

Addressing the Gap: Identifying Varying Levels of Pro-Environmental Behaviour in the Canadian Population

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Outline

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- Theoretical Content
- Past & Current Research
- Methodology
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Research Question

To identify dimensions of eco-citizenship using the Households and Environment Survey (2013) using a factor analysis technique.

Theoretical Content

Ecological Citizenship, defined

“Eco-citizenship is defined as a transformative way to reshape the relationship between humans, nature, non-humans, and other humans (Jagers, Martinsson and Matti 2014).”

“An eco -citizen also refers to individuals who, regardless of their political orientation, take on environmental responsibilities towards humans and nonhumans (Dobson 2003; Henderson and Ikeda 2004).”

Theoretical Content

Ecological Citizenship, operationalized

“To study ecological citizenship within the Canadian population through the designing of a new index allowing for quantitative analysis to identify factors associated with different levels of engagement of eco-citizenship.”

“The proposed index will capture levels of engagement **based on participation in activities that could be considered indicative of contributing to eco-citizenship**, including both levels of high or extreme engagement as well as low levels.”

Past and Current Research

“Gap” between individual’s environmental beliefs and their environmental actions (Kennedy et al. 2009)

Those that value the public good over personal prosperity more likely to engage in sustainable energy practices (Poortinga, Steg, and Vlek 2004)

Not only attitudes of individuals, but also their context and opportunities, that affect environmental behaviours (Poortinga, Steg, and Vlek 2004)

Lack of incentives (either monetary or personal), lack of knowledge and surrounding political and social infrastructure as reasons why this gap exists (Kollmuss and Agyeman 2002)

Methodology

- Households and Environment Survey (HES), cycle 2013, N = 22,363 households

Analysis Plan

- Factor Analysis applied to a set of selected indicators (N = 16)
- Contextualization through cross-tabulations of independent variables with dimensions and cumulative index

- **Green Consumer Behaviours**

(N = 4)

Example: Frequently uses own bags/containers to carry groceries, Yes/No

- **Water Conservation**

(N = 3)

Example: Devices used to conserve or reduce consumption of water, Yes/No

- **Connection to Nature**

(N = 4)

Example: Activities aimed at conservation/protection of environment without pay, Yes/No

- **Sustainable Household Behaviours**

(N = 5)

Example: Composted kitchen waste during previous 12 months, Yes/No

Variables Removed: Repetitive

- Dwelling has a low flow showerhead
- Dwelling has a low volume toilet
- Dwelling has a barrel or cistern to collect rain water

Variables Removed: Missing Values/Target Population

- Composted yard waste in previous 12 months
- Planted trees on property in past 5 years

Removed Variables: Adequacy of Question

- Purchases to feed or shelter birds
- Participated in outdoor activities
- Taught about nature without pay

Remaining Variables of Interest

- Devices used to conserve or reduce consumption of water
- Composted kitchen waste
- Grew vegetables, herbs, fruits, or flowers
- Activities aimed at conservation/protection of environment without pay
- Purchases foods advertised as being locally grown/produced
- Purchases “green” cleaning products
- Use own bags/containers to carry groceries
- Visited **any** parks or public greenspaces

Preliminary Results

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.703
Bartlett's Test of Sphericity	Approx. Chi-Square	7895.081
	df	28
	Sig.	.000

Communalities		
	Initial	Extraction
Devices used to conserve or reduce consumption of water	1.000	.283
Composted kitchen waste during previous 12 months	1.000	.448
Grew vegetables, herbs, fruits or flowers - previous 12 months	1.000	.482
Activities aimed at conservation/protection of environment without pay	1.000	.268
Purchased foods advertised as local always/often	1.000	.543
Purchased green cleaning products always/often	1.000	.535
Uses own bags/containers always/often	1.000	.258
Visited any parks or public greenspaces in past 12 months	1.000	.137
Extraction Method: Principal Component Analysis.		

Preliminary Results

Rotated Component Matrix ^a		
	Component	
	“Daily Green Behaviours”	“Household Green Behaviours”
Devices used to conserve or reduce consumption of water	.031	.531
Composted kitchen waste during previous 12 months	.057	.667
Grew vegetables, herbs, fruits or flowers - previous 12 months	.094	.688
Activities aimed at conservation/protection of environment without pay	.230	.464
Purchased foods advertised as local always/often	.729	.103
Purchased green cleaning products always/often	.729	.058
Uses own bags/containers always/often	.505	.047
Visited any parks or public greenspaces in past 12 months	.303	.213
Extraction Method: Principal Component Analysis.		
Rotation Method: Varimax with Kaiser Normalization.		
a. Rotation converged in 3 iterations.		

Preliminary Results

Dimension 1: Household
Green Behaviours

Reliability Statistics	
Cronbach's Alpha	N of Items
.423	4

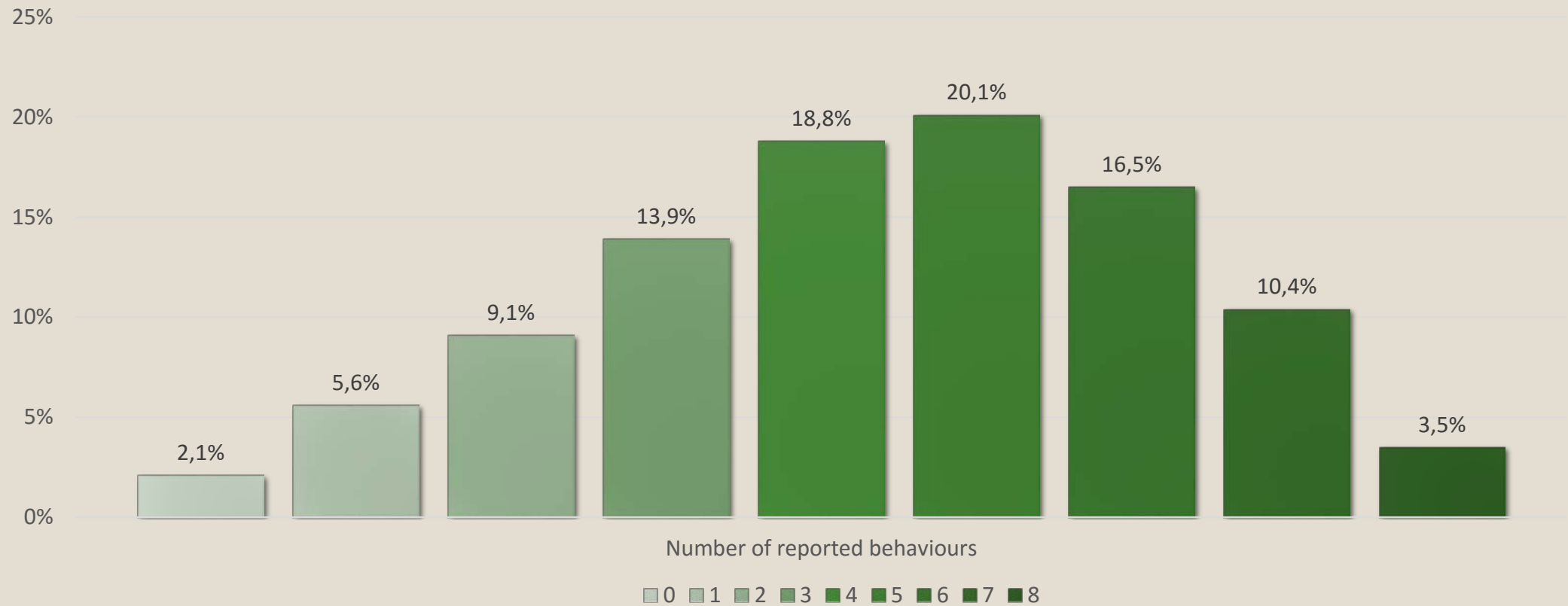
Dimension 2: Daily Green
Behaviours

Reliability Statistics	
Cronbach's Alpha	N of Items
.420	4

Cumulative with all variables

Reliability Statistics	
Cronbach's Alpha	N of Items
.536	8

Index of Behaviours Indicative of Eco-Citizenship



Future Directions

Contextualizing based on Household Characteristics

- Income
- Education
- Family-composition
- French/English
- Region
- Urban/Rural
- Type of dwelling – detached home versus apartment
- Number of people in the household

Further Analysis of some variables

- Composting – issue of access to programs
- Devices used conserving water – easier for homeowners/those with yards
- Grew vegetables, etc. – easier for those with yards
- Conservation – done with organization or independently, which activities more common

Future Directions

Issues

- Should items be weighted or not? Some behaviours are “more difficult” than others, should they receive a heavier weight towards the index compared to “easier” behaviours.

Implications of Project

- For future research using the Households and Environment Survey
- Further development of instruments to measure eco-citizenship in other populations
- Policy implications allowing targeted programs to certain populations based on lower index scores

Thank you!

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