H-E-A-R SAY

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Learning from Incidents - Protips Part 7: The Evolution of Cognitive Biases

This article is the seventh in a series that attempts to distil the accumulated knowledge of vPSI's consultants into "Protips" of value to those involved in investigating and learning from incidents.

In a previous issue (H-E-A-R Say Volume 12, Issue 1), we discussed cognitive biases that might be experienced during an incident and its investigation, both by those involved (including witnesses) and by those doing the investigation. It's a big topic though, so we've decided to delve deeper into the brain science behind why humans even have cognitive biases.

Cognitive Biases are subconscious mental shortcuts that help us rapidly handle incoming information. Unfortunately, they may also skew our decision making away from that which is logical. But if they cause us to be illogical, how did they survive the evolutionary process?

Before we get into that, let's look at what's happening when cognitive biases get called into play. The reason these biases exist, and everyone has them, is that our brains consume a disproportionate amount of our body's energy budget.

In Daniel Kahneman's book, *Thinking, Fast and Slow,* he explains how the brain works in a way that's easy to understand: the brain is in two modes all the time. System 1 is the automatic/storage part of the brain that controls involuntary things like breathing and rote activities such as driving, whereas System 2 is the pre-frontal cortex which allows us to reason and make decisions. Executive functions here help us understand and solve problems.

System 1 is doing 95% of the work, but System 2 is using up more energy. The brain is constantly trying to save energy by automating routine or repetitive actions and incorporating them into System 1.

This conversion of tasks from System 1 to System 2 is illustrated by a frequent post-incident question, "What were they thinking?"

We see incidents because of this all the time, and all too often investigators list complacency as the root cause when they should be delving deeper (see our article on Complacency in H-E-A-R Say Volume 12, Issue 3). It's worth noting that corrective actions in such cases should be eliminating or protecting against the human error, rather than punishing or blaming the employee for being human.

One of our investigators was on-scene in such an incident, where a string of drill pipe became disconnected as the crew was pulling out of hole, and the pipe started swinging around. One employee, without thinking, jumped up and grabbed the pipe and then was just stuck, holding on for dear life, until the pipe stopped swinging.

Afterwards, the crew member said he didn't know what he was thinking – and he was right. The fight, flight, or freeze response happens in System 1 quicker than your conscious brain can process. Though this response isn't itself a cognitive bias, it does trigger and amplify cognitive biases by hijacking executive function and making the brain rely on shortcuts that prioritize survival over logic and reason.

And that's how we get back to evolution: our ancestors' ability to make quick decisions thanks to cognitive biases allowed them to survive dangerous situations without having to take the time to think things through.

Print the last page of this newsletter for a free mini-poster, and hang it wherever investigations take place!

Employee Engagement: The Missing Link in Safety Performance

Employee engagement has become one of the most closely watched indicators of organizational health—and for good reason. Decades of research show that engaged employees deliver better productivity, stronger quality, higher retention, and notably, better safety outcomes. Yet despite this well-established connection, engagement levels are moving in the wrong direction.

Gallup's 2025 State of the Global Workplace report shows that global employee engagement fell to 21%, down from 23% the year prior. Gallup notes that engagement has only declined twice in the last 12 years—in 2020 and again in 2024—highlighting the significance of this trend. In the United States, engagement remains higher than the global average at 31%, but it has steadily declined for four consecutive years since 2020.

At the other end of the spectrum, Gallup reports that best-practice organizations consistently achieve engagement levels of around 70%. These organizations don't just outperform their peers financially, they also demonstrate stronger safety performance, fewer serious incidents, and more resilient operations. The message is clear: engagement isn't a soft metric. It's a leading indicator of both safety and business outcomes.

At the same time, another respected voice is offering a different perspective. The Conference Board—an independent, non-profit research organization with over a century of credibility—recently published Uncertainty and Opportunity: The CEO Playbook for 2026. Based on interviews with CEOs about upcoming risks and challenges, the report includes "low employee engagement" as a concern.

In contrast to the Gallup reports, the Conference Board findings show that CEOs rate concern about low engagement at ~22% globally, but only ~12% in North America. Even accounting for different methodologies and questions, the contrast raises an uncomfortable question: Is leadership underestimating how disengaged employees really are?

This potential disconnect mirrors a familiar concept in safety: the gap between Work as Imagined and Work as Done. Leaders often believe systems, procedures, and messaging are working as intended, while frontline employees experience something very different. When engagement data from employees and perceptions from executives diverge, safety professionals should pay close attention.

Engagement and safety are inseparable because safety does not live in policies, posters, or binders. People create safety. Real safety culture is built by the workers who perform the job every day—not by memos from an ivory tower. Employees who are engaged care about outcomes. They speak up when something feels wrong. They look out for one another. Disengaged employees do the opposite: they comply minimally, stay silent, and work around problems instead of fixing them.

Worker participation is the practical expression of engagement in safety. It goes far beyond being told the rules. True participation means workers (including full-time employees, contractors, subcontractors, and temporary workers) help build, run, and improve the safety system. If someone is exposed to the hazard, they deserve a voice in how it's controlled.

Frontline workers usually see risks first: the close calls, the shortcuts, and the mismatches between procedures and reality. Engagement cannot exist without trust. For participation to be real, workers must feel safe speaking up. That requires:

- Clear reporting paths,
- Time and space to participate,
- Zero retaliation, and
- Action and communication on the hazard(s) surfaced.

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The fastest way to kill engagement—and reporting—is to punish the people who raise concerns, but inaction is nearly as damaging. When workers speak up and nothing changes, trust evaporates. Silence sends a louder message than any policy ever could.

High-engagement safety cultures look different in everyday work. They include workers actively:

- Reporting hazards and near misses,
- Helping analyze routine and non-routine tasks,
- Improving procedures to match reality,
- Participating in inspections and investigations,
- Assisting with training and onboarding, and
- Evaluating what's working—and what isn't.

These organizations don't focus on blame. They focus on systems, root causes, and recognizing proactive safety actions. Importantly, worker participation does not slow production. It prevents injuries, shutdowns, rework, and costly mistakes.

This engagement gap revealed by Gallup and the Conference Board is a warning, especially for safety professionals. If leaders believe engagement is higher than it is, or if they think engagement doesn't matter, they may miss early signals of risk. Closing this gap requires shifting from compliance-based thinking to the principles found in Human and Organizational Performance (HOP):

- Listening to how work is actually done,
- Valuing frontline expertise,
- Designing systems that support success, and
- Treating engagement as a system outcome, not a motivational problem.

SAFETY CULTURE ICEBERG

One of the ways to engage employees and build trust is by creating Learning Teams. The purpose of a Learning Team is to bring together employees who do the work, along with any support staff as needed (engineering, maintenance, HSE, etc.) to understand how work gets done. During the discussions, Work as Done versus Work as Imagined and various challenges are covered. When actions to improve the process are identified and addressed by management, employees feel better about their work and that management is listening to them.

Safety isn't about rules. It's about trust. And trust is built when people see that their voice leads to action. That's when safety stops being paperwork—and starts becoming the way work truly gets done.

At the Podium

vPSI Consultants are frequently called to speak at conferences and other events. Below are some chances to hear one or more of our consultants in the coming months:

- Co-Founder and Director Norman Ritchie will be discussing To SIF or not to SIF at the Risk Engineering Energy Forum (REEF) Meeting in Houston, TX, on February 20th. He'll also be speaking on Riskwashing at the ASSP Northwest Chapter Professional Development Conference (PDC) in Brooklyn Park, MN, on February 17th, and he'll be the keynote speaker on the same topic at the ASSP Gulf Coast Chapter Health and Safety Summit in Houston, TX, on April 16th. He'll be presenting on HOP at the National Safety Council (NSC) at their Safety Summit on May 7th in Baltimore, MD.

- Principal Consultant Tom Knode will be speaking on Employee Engagement at several upcoming events including in Independence, MO, for the Associated General Contractors (AGC) on March 6th and for the ASSP Gulf Coast Chapter in Houston, TX, on April 16th at their Health and Safety Summit. He will also be presenting on the Fatal 4+ in College Station, TX, on February 17th.

Bias Awareness Checklist for Investigators

Look for these common cognitive biases when conducting or evaluating incident investigations to reduce their negative influence.

1. **Confirmation Bias:** Seeking information that supports what is already believed about the event, the people, or the causes.
   Watch for: "This fits what we always see…"

2. **Outcome Bias:** Judging investigation quality by the severity of the outcome rather than the quality of the process.
   Watch for: "It was just a near miss so no need for depth."

3. **Hindsight Bias:** Believing the outcome was predictable once it's known.
   Watch for: "They should have seen this coming."

4. **Similarity Bias:** Favoring investigations that look or sound like how I would do them.
   Watch for: "That's not how I'd structure it, so it's wrong."

5. **Status Quo / Conformity Bias:** Preferring conclusions that fit established organizational narratives.
   Watch for: "That's consistent with our usual findings, all good."

6. **Halo / Horn Effect:** Letting opinions of the investigator or others involved influence opinions of their work.
   Watch for: "Their reports are always strong/weak."

7. **Authority Bias:** Deferring too readily to the opinions of senior staff or experts.
   Watch for: "Management already agreed with these conclusions."

8. **In-Group / Out-Group Bias:** Judging work more favorably when it comes from "my group" or discipline.
   Watch for: "They don't really understand how this work is done."

9. **Curse of Knowledge:** Assuming others share my knowledge, experience, or understanding of the situation.
   Watch for: "This is obvious, it doesn't need explaining."

10. **Illusory Superiority Bias:** Assuming my judgment is more objective or accurate than it may actually be.
    Watch for: "This one's straightforward."

Use this checklist to support curiosity, challenge assumptions, and improve fairness and learning during investigation and review.