

Steering vs. Guiding

Comparing the Cognitive and Behavioral Effects of Nudges and Decision Signposts

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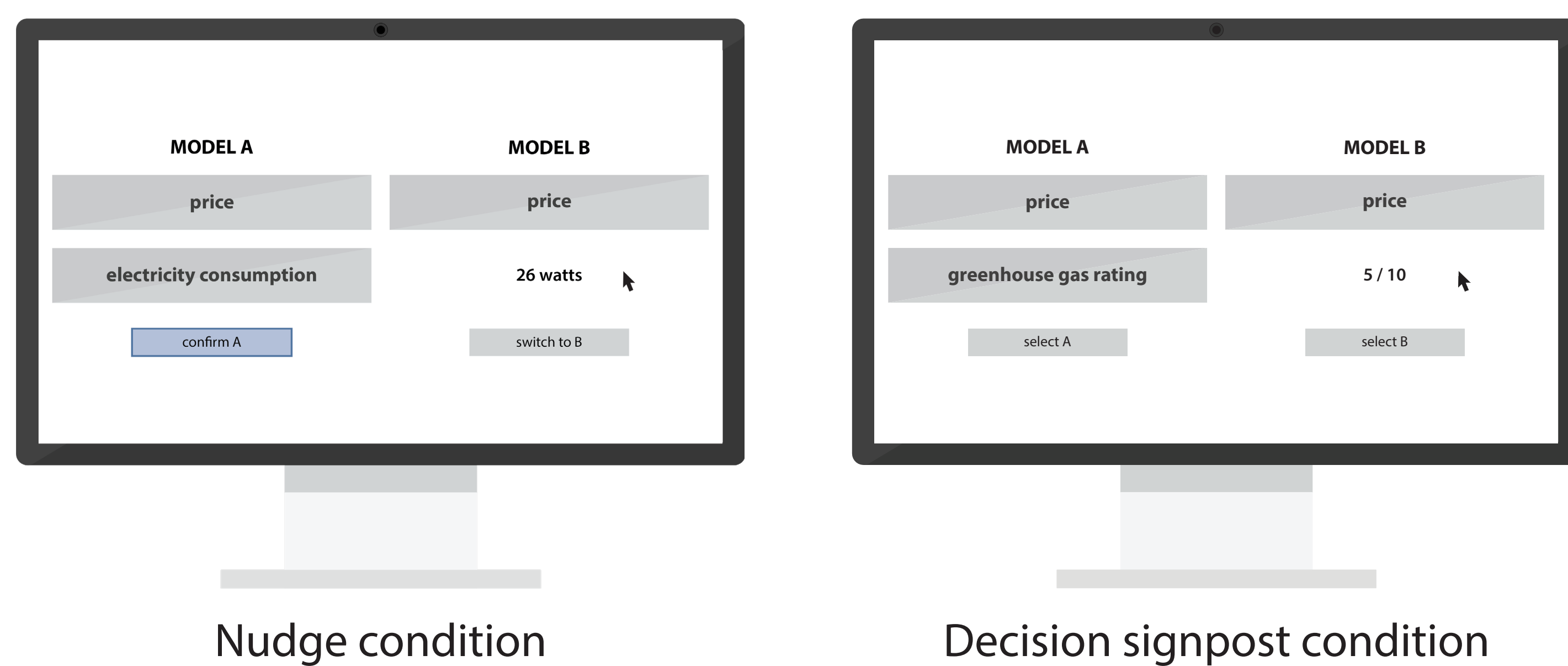
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BACKGROUND

Despite sometimes considerable consequences, consumers tend to overlook personal objectives when making decisions. The aim of the current study was to investigate how changes in the choice environment may help to overcome this tendency and guide consumers towards personally and socially desirable decisions. To this end, we compared the cognitive and behavioral effects of different choice architecture interventions on purchase decisions in the energy domain. In the light of recent discussions about the ethics of choice architecture, we were specifically interested in two distinct forms of interventions, nudges and decision signposts. **Nudges** are changes in the choice environment that capitalize on basic cognitive processes and biases to shift behavior in a direction that is pre-determined by the choice architect (e.g., defaults). **Decision signposts** are changes in the choice environment that aim to clarify the direction towards certain objectives to facilitate decisions that are congruent with the personal interests and concerns of the decision maker (e.g., attribute translations)¹.

Hypotheses: While both nudges and decision signposts affect purchase decisions, only decision signposts do so as a function of personal concerns. The distinct effects of nudges and decision signposts on behavior are linked to pre-decisional information acquisition processes, which are driven by either pre-determined structural components of the choice environment (nudges) or the activation of relevant concerns (decision signposts).

METHODS



In this online experiment, 511 American residents (61.45% female, mean age = 55.82 years, $SD = 13.70$) engaged in a series of hypothetical purchase decisions between varying models of light bulbs and cars. Options were described in terms of price and energy consumption and varied in values to force a trade-off between financial and environmental interests. Choice problems were manipulated between subjects to implement either nudges or decision signposts:

» **Green default** set to energy efficient option [*nudge*]

» **Gray default** set to energy inefficient option [*nudge*]

» **Translation** of consumption into greenhouse gas rating [*decision signpost*]

Individual differences in environmental concern were assessed using the revised NEP Scale². The process-tracing tool MouselabWEB³ was used to record participants' choices along with the duration and frequency of each attribute inspection.

RESULTS

Product choices

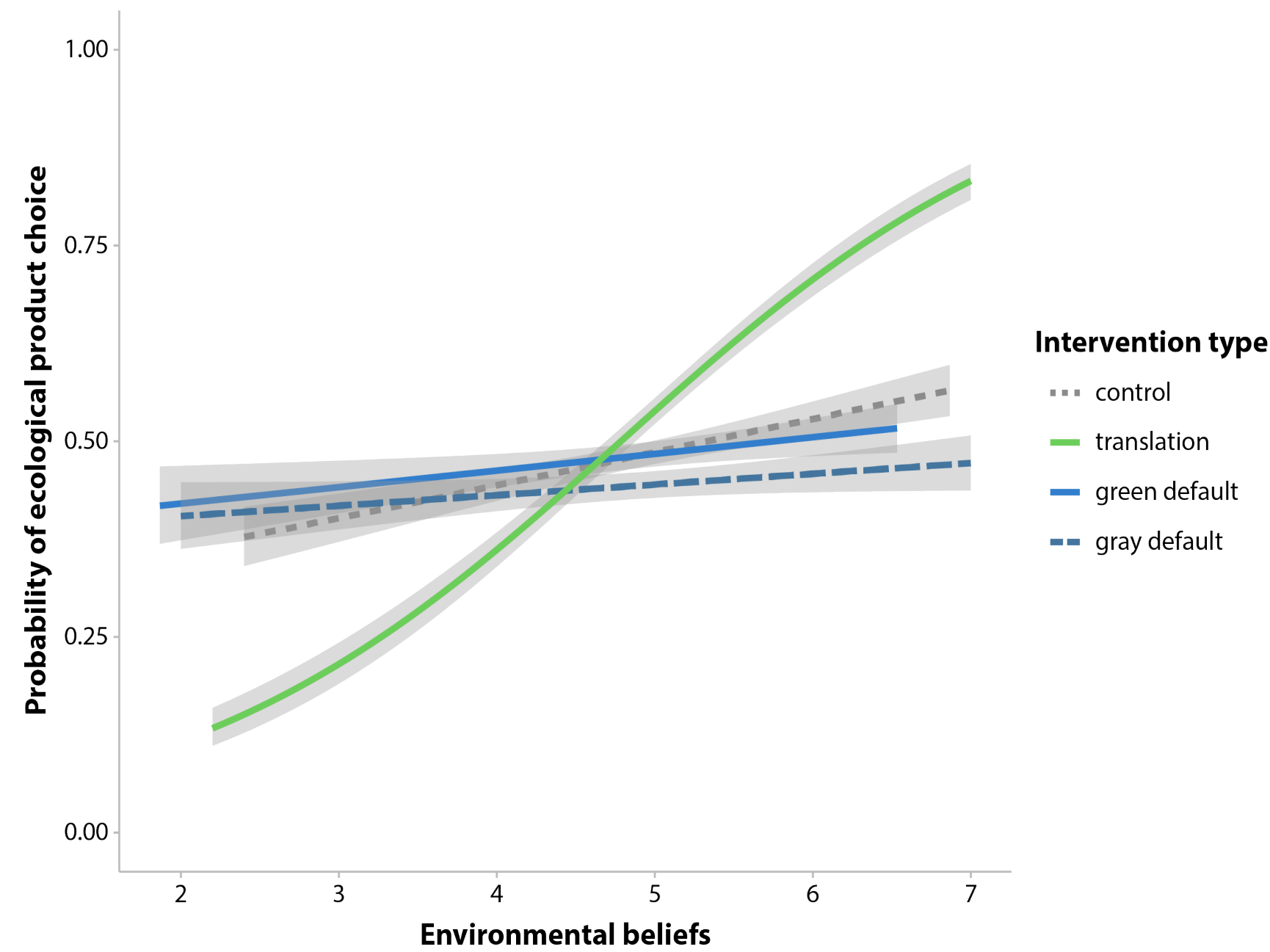


Fig 1. Probability of ecological choice as function of intervention type and environmental beliefs.

Allocation of attention

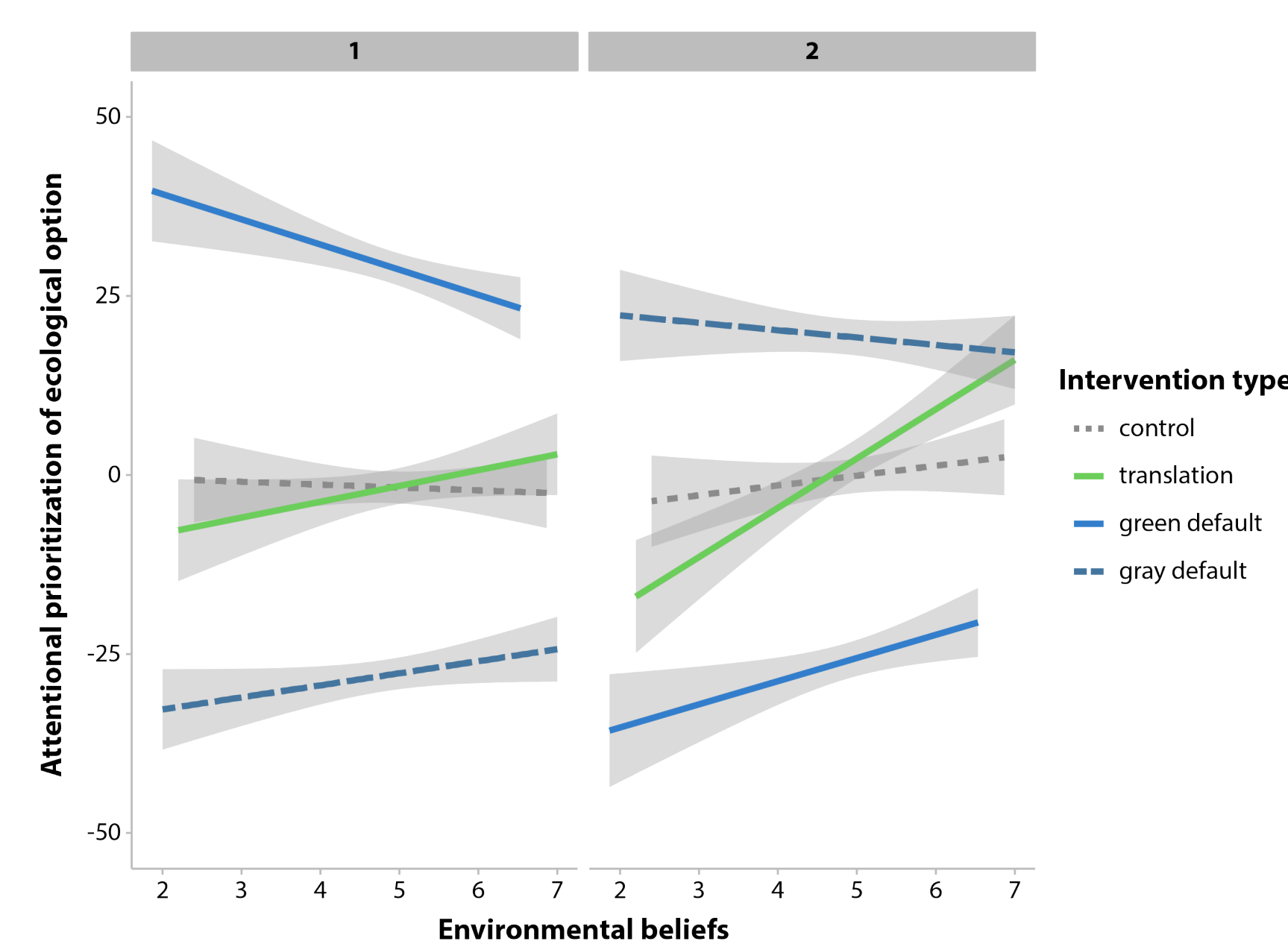


Fig 2. Attention allocation as function of intervention type and environmental beliefs during first and second half of information acquisition process.

Link between attention and choice

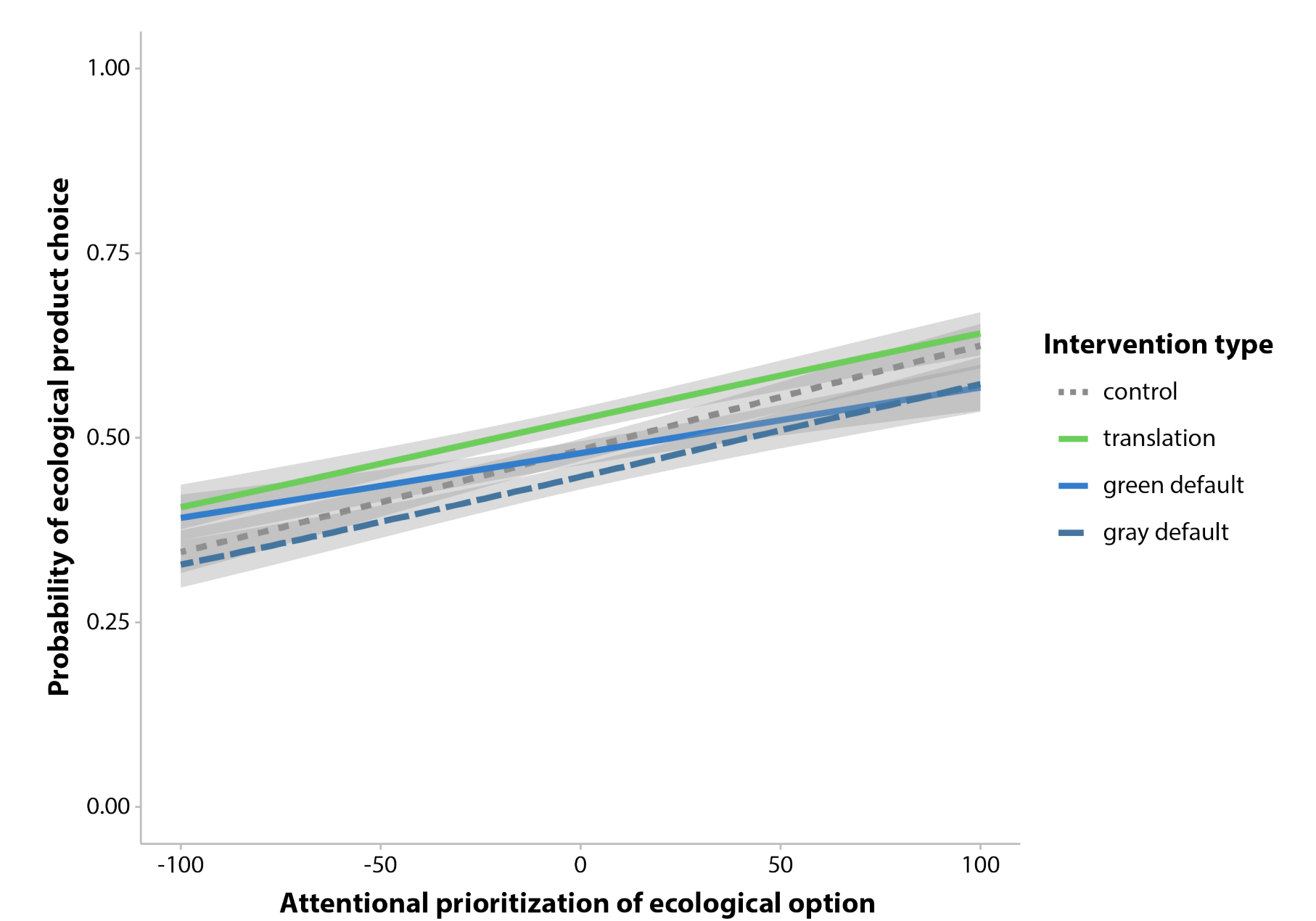


Fig 3. Probability of ecological choice as function of attention allocation during pre-decisional information acquisition process.

DISCUSSION

This study is among the first to directly compare the cognitive and behavioral effects of nudges and decision signposts. We show that the two types of choice architecture interventions have distinct effects on product choices and the underlying decision making processes. Specifically, our results suggest that only decision signposts guide decision makers towards choices that are congruent with their personal concerns. This effect is linked to an increasing attentional prioritization of concern-congruent options during pre-decisional information acquisition processes.

Due to their targeted effects on decision making, decision signposts may be a more appropriate intervention approach compared to nudges in cases of high heterogeneity of concerns among consumers. Future research will continue to investigate the effects of decision signposts on varying consumer groups and population segments and explore possible side effects, such as psychological reactance.

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