

Who Participates in Zero Waste?: Facilitators of and barriers to participation in the Zero Waste movement

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Abstract. Drawing primarily on concepts from McAdams, Tindall, Inglehart and Gillham, this study narrows its focus on a particularly understudied and newly formed social movement: The zero waste movement. This paper grounds itself on indicators for who will participate in various social movements found in the social movement theory literature, indulging in themes of costs/risks, biographical availability, social networks and value alignment. I conducted interviews with five participants residing in Vancouver, B.C., to shed light on how lived experiences can account for the divergence between environmentalists who participate in zero waste versus those who do not. Ultimately, this study identifies the zero waste movement as a low-risk, high-cost social movement, in which biographical availability and strong social ties (specifically, living or working in close spatial proximity to other zero wasters) are factors contributing to zero waste movement participation. The discussion of this paper recommends intersectional studies factoring in gender and race characteristics, social media influences, and how individuals overcome barriers to participation as areas for future research.

Introduction

Given the current state of the climate crisis and the uproar of social movement activities relating to environmental protection around the world in the 21st century (Sengupta, 2019), it is no wonder that environmental movements are an ever-growing topic of interest in the field of sociology. As the climate crisis worsens, understanding factors leading to participation in environmental activism becomes an increasingly relevant topic. Former research has looked at why some people participate in environmental activism while others do not (Farrell, 2011). Environmental activism is associated with individuals having an

affinity for pro-ecological values, specifically the belief that the environment holds inherent value, and so protecting the environment is seen as a moral obligation (Farrell, 2011). However, when taking a closer look at the environmental movement, it becomes apparent that within the movement there are many different forms and levels of participation. The zero waste movement is a newer, specific branch of the environmental movement. Other than looking at more radical instances of zero waste activism, such as Greenpeace volunteers' "plastic attacks" directly shaming the institutions that are responsible for our society's dependency on plastic (Austen, 2018), the zero waste movement can generally be considered low-risk. That being said, not everyone, let alone every environmentalist, participates in the zero waste movement, so this leaves room to identify some barriers to participation. In this paper, I will attempt to answer the question, what barriers exist to participating in the zero waste movement? Through qualitative interviews with environmentalists in Vancouver, B.C., I attempt to link interviewees' personal experiences to social theories of participation, specifically biographical availability, network exposure and new social movement theory. I predict that the zero waste movement is likely a high-cost movement, and so typical barriers, such as time, energy or money may prevent those who care about the environment but who do not have the means to do so from participating in the zero waste movement.

The Zero Waste Movement: A Form of Precautionary Consumption

A number of cities around the world, including Vancouver, B.C., are slowly starting to implement zero waste policies. Zero waste on a societal scale can be described as "designing and managing products and processes systematically to avoid and eliminate the waste and materials [produced by society], and to conserve and recover all resources from waste streams" (Lehmann & Zaman, 2011, p.177). Another way to look at city level implementation of zero waste practices is through the precautionary principle framework. The precautionary principle in this context "ensures that... an activity posing a [potential] threat to the environment is prevented from adversely affecting the environment" (Cameron & Abouchar, 1991, p.2). Therefore, if a city is adopting zero waste practices on a structural scale, they are following the precautionary principle by eliminating the source of potential harm (waste) to the environment. If larger social institutions fail to enact precautionary measures, the responsibility to prevent environmental harm falls to individuals. That is when the zero waste movement emerges.

The zero waste movement is described in the media as "a consumer-led, grassroots group of individuals and businesses coming for the convenience economy" (Jennings, 2019). The zero waste movement is therefore comprised of individuals utilizing precautionary consumption in protest of wasteful business-as-usual practices, as convenient as

they may be. The zero waste movement is different from many other social movements because being a part of the movement requires lifestyle changes to acquire the status of ‘zero waster’. One-time or limited involvement will not suffice. Some studies suggest that what one chooses to consume or avoid consuming contributes to one’s identity formation (Autio, Kujala, Holmberg & Lahteenmaa, 2016). Nevertheless, zero waste is an ambitious status to achieve, and one can earn the status of ‘environmentalist’ or ‘conscious consumer’, which have the same level of moral prestige, with much less consistent effort. Therefore, the question remains: Why do some environmentalists participate in the zero waste movement while others do not? Vancouver is a good testing ground for answering this question. Because the city has just begun to implement structural changes¹, zero waste options exist on a wider scale than in other cities but in a limited capacity within the city compared to options following the business-as usual model. Because the options exist, it is a matter of choice, but also what choices an individual will make is dependent on what barriers to making certain choices exist for them. I am curious to know what pushes some environmentalists to participate in zero waste and what prohibits other environmentalists from being able to take on this challenge, despite both groups sharing similar values.

Theories of Social Movement and Sustainable Consumption Participation

Biographical Availability & Exposure to Networks

According to McAdam (1986), there are micro-structural factors at play that can determine who participates in social movements. Firstly, biographical availability refers to “the absence of personal constraints that may increase the costs and risks of movement participation, such as full-time employment, marriage, and family responsibilities” (McAdam, 1986, p.70). What is really important about McAdam’s definition is that it exposes the fact that risks and costs are not equally distributed, and they exist for an individual regardless of the inherent risk or cost of a movement event. Some recent studies have found that in the case of the environmental movement, biographical availability factors such as age, marital status and family composition are weak indicators of participation (Gillham, 2008). This is in part because of the low-risk/cost nature of environmental activism. It tends to differ from other forms of activism, such as the high-risk/cost activism in the Freedom Summer Project studied by McAdam, because many environmental social movement events are easy and enjoyable to partake in, and are often oriented towards being family friendly.

¹ See where to access the City of Vancouver Zero Waste 2040 plan in the reference list.

Having said that, participation in the zero waste movement requires a high level of commitment, because to be recognized as a participant, one must replicate their behaviour day to day. One cannot go to a single event related to the zero waste movement and say that they are, follow or practice zero waste. Participation has to become part of their everyday routine, which means that if a person is under circumstances that make significant adaptations to their lifestyle difficult, then they may be less eager to participate. In other words, it is likely that having a high level of biographical availability is a prerequisite to participation in the zero waste movement, despite research about the environmental movement at large suggesting otherwise. Previous research has also demonstrated how spatial proximity has an influence on participation in sustainable consumption practices, specifically with neighbourhood differences whereby it is more difficult for those living in suburban areas versus urban areas to adopt sustainable consumption habits (Kennedy, Krahn & Krogman, 2013). All interviewees in this study lived within the urban centre of Vancouver, but on a related note, differences in transportation method (whether interviewees take the bus, drive, cycle or walk) and neighbourhood characteristics (whether zero waste stores are accessible within interviewees' neighbourhoods) could act as forms of geographical availability.

McAdam (1986) proposes another way that participants get involved, through prior contact to recruiters, participants or organizations of the movement. The zero waste movement involves both group and individual actions. There are numerous community groups, such as the Zero Waste Vancouver (Z WV) Facebook group, where community building can take place. However, one can still participate in the zero waste movement in full and not be a part of these groups and likewise, one can be a member of these groups and not be a full participant. The zero waste movement also requires a lot of effort on behalf of the individual, since aligning one's lifestyle with the movement, which would equate to full participation, means seeing out individual tasks such as package free grocery shopping. Because so much of the zero waste movement is dependent on individual participation that may not be observed by others, I expect that social networks are not a major indicator of participation. However, if one lives in close proximity to other zero wasters, meaning if one's family or roommates are also zero waste, then I believe that this could have a much larger influence.

Costs and Risks

In addition it is important to differentiate between the costs and risks associated with social movements. Costs are the "expenditures of time, money and energy that are required of a person" when they participate in a social movement, whereas risks are the "legal, social, physical, financial" and other repercussions that result from participation (McAdams, 1986, p.67). In his recent work, Tindall (2002) suggests that environmental movement activism tends to be low-medium cost/risk, but if the same were true about the zero waste

movement, why is there not more widespread participation, especially within the environmental movement where environmentalists tend to have attitudinal similarities? Tindall and McAdam believe that cost and risk are positively correlated. Like Tindall suggests, I would classify the zero waste movement as a relatively low-risk movement, because while it is against the social norms of the convenience economy, there are no major penalties for participating, and in fact participation is often seen as morally commendable. That being said, I would also classify the zero waste movement as a high cost movement. In terms of financial cost, zero waste is inherently more expensive because it opposes the social norms of our society. There are few businesses that sell products with no packaging, and those that do tend to be smaller scale and do not have the buying power of other stores, such as Walmart, nor as wide of a selection of products to purchase on the supplier end of things (Appelbaum & Lichtenstein, 2006). Furthermore, in the case of stores taking up practices that go against the status quo, prices amongst the supplier chain tend to be higher because of less competition, because competition drives the price of goods down between suppliers (Appelbaum & Lichtenstein, 2006). While it is widely agreed upon that financial cost is an issue in the zero waste movement, it is not only monetary cost that acts as a burden. If the zero waste movement is high-cost, it is worth asking what other types of costs hinder participation.

New Social Movement Theory

New social movement (NSM) theory is based off of Inglehart's suggestion that in modern social movements, participants in high-income nations are motivated to get involved because they hold postmaterialist values, meaning that their basic needs and concerns are met and so they have energy to spend working on abstract and idealistic social issues (Gillham, 2008). Logically, this means that modern social movements that are focused on non-material gains, attract individuals with high education and income. In the case of the European Union, "postmaterialist values and beliefs, higher education and income" were all strong predictors of environmental activist participation (Gillham, 2008, p.88). In this paper, based on previous literature, I consider pro ecological values to be postmaterialist (Gillham, 2008).

Since all interviewees indicated prior to the interviews that they have pro-ecological values, I will not so much be focusing on whether postmaterialist values are present, but whether or not the zero waste movement in particular attracts individuals from the environmental movement that possess a high level of education and high income. Given the fact that Vancouver, B.C. is an urban hub within a high-income Western nation, and that the zero waste movement is by many indications high-cost, I expect that high education and income will be prerequisites to participation in the zero waste movement. I expect to find that financial costs will be cited as the biggest barrier to participation by non-participants.

Methods

Interviews were conducted to collect the information presented in this study. With little funding and time, convenience sampling was used to recruit research participants. The sample was composed of five womxn, with an average age of 38.5, who currently live in Vancouver, B.C., but who identify with a multitude of nationalities including French, American, Norwegian/Pakistani, and Canadian. The interviewees included two parents with full-time jobs, one part-time traveller on a working visa with no children, and two university students with part-time jobs. Three of the womxn were queer identifying. Three were recruited through my post in the ZWV Facebook group, and two through the Vancouver Vegans Facebook group. Recruitment calls were posted in these two Facebook groups as well as on the researcher's personal own social media. Those who wanted to participate contacted the researcher through private messaging on Facebook. 5 interviews were conducted in total, with three taking place in person and 2 over the phone once the COVID-19 pandemic had limited the ability to meet in person. All 5 participants were self proclaimed environmentalists, meaning that they aligned with pro-ecological values and agreed that the environmental movement holds merit, and this was a requirement for participants to be chosen so that obvious attitudinal differences- as in, not participating in zero waste because one does not care about the environment- would not skew the results. Interviewees 2, 3 and 5 were participants in the zero waste movement and throughout the rest of this essay will be referred to as "zero wasters". The term zero waste was standardized in this study according to the internationally recognized definition as it pertains to consumers: "The conservation of all resources by means of responsible... consumption, reuse, and recovery of products, packaging, and materials" (Zero Waste Canada, 2018). By this definition, the zero wasters are individuals who purchase second-hand or unpackaged goods, and who reuse or recover their goods where possible. The remaining 2 interviewees from interviews 1 and 4 were not participants in the zero waste movement, and will be referred to as "non-participants". They may exhibit zero waste behaviour every once in a while but do not participate regularly enough to classify themselves as zero waste.

All five interviews were semi-structured. Because questions were open-ended and interviewees were allotted as much time as they needed to answer each question, the duration of the interviews varied, with the shortest interview taking one half hour and the longest taking one and-one-half hours. The interviews were guided by a set of questions relating to how and why interviewees described themselves as environmentalists; whether or not they defined themselves as zero waste movement participants and why or why not; and what zero waste related groups or events they took part in. I was most interested in understanding what barriers of their own participation they were aware of, and what made it easier for them to participate. I asked questions detailing participants' involvement in zero waste and environmental events to see whether community networks played a large role in their zero waste journey. Using deductive analysis, interviews were man-

ually coded at the sentence level, according to the following key themes: Biographical availability, networks, and NSM. Any mention of barriers to participation that followed McAdam's definition fell under the category of "biographical availability", and similarly any mention of social ties that aligned with McAdam's definition were categorized under "networks". Finally, data relating to financial cost or a lack of education as barriers to participation fell under the category of "new social movement (NSM)".

Findings

Biographical Availability

One biographical factor that indicated difficulty in participating in the zero waste movement was having young children. The zero waster parent said that she started being zero waste when she became biographically available. As she explained, "with having small children... I had very little energy to think about anything, especially thinking about my environmental footprint. And then when the kids got to be sort of in their teens, I found my way back to things I was interested in" (Interview5). The non-participant parent talked about how being a single mom to a young child made daily tasks difficult enough. As she explained, "once you have a child it's like, very hard to do zero waste, being a single mom, working, and to move around and then not have a car, what am I going to do with 107 pounds of groceries in glass jars?" (Interview1). Both families had no car, and so it seemed like having children and lacking transport options that would make participation easier were positively correlated factors that hindered participation. In addition, marital status, or in reality, having an extra pair of hands to help out around the house, had a positive influence on being able to participate in the zero waste movement.

In interview 4, the other non-participant talked about how for health reasons, she had to buy products that are not available zero waste. She explained that due to the medical requirements of one of her ill family members, her household had to purchase things like medication and even some special grocery items in packaging. She also talked about how she has prescriptions for skin problems that come in excessive packaging. "I know that [not using the skincare products] would benefit the environment... I do feel bad but at the same time I know that it would be really hard on my mental health to have my skin get really bad again" (Interview4). Her and her family member's mental and physical health seemed to be big barriers to participation rendering her biographically unavailable to partake in the movement. Similarly to the non-participants who were parents, interviewee 4 also talked about how her main mode of transport was public transportation, and believed that if there was a zero-waste grocery store in the Kitsilano area similar to some of the stores in East Vancouver, she would be more willing to adopt more zero waste shopping behaviours. The two remaining zero wasters did not state any biographical barriers

to their participation. What can be taken away from these remarks is that being free of personal constraints does positively influence one's ability to participate in the zero waste movement.

Exposure to Networks

In terms of organizational affiliations, one of the biggest zero waste networks in Vancouver is the Zero Waste Vancouver (ZWV) Facebook group. All five participants were members, including the two non-participants of the zero waste movement, so not all members of groups like the ZWV Facebook group are actually practicing zero waste. One zero waster from interview 3 said that she was also part of the Zero Waste Canada Facebook group, she used the trading app Buns, and she followed the Instagram accounts of zero waste markets to get tips and ideas, but she joined all of these a while after becoming zero waste, and so these organization affiliations are products of her participation and not a motivation for it.

All three zero wasters had strong prior ties to other zero wasters. Interviewee 3 said that while she became interested in zero waste when she was on a term abroad in Belgium, the reason why she has actively participated in zero waste since returning home is because two days after her flight landed, she was hired at the package free grocery store Nada, and so she is now surrounded by other zero wasters anytime she is at work. Interviewee 5 seemed to have prior ties to other zero wasters through Salal and Cedar, a Christian community in Vancouver that does environmental justice work as part of their community service. She also told me a story about discovering that one of her neighbours was a fellow member of ZWV, and her neighbour ended up gifting her an old blender when she was in need, which made her feel like a part of the community. She talked about how once she made zero waste changes to her lifestyle, her whole family adopted zero waste practices too, claiming that "everyone in the family is aware of the policy that we have around trying to buy reusable containers, and that plastic bags aren't allowed in the house" (Interview5).

On the contrary, the non-participants had few prior ties to other zero wasters. Interviewee 4 explained that of all of her close ties, only one of her friends was zero waste. However, she believes that she would adopt more zero waste practices if her and her zero waste friend move in together, which they are planning on doing, as she insisted that "if there was more of, like, a community effort to go zero waste, then I would also feel the need to go zero waste" (Interview4). Therefore, the data suggests that having close ties to other zero wasters is a predictor of subsequent involvement in the zero waste movement, especially relevant if they are in close contact like at work or at home.

Lastly, looking at the extent of prior environmental activism influencing partici-

pation in the zero waste movement, the results are mixed. There was little presence of interviewees having any involvement in zero waste related events, which tend to be run by environmental organizations and attended by the community members that support them. The zero waster from Interview 5 was the most involved in environmental activism of all the participants. She had attended just about every Trans Mountain pipeline protest, as well as more specific events like the Earth Day Parade and the Climate Strikes. She was the only interviewee who had ever attended a zero waste movement event, which was a repair café where volunteers provided the tools for individuals to mend their own products and clothing. This could indicate that prior involvement in environmental activism can be a predictor of participation in zero waste movement events. However, it is important to note that attending zero waste movement events is not required for participation in the movement.

New Social Movement Theory

Having a high-level of education appeared to be a good indicator of adopting pro-ecological values, in fact multiple interviewees referenced their schooling as part of the reason why they cared about the environment. However, there was no significant difference in education level between the non-participants and zero wasters. An alternative reasoning to what motivates participation in the zero waste movement could be having a high income. One of the zero wasters is a university student at the University of British Columbia. She is an international student, and recognizes that she does have disposable income: “The fact I have enough disposable income helps. . . and my parents still help me with food, like, give me some money for it. . . that is something that immediately took pressure off of me. If I didn’t have that, then who knows?” (Interview3). Another zero waster who has a large family talked about how she is willing to spend more to buy a product zero waste, but sometimes makes concessions for products that are overly expensive. “For instance, we drink a lot of tea. Loose leaf tea is insanely expensive compared to tea bags. . . so we kind of go back and forth between getting loose leaf tea and just using tea bags, and so we mix a lot just for what we can cope with in terms of our day to day lifestyle” (Interview5). The third zero waster told me about her lifestyle: She is a dumpster diver, she makes her own toothpaste out of coconut oil and baking soda, and she said that she would make everything herself if she could. She is on a working visa, working two part-time jobs as an elementary school teacher and a baker. Her family in France does not approve of many of her life choices, and so she does not get any financial support from them. From these three interviews, it is hard to tell whether income has a positive influence on participation in the zero waste movement. All of the interviewees expressed comfortability with their economic status, including the two non-participants, but as demonstrated through the three zero waster interviews, zero wasters come from a range of economic backgrounds. This could mean that while it is true that having a higher income and education is a good indicator of whether or not someone will have pro-ecological values, it is not a good deter-

minant of whether that will make the difference for someone with pro-ecological values to adopt zero waste practices. An important distinction is the difference between having a comfortable income and having a disposable income, as the latter does make it easier to participate in the zero waste movement.

Limitations

While the five participants of this study came from diverse backgrounds, the limited number of participants means that this sample is not representative of the population at large and therefore the results cannot be generalized. The use of a small sample can be attributed to the limited time and lack of funding available for this study. In addition, because of the small sample size the results are only exploratory in nature, as they point to potential facilitators and barriers to zero waste but do not equate to identifiable trends among zero-wasters and non-participants. In other words, I designed this study to gain insights on the zero waste movement but conclusions cannot be drawn based on my findings (Stebbins, 2001). I touch on areas for future research in the discussion section of this paper.

I did not have any means of making sure that there were low-income representatives in the sample, and so if I could have had participants from more assorted economic statuses, results may have been very different. For example, if someone from the homeless population in Vancouver had participated in the study, then financial burden may have acted as a more prevalent barrier. It is worth mentioning that previous studies also suggest that ethical consumerism is characterized by traits such as being “female, whiter, richer and much more educated than the general population” (Carfagna et al., 2014, p.163). With limited resources to attract a mixed sample, all participants were of partly European descent and female identifying, and so examining differences in race and gender were out of the scope of this study. Because all participants in my study were women identifying people, this data is not representative of men who participate in the zero waste movement.

Discussion and Conclusion

The findings in this paper reveal that unlike general environmental activism, which is thought to be low-medium cost/risk, zero waste movement activism is low-risk and high-cost. There are a number of costs associated with zero waste movement participation, namely financial, but also the expenditure of energy and time required to seek out options that are outside of the social norm. These costs are amplified by factors of biographical unavailability, including having young kids, being a single parent, or having oneself or a loved one in close proximity experience physical or mental health issues that hinder par-

ticipation. Participation is more likely when individuals are exposed to other zero wasters, especially if they have close ties to said zero wasters and are in close quarters, at home or at work. The opposite is true as well, and if someone has no close ties to people that participate in zero waste then one's own participation is discouraged. Zero waste organizations and events do not have a large influence on facilitating participation, but those who participate in other overt forms of environmental activism are more likely to participate in zero waste related events. Education is a good predictor of who will adopt pro-ecological values, but does not make a significant difference in who with pro-ecological values will practice zero waste. On the other hand, high income is not a necessity for participating in zero waste, as some participants partake in money saving activities like dumpster diving or making their own goods, but having a disposable income makes participation a lot easier and allows participants to make fewer concessions. Overall, it takes a combination of factors to facilitate participation in the zero waste movement.

The findings outlined in this study are significant because they demonstrate that while the zero waste movement is a branch of the environmental movement, there are barriers to participation in zero waste that do not exist to the same degree in the general environmental movement, so it is important to think of them in scholarship as two separate entities. This information could be useful for policymakers in cities like Vancouver that are developing zero waste strategies, to understand who is already participating in zero waste and what demographics face challenges to participating, so that they can make sure that in forming their policies they will not be further excluding the people that already face several obstacles to participation. The results of this study can also be useful to zero waste stores that want to broaden their market, so that when they expand their business they can take into consideration how to make shopping family friendly, and how to strive to improve affordability and accessibility. Lastly, any institutions or individuals that want to encourage more consumers to go zero waste can understand through this study that weak ties are not enough to motivate people to go zero waste, and the best way to stimulate participation is through the exposure of face-to-face interaction with other zero wasters, or by implementing zero waste practices in a household or workplace.

The small sample size in this study means that the results are only exploratory in nature. Future studies should build off of the barriers and facilitators to zero waste participation outlined by the five participants in this study, in an attempt to identify broader cultural trends in consumer behaviour, within Vancouver and Canada. Additionally, future researchers should look for patterns across identified trends to seek out more explanatory results regarding why facilitators and barriers to participation exist for different groups of people. For instance, studies can look into how gender and race impact who is able to participate in the zero waste movement. It would be worthwhile to explore whether there are barriers that impede men from partaking in zero waste at the same rate as womxn, as I found even in my research that recruiting male participants was a challenge. On a similar note, it is very possible that women feel an additional burden to engage in pro-ecological behaviour, even when by definition they do not have the means to do so, therefore look-

ing into gendered reasoning behind participating in zero waste activities would also be worthwhile. It would be equally as worthwhile to look into whether race is a factor determining who feels comfortable participating in zero waste, since zero waste participation tends to be disproportionately white (Carfagna et al. 2014). Another interesting area to research could be looking at whether social pressures through social media are as effective in getting others to participate in zero waste as social pressures in real life. In my study, Facebook groups did not have a significant effect, but perhaps personal Instagram accounts of either admired influencers, or of respected peers where the poster broadcasts their zero waste habits would have a greater influence on said poster's followers. A fourth and final area for future studies could be interviewing individuals who face some of the aforementioned barriers to participation, but who manage to participate anyways. For instance, interviewing someone who faces medical issues but manages to participate in the zero waste movement could be a useful way to provide insight into what strategies are used by participants to mitigate, bypass or overcome debilitating barriers.

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