
Egregious Emitters: Disproportionality in Household Carbon Footprints

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Abstract

This article presents survey data from households in Alberta, Canada, examining the relationship between income and carbon footprint. Using multivariate statistics to scrutinize the role of income, the data demonstrate substantial disproportionality in the composition and size of household carbon footprints. Results show that household energy consumption (heating, cooking, cooling) comprises half of the average footprint, with automobile transportation contributing 30% and air travel another 15%. In a linear multiple regression model, the size of household carbon footprints is positively associated with income, in addition to other variables. The highest income quintile has household carbon footprints 2.2 times greater than the lowest income quintile.

Keywords

carbon footprint, energy, disproportionality, proenvironmental behavior, income

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Introduction

Environmental sociologists and social psychologists have examined the relationship among environmental values, behaviors, and sociodemographic variables over the past 4 decades (e.g., Catton & Dunlap, 1978; Cottrell, 2003; P. W. Schultz & Zelezny, 1998; Van Liere & Dunlap, 1980; Wall, Devine-Wright, & Mill, 2007). Recently, work on more directly quantifiable environmental behavior (i.e., carbon emissions) has suggested a strong positive relationship between emissions and household income levels (Druckman & Jackson, 2009; Sovacool & Brown, 2010; Weber & Matthews, 2008). In this article, we look more closely at this relationship, analyzing partial carbon footprints (direct emissions only) at the household level in the western Canadian province of Alberta.¹ To deepen our understanding of household impacts on the environment, we use the concept of disproportionality in our data analysis and interpretation. We highlight the disproportionate relationships in both composition and size of carbon footprints, paying particular attention to the role of household income. In short, rather than simply reporting a statistical relationship as previous studies have done, we dissect and discuss the disproportionate relationship and its policy implications.

Literature Review

Carbon Footprints: Measurement and Existing Research

Critiques of the economic growth paradigm exist across sociology and economics (Daly, 1972; Jackson, 2009; York, Rosa, & Dietz, 2003), including arguments that sustainability goals are incommensurate with constant growth (Wackernagel et al., 2002). This macro-level analysis is mirrored at the micro level: The positive relationship between income and carbon emissions indicates that the strategy of “greening” household consumption without a concomitant reduction in levels of consumption will ultimately fail to meet emissions reduction targets. In this regard, carbon footprinting provides a measure of the environment that can be considered alongside social variables such as human behavior, attitudes, and demographics. Weaving these levels of analysis together is central to environmental sociological inquiry (J. Schultz & York, 2011).

Calculation of carbon footprints is a complex and yet imprecise science. Limitations on available data, and the use of different input measures, can lead to problematic comparisons in carbon accounting (Billitteri, 2010; Jones & Kammen, 2011; Padgett, Steinemann, Clarke, & Vandenbergh,

2008). Even so, as Rees (2000) and Wackernagel (2009) observed (with respect to ecological footprint analysis), the value of footprinting is not so much in its precision but in its ability, as an empirical metric, to highlight societal trends that may be missed by the proenvironmental self-reporting surveys that dominate the research literature.² Azapagic, Burkinshaw, Chahal, Leadbitter, and Pitts (2011) echoed this sentiment: “Measuring carbon footprints of industrial and other human activities is a first step towards a better understanding of our impacts on climate change” (p. 24). Footprinting is also useful as an education and awareness tool (Wilson & Grant, 2009) and can inform policy development (Klinsky, Sieber, & Meredith, 2009), particularly when analyses point to the origin of the largest contributions to the carbon footprint.

Existing research on household carbon emissions provides wide-ranging carbon footprint estimates (Kerkhof, Benders, & Moll, 2009). For example, Druckman and Jackson (2009) estimated the average United Kingdom household footprint (both direct and indirect emissions) at 19.1 tonnes (t) annually, while a U.S.-based study found the average household footprint (direct and indirect) to be approximately 48 t per year (Jones & Kammen, 2011). Some of this large difference is because, in contrast to other industrialized nations, U.S. figures include indirect emissions from health care services in household estimates. In their cross-national study, Kerkhof et al. (2009) reported household direct and indirect emissions per year of 12.2 t in Sweden, 13.6 t in Norway, 19 t in the Netherlands, and 20.2 t in the United Kingdom. A recent study estimated direct and indirect Canadian household emissions at 19.5 t (Brown, Southworth, & Sarzynski, 2009), suggesting that Canada’s household carbon footprint is more like that of the United Kingdom, in comparison with the lower footprints for Nordic countries that have a colder climate more similar to that of Canada.

Several recent studies (Druckman & Jackson, 2009; Kerkhof et al., 2009; Weber & Matthews, 2008) have shown much larger carbon footprints in high-income households compared with low-income households. Comparing metropolitan regions around the world, Sovacool and Brown (2010) found that the primary factors accounting for differences in carbon footprint were per capita income, population density, modes of transport, and electricity and power supply. Jones and Kammen (2011) found that income and number of people per household were the best predictors of carbon footprints. Lebel et al. (2007) concluded that urban centers in the developing world have higher emissions than rural areas primarily due to increased income and smaller household size (though the prevalence of personal vehicles and shift to protein-rich diets positively affected urban emissions).

Interestingly, while income and carbon footprints are generally found to be positively correlated, income is also positively correlated with proenvironmental behaviors and concerns (Scott & Willits, 1994). This may be a result of the strong and positive relationship between education and income in Western societies and evidence that more educated people are more likely to express concern (as measured by survey instruments such as Dunlap, Van Liere, Mertig, & Jones, 2000, new ecological paradigm scale) for the environment (P. W. Schultz & Zelezny, 1998; Scott & Willits, 1994). Proenvironmental beliefs and attitudes (environmental concern) are also positively associated with proenvironmental behavior (Cordano, Welcomer, Scherer, Pradenas, & Parada, 2011; Dunlap et al., 2000; Ebreo & Vining, 2000; Sand, 1999; Vining & Ebreo, 2002) yet not commonly explored in conjunction with concrete measures of environmental impact (e.g., carbon footprints). Taking all of these relationships into consideration, it is unclear whether environmental concern should be expected to be associated with the size of carbon footprints, and in what direction.

Disproportionality

Generally speaking, disproportionality refers to an over- or underrepresentation of a particular phenomenon within a given place or category of interest. While discussed, often with references to “hotspots,” in the biological (Myers, Mittermeier, Mittermeier, da Fonseca, & Kent, 2000), medical/epidemiological (Gawande, 2011), and criminological literatures (Weisburd & Mazerolle, 2000), the concept is not yet widely used in environmental studies (Berry, 2008). For example, in a recent account of popular trends in carbon footprinting (Billitteri, 2010), there is no mention of any differences between low and high emitters. Instead, the article focuses on average individuals and households. Two notable exceptions exist: First, in the environmental justice literature, researchers have observed that toxicity is often overrepresented in low-income neighborhoods (e.g., Habermann & Gouveia, 2008; Szasz, Meuser, Aronson, & Fukurai, 1993). Second, Freudenburg and his colleagues used the concept of disproportionality to examine environmental harm across resource extraction industries (Freudenburg, 2005, 2006; Nowak, Bowen, & Cabot, 2006). As Freudenburg (2006) articulated,

Rather than asking whether *overall* improvements in physical or ecological efficiency will counterbalance an increased scale of production, work on disproportionality argues that . . . socially structured disproportionalities in the creation of environmental damage are worthy of increased attention in their own right. (p. 12, italics in original)

Freudenburg (2005, 2006) focused on the relative contributions of various contributors to pollution outputs. He observed that the blame for pollution was often spread across a large set of industrial and individual actors (i.e., “we are all to blame for the state of our environment”) and justified on the basis of the economic benefits provided by the industry in general. Freudenburg (2005, 2006) countered this framing by highlighting disproportionality in contributions to the pollution problem, comparing the economic value of particular actors’ activities with their environmental impact. Specifically, he demonstrated that a minority of firms in one industrial sector created the majority of toxic emissions, while not necessarily providing any more jobs or valuable resources than the less polluting firms.

Situated within a theoretical/empirical tradition that focuses on how entrenched social inequalities are reproduced as advantaged members of society benefit more from social and technological advances, while suffering less from their negative consequences (Benton, 1997), disproportionality provides a conceptual orientation to a literature that has thus far been largely dominated by data-driven observations. A disproportionality analysis can be a very useful tool for targeting policy interventions because of the patterned practices to target among those in different income groups.

While the concept of disproportionality has been applied to the environmental consequences of the production of goods and services (Freudenburg, 2005, 2006), the present study focuses on the consequences of consumption, where it has not been used. For example, Berry (2008) speculated that national average carbon footprints ignore vast inequalities across households, but uses a hypothetical example. In the analysis described below, survey data from a Canadian province are used to estimate average household carbon footprints and determine how different household activities disproportionately contribute to these footprints. Furthermore, key sociodemographic and attitudinal measures are used to determine whether disproportionality in carbon footprint exists and, if so, whether the disproportionality is related to household income. The results presented address the following question: Is there evidence of income disproportionality in partial household carbon footprints?

Research Method and Measurement

Survey

The data analyzed here are derived from questions asked as part of the annual *Alberta Survey* conducted by the Population Research Lab (PRL) at the University of Alberta. The Alberta Survey is administered by telephone and

targets a minimum of 400 respondents in each of the province's two largest metropolitan centers (Edmonton and Calgary), and 400 in the remainder of the province, which includes rural, urban, and suburban communities. The use of random-digit dialing (RDD) ensures that households have an equal chance of being selected, whether they are listed in a telephone directory or not. Respondents must be at least 18 years of age, and quota sampling is used to ensure a representative gender distribution.

The 2011 Alberta Survey ($N = 1,203$) had a response rate of 26.1%, which is several times higher than the (private sector) industry standard for RDD surveys. Even so, this response rate reflects the decline over the past several decades in RDD response rates across North America (Curtin, Presser, & Singer, 2005). Analyses of previous RDD surveys conducted by the PRL indicate that more educated residents of the province are somewhat more likely to respond but that significant differences between the sample and the population do not exist for marital statistics, income, and age (Bladon, 2009). The estimated sampling error for a sample of this size, at the 95% confidence level and assuming a 50/50 binomial percentage distribution, is plus or minus 2.8 percentage points.

Measurement

A typical calculation of a *complete carbon footprint* for households includes estimates of direct CO₂ emissions (energy consumed for heating, cooling, cooking, and lighting, and for ground transportation and air travel for household members) and indirect emissions (energy consumed in handling household wastes and in the production of goods and services consumed by household members; Padgett et al., 2008). Limitations on the number and type of questions that could be asked in the Alberta Survey led to our decision to calculate a *partial household carbon footprint* that excludes most indirect CO₂ emissions (i.e., energy used in the production of goods and services) and, hence, underrepresents the size of the household footprint. The input measures for our calculations are household energy consumption, and energy consumed by ground transportation, air travel, and household waste, with all estimates converted to tonnes of CO₂ emitted (see online Appendix for details at <http://eab.sagepub.com/>).

For *ground transportation*, we asked respondents to indicate how many kilometers (km) they drive in their personal vehicle(s) in a typical week. We converted weekly estimates to km driven per year and converted the final number to miles. Using the U.S. Department of Energy (USDOE) figures for average fuel efficiency (20.4 miles/gallon) and conversion factor to estimate

pounds (lbs) of CO₂ emitted (19.564 lbs per gallon), we multiplied these values by miles driven to create a final score for personal vehicle use. The average number of km driven per year estimated for our sample (16,809 km) is very close to the number of km driven per year in Alberta as reported by Statistics Canada (2009; 17,306 km).

Air travel data were collected by asking for the number of round-trip flights taken by members of the household in 2010. According to Statistics Canada (2010), the average round-trip distance flown by Canadians is 3,352 km. The conversion factor (from the U.S. Environmental Protection Agency [EPA], 2011) is 0.64 lbs/mile flown. Thus, for lbs CO₂ emitted because of air travel, we multiplied the number of flights by the average distance of round-trip flight (converted to miles) by the conversion factor.

To estimate energy consumed for *household heating, lighting, and cooking*, we asked respondents to estimate the size of their home (in square meters, m²), assuming that we would obtain more valid and complete data than if we had asked about kilowatt hours (kwh) of energy used in their home annually.³ To convert home size to CO₂ emitted, we used Natural Resources Canada's (2011) Alberta-specific average usage rate (in gigajoules) per m² for a residential building (8.34072; based on source of energy—for Alberta the main sources are coal and natural gas). We converted the resulting value into terajoules and multiplied it by the constant 50.2 (from Natural Resources Canada) to convert energy consumed into tonnes CO₂ emitted.

We did not ask respondents to indicate how much *household waste* they throw away because we thought the majority would be unable to provide valid responses. Instead, we used data from Statistics Canada (2006) on the per capita disposal of household waste in Alberta and used the constant from the EPA (447 lbs CO₂) to calculate an average per person (0.46 t CO₂ emitted per person from waste). We then multiplied by the number of people in the household to get a household measure. We then subtracted the EPA's average CO₂ savings from recycling (0.20 t CO₂ per person, multiplied by number of people in the household) for those respondents who indicated that they often or always recycle household waste.

Despite the complexity of some of our questions (e.g., estimates of house size and kilometers driven weekly), cumulative missing data were not a serious problem. A total of 1,066 of the 1,203 survey respondents (89%) answered all of the questions required to calculate a partial carbon footprint for their household. Three respondents were extreme outliers on one or more of the questions, and so were omitted from the calculations, leaving a final maximum sample of 1,063. We examined differences between the 140 participants who were excluded from the footprint analysis and the 1,063 who were

included, and found that our final sample slightly underrepresents visible minorities (i.e., self-reported people of color), singles, and females.

Household income (before taxes and deductions) was measured with a 33 category (income increments of Can\$5000) question. We recoded responses to category midpoints. As in most surveys, a minority of respondents did not report their incomes. Preliminary analyses showed that the size of the household carbon footprint for those who did not answer the income question was not significantly different from that of those who did answer.

To measure respondents' *environmental concern*, we asked them to indicate how concerned they were with seven different environmental issues (1 = *not at all concerned*; 5 = *very concerned*): loss of forest cover; climate change; the impact of oil sands extraction on water quality; water availability; the conversion of agricultural land to other uses, such as urban development; the impact of hormones and medicines in drinking water; and air pollution. The interitem reliability for this index of environmental concern is excellent ($\alpha = .854$).

Results

Table 1 shows the breakdown of tonnes CO₂ emitted per household, as well as descriptive statistics for each of the four input measures. The average Albertan household emits 12.21 t CO₂ equivalents per year (per person average is 4.4 t CO₂). We observe a skewed distribution (the mean is considerably higher than the median) for all but one of the variables shown (the exception is household waste production), indicating that, for each source, a small minority of households are particularly high emitters.

The input measures vary widely in their share of the partial carbon footprint. Household energy consumption comprises the largest proportion (50%), followed by personal vehicle use (29%) and air travel (14.8%). Energy consumed in handling household waste comprises the smallest proportion (6.2%). The input measures range quite widely, particularly tonnes of CO₂ emitted from vehicle use (from 0 to 50.80 t) and from flights (ranging from 0 to 36.31 t). In some households, vehicle use and air travel are very uncommon, while in others, they are extensive. Household energy use also varies considerably (from 0.96 to 20.33 t), a reflection of some very small dwellings and some that are up to 20 times larger.

Table 2 displays a linear multiple regression analysis highlighting some of the key sociodemographic and attitudinal determinants of environmental impact, as suggested by previous research (Druckman & Jackson, 2009; Wall

Table 1. Partial Annual Carbon Footprint in Alberta, per Household and by Component ($N = 1,063$)

	Total tonnes CO ₂ emitted	Home: Energy (household)	Home: Waste (household)	Personal vehicle (household)	Air travel (household)
<i>M</i>	12.21	6.06	0.77	3.57	1.81
<i>SD</i>	7.17	3.01	0.44	4.53	3.38
Median	11.15	4.83	0.78	2.12	0.61
Minimum	1.22	0.96	0.26	0.00	0.00
Maximum	58.52	20.33	4.17	50.80	36.31
% of total		50.0	6.2	29.0	14.8

Table 2. Linear Regression Model of Partial Carbon Footprint (tonnes), Excluding Outliers

	Standardized β	Slope (SE) ^a	Multicollinearity tests	
			Tolerance	VIF
Number of hours in paid work per week (respondent)	0.165***	0.031 (.012)	0.960	1.042
Number of people in the home	0.206***	0.747 (.184)	0.870	1.149
Number of years of education (respondent)	0.165***	0.281 (.078)	0.947	1.056
Household income, midpoint (Can\$)	0.268***	0.000 (.000)	0.791	1.264
Owens home (rents = 0)	0.061*	2.078 (.634)	0.895	1.117
Environmental concern index (respondent)	-0.130**	-0.836 (.235)	0.965	1.036
<i>n</i>	755*			
<i>R</i> ²	0.270			
<i>F</i>	46.214			
Significance (<i>p</i>) of equation	<.000			

Note: VIF = variance inflation factor.

^aThe standard error is the Huber-White-sandwich estimate.

* $p > .050$. ** $p > .010$. *** $p = .000$.

et al., 2007). Our goal in this analysis is not to develop an inclusive causal model but rather to draw attention to the predictive role of household income, controlling on household size, environmental attitudes, and various measures of household socioeconomic status (SES). Using SPSS Version 20, standard errors for partial regression coefficients were estimated with a robust covariance matrix estimator (the Huber-White-sandwich approach) to take account of potentially serious outliers (although we removed three such outliers before beginning our analysis) and possibly clustered data as a result of our RDD mode of data collection. As indicated by the tolerance and VIF values, multicollinearity is not an issue, despite the model including several measures of SES.

Table 2 shows that household income is strongly and positively correlated with partial carbon footprint size ($\beta = .268$), as are years of education ($\beta = .165$) and home ownership ($\beta = .061$), two predictor variables that are correlated with household income. If home ownership and education had been omitted from the analysis, the partial coefficient for household income would have been even higher.

Also significant and positively correlated are the number of people in the household ($\beta = .206$), a variable that would indirectly measure the physical size of the home, and the number of hours worked per week ($\beta = .165$), a variable that would indirectly pick up on vehicle use to get to work. Although larger households have larger carbon footprints, the per-person footprint in these households was lower than for homes with fewer residents. Respondents' environmental concern is significant and negatively correlated with the size of the household partial carbon footprint ($\beta = -.130$).

Household income clearly has the strongest net effect on carbon footprint. We further illuminate the income-based disproportionality of Albertans' carbon footprint by converting household income into quintiles and using a one-way ANOVA to assess its relationship with carbon footprint.⁴ We observe a linear and statistically significant relationship between income quintiles and carbon footprint (Figure 1). Specifically, the lowest average partial footprint is found for low-income households ($M = 8.16$ t), increasing quite substantially for the second quintile ($M = 10.78$ t). The third and fourth income quintiles are more similar (M s = 12.83 t and 13.94 t, respectively), while the largest footprints are significantly higher than the remainder ($M = 17.92$ t). High-income households have carbon footprints 2.2 times greater than low-income households.

We also compared the mean values for the components of carbon footprints for the top and bottom quintiles (results not shown). Here too we see evidence of socially structured differences in impact related to lifestyle: The

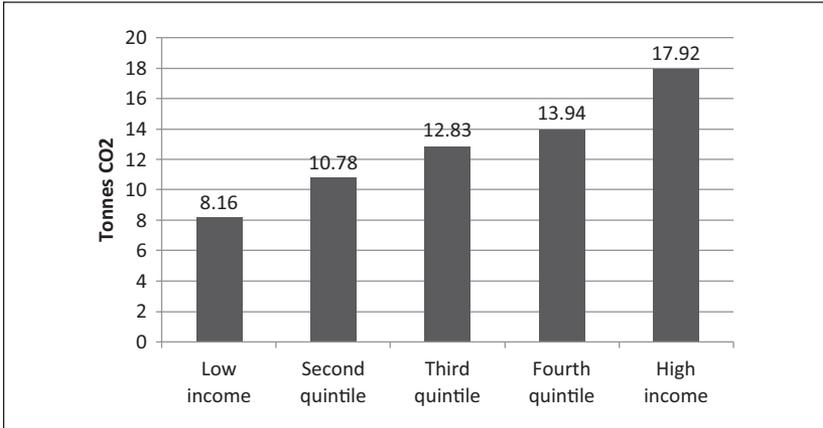


Figure 1. Household income and partial carbon footprint (tonnes)

percentage of CO₂ emitted from household energy consumption is larger for the lowest quintile (59%) than the wealthiest quintile (45%). More strikingly, the highest quintile has a greater proportion of emissions from air travel (26%) than does the lowest quintile (5%).

Discussion and Conclusion

The carbon footprint we calculated for Alberta households (an average of 12.21 t per year) is less than those reported in many other studies (e.g., Druckman & Jackson, 2009; Sovacool & Brown, 2010). However, given that we only include direct emissions while other studies also include indirect emissions from goods and services consumed, we expected to find smaller footprints. A study from British Columbia (Canada) that used similar input measures to ours found the average carbon footprint per person to be 3.5 t (Lee, 2010). In our study of the province of Alberta, the calculated value is 4.4 t CO₂ per person. This is not surprising: Emissions from household energy consumption are higher in Alberta, owing to the fact 78% of generation comes from coal (Bell & Weis, 2009; British Columbia's energy production is largely hydroelectric power).

Using the same input measures, we anticipate that future studies taking place in jurisdictions with a similar biophysical landscape (climate, source of energy) and similar approaches to public policy (e.g., urban density, building codes) would generate comparable results for average carbon footprint.

However, we would recommend researchers pay close attention to the climatic and policy context in future analyses of household carbon emissions. The findings relating to income disproportionality would likely be mirrored in other jurisdictions, though the range of household income could vary based on tax policies and employment opportunities. Finally, the disproportionality in composition of the carbon footprint should vary based on the source of energy and the auto-dependence of a region. For instance, in neighboring British Columbia, the largest proportion of emissions is from vehicle use, because British Columbia relies on the less carbon-intensive hydropower (Lee, 2010).

We find that household energy consumption accounts for the largest proportion (50%) of the partial carbon footprint, followed by road travel (29%), and air travel (14.8%). Energy costs associated with handling household waste represent only 6.2% of the average household carbon footprint. The prominence of household energy consumption is reported in other studies (e.g., Druckman & Jackson, 2009; Kerkhof et al., 2009). The distribution of carbon emissions by source is also similar to that reported by Sovacool and Brown (2010) for metropolitan regions in the developed world, roughly 50% from heating and cooling of buildings, about 45% from personal travel (air and ground), and less than 5% from food waste and diet.

Such disproportionality across sources of emissions is noteworthy because, as a society we often put our efforts into addressing our smaller problems, reflected by the weight ascribed to particular areas of environmental policy. For example, in Alberta, as in other jurisdictions, significant proportions of municipal and provincial/state budgets are allocated for household waste management, and proenvironment education campaigns often focus on individual initiatives in the home (e.g., recycling, turning down the heat). These are important, but if we wish to target larger inputs to household carbon footprints, we could be considering, for example, incentives for building smaller homes and disincentives for developing low-density, automobile-dependent suburbs (Stern, 2011). These findings suggest governments should consider higher vehicle taxes for larger and multiple vehicles, and programs and policies to reduce air travel and automobile use. Examples of programs and policies to reduce air travel include investing in online video technology that could reduce the need for face-to-face meetings currently requiring air travel, public education campaigns encouraging families to vacation close to home, and industry awards or tax breaks for reducing business travel. Examples of programs and policies to reduce single-occupancy automobile use include improved public transit, incentives for carpooling, building bike lanes in urban centers, and safe and affordable inner-city housing to allow people to live closer to prominent business districts.

In exploring the sociodemographic correlates of carbon footprints, we found that higher household income, as well as respondents' education and home ownership, both indirect measures of SES, were associated with a higher partial carbon footprint. So too were household size and number of hours of paid work per week. In addition, respondents' environmental concern was negatively correlated with carbon footprint, a finding in line with previous research showing that those who express more concern participate more frequently in proenvironmental behavior (Kennedy, Beckley, McFarlane, & Nadeau, 2009). Those who worry about environmental quality do appear to reflect this concern, at least to some extent, in their decision about what size of home to live in, how many cars to drive (and how often), and how often to fly.

Given that most studies of proenvironmental behavior (in contrast to environmental impact, as measured by carbon footprints) report at least one SES measure positively correlated with proenvironment behaviors (e.g., Scott & Willits, 1994), future research might further explore the interrelationships among environmental concern, proenvironmental behavior, and environmental impact. Cock (2002) has highlighted the paradox (though without empirical data) that those who adopt more proenvironmental behaviors are often those who are responsible for the majority of environmental harms, writing that "those who say they care most about the environment are those around the world who are the most educated and yet they also have the greatest ecological footprint" (p. 186).

This observation points to a possible limitation in our research. Because our data are derived from self-reported estimates, it is possible that those more concerned with the environment underestimated the size of their homes, and the amount of their automobile and air travel. It is unlikely that social desirability had a significant effect on our findings because participants were not told that carbon footprints would be calculated from their answers and our questions were part of a larger omnibus survey, including questions about several other topics. Given the survey was administered to the general population, we were limited in the number and specificity of questions we could ask. Hence, we likely underestimate actual carbon emissions, for several reasons. First, we do not account for second homes and vacation properties. Second, we use average fuel consumption rates, which overlooks the much higher proportion of light trucks and sport utility vehicles (SUVs) in the province (estimated at 53% of all personal/family vehicles; Statistics Canada, 2005). Also, while some respondents may have reported the number of km driven for the household, others may have only responded with their personal consumption, thus underestimating the vehicle footprint. In addition, we

include only personal ground transportation, excluding travel by public transit and carpooling. As a result, those households with no vehicle score zero for their personal transportation carbon footprint, even though they may rely on other forms of ground transportation.

Despite these possible underestimates, the evidence of income disproportionality conveyed by our data is clear: Those with higher income have much larger partial carbon footprints. The highlighting and dissecting of this relationship, along with the discussion of the public policy implications resulting from a disproportionality analysis of household carbon footprints, is the central contribution of this study. Berry (2008) wrote that “[u]nder conditions of disproportionality, simply blaming the pollution problems of an industrialized economy on the ‘average’ individual is not only inaccurate, but it is badly misleading” (p. 259). We agree; blaming the average consumer for carbon emissions ignores the disproportional contributions of the high-end carbon emitters. While greater environmental concern is (weakly) correlated with a reduced carbon footprint, the opposite (and stronger) effect of income suggests more society-led compared with individual-initiated approaches to sustainable consumption are needed, a suggestion also supported in a recent publication from Webb (2012).

Individuals (both low and high income) can decide to recycle more of their household waste, to turn down the heat in their homes, or to ride a bicycle to work (if possible; Stern, 2011). But “upstream decisions” may have a much larger impact on the size of household carbon footprints. That is, once a family has settled in a home, there is relatively little they can do about the source and amount of energy they use to heat, cool, and light their home. They may also be induced to drive a car if public transit is not frequent or convenient. Furthermore, the size of homes in North America has been steadily increasing, a worrying trend given that houses now hold fewer people per household and that household energy consumption comprises a growing proportion of total CO₂ emissions (Schor, 2010). From a policy perspective, if governments (municipal or provincial/state) provided incentive programs to encourage the construction of smaller homes with higher energy-efficiency ratings and to slow the expansion of low-density residential developments built at great distances from the city core, household carbon footprints could be considerably smaller (Brown et al., 2009).

In this article, we have drawn attention to the uneven distribution of household CO₂ emissions across sources and across households. Focusing only on the absolute size of a household carbon footprint keeps us from asking where (i.e., which sources) our efforts to reduce the footprint would have the most impact. Calling attention to average amounts of CO₂ emitted,

whether globally, nationally, subnationally, or by household, diverts attention away from the most egregious emitters, as highlighted in Freudenberg's (2006) analysis of how privileged access to resources is reinforced through privileged accounts (e.g., we are all to blame for our current crisis). Freudenberg's sectoral disproportionality assessment also reminds us that, when discussing household CO₂ emissions, those in high-income countries should not forget the relatively small proportion of overall emissions that households comprise. Industrial activity makes up over half of CO₂ emissions in the United States (Gardner & Stern, 2008; Schor, 2010). In Alberta, the residential sector accounts for only 11.6% of emissions, due to the high level of activity in the extraction and processing of fossil fuels (Natural Resources Canada, 2011). This suggests that while carbon footprint analyses are useful in educating residents about their relative contributions to emissions, policy change to lower the emissions of industrial activity is warranted.

Others who have observed that high-income earners disproportionately contribute to higher carbon footprints recommend that policy makers try to avoid creating blanket policies that disproportionately burden low-income households (Lee, 2010). For instance, British Columbia recently imposed a carbon tax on goods and services—an instrument that Lee (2010) argued is regressive, as it “will take up a larger share of income for low-income families than high-income families, even though the low-income families have the least capacity to adapt to higher carbon prices” (p. 15). Similarly, Mackenzie, Messinger, and Smith (2008) stated,

[I]f we fail to incorporate differences in environmental impact that are systematically related to income, we risk creating an ineffective policy that has the side effect of imposing disproportionate costs on the low- and moderate-income Canadians who have contributed the least to the problems we are trying to address. (p. 4)

To rectify this imbalance, Lee (2010) recommended climate credits be issued to low-income families to offset what they pay in carbon taxes. He also recommends a personal carbon-trading scheme similar to policies that already exist for industry (Lee, 2010). More importantly, researchers and policy makers who address the disproportionality in carbon footprints should reconsider issues such as urban planning (particularly the prevalence of vehicle-dependent neighborhoods; Grant & Bohdenow, 2008), and incentives for energy retrofitting and travelling by car or rail rather than by air (Mackenzie et al., 2008).

Ultimately, all of these changes call for structural and cultural change, particularly for those with high incomes in North American countries. Cultural change might be motivated by questioning and redefining the “good life” and the many options to be “successful” so that personal goals do not involve owning automobiles, flying frequently, and living in 3,500+ square-foot homes (Crompton, 2010). Such cultural change requires structural change so that consuming less energy becomes central to a country’s goal of responsibly preparing for peak oil and climate change. As Webb (2012) argued, we need to move beyond an economic model that looks for incentives to incrementally change individual behaviors and begin asking sociological questions about how citizens might come to recognize and collectively focus on “the major questions about modern societies and sustainable economic development with which democratic governments and their publics need to engage” (p. 122).

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Notes

1. A carbon footprint can be generally defined as the carbon dioxide (CO₂) emissions that result from the activities of a defined population, and may take into account direct emissions (e.g., energy consumed for household use and household’s members’ transportation) or direct *and* indirect (e.g., energy consumed in the production of goods and services consumed by a household) emissions (Wright, Kemp, & Williams, 2011).
2. An ecological footprint measures the total “area of productive land and water ecosystems required to produce the resources that the population consumes and assimilate the wastes that the population produces” (Rees, 2000, p. 371), in contrast to a carbon footprint that measures the carbon dioxide that is emitted as a result of people’s activities and lifestyle (Druckman & Jackson, 2009).
3. We acknowledge that this estimate does not include appliance use (other than for cooking), which is the fastest-growing source of household emissions (Dawson & Spannagle, 2009). In Canada, appliance use accounts for about 13% of household GHG emissions, while space-heating accounts for 63% (Natural Resources Canada, 2010).

4. A total of 887 people provided their household income. Because income was measured in categories, the actual size of the quintiles is not precisely 20%.

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Rethinking ecological citizenship: the role of neighbourhood networks in cultural change

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Rethinking ecological citizenship: the role of neighbourhood networks in cultural change

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Ecological citizenship is a normative theory that has been used to explain how some individuals lead sustainable lives within the constraints of late capitalism. Bringing citizenship into the discussion of sustainability is generally viewed as valuable, though some perceive the individualistic orientation of ecological citizenship to be a weakness. The varying capacities of individuals and groups to bring about social change have only recently entered discussion of ecological citizenship, largely neglecting the role of collective, cultural shifts in environmental politics. Drawing on ecological citizenship theory and qualitative data, the potential for ecological citizenship theory to incorporate a stronger cultural dimension through greater recognition of informal neighbourhood networks, centred on sustainable consumption, is examined. When ecological citizens engage in an informal neighbourhood-based network, a virtuous circle ensues. This reduces barriers to sustainable living in the neighbourhood, as well as deepening members' commitment to citizenship at the local level. In the case of an informal neighbourhood network, ecological citizens are more potent agents of cultural change as a collective than as individuals.

Keywords: sustainable consumption; ecological citizenship; networks; neighbourhood; cultural change

Introduction

From the vantage point of environmental sociology, environmental crises are material problems with ideological roots (Boyd 2003). Michael Bell (1998, p. 37) writes of the 'ecological dialogue', the fact that material conditions result from the ideals of human societies. This approach grants that to alter physical environmental crises, it is necessary to understand and take aim at their sociological foundations. Within much social theory and public policy, however, there continues to be a strong emphasis on the material. For

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example, economists dominate much environmental policy with market-based instruments, the suite of taxes and incentives that a government can use to induce behaviour changes in its populace (Dobson and Bell 2006). Material approaches neglect the need for cultural change to underlie behaviour change if behavioural shifts are to persist into the future (Adkin 2009, Scott-Cato and Hillier 2010).

Here I use sustainable consumption as an entry point to examine an informal neighbourhood network committed to reducing impact on the environment. Neighbourhoods have been largely neglected in a literature that tends to focus either at the individual (e.g. social psychological theories) or at global processes of production (e.g. critical theories). The Transition Towns movement is one exception to this general neglect, having recently been the basis for an empirical analysis of the role of social networks in ameliorating the effects and causes of climate change (Scott-Cato and Hillier 2010). At the neighbourhood level, norms can be conveyed through conspicuous practices of consumption, waste, and leisure (Bell 1998). However, for this form of communication to be effective, it is necessary that public meeting points exist to bring private actions into the public sphere (Horton 2006, O'Shaughnessy and Kennedy 2010). Using neighbourhood as a form of community, I examine how sustainable consumption can bring together committed citizens, leading to the construction of a network that fosters a virtuous circle: members' actions lead to more widespread adoption of a broad range of sustainable daily practices both within and outside of the network.

Sustainable consumption

Consumption practices are a unique confluence of environmental, socio-cultural, and economic forces. Human societies depend on the environment for the materials needed to produce goods and services and to assimilate the waste from our production and consumption processes. Consumption is 'rich, rewarding, and deeply human activity' (Heyman 2005, p. 116) that serves to knit together our social fabric and personal identities (Douglas and Isherwood 1979, Miller 1998), operating largely at the level of daily practices (Seyfang 2008). From an economic perspective, many of the structural influences encouraging consumption are premised on the tenet that consumption creates economic growth and that economic growth is good for society (Daly 1996). Politically, the potential for consumption behaviour to alter structural conditions is typically relegated to 'saving the world by spending' (Monbiot 2007). These approaches neglect the sociological dimension of consumption, failing to account for the importance of weak and strong ties in successful social change movements. Consumption can serve as a point of entry into environmental politics precisely due to fact that communities of practice often depend on shared daily behaviours (Miller 1998).

Critiques of using consumption as an entry point to environmental politics stress that consuming is a highly individualistic practice. The centrality of

individualism leads many to doubt the possibility of collective consumer action and the efficacy of any such moments of resistance to altering the structural constraints to sustainability. As Maniates (2006, p. 45) writes, 'when responsibility for environmental problems is individualised, there is little room to ponder institutions, the nature and exercise of political power, or ways of collectively changing the distribution of power and influence in society'. Soper (2007) notes that citizenship and consumption have frequently been posited as being at odds with one another. Emphasising a citizen's ability to affect environmental and social change by spending money overlooks a more influential role of the citizen-consumer: when individuals adopt consumption practices that run against mainstream culture, they may be able to shape cultural norms and influence the social construction of our daily lives. When these actions are taken by a group of individuals in a conspicuous fashion, this potential is even greater. Reducing consumption in a collective manner, so as to shape local social norms is a vital piece of cultural change. Without this change, 'it is not clear that citizens will be willing to alter their consumption and behaviour patterns' (Smith 2005, p. 275).

The relationship between politics and consumption has long been the topic of heated intellectual and policy debate. While some argue that our consumption choices can constitute an effective politics in and of themselves (Dobson 2003, Spaargaren 2003), others are highly critical of the notion of locating citizenship in our actions as consumers (Gould *et al.* 2004). Ecological citizenship theory is one approach that can be used to problematise the nexus between politics and consumption. Others include environmental justice (Agyeman and Evans 2006), ecological modernisation theory (Spaargaren 2003), treadmill theory (Gould *et al.* 2004), and the social economy (Smith 2005). Andrew Dobson (2003, p. 13) sees 'the "citizen as consumer" [as] a very active individual, comparing prices, demanding satisfaction from public services, and chasing up failures of service delivery when they occur'. Ecological citizenship theorists consider individual acts such as recycling and buying environmentally-friendly goods to constitute acts of citizenship by blurring the boundaries between public and private and by stressing the duties that come with being a citizen. Yet even within ecological citizenship theory, many acknowledge that an individual approach functions most effectively in the absence of barriers to participation (Dobson 2003, Nash and Lewis 2006, Adkin 2009).

Ecological citizenship

Ecological citizenship is a normative, justice-based theory that complicates existing (largely libertarian) notions of citizenship as rights-based and as occurring only in the public sphere. As a theoretical framework, it is useful for analysing citizen's consumption choices for three reasons. First, by questioning the bifurcation of private and public, ecological citizenship theory calls attention to the public effects of private consumption choices. Dobson (2004,

p. 10) sees the separation of public and private as problematic for the study of sustainable consumption, 'For ecological citizenship, this separation of public and private cannot hold. For one thing, the household is the site of much ecological citizen activity, and for another, it may even be that the virtues of ecological citizenship are learned there'. The ecological citizen may use the private sphere to express their citizenship but this is largely ineffectual at inciting cultural shifts towards sustainability unless there are witnesses to this set of daily practices. Reducing consumption is not political activity in and of itself; yet, reducing consumption conspicuously such that households with similar values can form strong and weak ties based on shared values has the potential to lead to social movement activity. This work provides a conceptual bridge between the dualisms of individual and collective by demonstrating a precursor to a social movement; a group of actors who are not reducing material consumption in isolation but engaging with others in their neighbourhood (Diani 1992, Rootes 1999). Individual actions become collective as neighbours discover they have shared practices and hopes, as well as shared frustrations with service provision. These actors become a collective as they work together to inspire deeper commitment to sustainable practices and act together to lessen structural barriers to environmental behaviour. The lines between public and private are complicated when the site of action moves from inside the walls of the home to include the neighbourhood. This occurs as behaviours practiced in common become common practices. A network so described is still within the ontological parameters of ecological citizenship, by acknowledging the citizenship dimension of private acts practiced by households with environmental concern. Yet by focusing on a group of individuals, this research offers a more political dimension – the possibility for an informal network to engage in environmental politics and collective action. This line of thought addresses the question of how a social institution (e.g. neighbourhood) can be transformed so as to 'support the cultivation and expression of green citizenship' (Smith 2005, p. 273).

The second reason ecological citizenship can serve as a useful tool through which to understand sustainable consumption is that, in taking a normative stance on duties-based – in addition to rights-based – citizenship, the theory provides space for considering the impacts of consumer-citizens on their communities, on the environment, and on people in other times and places. The rights-based view of citizenship emphasises our negative duties to one another (such as the duty to do no harm) over and above positive duties (such as the duty to help those in need). As Dobson (2004, p. 3) explains, 'one of ecological citizenship's most crucial contributions to contemporary theorizing is its focus on the duties and obligations that attend citizenship'. The discussion of duties aligns well with environmental discourse: most democratic states rest on the assumption that paying taxes and voting (our duties as citizens) affords us certain rights (access to education, protection of our property). Duties such as paying taxes and voting rarely do much to help people of other nations, other species, or future generations, yet our

self-appointed right to consume and dispose of material resources impacts these entities profoundly.

Third, the cosmopolitan orientation of ecological citizenship (Dobson and Bell 2006) calls attention to the fact that environmental crisis and political-morality are exercised across borders, not only within the nation-state. Szerszynski (2006) argues that while the holistic view of local and global is a strength of ecological citizenship theory, efforts still need to be made to root particular people in particular places and times – that ‘local matters’. He states, ‘there are limits to the spread of the ideas and practices of environmental citizenship unless they can be reconceived in terms that do not pitch them directly against a widespread habitus of local dwelling’ (Szerszynski 2006, p. 93). Supporting this assertion is the empirical work of Nash and Lewis (2006). The authors find that one’s belief orientation (as measured by Dunlap *et al.*’s (2000) concept of the dominant social paradigm) fails to be a significant predictor of environmental behaviour at the local level. As Dobson and Bell (2006, p. 13) summarise, Nash and Lewis’ research ‘reveals locally based commitments to the idea of responsibility that might be built on to encompass broader arenas of political, social, and economic life’. Finally, consumption is now global in nature (Wilk 2002), with goods produced far from point of purchase and supply chains often spanning thousands of miles. Thus others have used ecological citizenship to examine purchase of fair trade products, incorporating an ethic for social justice as well as environmental concerns (Seyfang 2006).

Ecological citizenship has typically been used to explore the potential for *individuals* to reduce their consumption, partly, through consuming (Latta 2007, Scerri 2009). Johnston (2008, p. 259) writes, ‘By framing political-ecological solutions through a “conservation through consumption” strategy, the choices required of ecological citizenship are minimised for the citizen-consumer’. For consumers to have a substantial impact on political and social change, acting as a collective is likely more effective than acting as autonomous actors. Passy and Giugni (2001) write of the structural connection function’ of social networks; that is, that social networks provide a fertile base upon which to form and maintain social movements, based on weak and strong ties. The neighbourhood network described here is not a social movement (as it lacks a central political purpose and demonstrated only a few instances of collective action with non-institutional tactics (Diani 1992)). But by cultivating weak and strong ties amongst committed households, the network represents an important micro-mobilisation structure for local political and household change, and could contribute to the formation of a social movement (Granovetter 1983). The importance of networks is often overlooked in favour of the individual or political organisation. Seyfang (2006, p. 391) argues that, ‘powerful coordinated global businesses must be tackled by coordinated, global networks of consumers rather than isolated individuals’. Yet global networks of consumers (such as might exist around fair trade products) tend not to unite in collective action (Seyfang 2005). By examining a network of

citizen-consumers at the local scale, I seek to show that when consumption (and non-consumption) serves as an entry point to other citizenly activity, a more potent form of resistance results, and one that contributes to cultural change at the local level.

Ecological citizenship theory and existing knowledge of the role of local social context in shaping norms and practices work together to explicate the potential for sustainable consumption to yield engagement in environmental politics. The link between ecological citizenship and sustainable consumption is well-documented. Seyfang (2006) tested the hypothesis that ecological citizens who seek out formal networks of support engage in acts of sustainable consumption. After testing this hypothesis in a case study on local food, she revised her original conceptualisation: once ecological citizens became involved with a network they were able to reduce their ecological footprint by using the infrastructure provided by the network. However, even more significant was the finding that through education and outreach programmes, individuals' sense of ecological citizenship developed further, leading them to take on ever more sustainable practices. Whereas Seyfang studied a formal organisation and a community of practice, my research focuses on informal networks rooted in a place of residence. The network described here proves to have reduced barriers to sustainable practices largely through shifting cultural norms for the neighbourhood at large, constituting an effective environmental politics.

Social norms and networks

Here, I describe the processes by which a network of ecological citizens is able to encourage members and non-members to reduce their material consumption. I discuss how some individuals are able to construct relationships in their neighbourhood based on informal ties and common environmental values and practices within an informal social structure. In industrialised societies in the recent past, there has been 'a decrease in informal networks of civil society that generally organize collective activities such as the sharing of capital goods, community improvement projects, and educational activities' (Briceno and Stagl 2006, p. 1542). Through participation in such networks, citizens' civic identity – and also their political norms and actions – are developed and modified (Passy and Giugni 2001). These networks are crucial not only for scaling up personal commitment to political action (e.g. through a social movement) but also to reinforce the importance of behavioural commitment at the household level (McAdam and Paulsen 1993). When acting as part of a network, the private household has the potential to serve as a site for altering social norms and rules (O'Shaughnessy and Kennedy 2010). Passy (2001) and Passy and Giugni (2001) addressed a gap in knowledge related to how social networks affect behaviour in social movements; here, I use and build on ecological citizenship theory as a framework to understand how involvement in informal social networks influences citizenship activity, including household-level sustainable daily practices and cultural change.

Social norms are reinforced by daily practices and their conspicuous display (Shove and Walker 2010). Citizenship involves the notion that individuals should act towards the betterment of their community and derive rights from their community as well (Kingwell 2000). Uzzell and Rathzel (2009, p. 2) describe the relationship between daily practices and social context:

Behaviour is ... based on habit and cultural tradition, emotional impulses, the influence of family and friends and social norms as well as wider trends. Moreover, while values and attitudes are clearly important in influencing behaviour, values and attitudes are not formed in a social and cultural vacuum. They are embedded, nurtured and emerge from a social context, such as class, gender, ethnicity, and environmental settings, resulting in specific everyday cultures.

At the local level, a group of committed individuals with shared values and practices has the potential to alter social context. Indeed, this dynamic between practices and context is part of what constitutes citizenship. As Horton (2006, p. 147) states, 'Citizenship is less a quality of individuals than of the architecture that produces and reproduces that citizenship'. A group of neighbours can act together to alter the architecture in which they practice ecological citizenship. When acting with others, living sustainably becomes more inspiring, more rewarding, and easier. Kingwell (2000, p. 22) argues that human communities 'are discursive achievements, processes of seeking and finding conversational partners and forging with them, painfully and by increments, the shared public institutions that will work for us'. The network described here builds on its internal strength to engage in local environmental politics, as demonstrated by members' participation in political actions to create a more resilient neighbourhood. By shifting norms and locating and addressing barriers to sustainable consumption in their neighbourhood, citizens are further able to encourage those in their neighbourhood who are not tied to the network to reduce their consumption as well.

Creating new social norms of environmental sustainable lifestyles is a form of environmental politics and is vital to a successful environmental social movement. Theoretical approaches to sustainable consumption (including ecological citizenship) too often fail to account for the role of cultural change in addressing environmental crises. Seyfang (2005, p. 150) concludes that, 'to build a social context consistent with an enabled ecological citizenry, governments must ... [alter social] context through radical changes to lifestyles, infrastructure and social and economic governance institutions, in order to redirect development goals and reduce absolute consumption levels'. Existing research explores the effectiveness of social networks as a starting point for social movements (McAdam and Paulsen 1993). The degree of personal commitment to social movement activities and the sense of personal effectiveness in creating positive social change in that role are both enhanced through connectedness to a social network (Passy and Giugni 2001). My aim here is to explore the capacity of an informal network of ecological citizens to incite cultural change towards more sustainable lifestyle patterns, to deepen the

commitment of network members' ecological citizenship, and to confer benefits to quality of life from engaging with others who are reducing material consumption.

Methods

This research builds on 26 interviews conducted between June and November 2009 in Edmonton, Canada (population approximately 700,000), with families with at least one child living at home. An ethnographic approach to interviewing was used to elicit information on daily practices, values, and beliefs throughout the interview process. The choice to interview families stems from data that suggest that two-parent households with children spend more of their income on consumer products than any other demographic group (Statistics Canada 2006). Thirteen families were selected through word-of-mouth and snowball sampling and each family was interviewed twice. The first interview was semi-structured; each participant was asked the same questions though the precise order of the questions varied by interview, according to the flow of conversation. The second interview was unstructured, building on three to five broad questions developed as data were analysed from the first round of interviews. Thus, each participant had a distinct second interview. The interviews ranged in length from 35 to 95 minutes. All interviews were conducted at either the home of the primary researcher or that of the participant. Interviews were transcribed and sorted into themes with the use of a qualitative software package (NVivo 8).

Results and discussion

The intent of the interviews conducted was not to locate a social network, and less so to look for examples of environmental politics. In fact, that household consumption practices could serve as the foundation for a group of local citizens to begin to address structural barriers to sustainable practices differs substantially from the original intent of this qualitative research: to identify ways that reducing consumption could increase quality of life. While informants seldom used the term 'network' to describe their relationships with others in their neighbourhoods, these relationships arose time and again in interviews with particularly dedicated and engaged participants, and with those who felt that reducing consumption lay at the heart of their family's quality of life. An initial clue to the informal network came as I asked informants to recommend households like theirs that I could interview (part of snowball sampling). Of the seven families interviewed in peripheral areas, three referred me to families who lived in the same centrally-located neighbourhood. Of those interviewed in that central neighbourhood, there was little variation in the families recommended; the list included the same eight households, though I have since come to learn that this network is considerably larger, incorporating at least 14 households in the same area.

The network I will describe includes eight households located within cycling distance of one another. All have children, five households home-school their children, and in no instance do both parents hold full-time jobs (all described an interest in 'downshifting'). Household incomes range from CDN\$30,000 to CDN\$80,000. The structure of the network is informal: there are few organised meetings though members' children often play together and one woman hosts an annual canning workshop and potluck supper while another couple hosts a bicycle repair workshop each year. Below, I will describe the importance of involvement in the informal network, the virtuous circle that ensues, and the functioning of the virtuous circle.

Network membership and quality of life

I begin by describing an informal neighbourhood network of citizens trying to reduce their consumption, commenting on the importance of the network for members' quality of life. Membership in a network confers a sense of belonging upon individuals whose actions are often at odds with the status quo. Furthermore, by living in proximity to one another, members are able to assert a 'critical mass' in their place of residence, making the household that composts, cycles, and grows their own food the norm rather than the outlier. Community forms around common practices and by establishing sustainable practices as the norm, households in this area are able to challenge dominant cultural values. Acting as part of a network, they are able to overcome many of the structural barriers to sustainability that limits the individually-oriented household.

The network described below is oriented around common values and practices; bringing like-minded individuals together provides benefits to quality of life and increases in environmental practices. As one informant says, 'One of the benefits of trying to live consciously and minimize your footprint in this neighbourhood is you learn some really neat stuff and meet some amazing people who are doing some inspirational stuff'. Several informants mentioned the inspirational nature of the network. They feel that their time spent amongst like-minded families has the ability to recharge their energy and commitment to reducing consumption:

Eleanor¹: We find it comforting to hang out with people that are like us. I can sometimes feel depressed when I'm in a very mixed group where not everyone sees what we see. I think there are times when we need to be with people who know exactly what we're talking about. So I think I would consider those networks to be a bit less work somehow and more spiritually and emotionally comforting. Not all the time but enough to kind of recharge you or sooth you a bit.

Eleanor's comment refers to the sense of belonging that comes from being with others who share a similar set of beliefs. At the individual level, such a benefit to quality of life is overlooked, though literature on participatory democracy and politics has observed the tendency for groups of like-minded individuals to

have deeper commitment and derive greater satisfaction from involvement in political activism (Passy 2001). Furthermore, Soper (2007) notes that quality of life can be affected positively through the knowledge that one is doing the right thing. Such 'alternative hedonism' explains why some individuals make choices that might appear irrational (e.g. higher cost, greater inconvenience) because these choices contribute to a reworking of the definition of 'the good life'. The revised good life includes awareness of the environment and others and a concomitant shift in behaviours to reflect that awareness (Soper 2007).

Membership in a network can accelerate the degree to which ecological citizens associate with alternative hedonism. In social movement theory there is a sense that a network is an entity of shared values and practices that has an overt political aim. Or as Diani (1992, p. 16) writes, a social movement is 'a network of informal interactions between a plurality of individuals, groups and/or organizations, engaged in political or cultural conflict, on the bases of a shared collective identity'. The network described here lacks such a political aim. Nonetheless, it has the potential to inform a social movement and the notion of a social movement is of use in understanding how informants give a sense of agency on the network rather than on the individual. Informants stress that having a shared identity reinvigorates their desire to reduce consumption and adds to their sense of wellbeing. Theresa talks about the inspirational role a network plays; she feels that if her husband did not have access to networks of support, he would lapse into isolation and frustration:

You just have to be in a community. I mean, maybe we're just totally hard-wired that way and thankfully that's the case. Otherwise you just come to depression. Like my husband – he tends to be more of a pessimist I think. I think having children has been a really good thing for him because he has to get out and participate more fully in the community. He used to just isolate and withdraw and have less to do with people. But when you have kids, you go to a soccer field, or the park, you know?

Membership in a network is a foundation for replacing privately experienced needs with reflection on the public good as well as the sense of gratification that comes from socially and environmentally accountable consumption (Soper 2007).

Jasmine reiterates the notion that a network is important to inspire one to reduce consumption: 'A network of friends is crucial if you felt at any point in time you couldn't do it. You need those people who simply raise the bar and can inspire you and remind you what's right'. Yet she and her husband have lived in a cabin in the woods for the past 20 years and miss the ease of reducing made possible by a neighbourhood network: 'We enjoyed living in our rural setting but now we want to live in a community. We've had 20 years in a cabin in the woods which we love but now we're back to building the community again'. Likewise, other informants who do not live in a neighbourhood with access to a network of ecological citizens feel more pressure to consume. As Jamie says, 'When we had free time and lived near our friends we were in social circles where everyone was very environmentally aware. But now we're in more

mainstream circles. Nobody else in this neighbourhood bikes or walks and certainly no one would wear thrift store clothes'. Aline has never had a network of support in her neighbourhood and only recently became interested in reducing her consumption. She has come to the conclusion that to reduce more, she needs a community of support for inspiration and information:

I think my next step is to find a community where I can be more comfortable with my values. I wonder if as you get more comfortable expressing your values, you're more able to develop and create community. I don't know. But what I'm pretty clear on is that it isn't related to all this material stuff. I also find sometimes that people who don't have excess stuff seem at some level to be more content and have more community. Like it's almost the more stuff you get, the more disconnected you become from yourself and community. And it's almost like the more we've increased how much stuff we have, we've decreased community and we seemed to have lost our own values too.

Ecological citizenship and the virtuous circle

As I interviewed participants who seemed to always be adding to the suite of behaviours that demonstrate their ecological citizenship, I noticed that the majority of these individuals had access to other families interested in reducing consumption. I pictured a virtuous circle: engagement in the network arises because of a shared commitment to living sustainably, and the collective presence of others deepens the individual's commitment and knowledge of how to reduce consumption. The notion of a virtuous circle exists in related research. For instance, Briceno and Stagl (2006) argue that the collective definition of social and private needs and values forms and maintains the functioning of a virtuous circle and that such a mechanism is integral to the functioning of a sustainable community. Rogers (1995) found a proportional relationship between the level of social participation and the level of adoption of innovations.

Because members of this network share the same physical location, their (typically) private actions become visible to others. Because of this, individuals with shared values and practices come to know one another. Rootes (2007, p. 739) alludes to the ease of entry to neighbourhood politics while acknowledging the limitations of such an approach: 'Acting locally will not usually be enough to secure redress of environmental grievances, but, for most people, local campaigns offer the only accessible entry to the political struggle for ecological sustainability'. Through this familiarity, knowledge and resources are shared, leading to a deepening commitment to reducing consumption as well as a heightened commitment to taking political action to address barriers to sustainable living. In the virtuous circle, personal and neighbourhood ability to reduce consumption is affected positively by the presence of an informal social network or negatively by its absence (Figure 1). By sharing knowledge and resources and shifting norms away from the highly consumptive, the members of the network under study are able to further reduce their ecological footprint and lessen some of the structural barriers to reducing consumption

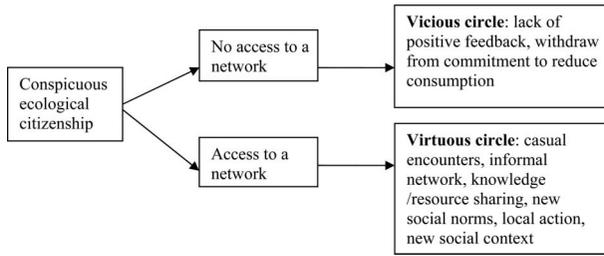


Figure 1. Descriptive model of ecological citizenship and social context.

that exist in their neighbourhood. This observation address a gap (as noted by Smith 2005, p. 127) in knowledge around green citizenship: ‘An individual may be knowledgeable and have cultivated the relevant dispositions and skills, but without the confidence to act they would not be fulfilling their duties as a green citizen’. As a network, the ecological citizens interviewed here feel they constitute a significant presence in their neighbourhood and are comfortable consuming and reducing consumption in ways that counter the mainstream.

Because informants live in the same area, it is relatively straightforward to form and maintain this virtuous circle. In this respect, conspicuous behaviour, meeting places, and proximity are crucial variables solidifying the network and ensuring its functioning (Horton 2006). Jared’s comment provides a good example of the haphazard way the network coalesced and the importance of conspicuous acts of ecological citizenship: ‘Because we walk everywhere, we’re quite visible and people know us. We’re that family who ride around on our bikes or walk around. Because of that we’ve met quite a few other families who don’t use a car either’. Here I have explained the mechanism by which acting as a network fosters deeper commitment to reducing consumption and provided evidence of the ways in which the network engages in political activity. Next, I describe how this network exists and how the virtuous circle functions.

Functioning of the virtuous circle

The processes by which the network supports efforts to reduce include sharing resources and information. For example, Theresa’s family relies on others for a car so that her family can live without a vehicle: ‘We have relationships with neighbours who often aren’t using their vehicles and who are happy to lend us theirs. Usually I’ll bake for them and I always put gas in’. She stresses the importance of a relationship and implies that this is made easier by the fact that they live in proximity to one another. Amy and her husband benefit from their neighbours’ knowledge of all things ecological: ‘Our neighbours down the street are just amazing people and they are just so aware of everything and we can always ask them their advice. We’ve learned a lot and do a lot more than we did before we knew them’. She suggests that their relationship facilitates greater involvement in sustainable practices for her and her husband.

Interestingly, another couple learned from Amy and Jared that it is possible to travel to Europe by steamship and plan to do so in the future, to avoid air travel.

In addition to sharing resources and shaping social norms, there is a competitive dynamic that encourages network members to reduce. By bringing together ecological citizens who model sustainable living, networks establish norms and values that are contrary to mainstream culture. This creates grounds for peer pressure and competition unique from mainstream pressures to consume more and to consume conspicuously. For example, Kaitlin describes her sense of guilt at owning a car when others in her network of support do not. She also alludes to the importance of network effects in her behaviour and to a dynamic tension between competition and inspiration that leads members of the networks to increase their commitment to reducing:

I realize that the way I build relationships, the things I do in private, are actually public because I have a community and we're constantly modeling for each other and providing both positive and negative reinforcement. We are constantly influencing and influenced by the people around us. So as a result we have a very alternative, very progressive, very environmentally aware, very child centered group in this neighborhood. And they all don't own vehicles so here I am owning my own vehicle and I always feel bad about it.

Kaitlin's comments suggest a sense of responsibility, motivated in part by her own values and in part by her allegiance to a network. This is a crucial feature of the virtuous circle formed when ecological citizens come together in a network. As Dobson (2004, p. 15, italics in original) writes: 'the virtuous circle is made up of *activity*, understood as carrying out social *duties*, in the *public* arena, and this is contrasted with *passivity*, understood as the claiming of *rights and entitlements*, in the *private* arena'. However, while Dobson locates agency in the individual, the informants for this study implied that it is the network that most significantly shapes social practices in their neighbourhood.

The network was both facilitated by and made more effective through the proximity within which members were located, by their opportunity to reduce consumption conspicuously, and by the presence of meeting points in their neighbourhood. These conditions mirror those offered by Horton (2006) who argues that successful green activist communities require places to meet and 'materialities' with which to express shared values (e.g. cycling, eating vegetarian meals). There would be little influence on broader social norms or context in which everyone shared the same consumptive practices and beliefs about the environment and one's place in a shift towards sustainability. The fact that the network of individuals described in this paper is embedded in a neighbourhood with mainstream consumers strengthens their ability to effect cultural change. Eleanor explains the benefits of existing in a network and the ability of the network to inspire change:

We are able to reduce our consumption a lot more because we have people in our lives with similar values. We have also had an influence on other people in our neighbourhood who maybe didn't do as much. I don't like to toot our horn but

sometimes building those relationships allows people to see another way of living that they might not have seen so much of. They might have thought, 'this is the norm', but the norm isn't always the happiest way to live.

By challenging mainstream norms, Eleanor and others are effectively politicising household practices. Working as a network, these individuals are far more effective at influencing change than they were when acting alone. The individuals in the network described here are strongly shaping their neighbourhood context by volunteering with the Community League² (e.g. as treasurer, one man ensures investment in the public commons, another woman makes the ice at the local arena so that families do not have to drive their children throughout the city to go skating), conspicuously reducing consumption (e.g. offering tours of sustainably-designed homes and gardens and living without a vehicle), and lobbying the city government (e.g. for a family bus pass rate). These expressions of citizenship are not taken solely due to a commitment to the environment but also due to a sense of responsibility to a network. Collectively, these acts serve to lessen barriers to sustainable living for others in the neighbourhood, regardless of whether or not they play a role in the network. As citizens of a neighbourhood, informants are committed to altering the social context in ways that they feel is of benefit to themselves and their neighbours; as ecological citizens, their actions are oriented towards environmental sustainability.

Conclusion

Briceno and Stagl (2006, p. 1562) concluded that their study of local exchange trading systems 'illustrate[d] the importance of social relations, networks, and participatory institutions in bringing about the kind of social change needed to adopt more sustainable consumption'. I have drawn upon comments from members in an informal neighbourhood network of ecological citizens to demonstrate how a virtuous circle can form in a local context, and to describe the functioning of this virtuous circle. Through engagement with existing literature and the use of qualitative data, I have contributed to ecological citizenship theory in several ways.

First, by grounding the theory in the discourse and actions of individuals engaged in ecological citizenship. Second, by exploring how an informal group of individuals in a neighbourhood can address structural constraints to sustainable practices (including cultural norms) and deepen members' commitment to the practices of ecological citizenship. Third, I have demonstrated that as a group, the network described here was able to have an influence on hegemonic assumptions about a society's needs and priorities (Adkin 2009). In sum, I have identified a number of mechanisms by which engaging in a network enhances individuals' ability to reduce, including competition, knowledge and resource sharing, and inspiration. By focusing on a group of individuals within a neighbourhood, the focus of ecological citizenship shifts to seeking to understand the potential for participation in

social change rather than the potential to reduce individual environmental impact.

Ecological citizenship offers a normative theoretical framework for interpreting individual responses to environmental problems, yet has been criticised for an individualistic orientation (Scerri 2009). Focusing on a group whose social foundation is predicated on ecological citizenship values goes some way to addressing this critique. Moreover, demonstrating the virtuous circle that ensues amongst a group of ecological citizens, as well as the knowledge sharing that helps to deepen commitment to living sustainably, I have demonstrated one institution within which citizens can learn the skills and ethos of ecological citizenship. Like Smith (2005), who examined the potential for the social economy to serve as a site for green citizenship, I situate the political in an unconventional sphere: a neighbourhood. Soper (2007) uses the notion of citizenship to offer a theoretical account of why some individuals reduce their consumption in ways that would seem to sacrifice comfort and convenience. Her concept – alternative hedonism – remains individualist, but she does call for, ‘a new political imaginary that dwells explicitly on the satisfactions to be had from consuming differently’ (Soper 2007, p. 222). By locating ecological citizenship in an informal, neighbourhood network, I have addressed Soper’s call for a new political imaginary.

There exists a strong precedent for drawing citizens into the democratic process through their commitment to the environment. As Latta (2007, p. 378) states, ‘using the turn towards citizenship as a springboard for advancing the democratic impulse ... has long been one of the hallmarks of environmentalism’. And certainly the democratic process and citizenship in general could use some energy. Kingwell (2000, p. 15) writes: ‘Citizenship is a role now in danger of losing its privileged position in human life, through various forms of withdrawal from the political realm: into consumerist fetishism, into cultural separatism, into self-regarding isolation’. Thus far, with few exceptions, ecological citizenship has overlooked how the actions of groups of individuals might differ from those of individuals acting alone. On a similar note, but from the perspective of urban sociology, Savage (2005, p. 358) writes, ‘Community is dead. But not irrevocably so. It can be built again, on the same kind of framework that earlier communities were based on, with fixed attachments to place remade’. The results presented here stress that involvement in an informal network strengthens members’ commitment to ecological citizenship and incites more citizenly activity that has the potential to reduce barriers to sustainable living for others. The network is strengthened by – and strengthens – the neighbourhood within which it is situated. Because the network is comprised of ecological citizens, a virtuous circle ensues, deepening members’ commitments to reducing consumption, drawing others not in the network towards sustainable living, and enhancing quality of life for members in the process.

Constructing a culture of sustainability will no doubt rely on the commitment of such ecological citizens. Their ability to affect local, cultural

change, and influence local, social norms may be contingent upon their ability to coalesce as informal or formal social networks. While the current study examined a neighbourhood-based informal network, similar groups could certainly exist in the workplace, in schools, in churches, and in other public and private institutions. Future research into the presence or absence of networks of sustainability in these and other contexts would likely bring further depth to the concept of ecological citizenship. The network is a site of citizenship that applies ‘pressure’ (Soper’s term) for more sustainable consumption. The citizens interviewed for this research seem to be influenced by their membership in a network to act as politically-engaged citizens at the local level. I hope to have demonstrated that informal networks should be further studied for their impact on ecological citizenship and local environmental politics. This development would not be at odds with ecological citizenship in its predominant conceptualisation but further add to and refine the theory. If theorists of ecological citizenship can shift their focus away from the individual as autonomous agent, there exists the possibility of examining ways that groups of individuals can become effective agents of resistance against the political economic and institutional forces that continue to undermine efforts to exist in a way that does not exact such a steep environmental price.

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Notes

1. Pseudonyms are used to protect participants’ identities.
2. Community leagues are a neighbourhood-level governance structure that seeks to build and maintain community by offering physical space for neighbours to meet (e.g. swimming pool, skating rink) as well as events for neighbours to get to know one another.

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Downshifting: An Exploration of Motivations, Quality of Life, and Environmental Practices¹

Emily Huddart Kennedy,² Harvey Krahn³ and Naomi T. Krogman⁴

“Downshifting,” reducing work hours, thereby income, to increase leisure time, offers a possible individual-level solution to the stress many experience from long working hours and work intensification. Recently, some have argued that an increase in leisure time with a reduction in income might also foster pro-environmental lifestyles as has been demonstrated for the “voluntary simplicity” movement. Quantitative research on the relationship between downshifting and quality of life is scant, with equivocal results, and studies of the relationship between downshifting and environmental lifestyles are even more rare. Survey data from a western Canadian city reveal nonsignificant impacts of downshifting on two measures of quality of life (subjective well-being and satisfaction with time use) as well as on sustainable transportation practices. However, downshifting is significantly associated with sustainable household practices. In order for downshifting to have more widespread positive effects, further structural changes in broader domains such as work culture, urban design, and support for families will be required.

KEY WORDS: double dividend; downshifting; environmental practices; leisure; quality of life; sustainability.

INTRODUCTION

Downshifting has been described as a solution to the stresses of longer working hours and limited leisure time, as an individual or family decision that could lead to improved quality of life (Drake 2009; Robin and Dominguez 1992). A few writers (e.g., Hayden 1999; Thomas 2008; van Eyk McCain 2011) have gone further, suggesting that along with quality-of-life benefits, downshifting will also bring environmental payoffs, presuming that having more leisure time will yield greater mindfulness (Warren-Brown and Kasser 2005) and, in

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turn, reduced consumption. Interest in these issues is, no doubt, linked to the increase in working hours for many workers in most Western societies over the past several decades (Maoz 2010) and the parallel decline in leisure time (Schor 1992), increased commute times (Sundo and Fujii 2005), and the general intensification of paid work and consumption (Bunting 2004; Jackson 2011; Schor 2001). Indeed, work-related stress and work–life imbalance can have severe consequences for individuals and families (e.g., Gregory and Milner 2009a; Hochschild 1997).

Many workers have simply “suffered it out,” but a minority have been proactive, choosing to “downshift,” that is, make a voluntary, long-term change in lifestyle that resulted in their having more leisure time and, as a result, earning and spending less (Hamilton 2003; Hamilton and Mail 2003; Schor 1992). The considerably fewer participants in the “voluntary simplicity” (VS) movement, a close cousin to downshifting (Etzioni 1998), go further. VS involves a deliberate resistance to high-consumption lifestyles—advocating and adopting a frugal lifestyle instead (Grigsby 2004; Lorenzen 2012). Downshifting focuses primarily, if not solely, on reducing work hours. In this article, we ask whether an emphasis on reducing work hours alone can lead to the promised gains in quality of life and reduced environmental impact demonstrated by voluntary simplifiers (Alexander and Ussher 2012).

The potential for improved quality of life and reduced environmental impact resulting from a shift from working hours to leisure time is appealing. In fact, Jackson (2005:32–33) hypothesizes a “double dividend” whereby “it is possible to live better (or at least as well as we have done) by consuming less, and becom[ing] more human in the process.” Such a double dividend has been demonstrated to varying degrees in early studies of VS (e.g., Iwata 1999; Shama and Wisenblit 1984). More recently, Warren-Brown and Kasser (2005) found a positive association between environmentally responsible living and subjective well-being. Lorenzen (2012:109) interviewed members of households who had voluntarily made changes to their lifestyle to reflect a commitment to the environment and observed that “[v]oluntary simplifiers argue that quality of life increases with restricted consumption, and claim that material objects literally get in the way of personal fulfillment and social relationships that can be restored when material barriers are cleared away.” Alexander and Ussher (2012) surveyed 2,131 voluntary simplifiers around the world and reported benefits to both quality of life and the environment.

In short, the VS literature has generally demonstrated that orienting one’s life around reduced consumption confers both benefits to the environment and personal happiness. Despite its popularity among media commentators, downshifting has not yet been scrutinized to see whether the same double dividend can result from a shift in time allocation that favors leisure time that is not necessarily motivated by environmental concerns. This study contributes to the literature by examining only downshiffters, not those in the VS movement. It employs survey data from a western Canadian city to ask whether downshifting is associated with two measures of quality of life (subjective well-being and

satisfaction with time use) and two measures of pro-environmental behaviors (sustainable household practices and sustainable transportation practices). We begin by reviewing literature related to work hours and work intensification, as this is the practical and theoretical foundation for downshifting (Saltzman 1991; Schor 1998). We then review existing literature on downshifting before presenting our results and discussion.

INCREASED WORKING HOURS AND WORK INTENSIFICATION

During the latter part of the nineteenth century, when 60-hour workweeks were common, trade unionists and social activists in Western capitalist economies fought hard and successfully for shorter working hours and higher hourly wages (Golden and Figart 2000; Schor 2005). Technology-driven increases in productivity allowed this social change to occur. By the 1920s, some observers were predicting a 2-day work week (Posner 2011). These social optimists did not fully recognize the power of the belief in the necessity for ever-increasing economic growth in capitalist economies (Jackson 2005), nor did they foresee the emergence of the advertising industry (Cook 2008; Leiss et al. 1990) and its ability to raise expectations of what an individual or family needs to live well. Thus, with the exception of periodic recessions and a major depression, the twentieth century was characterized by increases in the production and consumption of goods and services and, hence, no significant decline in work hours.

Toward the end of the twentieth century, further optimistic claims about shortened workweeks appeared, this time focusing on the time- and labor-saving benefits of computer technologies and automated production systems (Block 1990; Gorz 1999). But research has shown that some electronic communication technologies have created more, not less, work and stress for workers (Williams et al. 2008). As Juliet Schor (2005:40) observes, “[t]he conventional wisdom [but not the reality] is that capitalism has been associated with declining hours of work and that it possesses an inner logic that drives down hours of work.”

Granted, following World War II, average work hours per employee in Organisation for Economic Co-operation and Development nations declined for several decades (Schor 2005). By the 1980s, however, this trend had nearly halted. The gains in productivity afforded by new technologies failed to translate into reductions in work hours or increases in employees’ income (Schor 1998). Instead, an increase in hours spent in paid employment has been documented in a number of Western countries (Golden and Figart 2000), including the United States (Schor 1992, 1998), Australia (Hamilton and Mail 2003), and the United Kingdom (Hamilton 2003).

In Canada, following World War II, work hours fell to an average of 40 hours per week by 1957 and 39 hours by 1976 (Krahn et al. 2011). By the early 2000s, Canadians worked between 36 and 37 hours per week. This average has changed little in comparison to the United States, where it has increased, probably because Canadian trade unions have not lost as much strength (Krahn et al.

2011). However, polarization of work hours over this period in both Canada and the United States is a new trend (Hall 1999; Rones et al. 1997). More people have been working part time (typically not by choice) and there has been a small increase (larger in the United States than in Canada) in people working longer-than-average hours, some by choice and some out of necessity.

Workers in many Western countries have also experienced an intensification of work over the past 3 decades. Employers in both the private and public sectors have pushed for increased productivity and greater efficiency, putting more pressure on workers (Vallas 2003). Some employers have taken notice of work–life balance concerns, but frequently, there has been more talk about work–life balance than there has been change in employment conditions (Fleetwood 2007). According to some critics, we are seeing a new era of “management by stress” (Kunda and Ailon-Souday 2005:209) in which workers push themselves and each other to increase productivity for their employers (Bunting 2004). At the same time, well-paying, secure jobs in many industries have been eliminated, replaced by lower-paying and less-secure part-time and temporary jobs (Krahn 1995; Kalleberg 2009). These trends in precarious employment (Vosko 2005) help explain the polarization of working hours—some are working fewer hours and earning less, while others are struggling to maintain their incomes by juggling multiple part-time jobs or working overtime.

Either way, because their employers are pushing them to work harder or because they are struggling to maintain their previous standard of living, some workers do decide to downshift to reduce the pressure on themselves and their families. These challenges are particularly acute for mothers. As Hochschild (1989) noted, for families to balance work and home lives, women typically take on a “second shift” or “double day” of housework and child care. Stone’s (2007) comprehensive qualitative study of 54 married Americans mothers who left the workplace demonstrated that this decision reflected the constraints of a traditional, inflexible work environment. Thus, one of the most common responses to the challenges of competing pressure from home and work is for women to reduce work hours or to limit their careers, particularly when their children are younger than 6 years of age (Becker and Moen 1999; Fothergill and Feltey 2003). It is not only in two-parent, working households that women report high levels of stress. A study comparing households where the mother stayed at home while the father worked full-time to households where the father stayed at home while the mother worked full-time found that in both cases, women consistently reported higher levels of stress and exhaustion than their spouses (Zimmerman 2000). These trends are important to bear in mind, though not a primary focus of this article.

DOWNSHIFTING

Amy Saltzman coined the term *downshifting* in 1991. Since then, the concept has gained purchase among those who find themselves trapped in a cycle of

work and spend (Schor 1992), or without enough time for civic engagement or family activities (Hochschild 1997), to maintain health, or to seek meaning in life (Levy 2005). While there are few quantitative studies of downshifting, those that exist have provided useful information about the extent of the phenomenon in various countries. In a 1996 telephone survey Schor (1998) asked 800 adult Americans the following question: "In the last 5 years, have you voluntarily made a long-term change in your life which has resulted in you making less money—other than taking a regularly scheduled retirement?" One in five (19%) of the study participants answered "yes," and just over half of these individuals indicated that they thought this lifestyle change would be permanent (Schor 2001:69–70). Those who downshifted did so largely by moving to jobs that paid less and because they wanted "more time, less stress, and more balance" in life (Schor 1998:117).

In 2001, Hamilton and Mail (2003) asked 981 Australians between the ages of 30 and 59 essentially the same question, but with a longer time frame: "In the last 10 years have you voluntarily made a long-term change in your lifestyle, other than planned retirement, which has resulted in you earning less money?" Almost one in four (23%) survey participants stated that they had downshifted in the previous decade. Most had done so by reducing work hours, rather than changing jobs, though this was still a common strategy. The most important reason for downshifting was to spend more time with family (Hamilton and Mail 2003). Hamilton (2003) used the same question and time frame in his 2003 study of British downshifting trends. He found that 25% of those between 30 and 59 years of age had downshifted over the ten-year period. In Britain, most people downshifted by stopping work (though this method was more common for women; men were more likely to reduce work hours) and stated "more time with family" as their primary motivation.

Chhetri et al. (2009a) and Chhetri et al. (2009b) used the same question (and 10-year time frame), in the Brisbane–South East Queensland region in Australia, but sampled all adults, not just those aged 30 to 59. Their 2003 telephone survey (N = 773) revealed that 28.5% of all survey participants (20% of those aged 30 to 59) had voluntarily changed their lifestyle with a resulting loss of income. Most of the downshifters in this study wanted more control over and fulfillment in their lives or made this choice because they wanted to spend more time with family (Chhetri et al. 2009b).

Research on the health effects of increased leisure time and health tends to focus on the relationship between leisure time and physical activity. Burton and Turell (2000), for example, found no clear relationship between hours worked and physical activity among those in blue-collar professions in Australia. Other studies report that the young and persons of relatively high socioeconomic status are more likely to exercise when their leisure time increases (Jones et al. 1998; Stephens et al. 1985) and that physical activity during leisure time is positively related to health-related quality of life (Wendel-Vos et al. 2004). Studies on the relationship between leisure time and time spent with children consistently show that women are more likely to spend free time with their children (Bianchi 2000;

Bittman 2000), but these studies do not assert specific quality-of-life benefits for children or their parents.

TESTING THE DOUBLE-DIVIDEND HYPOTHESIS

Proposals to reclaim work and leisure while also trying to reduce one's environmental impact are part of what Jackson (2005) calls a double-dividend model of sustainable consumption. Shifting away from consumerism need not entail complete self-denial of material pleasures, according to Princen (2006). Rather, a slower pace of life with more time for family and community relationships offers the potential for simultaneous benefits to quality of life and the environment (Hayden 1999; Jalas 2012; Thomas 2008). While this is a laudable goal, a review of the literature did not identify any systematic empirical tests of the double-dividend hypothesis among downshiftingers although, as noted earlier, studies of the VS movement have focused on this issue. Chhetri et al. (2009a) observed lower, not higher, satisfaction among downshiftingers for several quality-of-life measures (satisfaction with finances, employment, and sense of freedom or independence) and no difference for 11 other measures (including leisure time, amount of time, and family life) between those who had and had not downshifted. However, this research team did not include pro-environmental behaviors among their dependent variables.

Survey data from Edmonton, Alberta, Canada, are used to test the double-dividend hypothesis with respect to downshifting. The central research questions guiding this analysis are (1) Is downshifting associated with an improved quality of life? and (2) Is downshifting associated with the adoption of pro-environmental behaviors? We also present descriptive data showing the proportion who downshift, who they are, and why they do so.

METHODS

Study Area

Located in the west of Canada, Alberta (AB) has 3.5 million residents. National data on work hours, spending of discretionary income, and sense of place reveal several disturbing patterns in Alberta, at least from the vantage point of downshifting. First, households in Calgary and Edmonton, the two largest cities, spend a larger proportion of discretionary income on goods and services than households in any other cities in Canada, except Toronto (Statistics Canada 2006).⁵ Second, Albertans work 1,880 hours per year—more than any other Canadians. In general, Canadians have fewer

⁵ In this respect, Alberta (with high incomes and low rates of unemployment) may differ from other North American regions, particularly in the United States, where household spending on medical care and education consumes much more of a family's budget (Warren and Tyagi 2004).

holidays and vacation entitlements than most other industrialized countries (Parkland Institute 2010; Ray and Schmitt 2007). Albertans also have the fewest number of leisure hours in the country, 5.00 hours per day compared to the national average of 5.55 hours (The Parkland Institute, 2010). Third, compared to residents of other provinces, Albertans report the lowest sense of belonging to a community (Statistics Canada 2003), perhaps because so many have migrated into the province from elsewhere in Canada and from other countries over the past several decades due to the province's strong resource-based economy.

Research Design

In 2009, in an earlier phase of this study, semistructured interviews were conducted with members of 14 young families (all had children living at home) who self-identified as consciously seeking to reduce their environmental impact. A key finding was that much of the variation in environmental behaviors adopted and the intensity of a household's commitment to reducing consumption could be explained by whether the household had access to a social network of like-minded households (Kennedy 2011). Furthermore, those living in suburban neighborhoods were much less likely to have such a social network than those living closer to the downtown core. As a result, the Phase Two survey (a copy of the questionnaire can be obtained by contacting the lead author) deliberately sampled two distinctly different neighborhoods in the same city. Both were largely comprised of owned single-family dwellings, but they differed in that one was a mature centrally located neighborhood while the other was a newly developed suburban neighborhood. Neither had a high proportion of renters living in apartments and both had higher household incomes and higher levels of education than the average Canadian household. The decision was made to examine downshifting (rather than VS) in the Phase Two survey, to see if the same benefits reported by interviewees (in Phase One) who had made deliberate lifestyle choices for environmental reasons would be reported by survey participants who had merely downshifted to reduce the time they spent in paid employment.

In all, 712 households were surveyed across the two neighborhoods in summer 2010. Questionnaires were delivered door to door in the evenings and on weekends, and 491 completed questionnaires were returned, resulting in a 69% response rate. Sixty-four percent of the questionnaires were completed by women. The survey was designed to collect behavioral information on transportation, consumption and waste, water and energy, food and garden, community involvement, and "negative" behaviors (such as buying bottled water). It also explored quality-of-life issues as well as attitudes toward the economy and the environment.

Measuring Downshifting

Previous studies of downshifting (Chhetri et al. 2009a; Hamilton 2003; Hamilton and Mail 2003; Schor 1998) have used a single question to ask survey participants whether they had made a long-term shift in their lifestyle (other than retirement) that led to a lower income. Because it might be possible to make a lifestyle shift that led to earning less money but not necessarily a slower pace of life (e.g., moving from working in a bank to working for a struggling nonprofit organization), two questions (with open-ended follow-ups) were asked to measure downshifting. They were asked with reference to any member of the household, rather than only the respondent, due to the focus on environmentally sustainable practices (a characteristic of a household) as well as quality of life (which might be considered as either an individual or a household characteristic).

The first question asked “In the past 5 years, has someone in your household made a conscious effort to earn less money? If yes, please explain.” The second question asked “In the past 5 years, has someone in your household made a conscious effort to have more leisure time? If yes, please explain.” Using these two questions allowed us to better approximate the generally accepted definition of downshifting—reducing income to acquire more leisure time. In contrast, previous accounts of downshifting may have included “downshifting-like” lifestyle changes if life-cycle events (e.g., having a baby) were included in estimates of the proportion of downshifters. Half of the participants (52% in the suburban subsample and 48% in the central urban subsample) answered “yes” to the first question. Just under half said that someone in their household had chosen to have more leisure time (52% in the suburban subsample and 44% in the central urban subsample). One in three (33%) answered “yes” to both questions. The responses to the open-ended “please explain” questions were used to filter out from this subgroup those who indicated that a household member had made only temporary changes to their income (e.g., maternity leave, time off for short-term travel) or who had been forced to make changes (e.g., laid off, regular retirement). After this filtering, we found one in four (26%) of the survey respondents (24% in the suburban subsample and 27% in the central urban subsample) reported that someone in their household had downshifted in the previous 5 years.

Some previous studies of downshifting have used a 10-year time frame (Chhetri et al. 2009a; Hamilton 2003; Hamilton and Mail 2003), while others have asked respondents about the previous 5 years (Schor 1998). Recognizing that accuracy of memory recall declines with time (Tourangeau et al. 2000), a shorter time frame (e.g., 5 years) will provide more valid results. Some previous studies have surveyed all adults (Chhetri et al. 2009a; Schor 1998) while others have selected only those aged 30 to 59 (Hamilton 2003; Hamilton and Mail 2003), presumably using this age-based sampling quota to eliminate young people moving in and out of formal education and older individuals being forced to retire. Given that young people are staying in school longer (Mitchell 2006), and that a larger proportion of older workers are choosing, or being forced to, work

past age 65 (Schellenberg and Ostrovsky 2008), we felt it would be prudent to survey the complete adult population.

It is important to note that households are the unit of analysis in our study (“In the past 5 years, has *someone in your household*...?”), while previous studies have asked survey participants about their personal behavior (e.g., “*In the last five years, have you*...?”). We chose to focus on households because we wanted to explore the hypothesized effects of downshifting on pro-environmental practices (which typically describe a household more so than an individual), recognizing that quality-of-life benefits of downshifting might be better assessed with an individual-level unit of analysis.

Measuring Quality of Life

Two indices were created to measure quality of life. A “subjective well-being” index was constructed from responses (on a five-point scale ranging from very dissatisfied to very satisfied) to five questions asking about respondents’ satisfaction with health, job, finances, time use, and life as a whole (Alpha = 0.781). With the original responses rescaled to start at 0, the index had a range of 0 to 20. A second five-item index focused more specifically on “satisfaction with time use”: having enough time for family; for friends; for personal hobbies; to cook meals from scratch; and for volunteering (Alpha = 0.551).⁶ Forced-choice responses to the original items (I spend too much time, I spend just the right amount of time, I do not spend enough time) were recoded as binary variables where 1 = just the right amount of time and 0 = too much/too little. A higher score on this index with a range of 0 to 4 indicates higher levels of satisfaction with time use.

Measuring Pro-Environmental Behaviors

We also constructed two indices of pro-environmental behaviors. The “sustainable transportation practices” index was created by summing responses to four questions about how often someone in the respondent’s household left their vehicle at home, walked, biked, and used public transit to avoid driving (Alpha = 0.720). Each item was measured from 0 to 4 (never, rarely, sometimes, often, always), so the index scores range from 0 to 16. An index of “sustainable household practices” was constructed by summing responses to seven survey items: “our household buys used goods”; “reuses items”; “composts food and garden refuse”; “reduces the temperature of the home to save energy”; “hangs laundry

⁶ This reliability coefficient is somewhat lower than the minimally acceptable level (0.60 according to Carmines and Zeller 1979), probably because, unlike attitudinal indices that are expected to demonstrate high correlations among all items, this is a cumulative index. In other words, if an individual indicates that they do not have enough time for volunteering, it may be because they spend a lot of time on personal hobbies. Hence, the two items might not be highly correlated and a lower Alpha could be expected.

to dry”; “reduces the temperature of the water heater”; and “cooks meals from scratch.” These items were measured on the same scale as the transportation items (0 to 4) and the index itself ranged from 0 to 28 (Alpha = .651).

RESULTS

As already noted, respondents in one-quarter (26%) of the surveyed households indicated that someone in that household had downshifted (i.e., reduced their income and increased their leisure time) in the past 5 years. Table I highlights statistically significant differences between downshifter and nondownshifter households for age (respondents in downshifter households are younger, on average), the presence of children in the home (more downshifting households have children at home), and marital status (more respondents in downshifter households are married). Women were more likely to report that someone in their household had downshifted (28% of female respondents vs. 21% of male respondents), but this difference was not statistically significant. Similarly, downshifting households did not differ significantly from nondownshifter households on several indicators of socioeconomic status (household income and university education) and on voting preferences (Table I).

We asked survey participants to explain how/why someone in their household had made a conscious effort to earn less money and to have more leisure time. Based on responses to these questions from respondents in the 26% of households in which a “downshifter” was identified, the most important motivations for downshifting were being able to spend time with children (42% of all responses from downshifters) and valuing leisure time more than additional income (20%).⁷ Others said they wanted a less stressful job (12%), they had

Table I. Demographic Profile of Downshifters and Nondownshifters, *t*-test, and Chi-Square Test (n = 485)

	Downshifters	Nondownshifters	Significant contrasts
Mean household income	\$109, 400	\$111, 700	$t = .408; p = .684$
Age of respondent	40.3 years	43.6 years	$t = 2.626; p = .009$
Female respondent	71.8%	62.7%	$\chi^2 = 3.335; p = .067$
Respondent born in Canada	82.3%	79.1%	$\chi^2 = .570; p = .269$
Own home	83.8%	86.6%	$\chi^2 = .639; p = .253$
Children at home	61.8%	44.4%	$\chi^2 = 21.456; p = .000$
Respondent has spouse	84.6%	72.1%	$\chi^2 = 9.692; p = .001$
Household has at least one university degree	70.5%	70.1%	$\chi^2 = 1.201; p = .160$
Respondent votes for Conservative Party	15.3%	17.6%	$\chi^2 = .000; p = .557$

⁷ Among the downshifting households, female respondents were significantly more likely than male respondents to identify the decision to stay home with children as their reason for “downshifting,” as we have defined it.

Table II. Predictors of Quality of Life: Stepwise Multiple Regression Models (Standardized Slopes)

	Subjective Well-Being		Satisfaction w/ Time Use	
	Model 1	Model 2	Model 1	Model 2
Gender (female = 1)	-.013	-.009	-.035	-.033
Age (years)	-.077	-.064	.214***	.218***
Children (number)	-.032	-.039	-.117*	-.119*
Spouse (yes = 1)	.012	.002	.086	.084
Household income (\$)	.118*	.126*	-.090	-.087
Holds a university degree (yes = 1)	.141**	.141**	.033	.033
Owens home or rents (owns = 1)	.157**	.151**	.070	.067
Neighborhood (1 = urban)	.147*	.134*	.119*	.114
Downshifting (yes = 1)	–	.076	–	.026
N	416	416	392	392
Adjusted R ²	0.065	0.068	0.103	0.102
F	4.609	4.382	6.657	5.936
Significance (p) of equation	.000	.000	.000	.000

*p < 0.05; **p < 0.01; ***p < 0.001.

gone back to school (7%), or they wanted to make improvements to their health (7%). No one mentioned environmental concerns or wanting to consume less.

Our first research question asked about the relationship between downshifting and quality of life (measured by subjective well-being and satisfaction with time use). Table II displays two stepwise multiple regression analyses, one for each of the two dependent variable indices. In each analysis, we begin by examining the effects of a series of sociodemographic variables (Model 1) before adding a binary variable indicating whether someone in the household had downshifted in the previous 5 years (Model 2).

Beginning with the subjective well-being index, the sociodemographic measures explain 6.5% of the variation in the dependent variable (Model 1). Significant independent variables are income ($\beta = .118$), education ($\beta = .141$), owning one's home ($\beta = .157$), and living in a central urban neighborhood ($\beta = .147$). Those with higher household income, who have someone with a university education in the household, who own their home, and live in a central urban neighborhood report a higher quality of life. Gender, age, marital status, and number of children have nonsignificant net effects. In Model 2, the addition of the measure of downshifting to the equation changes little in the previous results, and the net effect of downsizing itself is statistically nonsignificant.

Turning to the index of satisfaction with time use, a somewhat larger proportion of the variation in this dependent variable is explained with the sociodemographic variables ($R^2 = .103$). Age ($\beta = .214$), having children ($\beta = -.117$), and living in a central urban neighborhood ($\beta = .119$) are significant predictors. Older respondents and those living in central urban neighborhoods are more likely to be satisfied with their time use while, not surprisingly, those who have children living at home are less satisfied with their time use. However, as observed for the subjective well-being index, adding the downshifting variable to

the regression equation is of no consequence. The net effect of downshifting on satisfaction with time use is nonsignificant.⁸

The second part of the double-dividend hypothesis hypothesizes that downshifting and pro-environmental practices will be related. Using the same analytic techniques, we now examine the impacts of downshifting on pro-environmental behaviors, measured with two indices: sustainable transportation practices, and sustainable household practices. A much larger proportion of the variation in sustainable transportation practices was accounted for by the predictor variables ($R^2 = .285$), largely because of the very strong effect of neighborhood ($\beta = .518$). Residents of central urban neighborhoods are much more likely than those in suburban neighborhoods to choose alternatives to automobile travel, largely because they have the option to do so (Kennedy et al. forthcoming). In addition, having children ($\beta = .183$) and having at least one person in the household holding a university degree ($\beta = .132$) are significantly related to more frequent use of sustainable means of transportation. The downshifting binary variable is added in Model 2. Nothing really changes, and the net effect of downshifting on sustainable transportation practice is again negligible and nonsignificant.⁹

However, a different pattern is observed in the analysis of predictors of sustainable household practices. Here, income has a significant negative effect ($\beta = -.131$); respondents in higher income households are less likely to report that they and other household members engage in sustainable household practices (Model 1). Living in a central urban neighborhood again has a significant positive effect ($\beta = .280$). Together with the nonsignificant predictors, this model accounts for 8.6% of the variation in the dependent variable. Unlike the previous three multiple regression analyses, downshifting has a significant net effect ($\beta = .169$) when added to the equation (Model 2). The effects of household income and neighborhood are reduced a bit, and the total set of predictors now accounts for 11.1% of the variation in sustainable household practices. The increase in variance explained is significant ($p < .001$).

DISCUSSION

Downshifting, making a voluntary long-term lifestyle change involving earning less while (potentially) gaining leisure time, has been portrayed as an

⁸ To further interrogate these nonsignificant findings, we conducted two further analyses. First, we separated downshifting into two categories—those who stayed home with children and all others. Expecting to perhaps find an even weaker relationship between downshifting and subjective well-being for those staying home with children, we found the opposite. Instead, for this dependent variable index (a measure of satisfaction with jobs, finances, health, time use, and life overall), the positive relationship with staying home with young children was stronger and now statistically significant. However, the results for satisfaction with time use did not change. Second, we tested for interaction effects involving gender and downshifting (for both quality-of-life measures). These tests revealed nonsignificant interaction effects, suggesting that the nonsignificance of downshifting for quality-of-life measures is not moderated by gender.

⁹ We again tested for interaction effects involving gender and downshifting. They were not significant in either of the stepwise regression analyses displayed in Table III.

Table III. Predictors of Pro-Environmental Behaviors: Stepwise Multiple Regression Models (Standardized Slopes)

	Sustainable Transportation		Sustainable Households	
	Model 1	Model 2	Model 1	Model 2
Gender (female = 1)	-.026	-.025	-.044	-.040
Age (years)	-.096	-.091	.022	.056
Children (number)	.183***	.181***	.085	.070
Spouse (yes = 1)	-.079	-.082	.107	.083
Household income (\$)	-.079	-.076	-.131*	-.110*
Holds a university degree (yes = 1)	.132**	.132**	.057	.058
Owens home or rents (owns = 1)	-.040	-.043	.079	.066
Neighborhood (1 = urban)	.518***	.514***	.280***	.252***
Downshifting (yes = 1)	—	.026	—	.169***
N	414	414	370	370
Adjusted R ²	0.285	0.284	0.086	0.111
F	21.628	19.234	5.360	6.127
Significance (p) of equation	.000	.000	.000	.000

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

individual or family-level solution to the personal stress and work–life imbalance generated by long working hours and work intensification. For example, Schor (2001:77) states, “downshifting embodies a mentality of opposition to the dictates of the profit-maximizing cost-minimizing employment relationship.” While a reduction in income might also entail giving up some material pleasures, the trade-off is (potentially) less stress and work–life conflict, so net quality of life improvements might be expected. This is what is found in the VS literature (Alexander and Ussher 2012; Lorenzen 2012). Some proponents have suggested that, like VS, downshifting might also foster pro-environmental lifestyles, because downshifting might have more time to be reflective about their consumption practices and also gain do-it-yourself skills with their added time. This study is, to our knowledge, the first systematic test of Jackson’s (2005) double-dividend hypothesis for downshifting.

While we measure downshifting somewhat differently (see Measurement section), our estimate of the proportion of downshifting in the sample (26%) is roughly similar to the results reported in previous studies in the United States (19%) (Schor 1998), the United Kingdom (25%) (Hamilton 2003), and Australia (23% and 28.5%) (Hamilton and Mail 2003; Chhetri et al. 2009a, respectively). Downshifting was not related to place of residence (central urban vs. suburban) but strongly connected to household structure. Survey participants who were older, married, and had children were more likely to report that someone in their household had downshifted in the previous 5 years. The desire to spend more time with children, and to have more leisure time, were the two primary reasons for downshifting mentioned by study participants, although it is important to note that the first reason was mentioned more than twice as often as the second. More importantly, given our focus on a possible double-dividend (an improved quality of life for downshifting *and* less damage to the environment), it is

interesting that survey participants said nothing about their impact on the environment when asked about their motivations for downshifting. In contrast, Alexander and Ussher (2012), in their large-sample study of individuals involved in the VS movement, found that concern for the environment was the most frequently mentioned motivation for shifting to a simple lifestyle.

Our core research questions asked about the relationships between downshifting and, first, individuals' self-reported quality of life and, second, households' pro-environmental practices. Like Chhetri et al. (2009a), we found no relationship between downshifting and quality of life (measured with indices of satisfaction with time use and subjective well-being). As for pro-environmental practices, downshifting has a statistically significant positive effect on sustainable household practices, but not on sustainable transportation practices. While the latter are arguably among the most environmentally relevant (Dietz et al. 2010), the decision to earn less (and to possibly have more leisure time), that is, to downshift, does not appear to change patterns of automobile use. In contrast, there is a positive relationship between downshifting and engaging in sustainable household practices, as suggested by Etzioni (1998) in his early discussion of VS and downshifting.

These multivariate findings are interesting when compared to the results regarding motivations for downshifting. Specifically, survey participants' main reasons for (someone in their household) downshifting were spending more time with children and valuing time more than money; they said nothing about environmental or ecological reasons. Yet, in the multivariate analysis, a significant relationship was reported between downshifting and one of two pro-environmental behavior indices, but neither measures of quality of life.

Part of the explanation for this paradox may lie in the unit of analysis. While all of the survey participants answered questions about their own satisfaction with time use and their own subjective well-being (our two quality-of-life indices), some of them were describing their own downshifting behavior while others were describing the behavior of other members of their household (e.g., their spouse). As a result, the relationship between downshifting (a household measure) and quality of life (an individual measure) in this study may have been diluted. In contrast, both indices of pro-environmental behaviors in this study used the household as the unit of analysis, as did the downshifting measure. Even so, Chhetri et al. (2009a) did use individuals as their unit of analysis but nevertheless still found either a negative or a nonsignificant relationship between downshifting and various quality-of-life measures. Thus, even though the link between downshifting and an improved quality of life is intuitively appealing, we (and others) have not found evidence for it. Consequently, further systematic research on the topic would be very useful. It would also be useful to further examine the assumption that downshifting confers more leisure time. If parents of young children are reducing their hours of paid employment, this is not likely to result in an increase in leisure time.

With respect to the effects of gender, our findings suggest some uncertain conclusions and a need for more nuanced future research. Women were more

likely to complete our questionnaires, and more likely to indicate that someone in their household had downshifted (as we defined it), but this latter relationship was *not* significant. Female respondents were also more likely to describe the decision of someone in their household (perhaps themselves?) to downshift as a desire to stay home with children. However, gender was not significantly related to either of the quality-of-life or pro-environmental behavior indices, and interaction effects between gender and downshifting were also not statistically significant predictors. A similar lack of consensus is observed in previous research. For example, Mary Grigsby (2004) has noted that women are more likely than men to be voluntary simplifiers, while Hamilton and Dennis (2005) found the opposite.

This leaves us asking why downshifting was significantly associated with sustainable household practices but not sustainable transportation practices. The environmental benefits of downshifting are not extending beyond the walls of the home because widespread adoption of major pro-environmental behaviors (such as reducing reliance on automobiles) requires systemic changes. Urban design, more than individual choice, can enable or limit the extent to which a household can adopt less carbon-intensive modes of commuting (Harvey 1989). Most of the growth in North American cities over the past 7 decades has involved the building of suburban subdivisions far from the city core and from places of employment. Such trends in urban design led to the growth of multi-automobile households and shifted municipal spending away from public transportation to waste collection, schools, and roads in suburbs (de Graaf et al. 2001). For new immigrants and young families, the most likely buyers of suburban homes (Grant and Bohdanow 2008), suburbs offer safe, affordable, spacious homes, yet force reliance on automobiles and contribute to work-and-spend lifestyles (de Graaf et al. 2001). As our data show (Table III), the strongest predictor of sustainable transportation practices was neighborhood of residence.

Compared to trying to alter transportation practices, people have more options with respect to sustainable household practices such as composting, cooking meals from scratch, and hanging laundry to dry. Also, even if one is home with young children, the very presence of an adult in the home throughout the day may facilitate such home-based pro-environmental practices. Regardless of one's neighborhood, such time-intensive household practices could increase if a household member downshifted. Such practices might also become more necessary after total household earnings declined. As Spaargaren (2011) observes, reducing work hours and income has an impact on those practices that can be undertaken in the majority of households but has no impact on practices that are reliant on external systems of provision. Using public transportation or cycling to work is far more complicated in areas with infrequent bus service and few destinations within walking or cycling distance.

As an individual response to the "work-and-spend cycle" (Schor 1998), it is possible that downshifting can improve quality of life for some. Yet downshifting, in the absence of networks of social support (Kennedy 2011), without

consideration given to “upstream” decisions such as where to live and where to work, is unlikely to yield the promised “double dividend” of both improved quality of life and more pro-environmental practices. As Grigsby (2004) observed in her ethnographic account of voluntary simplifiers, these individuals (to which we would add many downshiffters) are averse to examining the race and class privilege that undergirds their ability to drop out of the traditional workplace. Nonetheless, our findings suggest that in addition to individual movements such as VS and downshifting, systemic changes are required—changes in how residential environments are built and serviced (Agyeman 2005), shifts to more flexible work hours being provided by employers (Schor 2005), and improved support for parents with young children.

CONCLUSION

While many proponents of downshifting have emphasized how it can be a personal and family solution to the stress and work–life imbalance generated by long working hours and work intensification, the present study does not report a significant relationship between downshifting and two different indices of quality of life (satisfaction with time use and subjective well-being). However, it may be premature to accept the conclusion that downshifting offers no quality-of-life benefits—future research involving in-depth interviews with downshiffters who report benefits to quality of life and those who do not might tease out the contextual and personal factors that may influence this relationship. Given that those downshifting in Alberta are in a social context with low unemployment and high average incomes, future research should also examine the roles of downshifting and lifestyle norms (and associated cultural practices) across communities with different economic and employment conditions.

As for the other half of the predicted double dividend—pro-environmental outcomes—a significant positive relationship between downshifting and sustainable household practices was found, but this was not the case for sustainable transportation practices. Having more leisure time does not necessarily translate into greater efforts to reduce one’s environmental impact (Ropke 2009). In some domains (e.g., transportation), individual opportunities and efforts are not enough; systemic changes are also required. This is a reminder to those seeking to change the consumption practices of the wider public to prioritize their efforts. Although sustainable household practices are clearly important, there is little evidence that recycling or using compact fluorescent lights leads to more significant reductions such as reducing air travel or going without a personal vehicle (Bartiaux 2008). Indeed, some have suggested that adopting straightforward “green” behaviors can result in a sense of satisfaction that one is doing the right thing and therefore free to buy more, travel more, and eat more (Beavan 2009; Mazar and Zhong 2010).

Lorenzen (2012:114) has also suggested that policy makers should shift their focus from “organizing environmental information in to-do lists” to “fostering

reflection and dialogue.” We agree, and add two further observations. First, downshifting may not result in increased leisure time. Second, for those who do accrue more leisure time, in the absence of a strong commitment to the environment and/or substantial structural changes to the built environment and to the rules of the workplace, additional leisure time is likely to be spread among various other activities related to health, family, and social networks, but not necessarily to sustainable lifestyles.

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