

Research Findings and Risk Communication

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01 INTRODUCTIONS



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02 OVERVIEW

Behavioral Insights Defined [1]

Behavioral Insights uses principles from the behavioral sciences such as psychology, neuroscience, and behavioral economics to understand how **individuals absorb, process, and react to information** and applies this to **design practical policies and interventions** with human behavior in mind



Potential Application to Flood Insurance

- Behavioral science can help **explain seemingly irrational human behavior** related to natural disasters and inform policymakers on **how to drive better outcomes**
- FEMA is deploying Behavioral Insights to help reach their Moonshots [2]

1. IRS “Behavioral Insights Toolkit”:https://www.irs.gov/pub/irs-soi/17rpirsbehavioralinsights.pdf
2. “2018-2022 FEMA Strategic Plan”: https://www.fema.gov/media-library-data/1533052524696-b5137201a4614ade5e0129ef01cbf661/strat_plan.pdf

02 OVERVIEW

Individual Factors
Human decision-making is based on both deliberate and automatic modes of information processing. These processes can be harnessed to make compliance more achievable.

Environmental and Design Factors
Because most information processing is automatic, peoples' behavior is largely shaped by contextual factors and cues in the environment.

Individual Concepts

- ***Cognitive Load***
- Self-image
- Fast vs. Slow Processing
- Heuristics and Biases
- Intention and Commitment
- ***Rewards and Penalties***
- ***Time Distortion***



Environmental and Design Concepts

- ***Choice Architecture***
- Feedback and Reminders
- Framing and Priming
- Salience
- Simplification
- ***Timing***

Social Factors
How people act and think often depends on the actions of those around them. Most people make efforts to conform to social norms and expectations.[1]

Social Concepts

- ***Messenger Effects***
- Reciprocity
- ***Social Norms***

1. IRS "Behavioral Insights Toolkit":https://www.irs.gov/pub/irs-soi/17rpirsbehavioralinsights.pdf

03 COGNITIVE LOAD

Individual Factors

Refers to the neurological description of the two ways that the human brain is thought to process information:

System 1 = Autopilot



Fast



Unconscious



Automatic



Everyday Decisions



Error Prone

System 2 = Pilot



Slow



Conscious



Effortful



Complex Decisions



Reliable

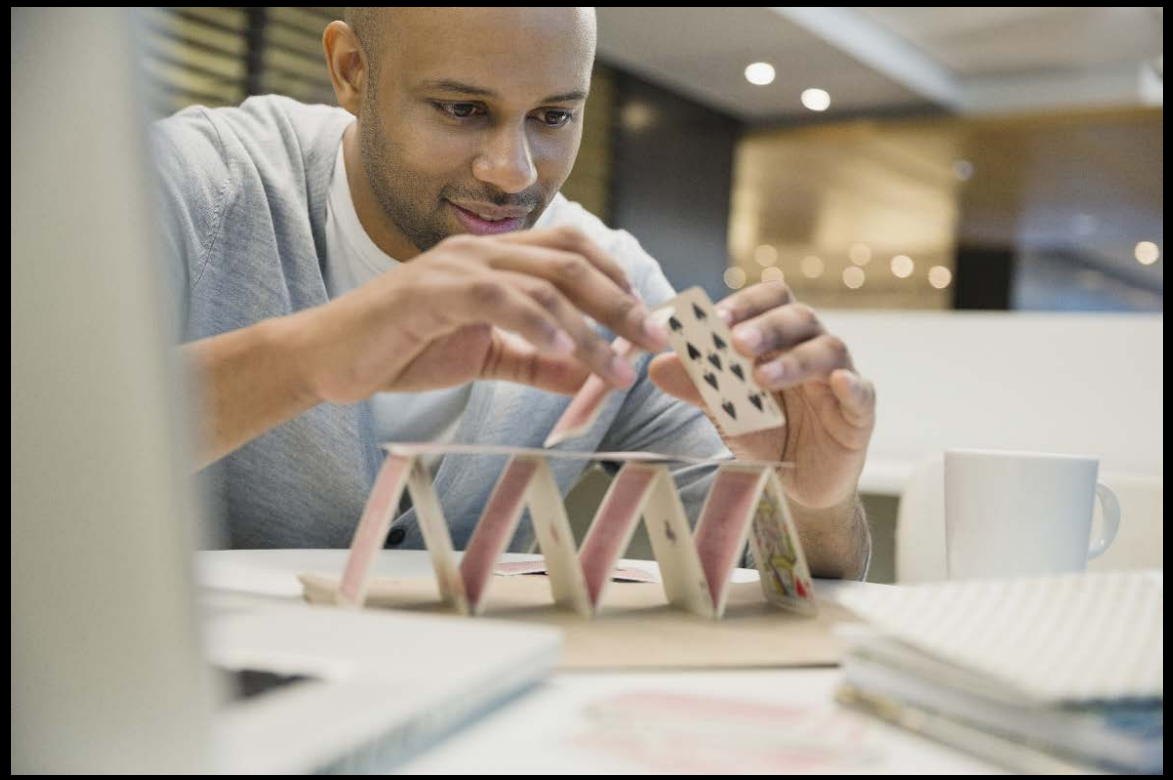
System 2 is *energy intensive and limited in quantity*, so our brain seeks to conserve energy once it begins being depleted

03 REWARDS & PENALTIES

Individual Factors

People respond strongly to both carrots and sticks

Rewards can feel remote and penalties can feel abstract. **When rewards and penalties are more concrete and present, they have more power to spur action.** Interestingly, however, the win-loss math is not as simple as it seems – **the prospect of a loss often has more motivational force than an equivalent gain.** This phenomenon, known as loss aversion, can be leveraged in surprising ways to prompt behavioral change.



03 TIME DISTORTION

Individual Factors

When choosing rewards for now or later, “now” usually wins

People tend to pay more attention to present rewards than future ones, even when this might go against their long-term interests and goals. Time distortion, or temporal discounting, can also take the form of opting to take a small reward now rather than hold off for a larger reward later, or alternatively, **pushing off unpleasant tasks to tomorrow.**



A “100-year flood” has a 26 percent chance of occurring at least once during a 30-year mortgage.[1]

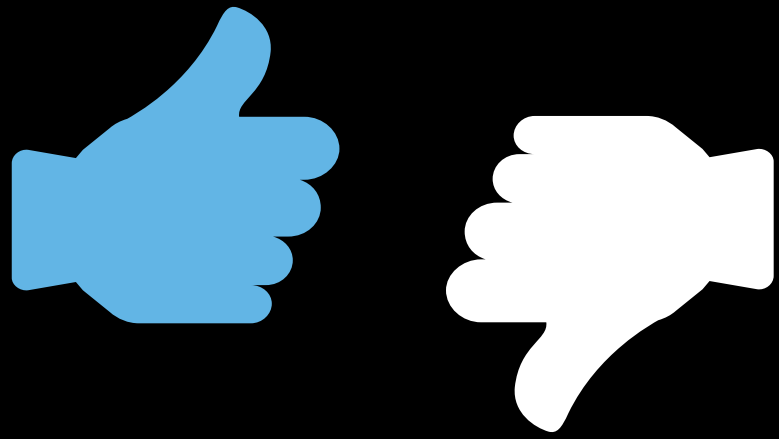
1: http://opim.wharton.upenn.edu/risk/library/RFF-DP-09-07.pdf

04 CHOICE ARCHITECTURE

Environmental & Design Factors

Make the best choice, the easy choice

Changing the way options are ordered or presented helps reduce cognitive burden and enable individuals to make better choices that are in line with their goals. Choice architecture also includes the use of active choice (being forced to make a decision, usually “yes or no”) and defaults (“opt-out” settings).



04 TIMING

Environmental & Design Factors

Nudge at the right time for maximum effect

Attitudes, beliefs, and behavior are influenced by the ideas and environments that we experience **from moment to moment**. Our reactions to a decision prompt can vary widely based on the timing of the prompt. The impact of reminders, warnings, and other feedback mechanisms can be **enhanced by determining the most effective point** in time to place them.



05 MESSENGER EFFECTS

Reactions to messaging often relate directly to opinions about who delivers it and how it is delivered

Reactions to information are often **influenced by the messenger** delivering it. Opinions about information, including **moral judgments, legal judgments,** and **social judgments** can be directly affected by the deliverer or source and the form in which the information is delivered.



05 SOCIAL NORMS

Social Factors

We are social creatures and care what other people think

Social norms are the **values, actions, and expectations of a society or culture** and offer both implicit and explicit guides to behavior. Norms are often identified as **descriptive norms** (observation of what others do, providing information about what is “normal”) and **injunctive norms** (perceived behavior of what most people approve of, providing information on what one “should” do).



06 WRAP-UP

Behavioral Insights can be used to help Federal Insurance and Mitigation Administration (FIMA) reach it's 2022 "Moonshots"

FEMA 2018-2022 Strategic Plan

- 1.1 Incentivize investments that reduce risk, including pre-disaster mitigation, and reduce disaster costs at all levels
- 1.2 Close the insurance gap

FIMA "Moonshots"

- Double Insurance Coverage
- Quadruple Mitigation Investments

Individual Concepts

- Cognitive Load
- Rewards and Penalties
- Time Distortion

Environmental and Design Concepts

- Choice Architecture
- Timing

Social Concepts

- Messenger Effects
- Social Norms

1: https://www.fema.gov/strategic-plan

QUESTIONS



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