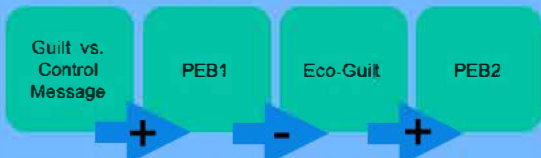


M. Ryan Nugent & Heather Barnes Truelove, PhD.

## Introduction

- Focusing on reducing single-use plastic straws has been argued as being ineffective at eliminating plastic pollution and may distract from more important issues
- Environmental spillover
- Performing an initial pro-environmental behavior (PEB) may lead to:
  - Increased performance of additional PEBs (positive spillover) or,
  - Decreased performance of additional PEBs (negative spillover)
- Guilt and PEB spillover



- This study aims to investigate guilt-centered spillover effects to additional PEBs by conducting the first longitudinal study focusing on the reduction of plastic straw use
- **H1:** Participants in the guilt condition will display higher levels of straw use change compared to the control condition
- **H2:** Changes in straw use will positively spill over to changes in policy support and PEB performance
- **H3:** Participants in the guilt condition will have lower levels of policy support change and PEB performance change (compared to control) because of negative spillover
- **H4:** Spillover effects will be mediated by identity (positively, H4a), concern (positively, H4b), and guilt (negatively, H4b)

## Method

# of participants from MTurk

T1-T2: 234 participants      T2-T3: 184 participants

Male = 62%  
 Female = 34%  
 Democrat = 50%  
 Republican = 24%

### Time 1



Guilt, identity, and concern measures

**Video Condition:** Reduce and track your single-use plastic straw use for one week

**Control Condition:** Track your single use plastic straw use for one week

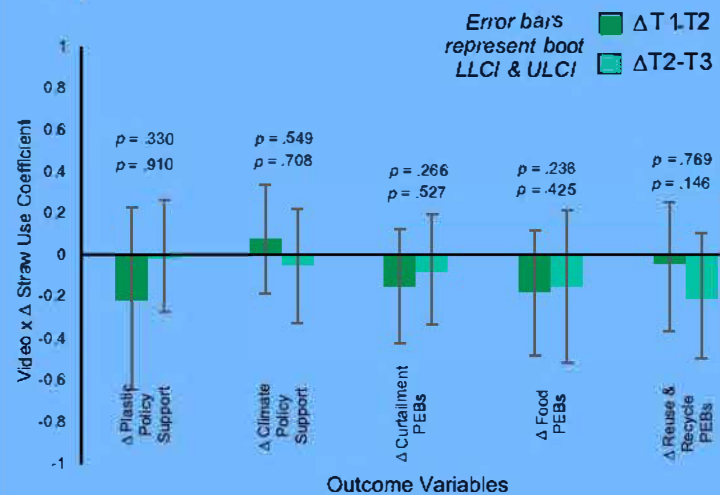
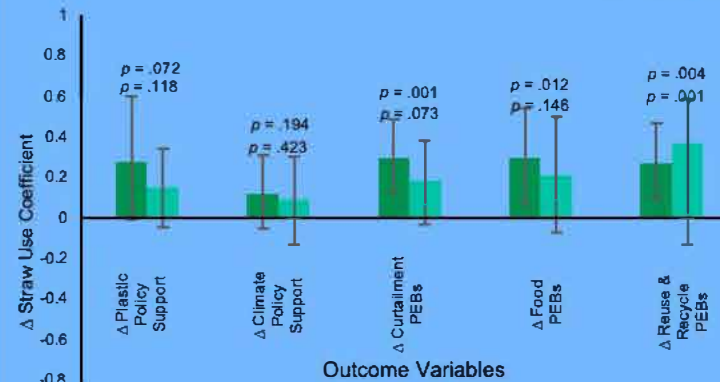
### Time 2 (one week later)

Recorded singleuse plastic straw use from the past week and answered same measures as Time 1

### Time 3 (3 months later when no behavior change request was in place)

Responded to same measures in Time 2

## Results



**H1**  
Not Supported

Video condition positively affected change in straw use, but it was minimal and nonsignificant  $b = .324 [-.151, .803], p = .192$

**H2**  
Partially Supported

A significant positive relationship between straw use change and PEB change was found for all PEBs except plastic policy support and climate policy support

**H3**  
Not Supported

No significant interaction effects between video condition and straw use change on other PEB change

**H4**  
Partially Supported

Significant indirect positive effects for climate policy support ( $b = .019$ ), reuse and recycle PEBs ( $b = .019$ ), and food PEBs ( $b = .026$ ) all mediated by environmental identity

## Discussion

- Additional research on guilt interventions in PEB change is needed
- By Time 3, several spillover effects had diminished or been eliminated
- Environmental identity plays a more important role than guilt in PEB spillover
- No evidence that relatively ineffective PEBs undermine broader, more important PEBs

For more information, see Truelove, H. B. & Nugent, M. R. Straw wars: Pro-environmental behavior following a guilt appeal. *Journal of Environmental Psychology*, 72, 1-10. <https://doi.org/10.1016/j.jenvp.2020.101521>

