Behavioral Economics: Insights for Educators

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Objectives of this Session

1. Introduce ideas and examples from Behavioral Economics that may be useful in education and survey design.

2. Invite you to think about:
   - how you might apply the ideas in your work, and
   - whether you have interest to learn more in future.

Behavioral Economics

blends insights from psychology and economics to understand how people make (often irrational and disadvantageous) economic decisions.

Were you thinking fast or slow?

1. A bat and a ball cost $1.10 in total. The bat costs $1.00 more than the ball. How much does the ball cost?”

__5__ cents

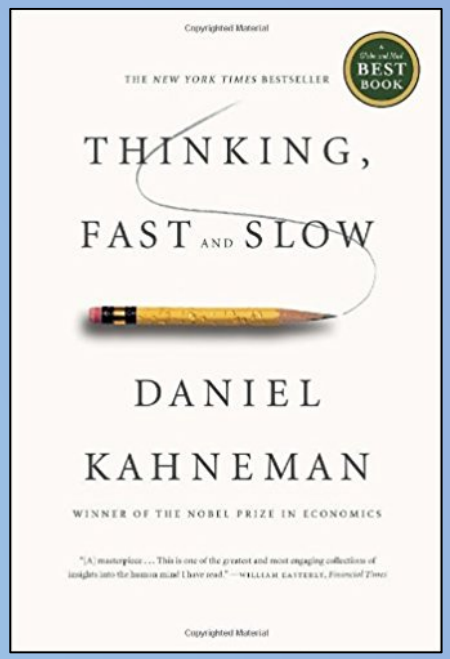
2. If it takes 5 machines 5 minutes to make 5 widgets, how long would it take 100 machines to make 100 widgets?

__5__ minutes

3. All roses are flowers
Some flowers fade quickly
Therefore some roses fade quickly. ___ Yes  No

System 1: Fast

- Automatic, involuntary
- Used effortlessly and intuitively for everyday decisions
- Necessary for getting things done
- Prone to mistakes, errors in judgment



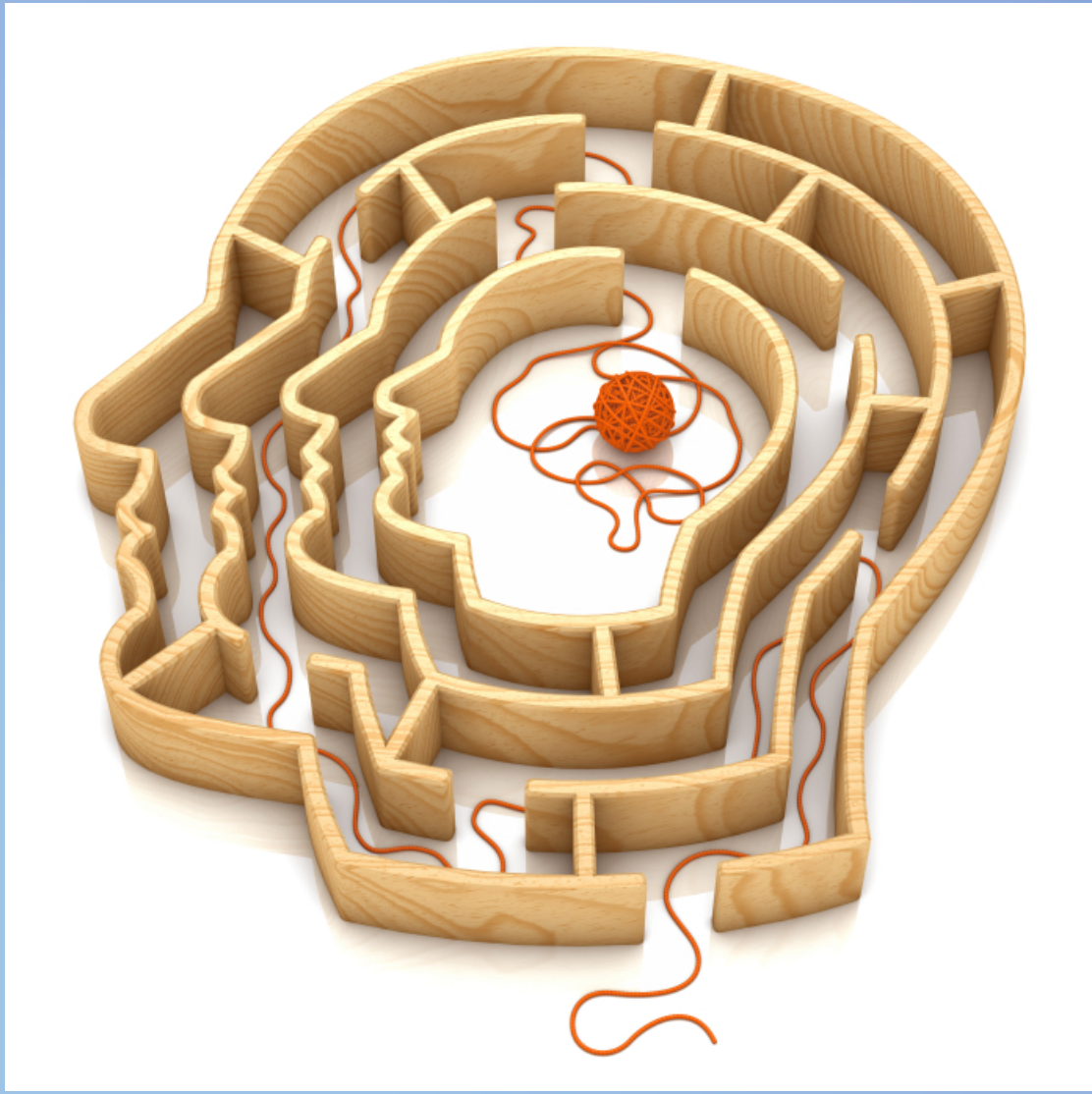
System 2: Slow

- Reasons, computes, analyzes, solves problems – only if necessary (can be lazy)
- Requires effort and self-control to use
- Too slow, inefficient for routine decisions
- Requires vigilance to use and confirm System 1 judgements

Why Does System 2 Not Always Check System 1?

- Time and energy demands
- Information overload
- Story makes sense
- Decision is one we emotionally prefer
- Conclusion matches our biases
- Primed with information that promotes associations
- Overly confident and optimistic
  - Newlyweds will likely say that their chance of divorce is 0; 50% of marriages end in divorce

Heuristics



mental short cuts and rules of thumb we use for making judgements and decisions

The Center for Behavioral and Experimental Agri-Environmental Research

Established 2014

Funded through ERS

Provides grants for experimental trials of program designs based on behavioral economics

UNIVERSITY OF DELAWARE

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4. Which person do you think sounds like a nicer person, _____ **Alan** or _____**Ben**?

Alan: intelligent – industrious – impulsive – critical – stubborn – envious

Ben: envious – stubborn – critical – impulsive – industrious – intelligent

Anchoring (and Adjustment)

We estimate by adjusting from a particular reference point – even if that information is not relevant.

The "anchor" is usually first information seen (or that we're primed with).

Another example

College students were asked two questions.

1. How happy are you?
2. How often are you dating?

Correlation between the questions was low (0.11) when asked in that order.
When order reversed, correlation was 0.62.

Thinking about their dating experience first anchored respondents thoughts –
if I'm dating often I must be happy; if not, then unhappy.

Questions for farmers?

1. How satisfied are you with the quality of your family life?
2. How often do you take a family vacation?

1. How satisfied are you with the quality of the soil on your farm?
2. How many tillage operations do you typically perform for your _____ crop?

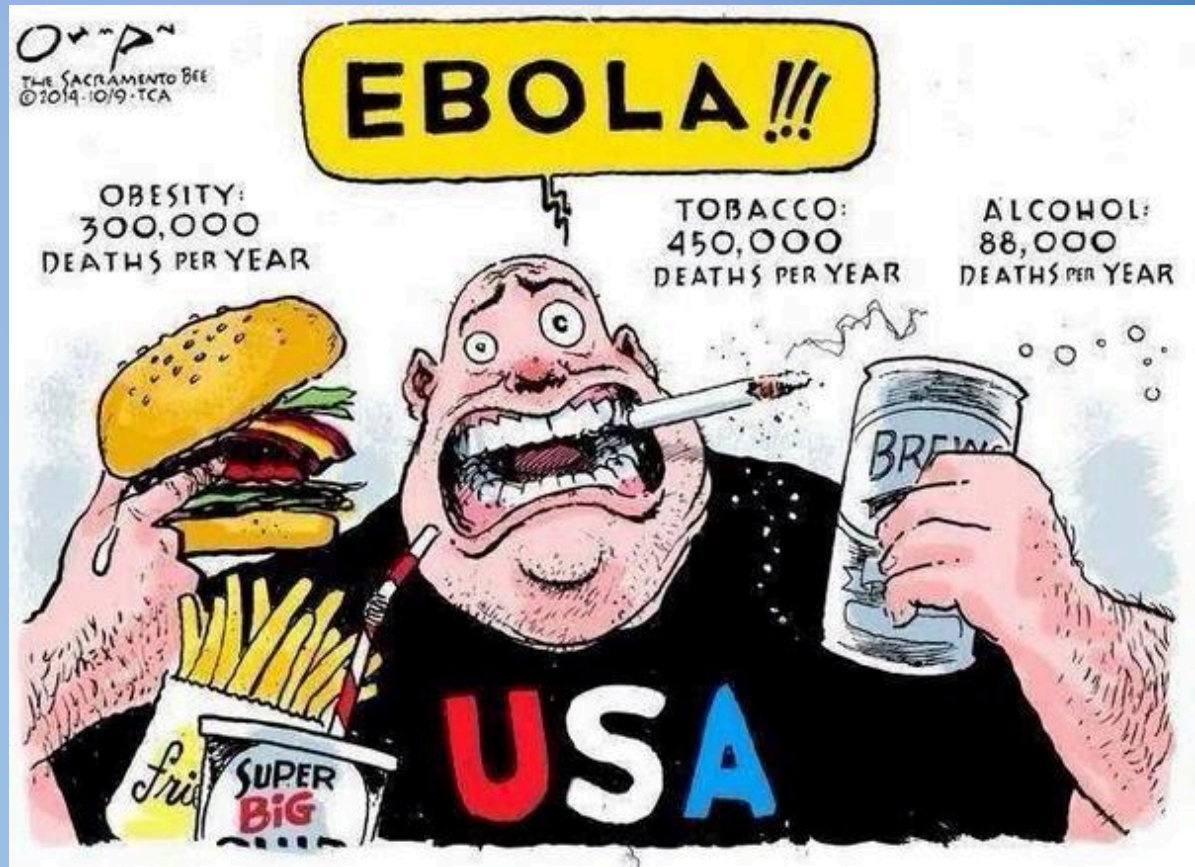
Back to our quiz

5. Read each pair of causes of death and check which cause is more frequent than the other.

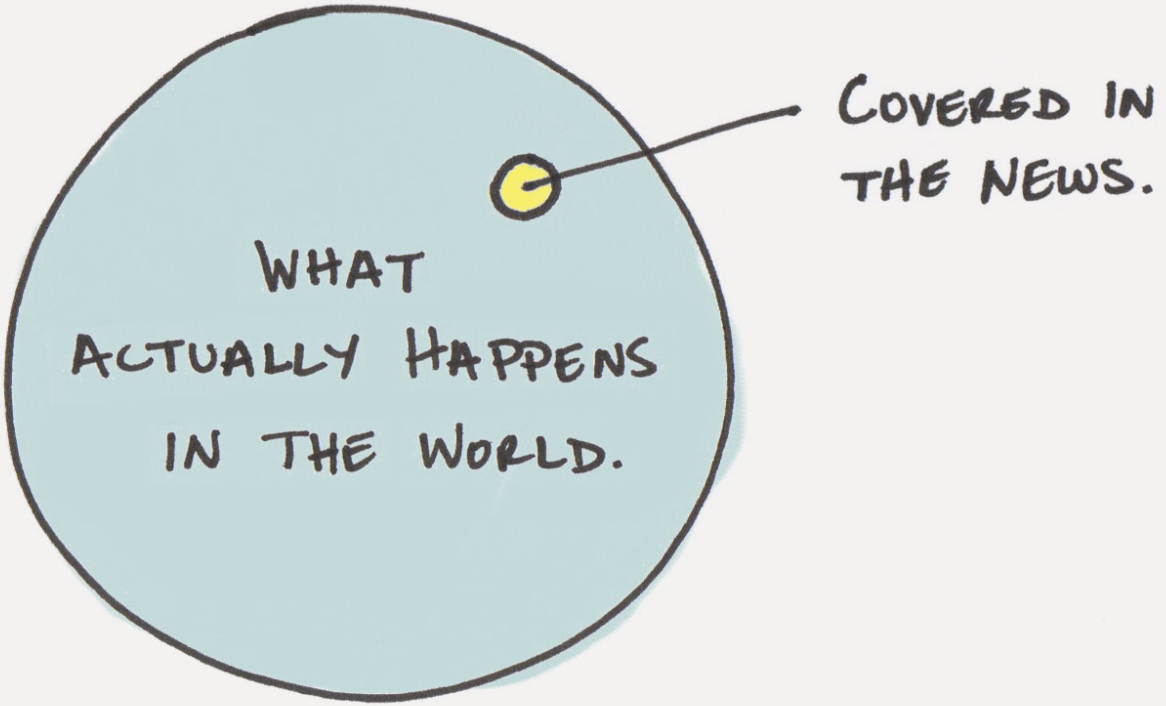
2X more	Stroke	vs.	X	Accidents
X	Tornadoes	vs.	20X more	Asthma
52X more	Lightning	vs.	X	Botulism
18X more	Disease	vs.	X	Accidents
X	Accidents	vs.	4X more	Diabetes

Availability

We rely on immediate examples that come to mind when evaluating a specific topic, method or decision.



THE AVAILABILITY HEURISTIC



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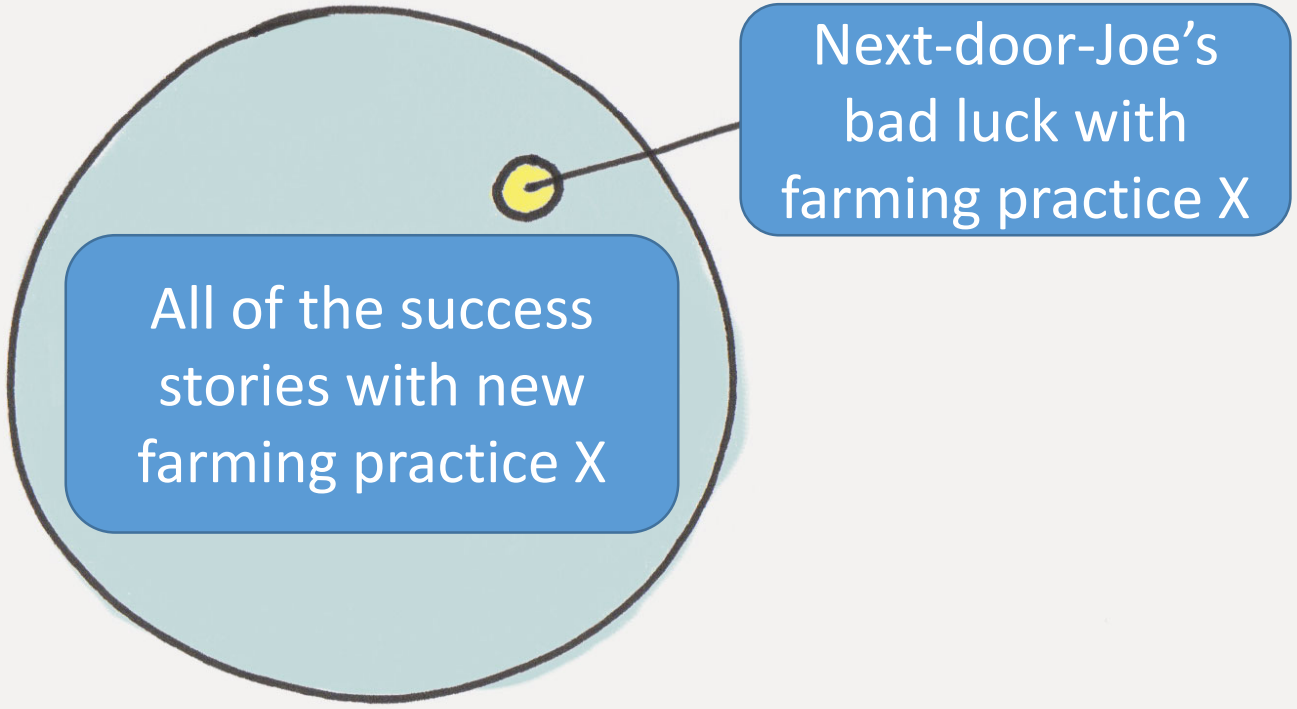
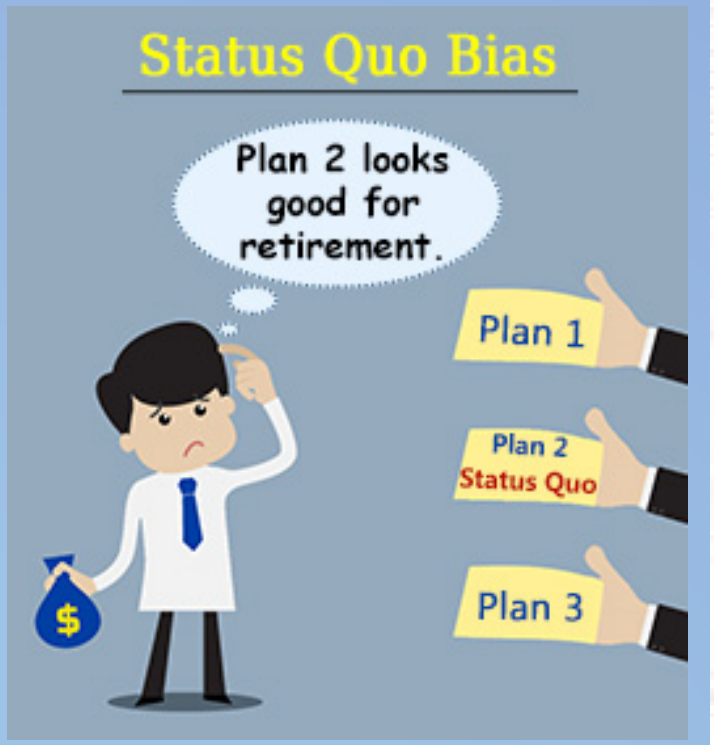


Status Quo Bias

Our preference to maintain current state even if change would be better



Examples from your work with farmers?

Which would you choose?

A. Get $900 for sure

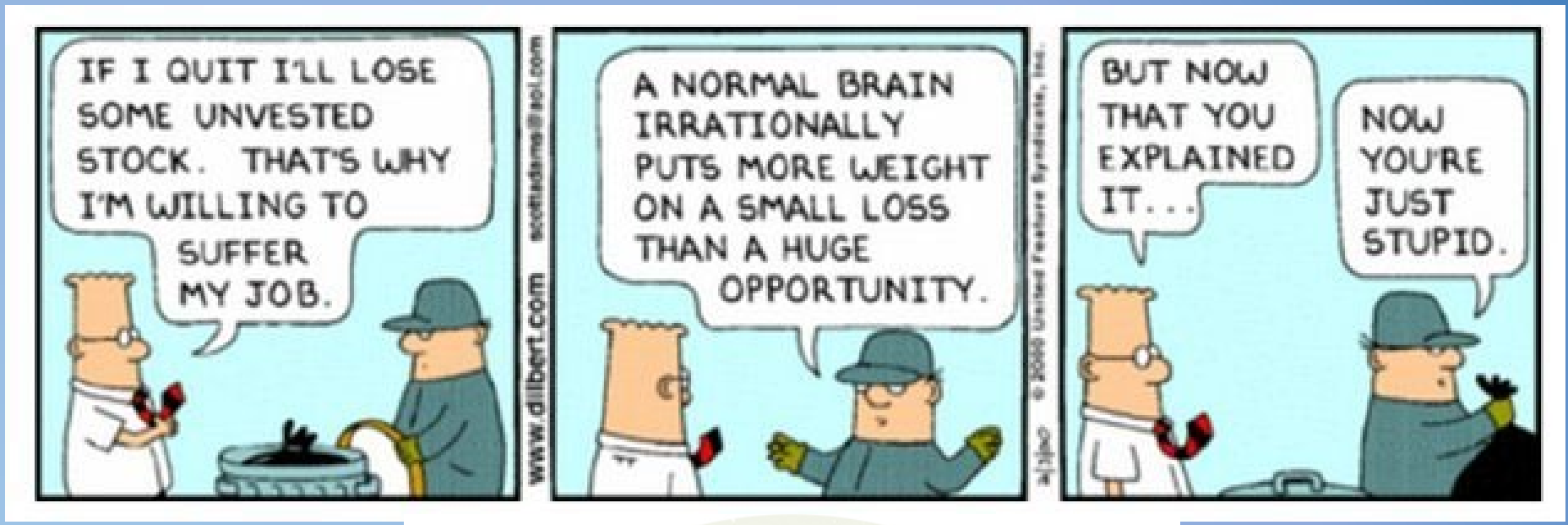
B. 90% chance to get $1000

A. Lose $900 for sure

B. 90% chance to lose $1000

Loss Aversion

We hate to lose – risk of loss valued more strongly than chance of gain



Get 5 cents

Pay 5 cents

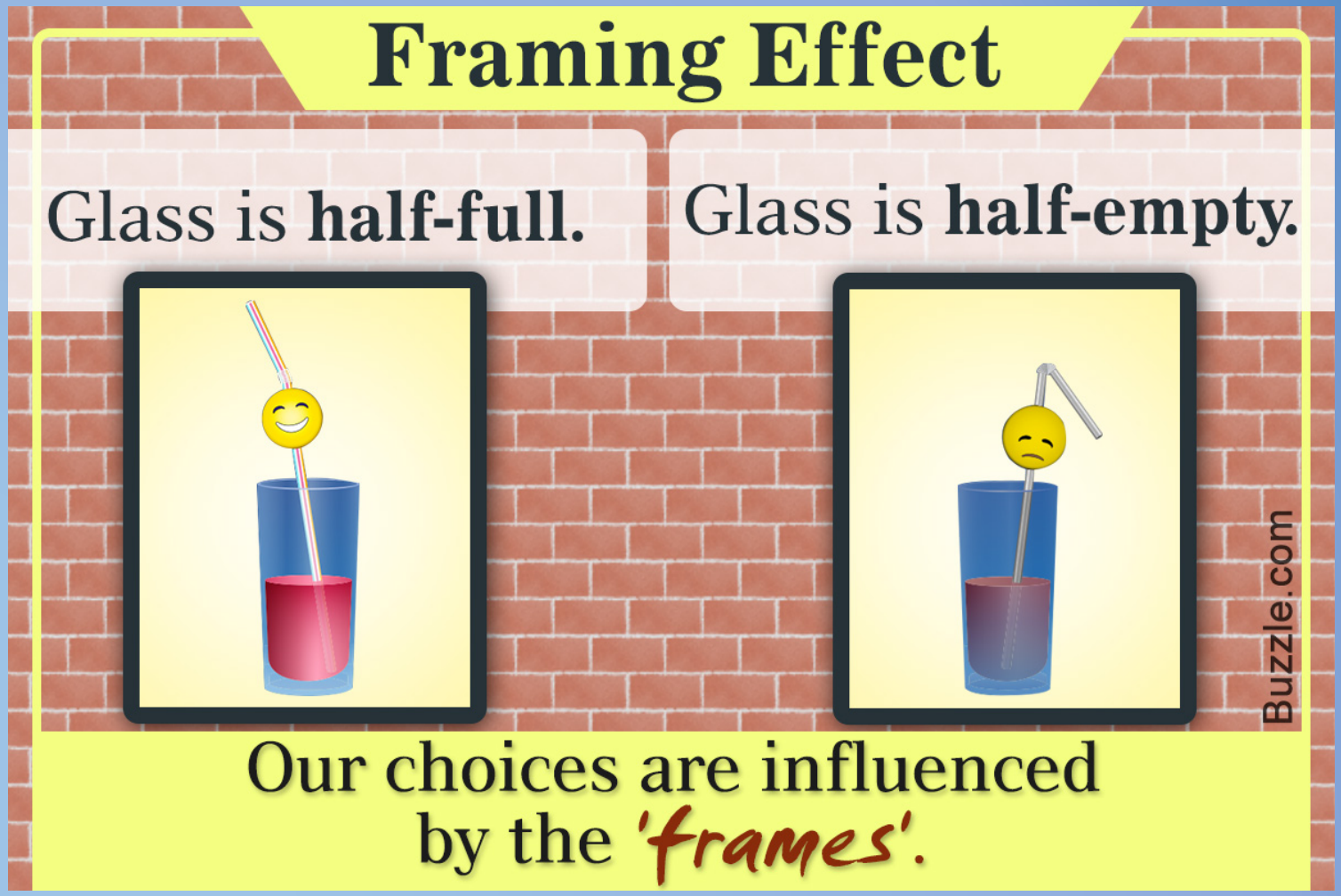
Two Energy Conservation Campaigns

A. If you use energy conservation methods you will <u>save $350 per year</u>

B. If don't use energy conservation methods you will <u>lose $350 per year</u>

Which campaign was more effective?

Framing Effect	We react to a particular choice in different ways depending on how it is presented.



SAY YES! TO COVER CROPS

Recharge Your Soil – Protect the Bay

MARYLAND'S 2019-2020 COVER CROP SIGN-UP

Accepting grant applications June 21 through July 17 at soil conservation district offices.

2019-2020 COVER CROP PLANTING AND PAYMENT OPTIONS					
TRADITIONAL COVER CROP PAYMENT OPTIONS	NO-TILL	CONVENTIONAL	BROADCAST WITH LIGHT, MINIMUM OR VERTICAL TILLAGE	AERIAL	BROADCAST STALK CHOP, AERIAL GROUND, AND BROADCAST CULTIPACKER
Base payment:	$45/acre	$45/acre	$45/acre	$50/acre	$45/acre
Plant by October 1, ***add:***	$20/acre	$10/acre	$10/acre	$0/acre	$0/acre
or Plant by October 15, ***add:***	$10/acre	$5/acre	$5/acre	$0/acre	$0/acre
Aerial seed cover crop into standing corn between August 15 and September 1, ***add:***	$0/acre	$0/acre	$0/acre	$10/acre	$0/acre
Terminate cover crop after May 1, ***add:***	$15/acre	$15/acre	$15/acre	$15/acre	$15/acre
Plant rye (no mixes), ***add:***	$10/acre	$10/acre	$10/acre	$10/acre	$10/acre
Maximum Payment Amount:	$90/acre	$80/acre	$80/acre	$85/acre	$70/acre

Current Version

TRADITIONAL COVER CROP PAYMENT OPTIONS	NO-TILL
Base payment:	$45/acre
Plant by October 1, ***add:*** or Plant by October 15, ***add:***	$20/acre $10/acre
Aerial seed cover crop into standing corn between August 15 and September 1, ***add:***	$0/acre
Terminate cover crop after May 1, ***add:***	$15/acre
Plant rye (no mixes), ***add:***	$10/acre
Maximum Payment Amount:	$90/acre

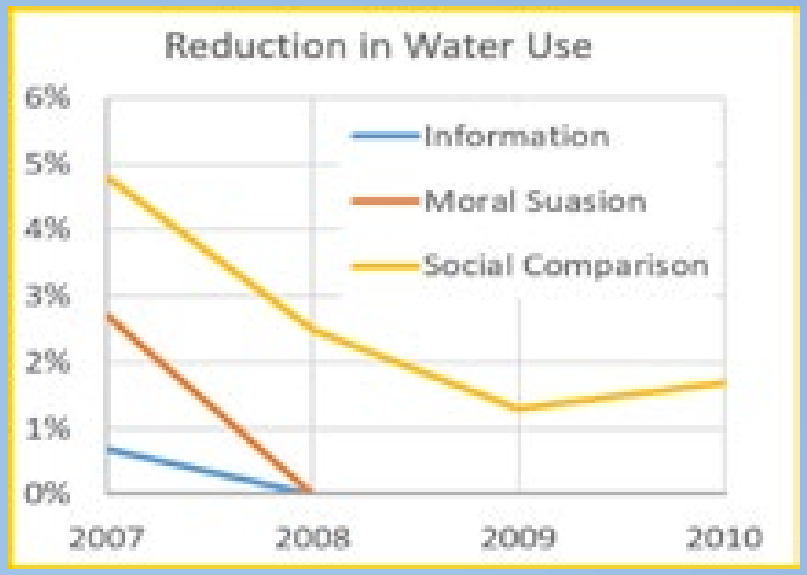
Reworded Version

TRADITIONAL COVER CROP PAYMENT OPTIONS	NO-TILL
Maximum Payment Amount:	$90/acre
Plant after October 1, ***subtract:*** or Plant after October 15, ***subtract:***	$10/acre $20/acre
Aerial seed cover crop into standing corn between August 15 and September 1, ***subtract:***	N/A
Terminate cover crop before May 1, ***subtract:***	$15/acre
Not pure rye, ***subtract:***	$10/acre
Lowest payment:	$45/acre

Social Proof	We look to the behavior of others to resolve insecurity about decisions; conform our behavior to that of others.

Social Comparisons Reduce Water Use

- **The social comparison message had the largest and most persistent effect on reducing water use.** Impacts from this single message could be detected six years later.



- Use comparison groups whose behaviors people care about (like neighbors in the same county or state)
- Make clear that the behavior you seek to encourage is popular among this comparison group (or unpopular if you seek to discourage it).

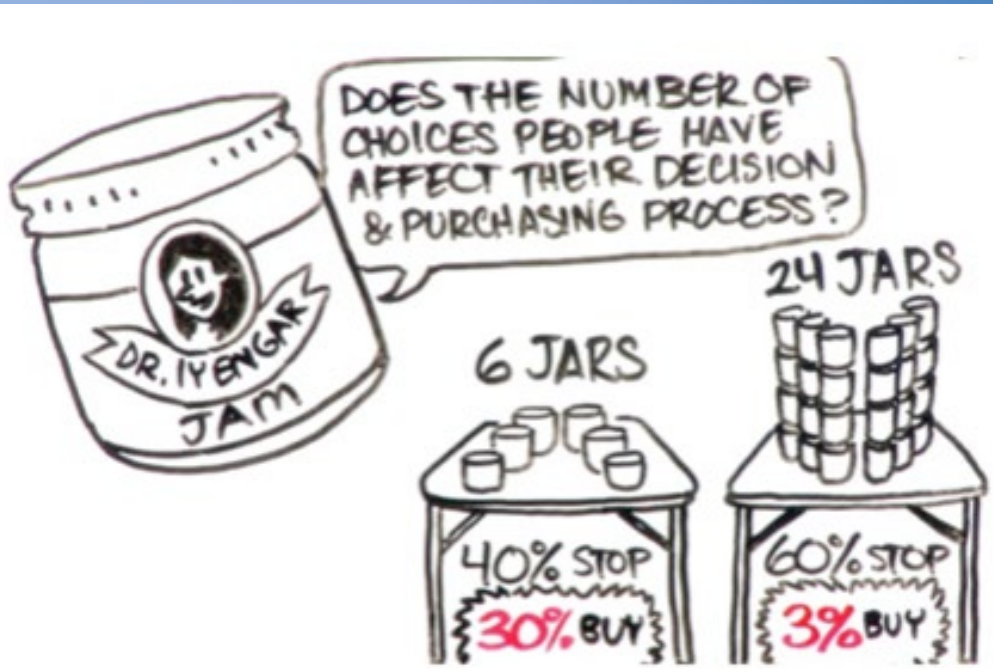
Where have you seen Loss Aversion and Social Proofing at work among farmers?

Peer-to-peer learning

- **It is difficult to change individual behaviour without including trusted people**
- **Invite farmers' family and advisors to stimulate peer-to-peer learning**
- **Farmers may be given leadership roles in participatory meetings, increasing their level of confidence in performing a particular behaviour**
- **Farmers listen more closely to advice given by someone like them.**

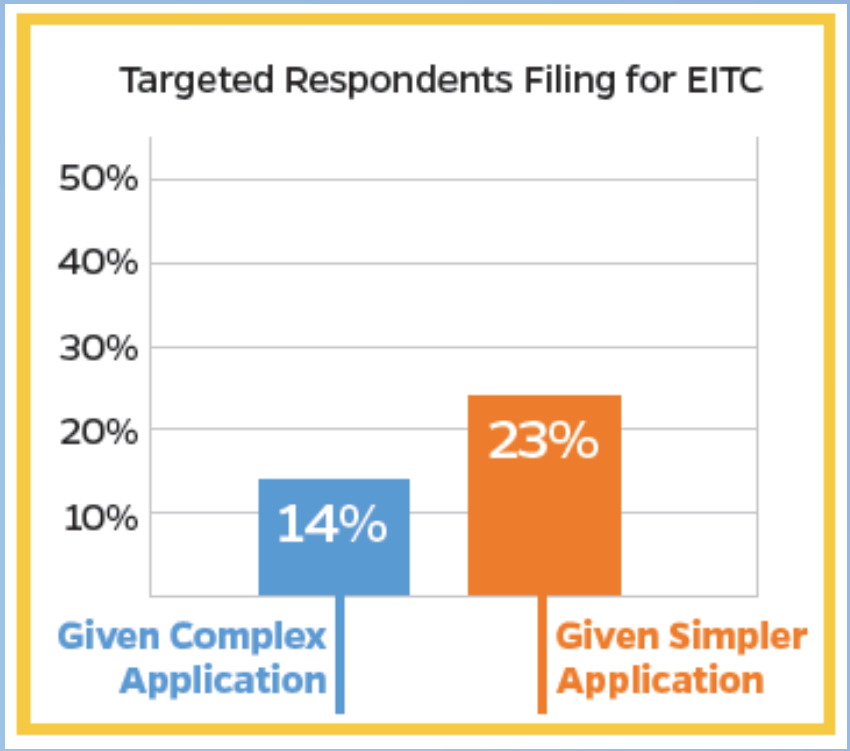
Complexity and Choice Overload

Too many choices; too much information and complexity – difficult to make good decision



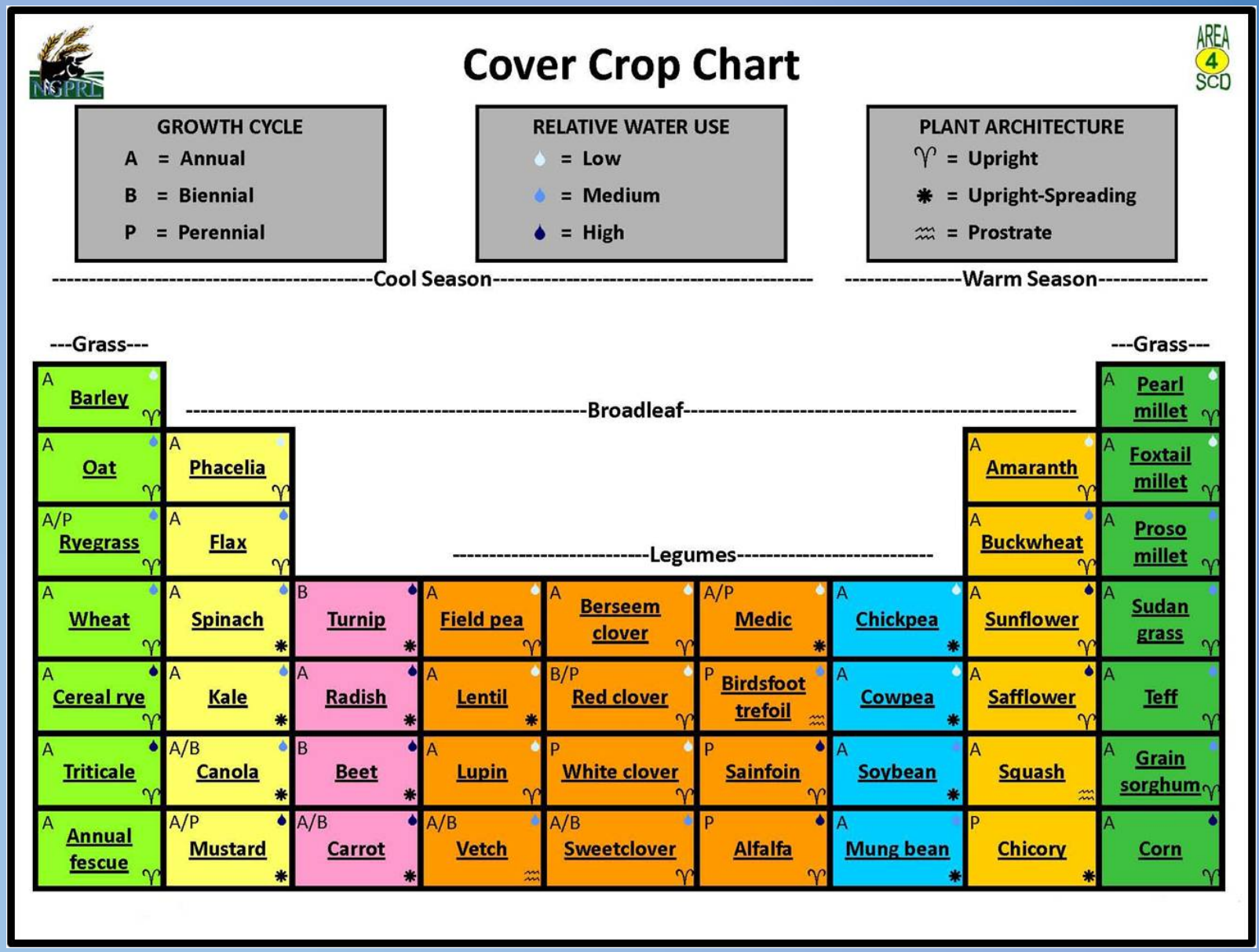
Examples from your work with farmers?

The Impact of Simplicity
The simpler Earned Income Tax Credit (EITC) reminder package increased take-up of the EITC by 65%.



- Think critically about the information you truly need from your participants, and when you need it. Many times, we ask repetitive or unnecessary questions
  - Can you simplify what information is collected?
  - Can you ask for some information later in the process?

Simplify the Complex



Choice Architecture

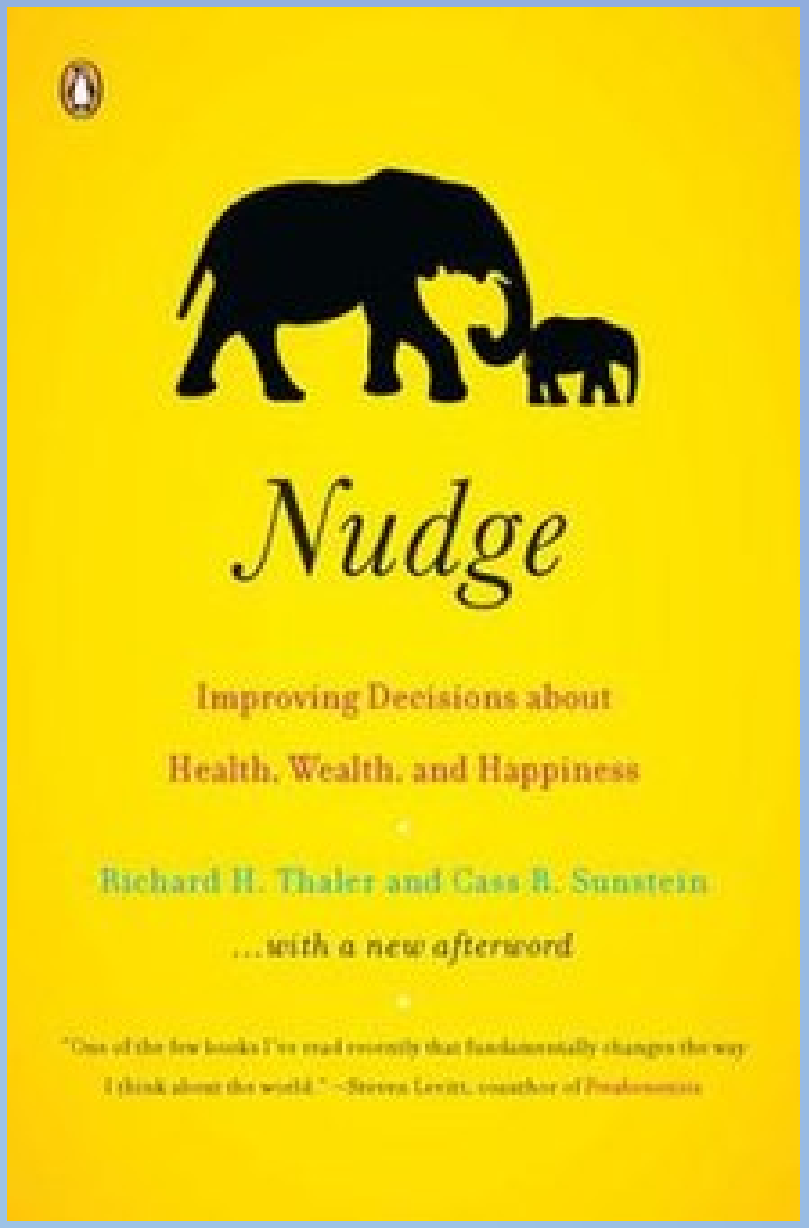
if you are engaged in:

- presenting options to people
- helping people make decisions
- asking people to respond to questions

then you are a choice architect – whether you recognize it or not.

For example:

- Recruiting
- Survey writing
- Pesticide options



Nudge Theory

- Use B.E. to help people make better choices
- Alters behavior in a predictable way
- Don’t forbid any options or change their economic consequences
- There is no such thing as a neutral choice situation

Nudge for litter control

Texas litter reduction campaigns weren't going well.

Officials realized many litterers were 18-24 year old men

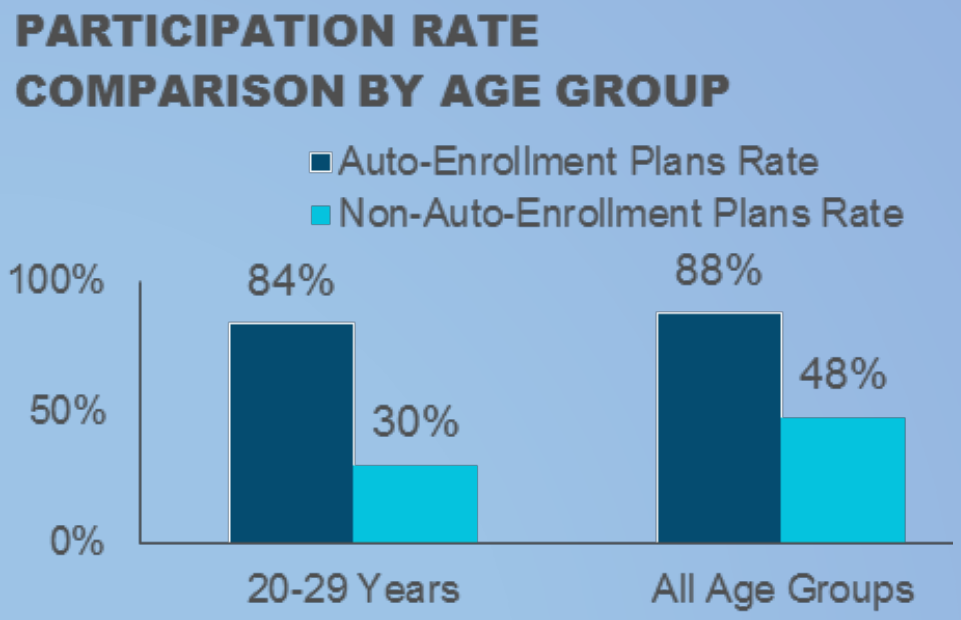
Tough talking slogan evoking Texas pride reduced roadside litter by 72% in first 6 years.

My Favorite Nudge

The Power of Defaults

Retirement Savings Plan

In standard plans, employees have to take action to enroll (opt-in). An alternative is automatic enrollment, where employees have to opt-out if they do not wish to participate. **Participation is much higher with auto-enrollment.**



To encourage greater participation, suggest above-average levels of commitment in your default options. For example, instead of asking “how many acres would you like to sign up”, ask “would you like to sign up 75% of your eligible acres?”

Lessons for Survey Design

- Being aware of how biases and mental shortcuts can influence our behaviors, remember to take a pause and check your System 1's suggestions.
- For big decisions use a handy 10-10-10 rule – How will I feel 10 minutes from now, 10 months from now, 10 years from now?
- Lessons to take into survey question design:
  - There is no such thing as neutral wording and how questions are framed will influence responses.
  - Also which responses people see first will anchor how they read the remainder, and
  - Providing too many choices say for ranking may make it difficult for people to decide.

How can you apply these concepts in the choice architecture in your education programs and surveys?