



*Decisions Matter:
Understanding How and Why We Make
Decisions About the Environment*

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If...

- ...human behavior is causing many environmental problems (species loss, global warming, soil depletion, etc.),
- **then** behavior changes are required to address them
 - environmental decisions are crucial

Environmentally-relevant decisions made every day

- Energy consumption
 - heating and cooling, transportation choices
- Water use
 - Gardening, swimming pools, rice farming
- Land use
 - Deforestation, city planning

Decision Research provides...

Both good news

and bad news

on prospects for better environmental decisions

Bad News

- Evolution has not (yet) provided us with appropriate *visceral reactions* to many environmental risks
- *Analytic evaluations* are also biased towards inaction

No visceral reaction to environmental risks



- No worry, no action (*Peters & Slovic 2000*)
 - Risk is a “feeling” (*Loewenstein, Weber, Hsee & Welch 2001*)
 - Analytic concern neither necessary nor sufficient
- Environmental risks not the type for which we are hard-wired to worry
 - “Psychological” risk dimensions (*Slovic, 1987*)
 - Do you wake up at night worrying about climate change?

Analytic evaluations biased towards inaction



- Life style changes require immediate sacrifices for delayed and uncertain benefits
 - People do not discount future outcomes the way economic theory assumes they do (or should)
 - Steep discounting of future benefits when immediate consumption is an option (“impatience,” hyperbolic discounting)
 - People are risk seeking in domain of losses
 - i.e., politicians and people are willing to take their chances with climate change rather than locking in “sure-loss” scenarios

Good News

“*Tragedy of the commons*” (Hardin 1968) can safely be downgraded to a “*drama*” (Ostrom et al. 2002)

- People blessed with cognitive abundance of three types
 - Multiple goals
 - Multiple ways to represent information (framing)
 - Multiple ways of making decisions

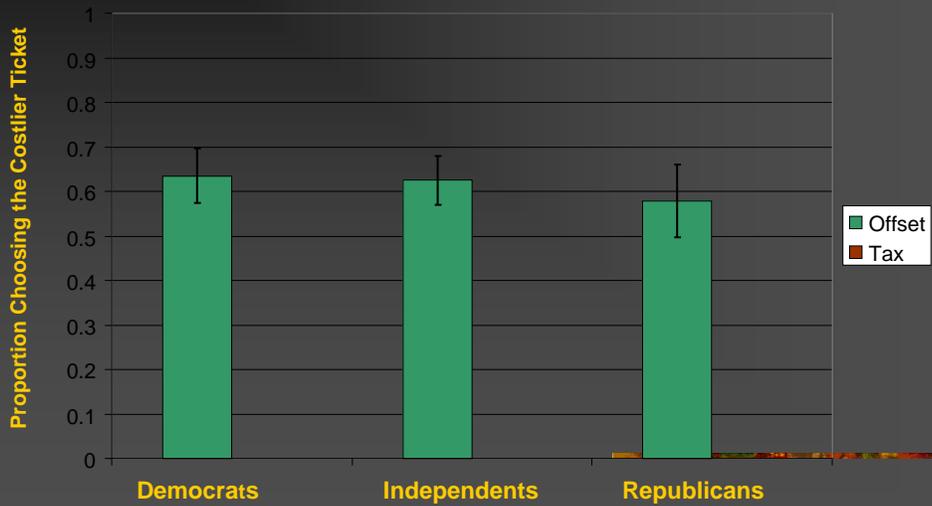
Multiplicity and Mutability of Goals 😊

- Human needs and goals
 - *Material, psychological* (feeling in control), *social* (feeling connected, concern for future generations)
- Goals influence decisions only when activated
- Goal activation
 - Gender, age, and culture affect **chronic** activation of different goals
 - Choice content and context affect **temporary** activation (“priming”)

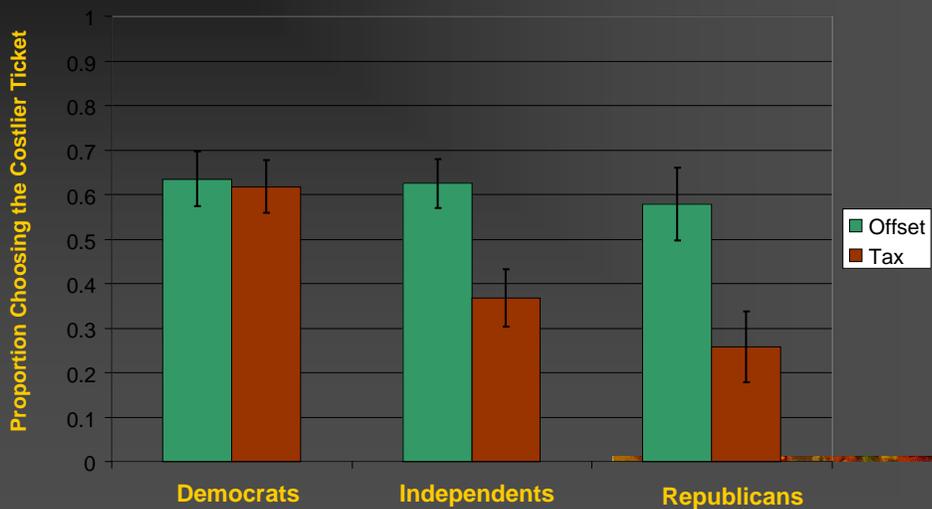
Multiple Representations 😊😊

- Labels trigger different reactions and choices
 - Carbon *offsets* more palatable than carbon *taxes*
- Group context (“we” vs. “I”) primes collective interests and longer time horizons (*Milch et al., 2009*)
- New “mental accounts” provide new goals
 - Personal carbon footprint accounts
 - Online fuel-efficiency displays in Toyota Prius
 - Turn behavior change into a “video game”

Dirty Word or Dirty World study (Hardisty, Johnson, Weber, in press)



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Multiple Ways of Making Decisions



- Decisions get made in qualitatively different ways (Weber & Lindemann, 2007)
 - “by the head” → calculation-based decisions
 - “by the heart” → emotion-based decisions
 - “by the book” → rule-based decisions

Environmentally responsible choices in calculation-based decisions

- Make environmentally-responsible options the default (*Johnson & Goldstein, 2003; Thaler & Sunstein, 2008*)
- Prime social goals (Apollo-8 image of planet earth)
- But,
 - *many* decision biases will work against you!

Environmentally responsible choices in *emotion-based* decisions

- Tempting to scare people into “right” behavior
- Problematic for at least two reasons
 - Finite pool of worry
 - Increase in worry about one hazard decreases worry about other hazards (*Weber, 1997, Linville & Fischer 1991*)
 - Single action bias
 - Tendency to engage in single corrective action (*Weber, 2006*)
 - Yet, most environmental problems require multiple responses

Environmentally responsible choices in *rule-based* decisions

- Much behavior driven by habits
 - based on past calculations or internalized rules
- Create new habits, by following new rules
 - Respected authority to issue new rule
 - *“What would Jesus do?”*
 - Behavior prescriptions need to be concrete
 - *“What would Jesus drive?”*
 - Capitalize on social observation and imitation by having celebrities model desired behaviors
 - *“What does Angelina drive?”*

Conclusions

- Solutions to environmental problems require broad-based behavior changes
- Such changes discouraged for multiple reasons
 - Egocentric biases and shortsighted time horizons
 - Rational incentives to defect in “commons” dilemmas
 - Existing behaviors largely automatic
 - Hard to change with incentives
 - Fear appeals problematic

Recommendations (“Nudges”)

- Introduce new mental accounts and metrics
 - to focus attention on environmental goals and to measure progress
- Shift from calculation- or emotion-based to rule-based decision processes
 - to overcome myopic self-interest
- Use automatic processes (social learning and imitation)
 - to change undesired automatic behavior
- Use group decision settings
 - to prime social and collective goals

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