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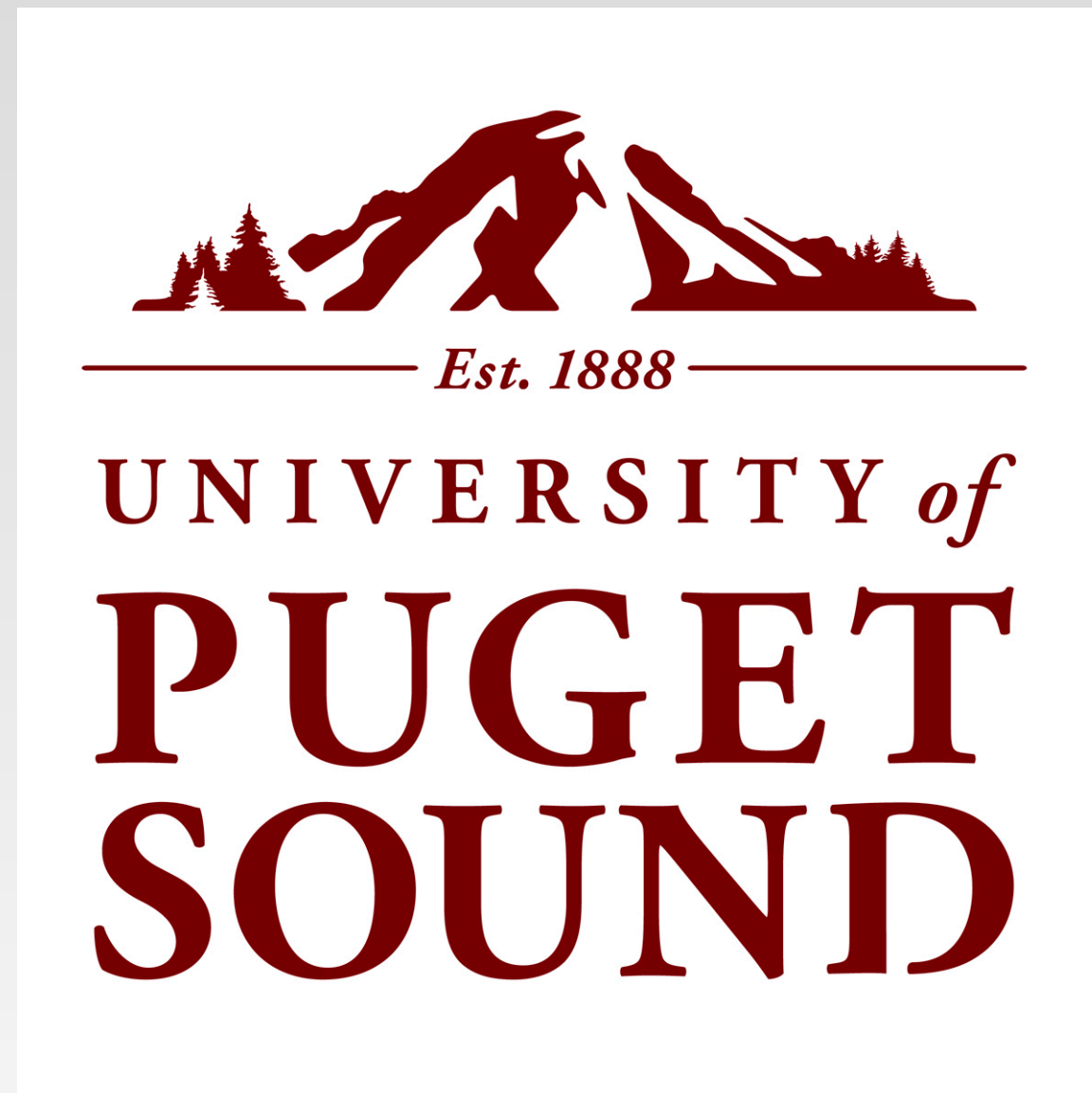
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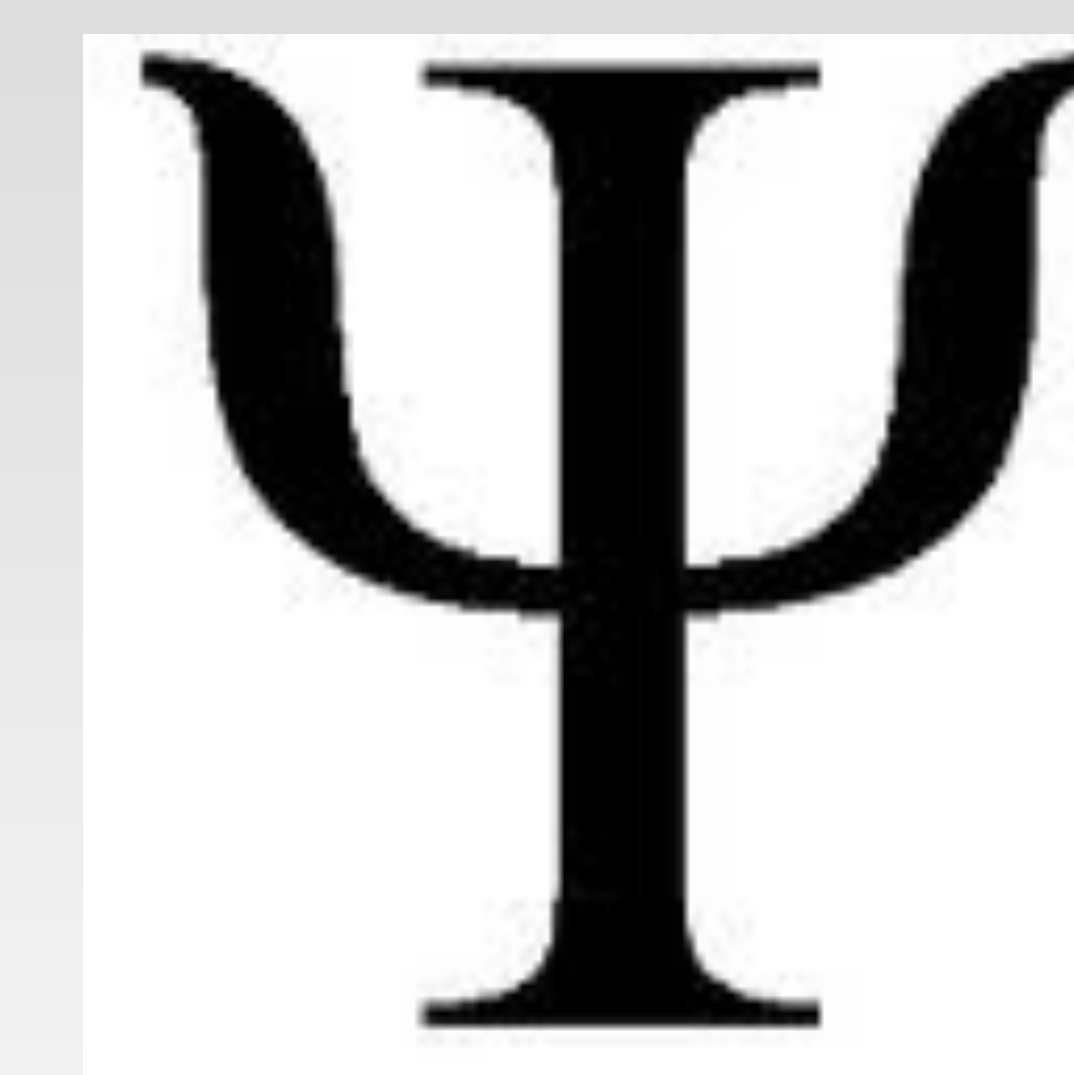
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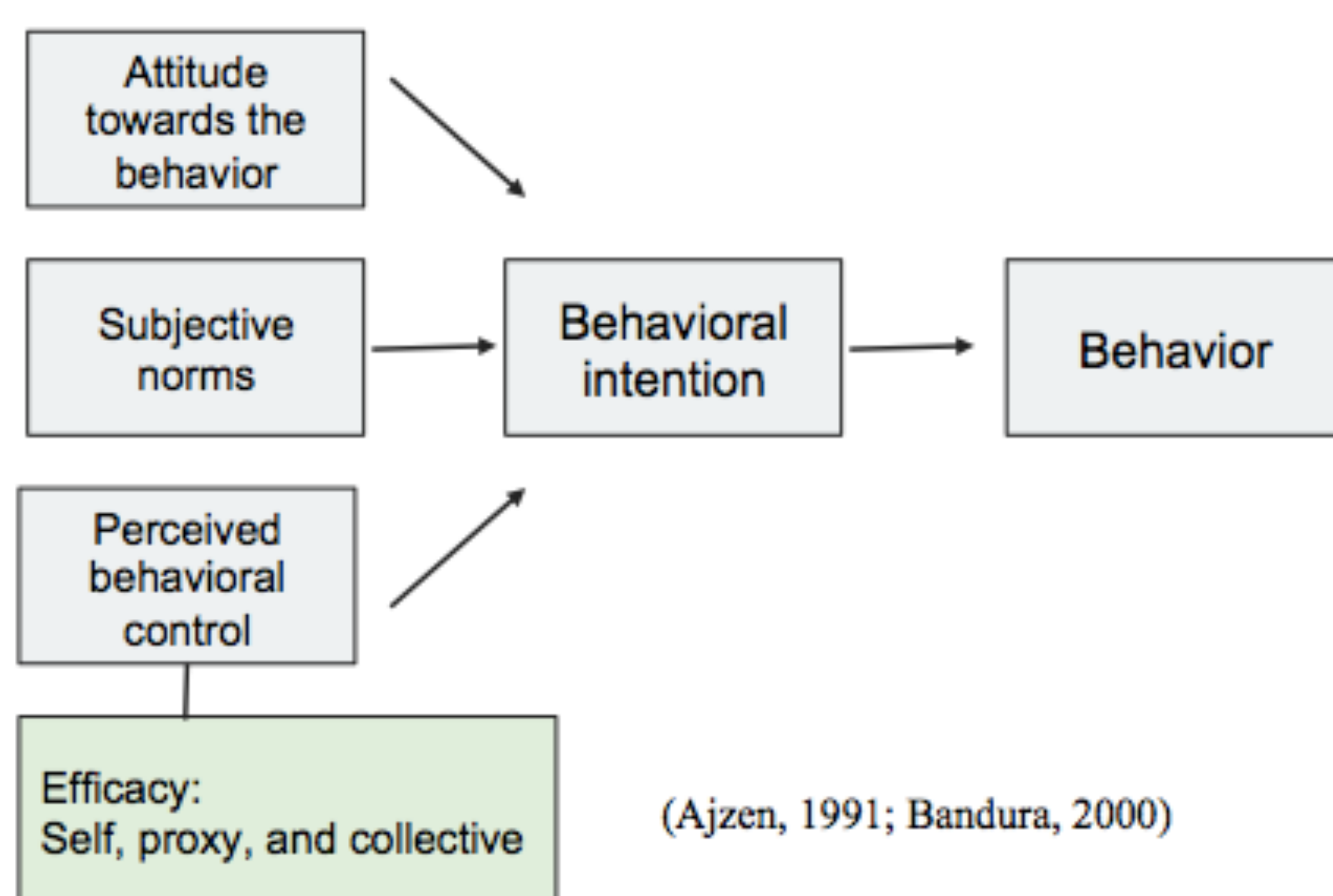
Is it Hot in Here or Is It the Climate? Predicting Individual and Systemic Pro-Environmental Engagement

Alaina Geibig and Carolyn Weisz



Introduction

Reducing greenhouse gas contributions is increasingly critical in order to lessen global consequences of climate change. Despite this, U.S residents' shift towards practicing pro-environmental behaviors (PEBs) has been slow. This study investigated factors that predict everyday PEBs, including attitudes, perceptions of difficulty and efficacy, perceived social norms, and the actor's own sense of environmental identity. Previous research has explored many predictors of PEBs through the lenses of Ajzen's Theory of Planned Behavior and Bandura's Efficacy Model.



We predicted that people who feel more capable of succeeding and view behaviors as easy rather than difficult would be more likely to engage in PEBs. We also predicted that people would participate in more PEBs if they believe that the behaviors are meaningful, impactful, and reflect norms in their social environment.

Less research has focused on distinctions among types of PEBs, such as differences between PEBs that make a direct personal impact on climate change (individual PEBs) and those that attempt to create change at a systems level (systemic PEBs). Some research has found differences in predictors of systemic PEBs such as lobbying for environmental policy and individual PEBs such as recycling and consumer behavior (Sloot et al., 2018; Stern et al., 1999). Another goal of this study was to explore differences in the factors associated with individual and systemic PEBs among college students.

Participants and Procedures

547 University of Puget Sound students were invited by email to participate in an online survey for the opportunity to win a \$150 gift cards, and this yielded usable data from 209 students. Participants responded to eight prompts that asked about 20 PEBs (e.g., recycling, signing environmental petitions), answered demographic questions, and completed a measure of environmental identity.

Participants ranged in age from 18 to 43 years ($M = 21.9$) and identified as female (162), male (40), or non-binary (6). These participants primarily identified as politically *very liberal* (111) and *somewhat liberal* (62) compared to *neutral* (19), *somewhat conservative* (6), and *very conservative* (1).

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Measures

Participants responded to eight prompting questions that appeared in the single fixed order (below) with each followed by 20 PEBs (1= None/Not at all, 5= Very/A lot). Responses to three impact items were averaged to create an impact index.

- How much positive **impact** would consistently practicing these behaviors have on reducing climate change?
- How **challenging** is it to consistently practice these behaviors?
- How important is it to your friends and family members to practice these behaviors? (**Norms**)
- To what extent do you practice these behaviors? (**PEB measure**)
- How **meaningful** is it for you to practice these behaviors?
- To what extent does practicing these behaviors have an immediate **impact** on climate change?
- To what extent does practicing each of these behaviors have a long-term **impact** on reducing climate change?
- How much **capability** do you have to successfully practice these behaviors?

Behaviors

Individual Behaviors ($\alpha = .66$)

Recycling plastics
Using reusable cups for beverages
Avoiding using plastic bags
Taking shorter showers
Biking/walking to the grocery store
Using public transportation
Buying organic foods
Eating vegetarian
Reducing personal air travel

Systemic Behaviors ($\alpha = .82$)

Signing online petitions
Engaging in environmental discussions
Voting pro-environmentally
Contacting Senators
Lobbying for policy
Making donations to non-profits
Attending city council meetings
Volunteering for organizations

* Three PEBs with low responses were excluded from the analyses.

Among the individual behaviors, correlations indicated that there were two subset behavior groups: plastic use habits that included recycling plastics, using reusable cups, and avoiding plastic bags ($\alpha = .67$) and transportations habits that included using public transportation and walking/biking to the grocery store ($r = .47$).

Results

As expected, participants reported practicing individual PEBs more than systemic PEBs with especially high engagement with plastic behaviors, but lower engagement with transportation behaviors. Relative to other behaviors, participants reported reducing and recycling plastics as more meaningful, less challenging, and more supported by social norms.

Table 1.
Means (SDs) for Behavior Types (N = 209)

	All PEBs	All Systemic	All Individual	Plastic	Transportation
PEBs	2.99 (.55)	2.37 (.68)	3.50 (.59)	4.62 (.55)	2.93 (1.10)
Meaning	3.36 (.76)	3.20 (.96)	3.50 (.80)	4.17 (.88)	3.35 (1.08)
Challenge	2.50 (.45)	2.68 (.52)	2.34 (.55)	1.54 (.56)	2.67 (.94)
Capability	3.81 (.67)	3.57 (.79)	4.02 (.68)	4.68 (.70)	3.71 (1.02)
Norms	2.90 (.76)	2.67 (.52)	3.11 (.77)	3.97 (.95)	2.67 (.94)
Impact	3.41 (.65)	3.30 (.67)	3.51 (.79)	3.65 (.92)	3.57 (.82)

Results (continued)

Pearson correlations indicated that meaningfulness was the strongest predictor for all types of behaviors except for plastic use behaviors. Social norms were also a strong predictor of all behaviors.

Table 2. Pearson Correlations Between PEBs and Predictor Variables

	Meaning	Challenge	Capability	Norms	Impact
All PEBs	.72	-.31	.47	.59	.50
Systemic	.69	-.23	.42	.57	.49
Individual	.63	-.45	.47	.41	.57
Plastic	.31	-.40	.25	.44	.28
Transport	.63	-.41	.50	.47	.29

Note: All correlations are significant at the $p < .01$ level (2-tailed).

Regression analyses indicated that meaning, norms, and capability were independent predictors of behaviors after controlling for other behaviors. For individual but not systemic behaviors, beliefs about how challenging it is to consistently practice the behaviors was also an independent predictor.

Table 3. Standardized betas for Regression Analysis Predicting Overall, Systemic, and Individual PEBs

	All PEBs	Systemic	Individual
Meaning	.48***	.47***	.38***
Impact	.06	.06	.03
Challenge	-.11*	-.08	-.23***
Capability	.16**	.13*	.16**
Norms	.24***	.27***	.24***
Adjusted R ²	.61***	.57***	.55***

* $p < .05$. ** $p < .01$. *** $p < .001$.

Conclusion

As a student, I feel fortunate to be a member of a community that encourages environmental behaviors amongst fellow students, through course curriculum, and as an institutional value. Our research contributes to a better understanding of how and why Puget Sound students are practicing environmentalism. Our findings suggest that a sense of meaningfulness may foster pro-environmental behaviors, and that promoting a sense of meaningfulness may be a useful strategy to create behavior change. Future research should examine what makes environmental behaviors seem meaningful for students and other populations.

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