



GEOPROFESSIONAL
BUSINESS
ASSOCIATION

ELEVATE

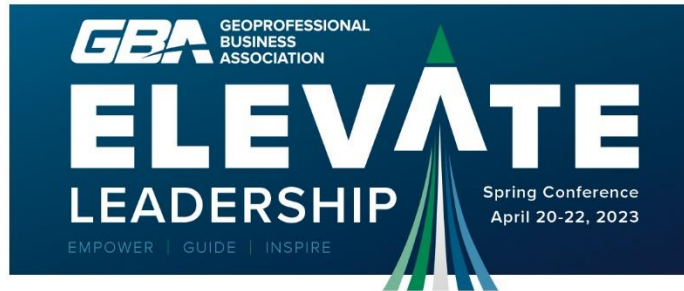
LEADERSHIP

EMPOWER | GUIDE | INSPIRE

Spring Conference
April 20-22, 2023

Sawgrass Marriott
Golf Resort & Spa





Ethical Strategies for an Irrational World

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Terracon









System 1

System 2



THINKING,
FAST AND SLOW



DANIEL
KAHNEMAN

WINNER OF THE NOBEL PRIZE IN ECONOMICS

System 1

- Quick to Respond
- Takes Shortcuts
- Minimal Effort
- Saves Time
- Often Correct, BUT
- PRONE TO MISTAKES



System 2

- Methodical
- Slower
- TAKES MORE EFFORT





A bat and a ball cost \$1.10.
The bat costs one dollar more than the ball.
How much does the ball cost?



\$0.10



~~\$0.10~~



\$0.05

Bat - \$1.05

Ball - \$0.05

Total - \$1.10



System 1 - \$0.10

System 2 - \$0.05

System 1 Biases

- Halo Effect
- Framing
- Confirmation Bias
- Sunk Cost Fallacy
- Optimism Bias



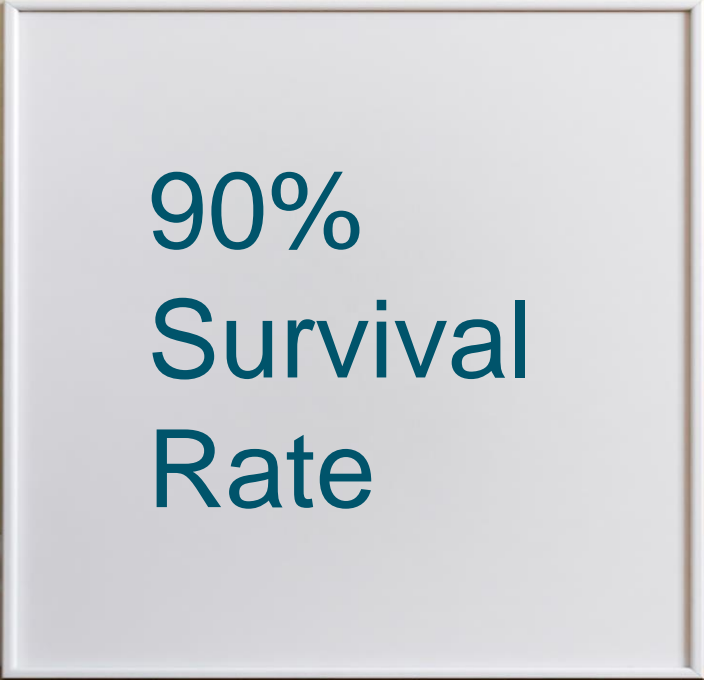
Halo Effect

- If someone is:
 - Successful
 - Attractive
 - Personable
- You are more likely to think they are:
 - Intelligent
 - Generous
 - Trustworthy





Framing



90%
Survival
Rate



10%
Death
Rate

Confirmation Bias



Confirmation Bias



Confirmation Bias



Confirmation Bias



Confirmation Bias



Sunk Cost Fallacy



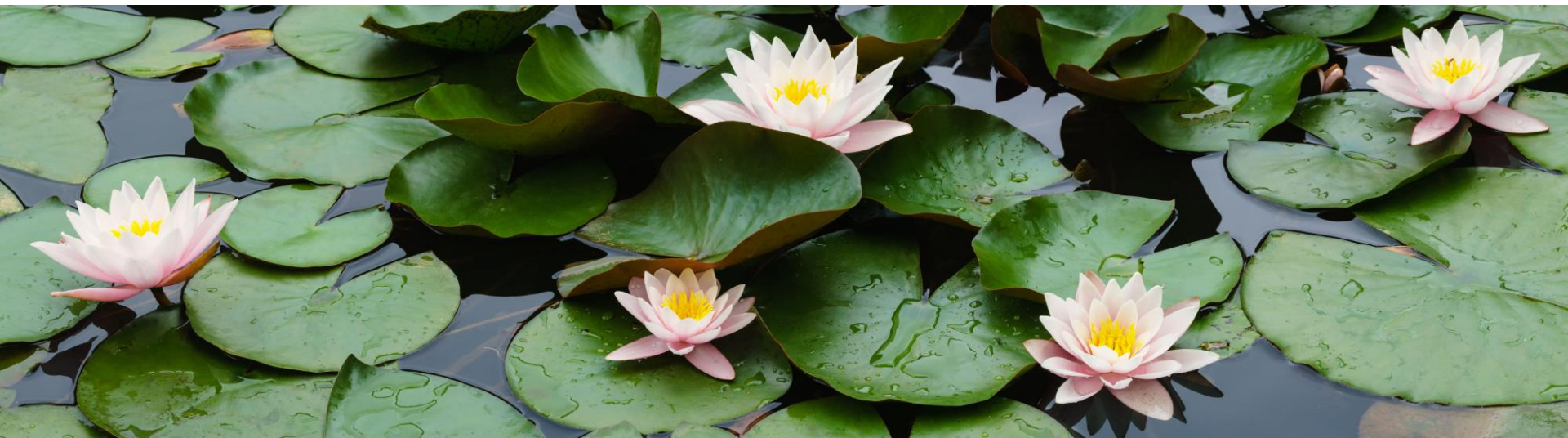
- Costs that have been Incurred that Cannot be Recovered
- Extensive Prior Costs Justify Future Expenses
- Plan Continuation Bias



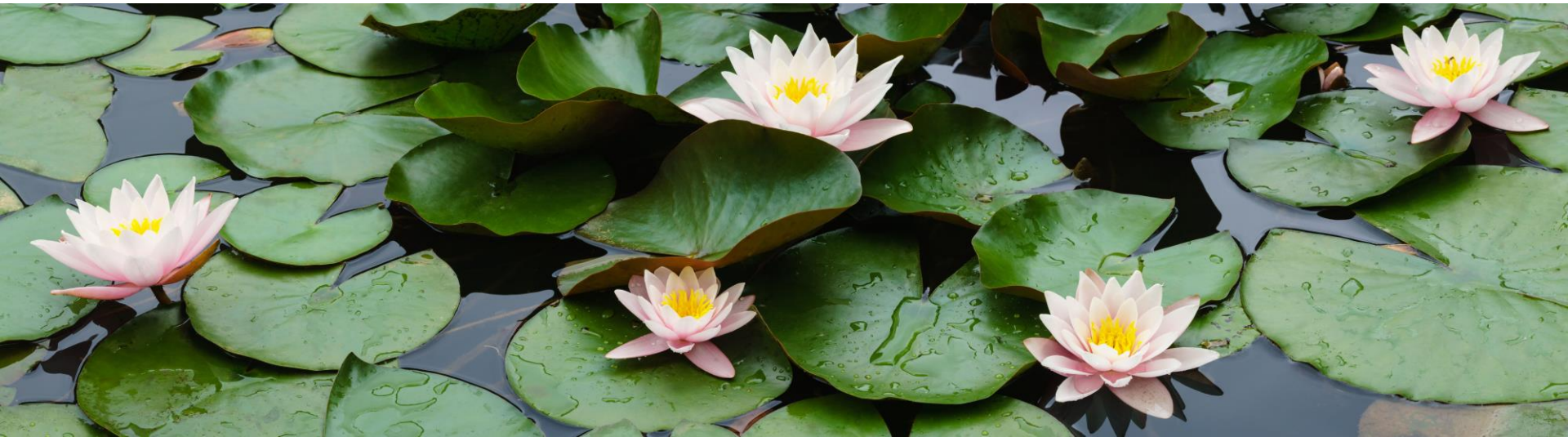
Optimism Bias



In a lake, there is a patch of lily pads. Every day, the patch doubles in size. If it takes 48 days for the patch to cover the entire lake, how long would it take for the patch to cover half of the lake?



24 DAYS

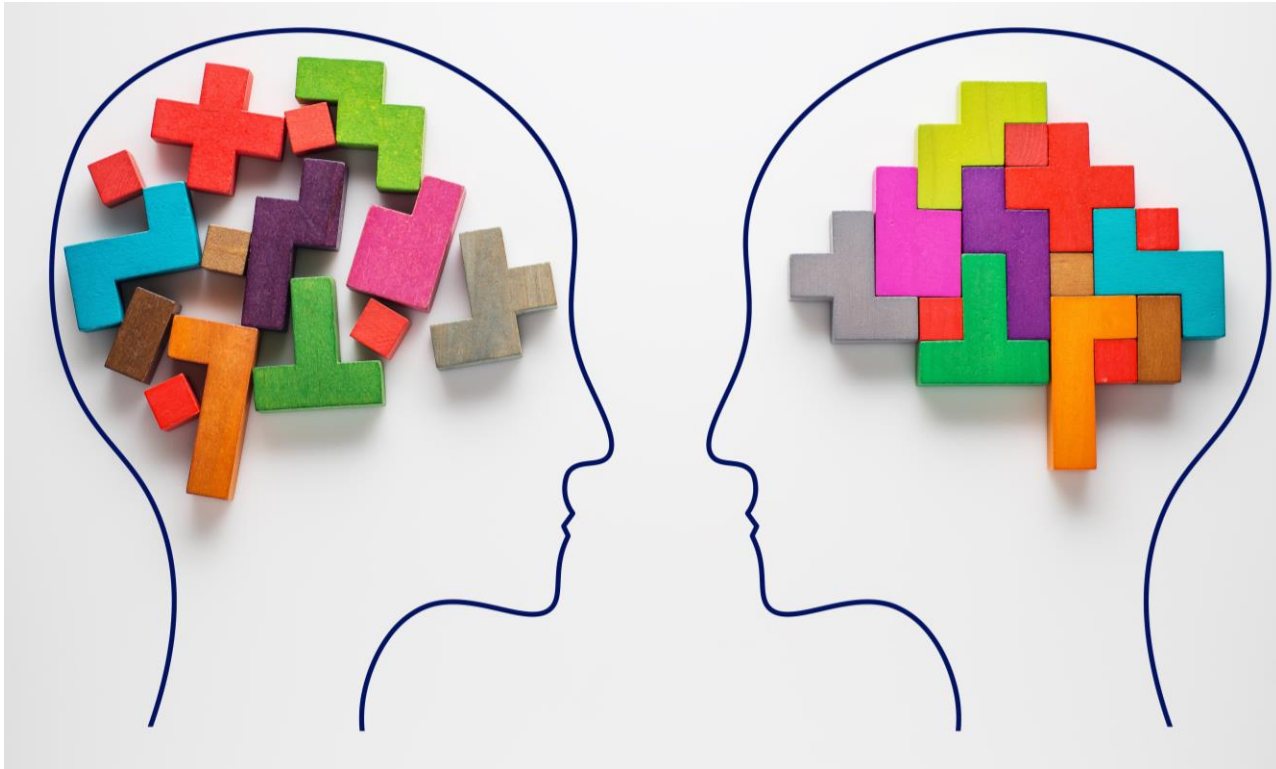


~~24 DAYS~~

47 DAYS

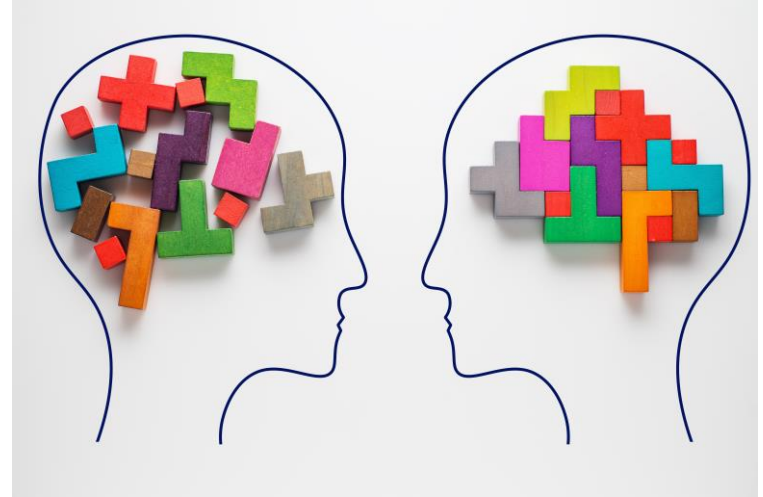


"BUT I'M SMART!!!"

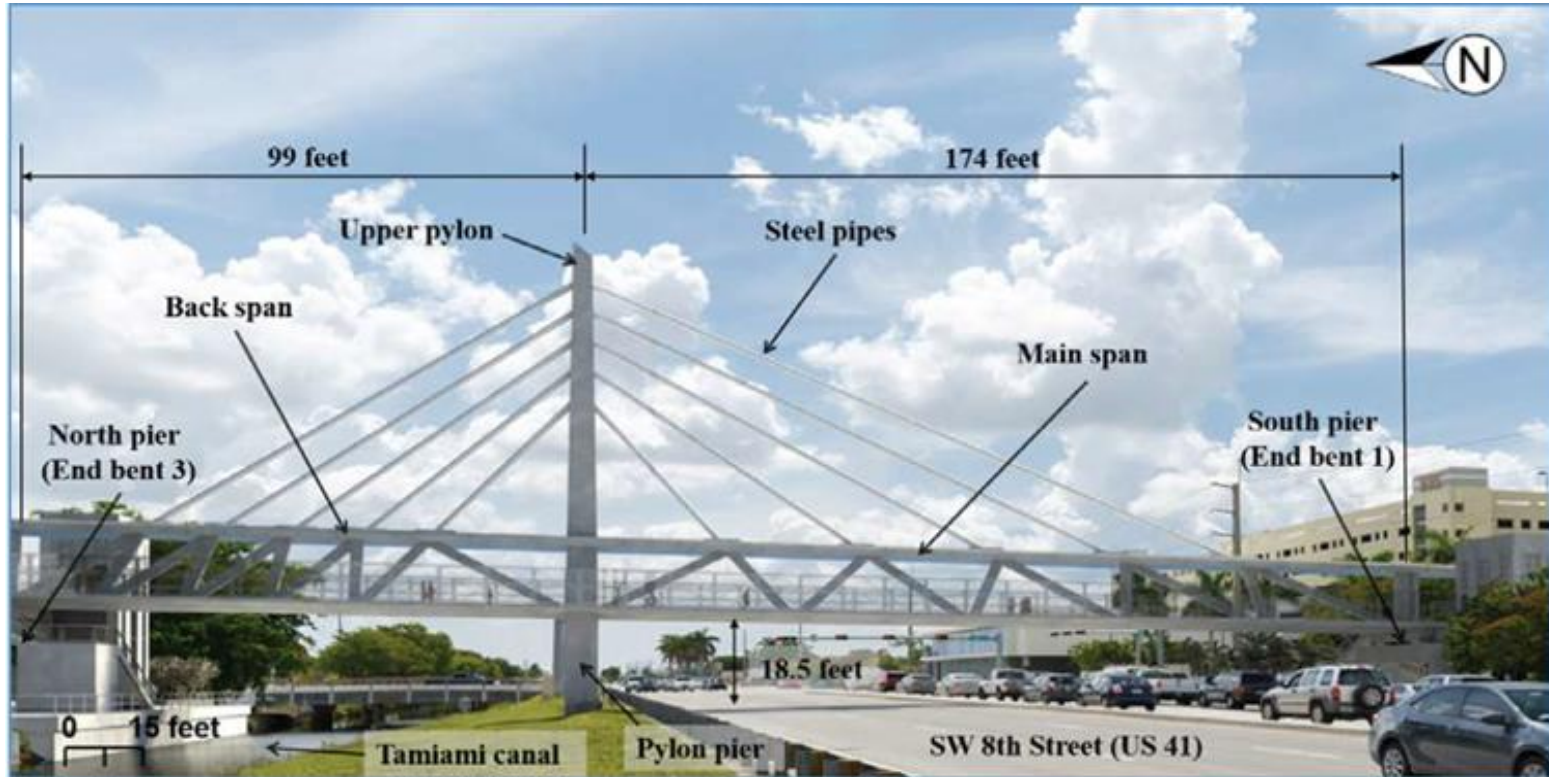


“BUT I’M SMART!!!”

- Highly Intelligent People more Prone to System 1 Biases
- Track Record of Being Right
- More Willing to Trust their “Gut Instinct”



FIU Pedestrian Bridge

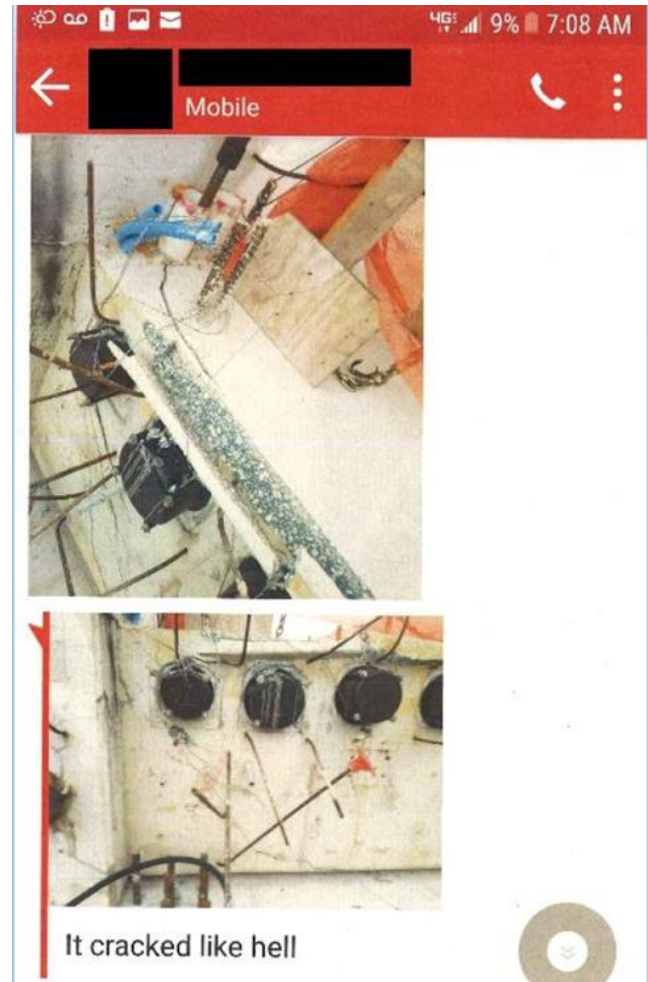


FIU Pedestrian Bridge



FIU Pedestrian Bridge

“IT CRACKED LIKE HELL”







SEOR – “We do not see this as a safety issue.”

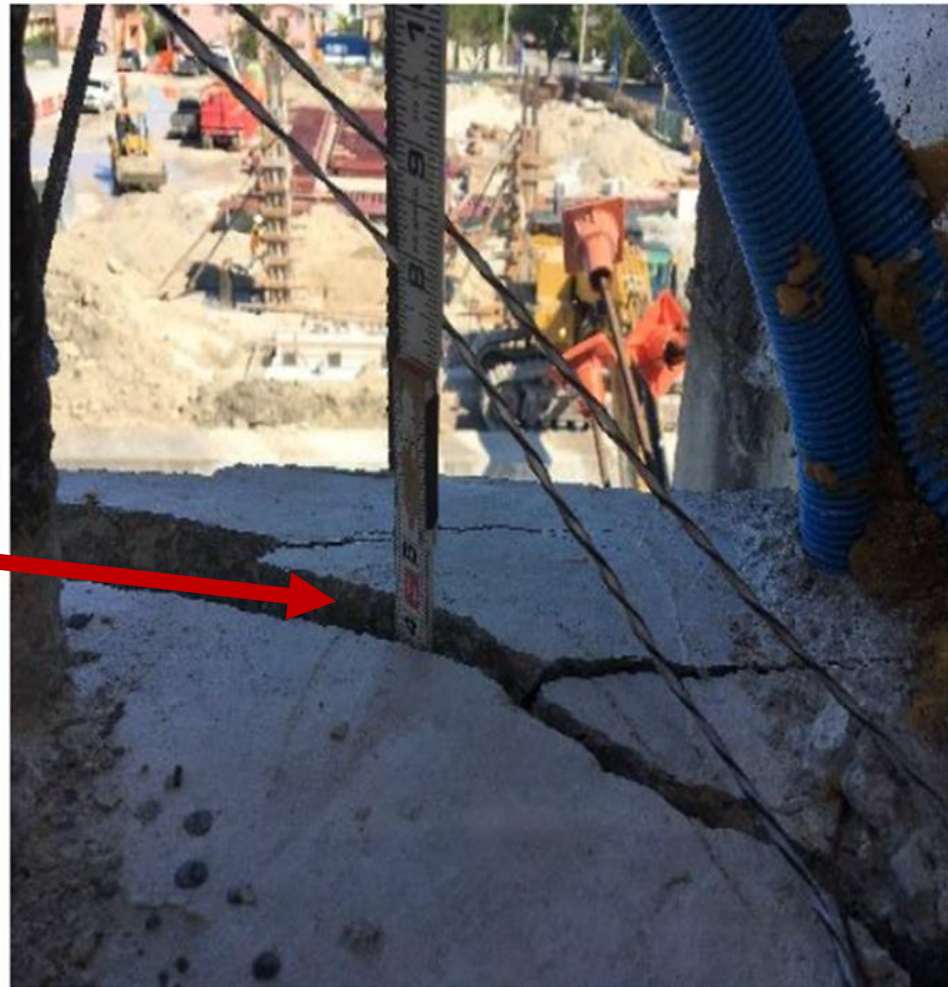


SEOR – “We don’t see that there’s any [safety] issue there, so we’re not concerned about it from that perspective.”



SEOR – “We
have evaluated
further and
confirmed this
is not a safety
issue.”

4" →



FIU Pedestrian Bridge

- The cracks look more significant in person
- No safety concerns
- Temporary loading condition
- Not “replicated by the engineering analysis”



FIVE HOURS LATER

FIU Bridge Collapse



FIU Bridge Collapse

Optimism Bias

- Temporary loading condition
- No safety concerns
- This is a problem to solve, nothing more

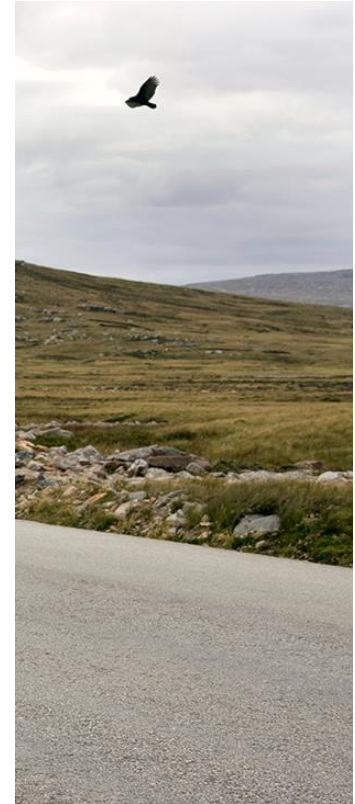


FIU Bridge Collapse



Confirmation Bias

- Cracks look more significant in person
- Not “replicated by the engineering analysis”



FIU Bridge Collapse

Halo Effect

- No one suggested they close the road





Challenger Disaster

- January 28, 1986
- 7 Fatalities
- 25th Manned Mission



Challenger Disaster

- Prior Coldest Launch – 53 Degrees
- Time of Challenger Launch – 36 Degrees





NASA Go/No-Go

- Morton-Thiokol Objects to Launch

An hour later

- Morton-Thiokol Approves Launch

WHAT CHANGED?



NASA's Response

“I am appalled
by your
recommendation”

“My God Thiokol, when
do you want me to
launch, next April?”

Challenger Disaster

Before

“Take off your engineer hat and put on your management hat.” –
Jerry Mason, Morton-Thiokol SVP

After

“You know, you work with people and you develop some confidence and I have great confidence in the people at NASA.”
– Robert Lund, Morton-Thiokol VP of Engineering

Challenger Disaster



“Take off your
engineer hat.”



“Put on your
management hat.”

Framing

- “Take off your engineer hat...”

Halo Effect

- “I have great confidence in the people at NASA”



Challenger Disaster



- Prior Missions Scrubbed
- Trying to Keep to the Schedule
- \$300,000 per postponement
- “When do you want me to launch, next April?”

Challenger Disaster

- Optimism Bias
- Law of Small Numbers
- MT/NASA Discussion
Time – 10:30 PM



How do You Combat this?

- Give it a Voice and Call it What it is



How do You Combat this?

- Empower People to Ask Hard Questions



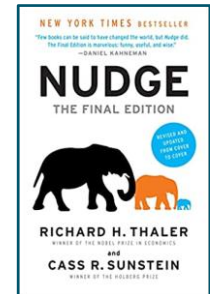
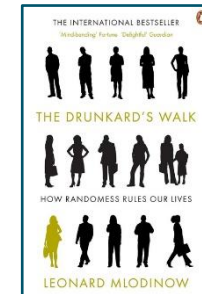
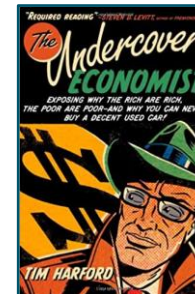
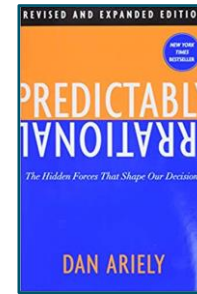
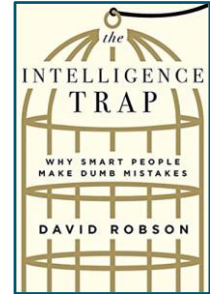
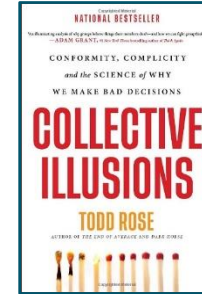
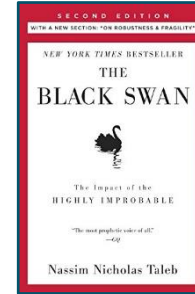
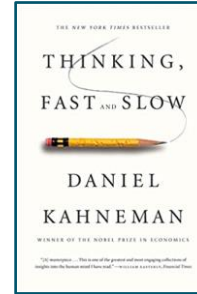
How do You Combat this?



- CURIOSITY!
- Make it Someone's Job OR
- Force Yourself to take the Other Side

Get Curious

- Thinking Fast and Slow
- The Black Swan
- Collective Illusions
- The Drunkard's Walk
- The Intelligence Trap
- Nudge
- Predictably Irrational
- The Undercover Economist



KNOWING  
IS HALF THE BATTLE

Thank You!

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