Deciding to change behavior to address climate change

“Last week, I confessed to being a bad traveler. This week, I confess to something much worse. I resist and resent the demands made on me by environmental imperatives. I don’t want to save the planet. I just want to inhabit it as comfortably as possible for as long as I have.

Now don’t get me wrong. I am wholly persuaded by the arguments in support of the practices I resist. I believe that recycling is good and that disposable paper products are bad. I believe in global warming. I believe in Al Gore. But it is possible to believe something and still resist taking the actions your belief seems to require. (I believe that seat belts save lives, but I never wear them, even on airplanes.) I know that in the great Book of Environmentalism my name will be on the page reserved for serial polluters. But I just can’t get too worked up about it, even though I began well in the ’60s when I heeded Lyndon Johnson’s plea to turn off lights when you leave a room, something I still do religiously (or is it obsessively?).”

How do you get people to decide that taking action is warranted?

1. Perception of Risk.
   - perception of risk can compel or constrain political, economic, social, personal action

2. Balancing Current Costs against future well-being
   personal sacrifices now versus benefits for grandchildren

3. Incentives are not properly aligned:
   - Tragedy of the commons: if you engage in environmentally costly behavior, you will likely pay nothing for harms you inflict

   - each diary farmer has incentive to add more cows to his herd because he obtains benefits of additional cows while suffering only fraction of costs; yet his cows collectively ruin the pasture.
4. People don’t get feedback of the environmental consequences of their action.
- if your use of energy produces air pollution, you are unlikely to know or appreciate that fact.
- even if you know about connection, you are unlikely to think moment by moment about all of the personal and social costs.

1. Perception of Risk


2. Balancing current vs. future costs

- WHO estimates that in 2000, annual death toll from climate change is 150,000 people a year.
- All of use do things to increase emission of greenhouse gases
- What we do now benefits us, yet causes harm in future

- Costs of mitigating climate change are sacrifices the current generation will have to make to reduce greenhouse gases.
  - travel less; better insulate our homes; recycle; eat less meat

- Benefits: better lives that future people will lead ( other benefits?)
  - lessen growth of deserts, floods, famines, etc.

Two Questions: ethical and economic

Economic Analyses:
- Stern Review: concludes benefits ( future value of goods) would far outweigh costs ; urges immediate action

Nordhaus Review: concludes that benefits ( future value of goods) do not outweigh costs.
**Why difference:**

- **Discount rate:** value of future goods is generally less than current goods.

  - same idea applies to other decisions

  - Stern discount for future value is less than Nordhaus

    _most of costs for controlling climate change must occur in near future( when present generation must sacrifice); benefits mostly come in 100-200 years._

Stern and Nordhaus assign same value to current goods; yet Stern assigns higher value to well-being of future generations.

**Is this a valid approach for climate change?**

**Factors affecting discount rate?**

- **Why discount at all ?:** assume that people I future will have more goods than present people. Thus, more goods you have, the less valuable they are.

- **Temporal Distance:** how should benefits of future, richer, people be valued in comparison to our own?

- **Prioritarianism:** benefit that comes to a rich person should be assigned less social value than if it had come to a less rich person. Value attached to future is less than that assigned to current benefits- relatively high discount rate.

- Utilitarianism: benefit has same value no matter who receives it. Future people’s benefits are valued equally to ours- lower discount rate.

3. **Aligning incentives**
4. Improving feedback

5. How do we actually persuade people to change Behavior?


Iron Eyes Cody:
Famous PSA which shows native American coming ashore near a littered highway.
-watches as bag of garbage is thrown from window of car
-camera pans up from trash to Indian’s face, where we see a tear.

Effective at stopping littering?

Underlying message:

Descriptive vs. Injunctive Norms
1. Injunctive: perceptions of which behaviors are typically approved or disapproved
2. Descriptive: perceptions of which behaviors are typically performed

both kinds motivate human behavior

people do what is socially approved, as well as popular.

need to use both inline with, not against one another

Littering Experiment: subjects found a handbill placed on windshield.
-Variables: manipulated descriptive norms
  -clean or littered environment
  -watching confederate who littered or just walked through
**Predictions:**
- people litter more in already littered environment
- subjects who saw confederates litter would be more likely to litter (pro-littering descriptive norm)
- subjects who saw confederate litter in clean environment would be less likely to do so (anti-littering descriptive norm). Would rule out just modeling explanation

**Results:**

![Graph showing littering behavior](image)

Fig. 1. Percentage of participants littering as a function of the salience of the descriptive norm and the state of the environment.

**Cody Ad:**

- Tear is a reminder of the injunctive norm, but it is undermined by message that people DO litter.
-instead of using picture of motorist littering into ALREADY littered environment, should have used image of person littering into a clean environment.

-then when tear appears, would align injunctive and descriptive norms.

**Environmental Theft:** PSA should focus on injunctive norms (what is disapproved) rather than what is usually done (descriptive).

-Petrified Forest suffers from loss of ton of wood per month.

**Sign:** Your heritage is being vandalized every day by theft losses of petrified wood of 14 tons a year, mostly a small piece at a time.

Suggestion: make signs to focus on social disapproval of theft.

**Expt:**
- secretly placed marked pieces of petrified wood along pathways.
- For 5 consecutive weekends, displayed signs that emphasized either descriptive (many past visitors have removed petrified wood, changing the natural state of the Petrified Forest; along with pictures of people taking wood) or injunctive (Please don’t remove the petrified wood, in order to preserve the natural state of the Petrified Forest; picture of lone visitor stealing a piece, with red circle and bar symbol over his hand) norms

**Results:** Percentage of marked wood stolen higher in descriptive norm message (7.92%) than in injunctive norm message (1.67%).

**Recycling:** is highlighting descriptive norms always likely to be counterproductive in environmental information campaigns?

No, it is effective when the common behavior is environmentally positive.

-if majority of people conserve energy, PSA should highlight descriptive normative info in brochures, etc.
-if majority also approve of behavior, PSA should incorporate this injunctive normative info as well.

Sample PSAs: scene in which majority of depicted people engaged in recycling, spoke approvingly of it, disparaged single individual in scene who failed to recycle.

**Field test in Arizona TV:** 23.35% increase in recycling tonnage vs, communities who didn’t see ads.

Was success due to normative elements or humor or just information?

**Student Ratings:**
-Both normative and non-normative factors influenced intent to recycle in students viewing ads.

**Non-normative:** prior attitude, new info, humor
**Normative:** both descriptive and injunctive norms affected intent

Conclusions:

-Ads should be careful not to have mixed messages

**Injunctive norms** affect intentions by influencing assessments of ads’ persuasiveness (based on understanding of moral rules of society, thus require cognitive analysis)

**Descriptive norms** influence intent directly, without affecting perceived persuasiveness. (don’t require cognitive analysis)

-research needed on how to make sure that message is salient when behavior is taking place (e.g., mnemonic devices).