustainability issues, I will also investigate the problems associated with it and possible drawbacks with special consideration paid to neoliberalism. I attempt to understand how the individualization framing negatively affects the ability of academia’s contributions to support sustainability efforts to combat major issues like climate change. The primary questions guiding my research are detailed in Table 1.

Table 1. Research questions, methodology used to answer research questions and theory used to guide the methodology are detailed.

Research question	Methodology	Theory/Approach
<i>How does academia frame responsibility for pro-environmental behavior change?</i>	Abstract examination	Individualization, interpretivism, constructivism
<i>How is the framing of pro-environmental behavior change in academic research harmful to efforts to contribute to sustainability issues?</i>	Literature review	Neoliberalism, power

1.5 Contribution to sustainability science

Kates et al. (2001) describe sustainability science as a field that “seeks to understand the fundamental character of interactions between nature and society” (p. 641). In this way, pro-environmental behavior research is an attempt to understand how humankind interacts with nature through the lens of sustainability (Kollmuss & Agyeman, 2002). However, despite its intent to contribute to sustainability efforts, academic research is prone to changes in dominant norms and discourses of the society which can sabotage its ability to contribute beneficial and useful information to the wider public (Kueffer et al., 2012).

This thesis will contribute to sustainability science by attempting to evaluate the effectiveness of pro-environmental behavior research through investigation into how it frames environmental responsibility, and the possible implications of that framing. Through a better understanding of the usefulness of academia’s current contribution to sustainability issues, it will be easier to identify how

to make more beneficial contribution in the future. This thesis may also serve as a 'wake-up call' for pro-environmental behavior research if my results show that its impartiality is particularly impacted by the dominant discourse of neoliberalism.

2. Methodology

In this section I will present the research design for my examination of abstracts as well as the literature review. I also explain in detail how I collected my data and categorized each abstract and I provide a number of relevant examples. Theoretical influences for my research methodology are also discussed.

2.1 Research design

The products of this thesis will consist of an examination of abstracts of pro-environmental behavior research articles, the methodology of which is based on the work of Cook et al. (2013), followed by a comprehensive discussion section. Cook et al. (2013) performed an exhaustive examination of abstracts as a means to assess the position of academic researchers on climate change. In a similar way, I will use my abstract examination to assess the position of academic researchers on individualization of environmental responsibility. It is akin to a 'content analysis' in that I look beyond the superficial text of the abstracts to try to identify the underlying messages about environmental responsibility and individualization (Bryman, 2012).

My abstract examination will gauge whether there exists support for individualization within pro-environmental behavior research and identify trends and characteristics present in the abstracts. My discussion will be the place where I look at the possible implications of my results from a theoretical perspective by discussing the influence of neoliberalism and issues of power. My discussion, much like a literature review, will be "a means of developing an argument about the significance of [my] research by incorporating ideas and perspectives from many sources" (Bryman, 2012, p. 98). It is my intention for the discussion section to place the results of my abstract examination in time and space to enhance the relevance of my results for future academic research about pro-environmental behavior.

2.2 Epistemological and ontological considerations

The epistemology that I utilize in my research is that of *interpretivism*, in that I look at the subjective meanings underlying the text of the abstracts that I examine; I attempt to interpret the hidden messages not readily available in the text, based on my own subjective experiences and perception of reality. Moreover, I am not looking for objective truths in my research (Bryman, 2012). My epistemological standpoint necessitates my ontological position which is inspired by *constructivism*, where I will regard ‘environmental responsibility’ as a social construction. That is to say I will explore how individuals are portrayed in the abstracts I examine, for example as actors responsible for both the creating and addressing major environmental issues. In this way ‘environmental responsibility’ is not only constructed, but also assigned a particular social meaning (Bryman, 2012).

2.3 Data collection

Cook et al. (2013) used Web of Science to search for two sets of keywords and their team of 24 reviewers subsequently examined some 11,944 abstracts from 1991 through 2011 for their stance on global climate change³. In a similar manner I searched Web of Science as well as Scopus for the term ‘pro-environmental behavior’ and received over 700 articles. Taking into account my narrow timeframe for this thesis and the fact that I worked alone, I decided to limit my search to that one set of keywords. Additionally, I narrowed my search to peer-reviewed journal articles written in English and published from 2011 through 2015. The publish date limitation was a reflection of my effort to try to keep my findings as up to date as possible: I want an understanding of how pro-environmental behavior is framed *currently* in the field.

I imported all of the abstracts into Endnote and used the ‘duplicates’ tool to remove all of the duplicate articles it could identify. I subsequently read through each citation and manually deleted any other duplicate that had not been previously found. I then exported my updated results to Microsoft Excel and created a spreadsheet with the authors, title, year, journal, the article’s keywords (if applicable) and included the abstract (see Figure 1). At this point I was able to identify and delete several articles which lacked an abstract entirely in order to ensure uniformity in my methodology. After these steps I was left with my final set of abstracts ready for examination.

Prior to beginning the examination of the abstracts, I determined my definition of ‘individualizing’ to help guide the examination specifically. Taking inspiration primarily from Kollmuss and Agyeman

³ Cook et al. (2013) search keywords were ‘global warming’ and ‘global climate change’.

(2002), Maniates (2001) and Middlemiss (2014), I defined ‘individualizing’ in my abstract examination as a focus on individual behaviors such as recycling, reducing private car use, etc. I assume that these behaviors are depicted as ways to allocate responsibility for addressing environmental problems to individuals and are supportive of the neoliberal characteristic of individualization to increase personal responsibility wherever possible (Thorsen, 2011).

	A	B	C	D	E	F	G
7	Anderson, A.	2013	Together we can save the arctic: celebrity advocacy and the Rio Earth Summit 2012	Celebrity Studies	celebrity advocacy: climate change: Greenpeace: media: Rio+20 summit	Economic, institutional and organisational pressures mean that journalists have become increasingly reliant upon pre-packaged information, principally from public-relations professionals, industry and news agencies. Celebrities have become an important currency and particularly so with regard to climate change, since they can help propel the issues into the headlines. As environmental NGOs frequently find themselves at the whim of ever-shifting political and media agendas, celebrities can lever news entry, providing them with a powerful hook. This article examines the role of celebrities in the Rio+20 summit through a textual analysis of UK newspaper coverage, together with a review of recent surveys of celebrity influence on pro-environmental attitudes and behaviour. The Rio United Nations Conference on Sustainable Development was organised to take place on the twentieth anniversary of the 1992 summit. Compared with the earlier summit, it received very little media attention. Analysis suggests that celebrity involvement can be a potentially significant means of raising visibility of environmental issues through popular culture, but at the same time runs the risk that the core message becomes muted or challenged.	Neutral
8	Anderson, S. E.	2011	Complex constituencies: Intense environmentalists and representation	Environmental Politics	Congress: Constituency: Environmental group: Political parties: Voting: environmental politics: least squares method: party politics: voting behavior: United States	The role of environmental subconstituencies in determining the voting behaviour of members of the US Congress is assessed. Using ordinary least squares and symmetrically censored least squares (a method especially appropriate for bimodal data), the impact of environmentally-concerned constituents, as measured by original data on environmental group membership, on congressional voting is quantified. In general, members of the US Congress vote more pro-environmental when they have more environmental group members in their districts, which may be representation or factionalism at work. Surprisingly, even though members of environmental groups are a traditionally Democratic constituency in the United States, both Democrats and Republicans are responsive. © 2011 Taylor & Francis.	Non-individualizing
9	Andrews, C. Yi, D., Krogmann, U., Senick, J., Wener, R.	2011	Designing Buildings for Real Occupants: An Agent-Based Approach	IEEE Transactions on Systems Man and Cybernetics Part a-Systems and Humans		Building information modeling is only beginning to incorporate human factors, although buildings are sites where humans and technologies interact with globally significant consequences. Some buildings fail to perform as their designers intended, in part because users do not or cannot properly operate the building, and some occupants behave differently than designers expect. Innovative buildings, e.g., green buildings, are particularly susceptible to usability problems. This paper presents a framework for prospectively measuring the usability of designs before buildings are constructed, while there is still time to improve the design. The framework, which was implemented as an agent-based computer simulation model, tests how well buildings are likely to perform, given realistic occupants. An illustrative model for lighting design shows that this modeling approach has practical efficacy, demonstrating that, to the extent that users exhibit heterogeneous behaviors and preferences, designs that allow greater local control and ease of operation perform better.	Individualizing
	Anker, A. Feeley, T.	2011	Are Nonparticipants in Prosocial	Health		Latane and Darley's (1970) bystander intervention theory was used to model individuals' participation in two	Individualizing

Figure 1. Example of spreadsheet layout for abstract examination.

After my search results from Web of Science and Scopus were combined, I read each abstract, its title and keywords (if present) and assigned it to a category. I attempted to identify key phrases and words which indicated the researchers’ stance with regards to my methodological definition for ‘individualization’. I used methodological insights from Miles and Huberman (1994) to choose three categories to cluster my data into, the criteria of which can be found in Table 2. Miles and Huberman describe clustering as “a general name given to the process of inductively forming categories, and the iterative sorting of things...into those categories” (1994, p. 249). In other words, I attempted to look at the breadth of the abstracts and identify commonalities and how they were like or unlike each other. When reading through each abstract I asked myself the question: ‘how is responsibility for environmental issues framed in this abstract?’ My answer to that question is what determined the way I categorized the abstract.

The ‘individualizing’ category was characterized by abstracts that framed individual shortcomings as the primary cause of environmental issues, and implied that individual actions to ‘fix’ the behavioral problems are necessary. In these articles individual behavior change was stressed and environmental problems seen as individual problems rather than institutional or structural inadequacies. Topics of

these articles included concepts like how to ‘nudge’ consumers to buy more ‘green’ products, or how to encourage more recycling behavior in households.

There were some articles which did not have a stance or with an unclear stance. I created a ‘neutral’ category for these abstracts and they were often focused primarily on psychological concepts such as ‘self-efficacy’ and ‘trust’ as it relates to individual pro-environmental behavior. In these cases the focus of the abstracts was psychological contributors to behavior and it was difficult to get a good sense of how individualization was actually being framed. Other abstracts simply did not discuss concepts which relate to individualization, such as evaluating the effectiveness of carbon footprint as a research tool.

Table 2. List of categories into which abstracts were sorted. How the authors framed responsibility for environmental issues was the defining characteristic. Additionally, I present examples of phrases similar to those found in an abstract sorted into that category.

Category	Framing of Environmental Responsibility	Example
<i>Individualizing</i>	Environmental problems are a result of individual shortcomings and individual behaviors must be changed	<i>‘...individuals must reduce car use in order to address climate change’</i> or <i>‘...this research will provide insight for policymakers to influence individual behavior change’</i>
<i>Neutral</i>	Unclear, conflicting stance on or no discussion of individualization	<i>‘...trust is a significant psychological barrier to pro-environmental behavior’</i> or <i>‘...the Theory of Planned Behavior was applied to rural populations to measure its accuracy’</i>
<i>Non-Individualizing</i>	Environmental problems are a result of shortcomings beyond the individual	<i>‘...attribution of responsibility for environmental issues is wrongly placed on the individual’</i> or <i>‘...recycling is not the issue, it is the high production of disposable packaging’</i>

Abstracts which were ‘non-individualizing’ either framed environmental responsibility as falling on more than just individuals or individualization was specifically challenged. Phrases in the abstracts made light of this fact, such as mentioning that while individual behaviors will not solve environmental issues they are an important contributor and are worth researching. The authors in these abstracts made it clear that other changes in other levels of society were needed, not just individual behavior.

After I sorted all abstracts into one of the three categories, I performed a simple proportion analysis. I used a simple ‘COUNTIF’ function in Microsoft Excel and percentage calculation to identify the number of abstracts present within each category. This was my way of getting a sense of the dominant way

individualization was framed within pro-environmental behavior research. The proportion analysis gave me an indication as to whether there was an extremely dominant position or if there were actually many different ideas about whether individualization is useful for sustainability efforts.

3. Results

In this section I will present the results of my abstract examination consisting of the proportions of abstracts categorized into each category as well as trends that I identified. I discuss the main characteristics of the most-studied pro-environmental behaviors in the abstracts and discuss the possible implications of these characteristics. Similarly, I discuss the tendency of many of the abstracts to focus on consumption patterns as a solution to sustainability issues, and further explore how that approach can be problematic. For all sections I provide examples directly from the examined abstracts.

3.1 Abstract examination results

A total of 487 abstracts were examined for this thesis⁴. In March, 2015 my keyword search yielded 406 hits through Web of Science and 380 hits through Scopus, for an initial total of 786 compiled abstracts. After removing the duplicates and articles without abstracts (n=299), each was examined for its position regarding individualization and categorized accordingly. Overall totals of abstract categorization were vastly skewed towards ‘individualizing’, at 352 or just over 72 percent (see Table 3). Conversely, only 9 abstracts (just under 2 percent) were categorized as ‘non-individualizing’. Abstracts placed in the ‘neutral’ category totaled 126 and made up over 25 percent of the total abstract count.

Table 3: Total count and relative percentages of abstracts falling into each category.

Category	Count	Relative Proportion
<i>Individualizing</i>	352	72.30%
<i>Neutral</i>	126	25.87%
<i>Non-Individualizing</i>	9	1.85%
Total	487	

⁴ For a complete reference list of abstracts examined, contact author directly or follow one of these links: <http://bit.ly/1ECuNbv> or <http://goo.gl/OGRC57>.

3.2 Data trends

The abstracts in each category had a number of unique characteristics. Abstracts considered to have framed environmental issues as individual issues and placed in the ‘individualizing’ category tended to begin with a discussion of broad and global issues, such as climate change, followed by a sentence that brings the issue down to the individual by stating that individual behavior change is necessary for addressing it. In contrast, the non-individualizing abstract, though often beginning with discussion of large-scale environmental problems, did not bring the conversation down to the level of the individual. Environmental problems were framed as larger structural issues or the role of the individual was discussed as being only part of a larger scope of responsibility borne by organizations and governments, as can be seen in Table 4.

Table 4. Excerpts from abstracts in each category. Note that the ‘neutral’ category is omitted from this table.

Category	Examples from abstract text
<i>Individualizing</i>	<p>Environmental problems have their origins in human behavior, and as a result, any solution to environmental issues will require changes in behavior. (Schultz, 2014, p. 107)</p> <p>Achieving a sustainable future requires that individuals adopt sustainable behaviors, which are often learned and cemented at a young age. (Redman, 2013, p. 1)</p> <p>The current materialistic way of life results that humankind more and more actively interferes in the environment, constantly putting it through radical changes and causing major environmental deterioration. For that reason we may regard people's mentality, awareness and behavior as the most critical factors in forming and solving the issue of burdening the environment. (Horvat, 2012, p. 43)</p>
<i>Non-individualizing</i>	<p>Reducing energy demand is not simply about developing energy efficiency measures and technologies, but also changing behavior and everyday practices. Although the over-emphasis on individual behavior as the main driver of transition to low-carbon societies may be contested on the grounds that it distracts attention from the wider structural, economic and political factors, it is widely acknowledged that pro-environmental behaviors play an important part in such a transition. (Davoudi, Dilley, & Crawford, 2014, p. 11)</p> <p>Government interventions on the demand side of consumption have increasingly involved attempts to obtain greater traction with the values, attitudes and beliefs of citizens in relation to climate change and also in terms of influencing consumer behavior at an individual level... Tracing the development of the UK Government's behavior change agenda over the last decade, we posit that a core reason for the limitations of this programme relates to an excessively narrow focus on the individual. This has served to obscure some of the wider political and economic aspects of the debate in favor of a more simplified discussion. (Fudge & Peters, 2011, p. 789)</p> <p>Although not regarded as the major culprits in terms of the degradation of the world's resources, consumers in developing countries such as South Africa should be encouraged to realize their potential contribution to save our planet. (Sonnenberg, Erasmus, & Donoghue, 2011, p. 153)</p>

3.2.1 Characteristics of most-studied pro-environmental behaviors

The types of pro-environmental behaviors which were studied in the articles categorized as ‘individualizing’ tended to be quite benign. That is to say, the most-studied behaviors do not challenge or force a rethinking of the current political, economic or other societal institutions, structures or dominant discourses, nor do these types of actions require individuals to significantly change their day-to-day lives (Maniates, 2001). Further, the framing suggests that individual agency is the only thing required in order to address systematic environmental issues (Middlemiss, 2010). Below is a short list of some of the most mentioned types of pro-environmental behaviors within the abstracts I examined:

- Recycling, composting and reusing materials
- Tourism behavior and public land use
- Transportation mode choices (e.g. car, train, airplane, bicycling)
- Electricity use (e.g. turning off lights when not in use, turning up the thermostat in summer)

The abstracts focused on these types of pro-environmental behaviors framed them as activities which, if practiced on a large scale by many individuals, will have major positive impacts on sustainability efforts. Studies relating to pro-environmental behavior tend to focus on how to most effectively encourage pro-environmental behavior change, for example designing policy to encourage taking the bus to work rather than driving. There are very few studies, however, that have attempted to measure the *actual* environmental impact of pro-environmental behaviors on a large scale, and what little research I was able to find seemed to indicate these behaviors do not result in lowered individual carbon or ecological footprints.

A study in the Proceedings of the National Academy of Science by Dietz, Gardner, Gilligan, Stern, and Vandenberg (2009) studied the impact of nationwide household implementation of 17 energy saving techniques, “with low or zero cost or attractive returns on investment, and without appreciable changes in lifestyle” (p. 18453) and which do not necessitate any new regulatory measures. The researchers calculated that if all 17 of the energy saving techniques were universally taken up by U.S. households, total national carbon dioxide emissions would decrease by 7.4 percent. Dietz et al. (2009) makes clear that this is a significant amount of emissions, amounting to 123MtC/yr., and from a sustainability perspective this is indeed an important move towards sustainable emissions control. Nevertheless, the Intergovernmental Panel on Climate Change’s fifth Assessment Report calls for global emissions cuts of 40 to 70 percent by the year 2050 (IPCC, 2014).

In a similar way, Huddart Kennedy et al. (2015) studied the impact of pro-environmental behaviors, such as purchasing used goods, composting organic waste and recycling on the size of individual carbon footprints. Using the responses from a series of phone interviews, the team found no connection between pro-environmental behavior levels and carbon footprint. In other words, the amount of pro-environmental behaviors individuals performed had no effect whatsoever on their carbon footprint. Instead what they found was that while higher levels of environmental concern does increase the number of pro-environmental behaviors performed, individuals tend to perform more environmentally-taxing behaviors concurrently (Huddart Kennedy et al., 2015).

This finding is echoed by Csutora (2012) whose team looked into how much carbon footprints could be reduced by individuals without making significant structural or contextual changes. They surveyed the rates of pro-environmental behaviors performed by self-labeled 'green' versus 'brown' consumers⁵ in Hungary ($n=1,012$) in order to ascertain their ecological footprint. Through this study Csutora aimed to ascertain how much reduced impact can be attributed to voluntary pro-environmental behavior choices. The team found no significant differences in the ecological footprints of 'green' versus 'brown' consumers (Csutora, 2012).

Along these same lines Gatersleben, Steg, and Vlek (2002), in their 2002 study of Dutch individual homeowners, found that those who indicate they behave more pro-environmentally do not use less energy. Thøgersen and Grønhøj (2010) found that Danish energy consumers' "effort to save electricity is as important for household electricity consumption as the structural characteristics reflected in the size of the home" (p. 7738). These studies all point to a "behavior-impact gap" problem in which higher levels of pro-environmental behavior activity do not seem reduce one's environmental impact, and can actually exacerbate it (Csutora, 2012).

These researchers note in their studies that it is difficult to say exactly why there is a gap between higher levels of pro-environmental behavior and reduction of CO₂ footprint and emissions. Huddart Kennedy et al. (2015) hypothesize that individuals feel justified in flying several times a year because of their high level of pro-environmental behaviors at home, or that their built environment makes it impossible to not own a car. Individuals may also perform many low-impact pro-environmental behaviors, but shun others which carry much more ecological weight (Csutora, 2012). For example, while individuals may recycle, take shorter showers and buy used clothing, they may also take several international flights each year.

⁵ Csutora (2012) defines 'green' consumers as ecologically committed in their consumption choices, and 'brown' consumers as non-ecologically committed.

Another significant barrier is the gap between awareness of environmental issues and actual willingness to act. Studies are finding that awareness and concern for the health of the planet is growing, especially with those that have higher incomes (Seyfang, 2005). While more people are becoming aware of and want to contribute to solving environmental problems, few know how to act effectively. Knowledge of environmental issues, concern and willingness to act is increasing within the public sphere, but it does not seem to be increasing the levels of pro-environmental action being taken (Kent, 2009). The 2012 “Global Warming’s Six Americas” study found that of over 1,000 Americans surveyed, 29 percent labeled themselves as ‘concerned’ and 16 percent said they were ‘alarmed’ about climate change (Leiserowitz, Maibach, Roser-Renouf, Feinberg, & Howe, 2012), but the ‘attitude-behavior gap’ remains (Blake, 1999; Kollmuss & Agyeman, 2002).

The effectiveness of reliance on individuals to act rationally about their emissions, rather than policies targeted at regulating industry, has yielded mixed results. In the U.K., government policies have had quite limited success bridging the gap between awareness and action with regards to household emissions as a means of meeting their 80% emissions reduction goal for 2050 (Fudge & Peters, 2011). The U.K. is not alone however: in 2007 AccountAbility and Consumers International performed a survey about what assures U.S. and U.K. consumers on climate change. They found that 75 percent of the combined populations of U.S. and U.K. consumers are concerned about climate change, only 9 percent stated that they were willing to take action against it (AccountAbility and Consumers International, 2007).

For Australia, a similar survey by Net Balance Foundation and AccountAbility (2008) found that an equal proportion (75 percent) were concerned about climate change, and a slightly higher but still significantly low number (21 percent) were willing to act. While there is a high and growing concern for global environmental issues (Barr, Gilg, & Shaw, 2011; Leiserowitz et al., 2012), there appear to be significant barriers for action on the part of individuals. Awareness and concern, it seems, do not necessarily mean there is a willingness to act.

My results indicate that the pro-environmental behaviors researchers principally focus on are politically neutral behaviors that are aligned with the path of modernization and maintenance of the status quo (Langhelle, 2000). Simple, relatively painless acts such as recycling and bicycling are framed as meaningful solutions to major environmental issues. Moreover, by portraying many of these activities as quite ‘harmless’, researchers are actually normalizing the idea that sustainability is something which can be addressed through ‘everyday’ and ‘mundane’ activities (Barr et al., 2011).

Research into the effectiveness of these behaviors at adequately addressing environmental issues such as climate change shows mixed results (Csutora, 2012; Seyfang, 2005). While studies such as Dietz et al. (2009) which focus on apolitical behaviors do have their place, it is important to consider the actual measured effectiveness that these types of behaviors have and whether they warrant the majority of empirical inquiry into pro-environmental behavior change. Additionally, the numbers of barriers to meaningful behavior change and reconciling attitude behavior gaps is significant (Kent, 2009; Kollmuss & Agyeman, 2002).

3.2.2 Consumption in pro-environmental behavior research

Though I sorted the abstracts into only three categories, there was a significant trend within the data sorted into the 'individualizing' category. I found that a 59 of the 376 'individualizing' abstracts focused heavily on economic means of addressing large-scale environmental problems. Consumption practices of the individual were a common research subject and included concepts such as 'green purchasing' and 'ecological consumerism'. These abstracts were characterized as framing environmental issues such as climate change as an error of individual consumption and reversed primarily through 'better' consumptive habits. There is a very strong emphasis on changing consumer behaviors, and there was little if any discussion of changing producers' behaviors throughout the abstracts. Examples can be found in Table 5.

Many prominent researchers associate the prevalence of neoliberalism with the spread of consumerism (see for example: Touraine and Macey, 2001; Harvey, 2005; 2006; Saad-Filho and Johnson, 2005), which is an important way of supporting the limitless economic growth that neoliberalism demands (Thorsen, 2011). Along similar lines, abstracts exhibiting the trend of focusing on consumption as solution framed consumerism as a legitimate means of affecting environmental change. Moreover, as I have mentioned in the previous section, individual actions are 'politicized' in these abstracts as they are framed no longer as private but as public actions for the 'greater good' of the planet and humankind (Middlemiss, 2014).

In this way, individuals are asked to 'vote' with their consumption choices and to affect environmental problems not through activism or collective political pressure, but through their product choices in the marketplace (Maniates, 2001), and individuals essentially become 'citizen-consumers' (Barr et al., 2011). Irving, Harrison, and Rayner (2002) call the politicization of consumption 'democracy through the wallet' and it became clear through my abstract examination that this trend pervades pro-environmental behavior research.

The ‘individualizing’ abstracts which focus on economic ‘solutions’ for environmental problems are making critical assumptions about consumption as a pro-environmental behavior. These researchers are saying, either explicitly or implicitly, that consumption activities are sufficient and relevant enough to effectively address humankind’s environmental problems and merit serious academic inquiry. Consumption is an arena that most individuals feel they have significant power and Maniates (2001) hypothesizes that this is why most pro-environmental behaviors are focused on consumption. Though individuals do feel power within their consumption practices, individualization places a huge amount of responsibility on private consumers to repair the problems which “were created in large part by producers” (Muldoon, 2006, p. 4).

Table 5. Excerpts particularly focused on consumption as a proposed solution to sustainability issues. Note the excerpt from Durif, Roy, and Boivin (2012) which echoes my findings that ‘green consumerism’ is increasingly commonplace in academic literature.

Framing	Example from abstract examination
<i>‘Pro-environmental consumption can be the solution’</i>	<p>Although green consumption is increasingly popular in the academic literature, practice is still far from commonplace among consumers. Few studies have been conducted to explain consumer reluctance to adopt green products, particularly with regard to the roles of the various risks consumers perceive in their purchases. (Durif et al., 2012, p. 1)</p> <p>Increasing consumption in the South African emerging economy necessitates stringent effort toward developing environmental information campaigns that stimulate preferences for eco-friendly [apparel] alternatives. (Sonnenberg, Jacobs, & Momberg, 2014, p. 266)</p> <p>In this modern era of societal marketing business ethics and social responsibility are becoming the guiding themes for marketing strategies and practices. Within the field of ethics and social responsibility environmental and green marketing topics are the central topics, which are closely related to biodiversity and sustainability. (Kaufmann, 2012, p. 50)</p> <p>This paper explores the under-researched notion of consumer responsibility, a potentially significant influence on consumer behavior that marketers and policymakers may be able to harness as they attempt to respond to environmental challenges such as climate change (Wells, Ponting, & Peattie, 2011, p. 808).</p> <p>We examined the existing practices of various media to ascertain the usability of information based on life cycle thinking which can be key to changing consciousness and behavior of consumers towards pursuing a sustainable society (Tsuda, Hara, & Uwasu, 2013, p. 123).</p>

3.2.2.1 Barriers created by consumption as a pro-environmental behavior

There are a number of barriers that the ‘citizen-consumer’ faces as they attempt to make the most sustainable and ethical decisions, notably that of information: “[c]onsumers are often not properly informed about the ecological impacts of their pro-environmental behaviors” (Csutora, 2012, p. 149). Seyfang (2005) points out that “the present economic system externalizes the environmental and

social costs of economic activity, and so sends the consumer the wrong signals” (p. 295). For example, the cost for many foods is subsidized and so prices do not account for the costs of soil damage or water pollution.

Individuals may not understand or be capable of knowing every aspect which goes into the production of a product and whether it is somehow more ethically-produced than a similar one (Crouch, 2012). In other words, though organic food is generally understood to be a more ecologically-friendly alternative, it may actually be the case that a local non-organic alternative has a smaller impact (Csutora, 2012). Framing consumption in this sense requires that the citizen-consumer know what the ethical product choices are, but it may be simply impossible considering the misleading and scarce information available to them (Hobson, 2002). That citizen-consumers lack the ability to make more sustainable choices is a significant barrier to effective change, especially when consumption choices are framed as the primary means of addressing environmental issues (Seyfang, 2005).

Another important barrier to consider is that of context: consumption rarely, if ever, occurs in a void. Not only are individual choices shaped by our relationships and environment, but the available choices themselves are limited by powers upstream in production as well as social and institutional structures (Conca et al., 2001; Scerri, 2009). “Although individual consumers...have some discretionary power over their consumption pattern...limited abilities and restricted opportunities in combination with norms and incentives...make it difficult even for highly motivated individuals to do anything radical to improve the sustainability of their lifestyles” (Thøgersen, 2005, pp. 167-168). Not only are available choices constrained by producers, policymakers and other structures, but the choices individuals are willing to make is influenced by their own personal norms and values (Csutora, 2012).

Individualization requires that individuals act alone as consumers but also in unison to pressure the market to change, through decentralized consumerism (Maniates, 2001; Seyfang, 2005). While the market is a strong tool that authors such as Muldoon (2006) have argued can and should be used to solve major societal problems, others have pointed out that such market changes require collective action which is difficult in a society where people identify more as individuals than as members of a larger community (Middlemiss, 2014). It is possible to act in an inconsistent way regarding environmental problems, and further the behavior of other individuals can work against or interfere with the success of pro-environmental behaviors (Csutora, 2012, p. 150). In other words, even if a large group of individuals do manage to work together towards an environmental goal, a larger group may be negating any gains made.

When consuming 'green' or 'sustainable' products, consumers have a tendency to be comfortable in thinking that they are protecting the environment which can limit their drive for additional pro-environmental behaviors (Huddart Kennedy et al., 2015). "By suggesting that citizens can meaningfully contribute to environmental reform in the absence of collective political action or more informed choices about where to live in relation to amenities, private sphere PEB risks obfuscating meaningful solutions to environmental issues" (Huddart Kennedy et al., 2015, p. 231). Moreover, the narrow concept of 'green consumption' and 'green' products distract from the huge profits gained by corporations through high levels of pollution and the mass extraction of resources (Muldoon, 2006).

Muldoon (2006) points out that the 'citizen-consumer' lives in a state of constant conflict. On one hand they are asked to act as 'selfless' citizens whose choices are made in the interest of the greater good. On the other hand they are asked to make choices for themselves through their consumption, which is an inherently selfish endeavor (Muldoon, 2006). Consuming is inherently individualist, but citizenship is an obligation to the collective (Barr et al., 2011). It is very difficult for individuals to find the balance between citizenship and their own needs which is particularly risky as decisions made by the citizen-consumer are easily eclipsed by private desires and needs (Barr et al., 2011; Scerri, 2009). Furthermore, consumerism is a classically passive act which is antithetical to what collective action requires (Slocum, 2004).

Researchers such as Conca et al. (2001) have written that social science in particular has failed to "grapple seriously with problems of consumption and environmental degradation...and the need to see consumption not just as an individual's choice but as a stream of choices" (p. 5) along the process from production to consumption. The authors note that power for decision-making in the production-consumption chain is often ignored except at the consumption stage. Production-consumption chains are also depoliticized and removed from the wider sustainability discussion by placing focus on consumers – and not producers – to act (Scerri, 2009). Removal of producers (and other important holders of power such as politicians and regulators) from researchers' focus creates a barrier to pro-environmental behavior because consumers are left to pick up the pieces created by these upstream powers (Conca et al., 2001). In this way, responsibility for the conditions that were actually created by producers comes to rest on the shoulders of individual consumers (Scerri, 2009, p. 477). The 'citizen-consumer' faces many barriers that upstream powers in the production chain simply do not (Conca et al., 2001).

Individualization frames consumption as a solely individual choice yet requiring individuals to act collectively. That framing conceals the prior stream of choices that had to be made by producers and policymakers (Conca et al., 2001). Barr et al. (2011) argues that individual consumption behavior is

overemphasized and “crowds out other ways of viewing both society’s and individual’s approaches to environmental and social change” (p. 1225). In other words, while it is important that consumption patterns change, it is not certain that individual consumption patterns alone will be sufficient to prevent problems such as climate change, considering the stumbling points individual consumers face. Moreover, serious environmental change requires identifying the sources of the forces pushing society in unsustainable trajectories, but this is difficult if so much in the chain is obfuscated (Maniates, 2001).

While there exist barriers to sustainable behavior change at every level of society, it is not clear if the neoliberal concept of individualization, which favors relying on individuals’ consumption choices, is the most effective way to combat climate change and other sustainability issues. What is left out of this framing is whether the citizen-consumer is indeed the most reliable means of achieving sustainable change, or if it lies with actors further up the production chain with more knowledge and more power. In choosing what to consume, it is possible that the citizen-consumer is prone to unwittingly ‘neglecting their responsibilities’ to society due to barriers in information, choices available and their social context (Middlemiss, 2008). With so many barriers to individual pro-environmental behavior change and its lack of effectiveness in reducing environmental impacts, perhaps the individualization of responsibility in empirical research is not the most effective approach to sustainability issues.

4. Discussion

My results demonstrated that the neoliberal concept of individualization is pervasive in pro-environmental behavior research with over 70 percent of abstracts categorized as ‘individualizing’. In the following sections I investigate how this is problematic both for pro-environmental behavior research and sustainability efforts in general, and I also tie in discussions and implications of concepts of power. I identify some of the major barriers created by the high levels of individualization and attempt to assess whether a neoliberalist understanding of environmental responsibility is the most beneficial way pro-environmental behavior research can contribute to the wider sustainability discussion.

4.1 Neoliberalism in pro-environmental behavior research

Individualization is a principle characteristic of neoliberalism, and so there is a significant possibility, in light of the high level of individualization present in my results, that neoliberalism is influencing pro-environmental behavior research. Conca et al. (2001) support this idea, arguing “much of the social sciences has come under the sway of economic reasoning...and little attention is paid to externalities,

social or environmental” (p. 4). In other words, the research I examined may be more focused on researching within the neoliberalist paradigm than with critiquing it or developing more useful approaches to addressing sustainability challenges. If acceptance of neoliberalism is indeed the source of the high levels of individualization in my abstract examination, this can present a number of significant barriers and conflicts to sustainable change.

For the purposes of this thesis I will be primarily drawing on Thorsen (2011) for my understanding of neoliberalism. Despite its debated meaning and somewhat unclear history, Thorsen proposes that neoliberalism be understood as “a loosely demarcated set of political beliefs which...include the conviction that the only legitimate purpose of the state is to safeguard individual liberty” (2011, p. 208). Thorsen (2011) goes on to characterize neoliberalism as a unified movement to place more responsibility in the hands of individuals, and that these individuals will function as competent actors in the free marketplace. Through increased ability to exercise personal freedom and entrepreneurship, as Thorsen explains, collective well-being of humankind will be enhanced. However, many of the dominant characteristics of neoliberalism are not compatible with the principle goals of sustainability, so its influence over empirical research is possibly problematic (Crouch, 2012).

4.1.1 Characteristics of neoliberalism and its implications for sustainability

Neoliberalism emphasizes the role of the individual as the actuator of change and increasing personal autonomy and responsibility as the goal (Thorsen, 2011). A majority of the abstracts I examined emphasized the responsibility of the individual for sustainable change, with very little if any discussion of the responsibility of the collective nor more powerful social, political or economic entities. Furthermore, few of the abstracts mentioned structural or institutional barriers which may limit individual ability to act, something which Seyfang (2005) notes diminishes the power of the citizen-consumer’s ability to act. Neoliberalism depends on rationally acting individuals, but there is a significant gap between attitude and pro-environmental behavior and many studies have found that consumers do not act rationally as was once thought (Kollmuss & Agyeman, 2002). Individuals are notorious for not acting rationally, even when presented with objective information that doing so would benefit them (Conca et al., 2001; Middlemiss, 2014).

Another major aspect of neoliberalism is its dependence on unfettered access to natural resources and infinite economic growth; continuous consumption is obligatory, and undisputable (Muldoon, 2006; Seyfang, 2005). Focusing only on individual pro-environmental behaviors portrays infinite economic growth and environmental reforms as compatible (Huddart Kennedy et al., 2015, p. 231). Most of the

behaviors studied in the abstracts categorized as 'individualizing' such as 'green' consumption or recycling do not support the decoupling of neoliberalist values from environmental degradation (Seyfang, 2005). Recycling and bicycling to work do not conflict with the idea of infinite growth or mass resource extraction, but individuals growing all of their food and public ownership of fossil fuel resources do. Environmentalism and the goals of sustainability inherently stand at odds with individualization as it currently exists in the neoliberal paradigm, yet the two are increasingly portrayed as compatible (Maniates, 2001; Spaargaren, 2003).

Also characteristic of neoliberalism is its anti-democratic nature, with many of the largest powers in society such as the Federal Reserve, out of democratic control (Harvey, 2006). With regards to sustainability efforts this materializes as increasingly unregulated or impossible to regulate corporate entities and reduction in governmental powers to regulate (Irving et al., 2002). Furthermore, criticism of the neoliberal mindset and of corporate degradation of the environment is seen as 'extreme' and dissent is marginalized in politics, business and sometimes civil society (Scerri, 2009). "If a person demands that the state should regulate the market or make reparations to the unfortunate, who have been caught at the losing end of a freely initiated market transaction, this is viewed as an indication that the person in question is morally depraved and underdeveloped, and scarcely different from a proponent of a totalitarian state" (Thorsen, 2011, p. 204). Alternative economic and social systems are marginalized and labeled as antithetical to well-being and prosperity, even though alternatives have more potential to lead to a more sustainable, just and healthy future (Harvey, 2006; Scerri, 2009).

The neoliberal concept of individualization's definition of responsibility makes it difficult to resolve societal problems other than on the terms of augmenting individual autonomy and personal sovereignty (Scerri, 2009). The places where government regulations of corporate producers fall short of sustainability, such as failing to regulate the exploiting of fish populations to collapse levels, is framed as the gluttony of individuals (e.g. they are consuming too much fish). Inequalities and glaring social injustices are often considered 'morally acceptable' because they are the result of a chain of freely made individual decisions: individuals are solely responsible for the choices they make and the consequences of them (Thorsen, 2011). Citizen demands for checks on unsustainable corporate or government behaviors are twisted and reframed as opportunities for self-improvement, so the vicious cycle of individualization is self-sustaining (Scerri, 2009).

Neoliberalist individualization has a decentralization of responsibility component which can be very problematic for pressing sustainability issues such as climate change (Kent, 2009; Thorsen, 2011). At a time when global environmental risks are increasing and their influence is spreading to more and more people, specific responsibility for addressing them is becoming less and less easy to pinpoint

(Maniates, 2001). Increased individualization tends to distribute responsibility widely resulting in a situation where no-one is held specifically responsible for addressing major environmental problems and resolution of major issues is very difficult to achieve. Instead of being able to rely on government to regulate overexploitation of resources by corporations, responsibility is given to a diffused and decentralized series of consumption choices made by individuals (Kent, 2009).

Also central to the neoliberalist paradigm and the idea of the 'citizen-consumer' is the commodification of nature: neoliberalism mandates the expansion of markets wherever possible, so if there is no market in such places as ecosystems or environmental pollution they must be created (Harvey, 2006; Thorsen, 2011). Things that were once publicly-owned and not a market asset are 'commodified', such as greenhouse gas emissions via carbon markets. In this way, business values are accepted as part of the movement toward sustainability (Maniates, 2001). Further, consumption as a solution to environmental issues is a privatized approach, wherein through purchasing the 'correct' products and participation in private markets we can effectively solve collective, public issues (Maniates, 2001).

4.1.2 Acceptance of neoliberalism in pro-environmental behavior research

Yet despite these contradictions to sustainability, I found that the majority of the abstracts I examined consistently supported individualization. Reasons for this adherence to neoliberal concepts within academia may be linked to how much of an influence dominant paradigms have, whether the researchers were aware of it or not. Some researchers have put forth hypotheses, notably that by Harvey (2006) who posits that "neoliberalism has become hegemonic as a mode of discourse, and has pervasive effects on ways of thought and political-economic practices to the point where it has become incorporated into the common-sense way we interpret, live in and understand the world" (Harvey, 2006, p. 145). Perhaps individualization has become so normalized in the minds of researchers it is not a political discussion worth having⁶, or perhaps they assume that it is a logical, common-sense way that we can address our global problems.

Many also find the individualizing characteristic of neoliberalism to be attractive, which helps to normalize and to support its furthering. Increasing individual responsibility is seen as 'freeing': by increasing individual responsibilities in societies, individual control and power over their lives is also increased (Kent, 2009). While the neoliberal understanding is that individuals are autonomous actors

⁶ In a similar way, Cook et al. (2013) note that a large percent of the abstracts in their study had no mention of climate change. They attributed this to a 'consensus situation', wherein researchers' acceptance of climate change as a non-issue caused them to believe it did not merit empirical mention or discussion.

in the market, in truth there are a significant number of constraints that hinder their choices greatly (Barr et al., 2011). As Skill (2012) notes, a focus on autonomy can hide all of the relationships, social systems and structures that individuals depend on, and which form the context from which individual behaviors are shaped. Despite its downsides, neoliberalism is pervasive both in academia and within the general public's mindset.

A study by Middlemiss (2008) found that individuals have incorporated the dominant, individualist paradigm into their psyche. Middlemiss interviewed members of the English "Christian Ecology Group" concerning their pro-environmental behaviors and feelings of responsibility for environmental issues. She found that a significant amount of them felt personally responsible for major environmental problems, and so felt high levels of guilt for failing to act more than they do already (Middlemiss, 2008). Individuals in the study felt responsible for the gap between their ability to affect change, and the changes they see as necessary for a sustainable future. Of particular note was the lack of consideration of or attempts by the interviewees to shift the responsibilities of other bodies in society such as business or government (Middlemiss, 2008, p. 8).

While neoliberalism as an economic concept does not specify the constructs of government, it does maintain that as much as possible in society should be left to 'the market' and kept out of state control (Thorsen, 2011). Activities which were once seen as the responsibility of the state, such as putting pressure on companies to produce less environmentally harmful products, have been privatized and allocated to the individual (Skill, 2012). With the banner of increased freedom and autonomy behind them these privatizations and abdications of state control are still common today, resulting in decreases in the regulatory power of government organizations in throughout Western society and particularly since the boom of neoliberalism beginning in the 1980s and continuing into the 2000s (Harvey, 2006).

Neoliberalism is notoriously skeptical of the state, especially if it attempts to intervene with the market (Thorsen, 2011). Sustainability issues are collectively-shared problems and the state has historically been regarded as the body which will address such issues, but with increasing acceptance of neoliberal ideas the state has been more and more marginalized and its power to regulate the market eroded (Hobson, 2002). Crouch (2012) makes clear that governments continue to be the only institutions in society that can wield the resources needed to make the necessary changes needed for sustainability. Without the power of the state to regulate market it is unclear to me whether sustainability problems can be met by individuals alone who face so many challenges to pro-environmental behavior.

4.1.3 Discussions of power

The neoliberal concept of individualization assigns increased responsibility to individuals, regardless of their power to bring about change. Placing increased responsibility on individuals with little power to make the changes asked of them can have detrimental effects, and can actually exacerbate already present barriers to pro-environmental behaviors (Norgaard, 2009). It can discourage individual action because individuals see little positive results from their efforts; individuals begin to see that their actions are insufficient to impact major issues such as climate change, and so withdraw their efforts to make more sustainable choices (Barr et al., 2011). Instead of providing individuals with more power, autonomy and freedom, often individuals feel more powerless when faced with increased environmental responsibility. As their limited power becomes more obvious, individuals in turn make less sustainable choices (Harvey, 2006).

Issues such as the classic “Tragedy of the Commons” can also become a barrier to change when too much responsibility is put on those with little power. When pressure to take on major issues like climate change is put on individuals who cannot realistically do so, those individuals will externalize their frustration and place blame on others for not doing enough (Muldoon, 2006). Characterized by feelings of disempowerment and constraint placed on them by institutions on more powerful bodies, individuals can actually stop acting responsibly and revert to more self-interested choices (Barr et al., 2011). For example, individuals’ concern about climate change can cause them to blame others for commuting to work with their cars, and in their frustration they may stop riding their bicycle to work because they no longer see the point when others are not doing the same.

Also removed from much of the conversations of power in pro-environmental behavior research is the reality that individuals are affected by the responsibilities from individualization disproportionately and some individuals have less power to act pro-environmentally. The articles in my results which were ‘individualizing’ focused on behaviors such as driving electric vehicles, recycling and organic food purchasing which are very Western, middle-class concepts. Indeed acting pro-environmentally as a means of political activism is a concept which leaves out many minorities who are not able to do so (Middlemiss, 2014). Additionally, a vast majority of the articles present in my analysis were focused on Global North countries and it is unclear how pro-environmental behavior works in the Global South since there is so little research focused on those regions.

Lower classes and minorities are often subject to limitations in personal resources or structural barriers which do not allow them much choice at all (for example, urban food deserts forcing consumers to purchase from small stores with few types of products). Moreover, when environmental problems are

framed as problems of consumption, those who are wealthier have more power to affect change (Muldoon, 2006). Wealthier individuals have access to more ecologically-friendly food choices, more efficient cars and can afford to live closer to where they work (Csutora, 2012). Though responsibility in the individualization framing places the same levels of responsibility on all individuals, their actual power is unique from person to person.

Indeed depending on an individual's context and social status, they may actually have more or less power over their consumption habits and thus more or less power over addressing sustainability issues. Dawson (2012) calls for looking at pro-environmental behaviors and individualization in their unique social contexts (what he calls 'embedded') rather than as a set of 'dis-embedded' activities so prevalent in pro-environmental behavior research. Middlemiss (2014) points out that environmental impact and the power to change that impact is not evenly distributed and that it would be unfair to ask less powerful individuals to shoulder the burden of environmental mitigation. In other words, wealthier people with the opportunity and resources to make a number of different behavior choices (and who also tend to have significantly higher environmental impacts) should have more responsibility to make more sustainable choices (Huddart Kennedy et al., 2015).

Meanwhile, Conca et al. (2001) argue that a focus on upstream behaviors would have more controllable impacts and would be much easier to manage, as there tend to be more powerful actors, much akin to management of non-point versus point-source pollution. Trends in pro-environmental behavior research have tended to focus on downstream solutions despite evidence that 'end-of-pipe' behavior change is not effective enough (Conca et al., 2001), however researchers are still being drawn to this approach to addressing environmental problems (Middlemiss, 2008). A famous example is the 'IPAT' equation⁷ often used in sustainability research to identify the root sources of environmental issues. The equation might identify high population growth as the source of the issue and assign responsibility to women in developing countries for having too many children. This perspective, however, fails to bring to light the underlying power in politics, healthcare infrastructure or paternalism which may actually be the source of environmental issue, whose subsequent result is high population growth (Maniates, 2001).

Focusing narrowly on the downstream pro-environmental choices and behaviors of consumers blinds people to the choices and consumption of producers and authorities all along the production chain throughout the production process (Conca et al., 2001). It further obscures power relations and root

⁷ Impact = population x affluence x technology. Source: York, Rosa, and Dietz (2003).

causes of environmental issues and unfairly attributes responsibility to people with little power to make the necessary changes (Barr et al., 2011). Without discussions of power in research to promote pro-environmental behavior, the knowledge generated by researchers lacks a significant amount of value to sustainability efforts.

5. Conclusion

It is imperative that humans change their behavior and interactions with the environment to ensure our future survival. A principle way of discovering ways to improve this interaction is through empirical research. Pro-environmental behavior research attempts to take on this behavior change and contribute meaningful knowledge to sustainability efforts. My results show, however, that pro-environmental behavior research is influenced by the neoliberal understanding of individualization which has a number of significant limitations. In the following sections I present the limitations of my research, as well as my final conclusions and suggestions for further research considering the results of my abstract examination and subsequent literature review.

5.1 Limitations

There were several limitations in my research for this thesis which are important to make note of, including representativeness of my sample, bias in the data collection, and lack of clarity in many of the abstracts. The abstract examination was limited because of the narrowness of the search, both in terms of the search engines used and the search terms. I only searched for 'pro-environmental behavior' but it has become apparent from my literature review that there are other, less-prominent titles for this field of research such as 'ecological behavior' or 'sustainable behavior'. Moreover, a possibly consequential amount of articles into pro-environmental behavior are written in German, however I decided not to include non-English articles to avoid misinterpretation through translation.

A large amount of the articles categorized as 'neutral' displayed an unclear stance and at times it was difficult for me to make a judgement call about how environmental responsibility was being framed in the text. Cook et al. (2013) communicated with authors via email when the message of the abstract was not clear. This step was also out of reach for me because of time and that I worked alone. Another significant limitation of the abstract examination is just that: it is an examination of *abstracts* and not articles in their entirety. It is possible that the abstracts did not give me the whole picture of how environmental responsibility was framed in the rest of the article. For example, there could have been

important clues about the authors' stance regarding individualization and their framing of environmental responsibility within the article itself that were not included in the abstract.

5.2 Final conclusions

Influence of the neoliberal concept of individualization can have a number of negative effects for the usefulness and impartiality of the empirical work itself by portraying neoliberalism and sustainability as compatible, by disregarding issues of power, by portraying environmental issues as problems of consumption, and by exacerbating already present barriers to pro-environmental behavior change. In light of this, I believe that pro-environmental behavior researchers would benefit significantly from looking into concepts beyond neoliberalism and individualization. Examples of looking beyond individualization could include studying behavior change with individuals that have significant levels of power (e.g. what are the barriers to pro-environmental change for people in prominent positions of power?).

It is additionally important that pro-environmental behavior research recognize that individuals do not have equal abilities to act pro-environmentally nor do they have equal levels of power to affect change. While pro-environmental behavior research is generally focused on the individual, I found in my research that very seldom are issues of power and ability taken into account. In my opinion, it does not make sense to assign equal responsibility to individuals to create change when they do not have equal capabilities to take responsibility. Pro-environmental behavior research needs to recognize and incorporate this important aspect when carrying out research, and in the future focus more on individuals and actors who have stronger ability to actuate the major behavioral changes necessary to address the important sustainability challenges humankind is facing.

5.3 Opportunities for further research

As noted above, there are many more titles for 'pro-environmental behavior' in academic research and I was not able to include them in my internet search and thus my abstract examination. Future research could not only include other keywords in an abstract examination, but perhaps include more researchers in the project. As I was limited to working alone, future research projects could include perhaps a research team as in Cook et al. (2013). Furthermore, an examination of more than just the abstract of these articles would have been quite beneficial as it may have been discussed in the article text and not in the abstract. Interviews and contact with prominent researchers in the field would also

complement this research as well, because it would allow researchers to provide their understanding and reasons for their more individualizing research methods.

Further research into not only the consequences of individualization within academia but in wider areas of society would be an important next step. Though academia seems to be effected by the dominating neoliberal discourses, it is also important how this plays out in policy and societal relations; a deeper look at the downsides of individualization beyond academia is needed. Additionally, more research into ways to reverse or alternative paths to take from individualization is critical for future sustainability efforts. I lacked the time to suggest some alternative paths for academia to take which is a necessary and logical next step to the development of this topic.

Unifying behavior change research with a focus on those people, organizations or institutions with the most power to make effective change is an important step moving forward with academic research in sustainability. Moreover, recognizing that assigning equal levels of responsibility to people with unequal levels of capacity for pro-environmental behavior change is essential. The usefulness of the information produced by empirical research must always be under scrutiny, especially when dealing with issues like sustainability.

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