

Flawed Situational Awareness:

The stealth killer of first responders

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Warning:

This program uses adult facilitated learning techniques and audience participation is essential.

If you do not want to participate, when asked to volunteer, look down at the floor like you just saw a mouse run past or keep your cell phone handy so you can act like you're responding to a very important text message.

I am a trained professional.

Do not attempt these exercises at home or on the job unless you are willing to live with the consequences that you may actually improve first responder safety.

#3

Contributing Factor
to first responder near-miss
& casualty events:

Human Error
(Sometimes called “Human Factors”)



#2

Contributing Factor
to first responder near-miss
& casualty events:

Poor Decision Making

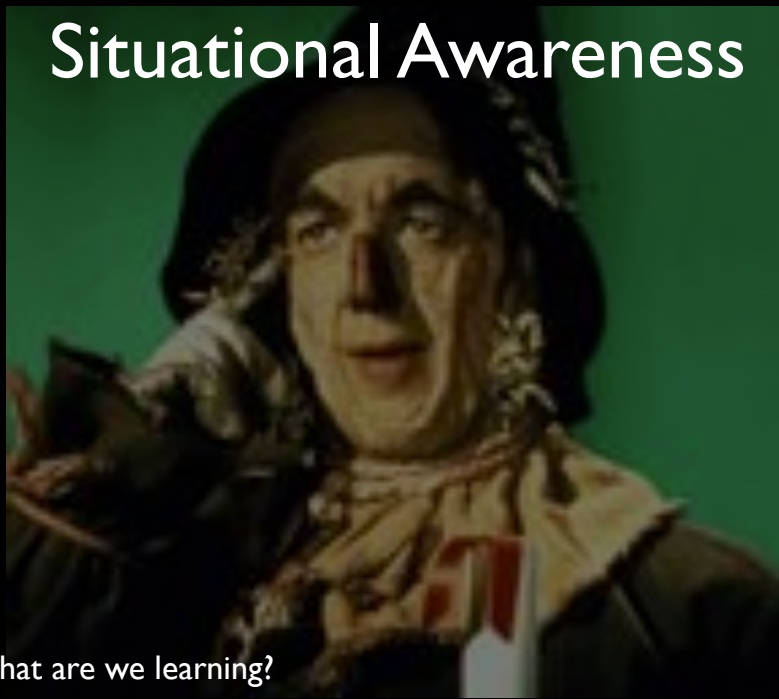


#1
Contributing Factor
to first responder
near-miss & casualty events:

Flawed Situational Awareness



Situational Awareness



What are we learning?

3 Levels of Situational Awareness (SA)

Level 1:

Capturing the cues and clues in the current situation

- Paying Attention
- “Perception”
- “What’s happening right now?”



Negative Clues & Cues



Only experts can comprehend
negative clues & cues



3 Levels of Situational Awareness (SA)

Level 1:

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- “Perception”
- “What’s happening right now?”

Level 2:

Comprehending the current situation

- Making sense of it
- “Comprehension”
- “What does this mean?”





3 Levels of Situational Awareness (SA)

Level 1:

Capturing the cues and clues in the current situation

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Level 2:

Comprehending the current situation

- Making sense of it
- “Comprehension”
- “What does this mean?”

Level 3:

Predicting the future situation

- Mental models of future events
- “Projection”
- “Where is this going?”



Flawed Situational Awareness
is not a root cause.

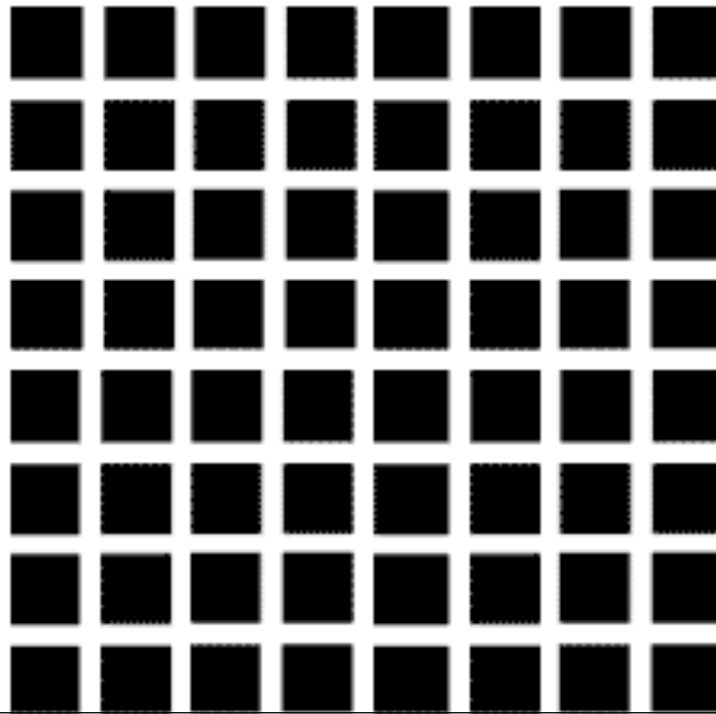
It's a symptom.

Barriers that flaw situational
awareness is the root cause.

Time to run some experiments...

Perceptions

The
Flawed Perceptions
Experiment.



Mental Models

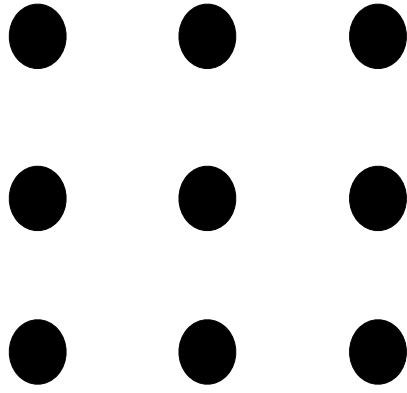
The
Shared Mental Models
Experiment

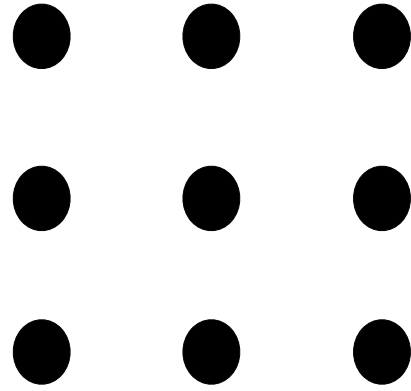




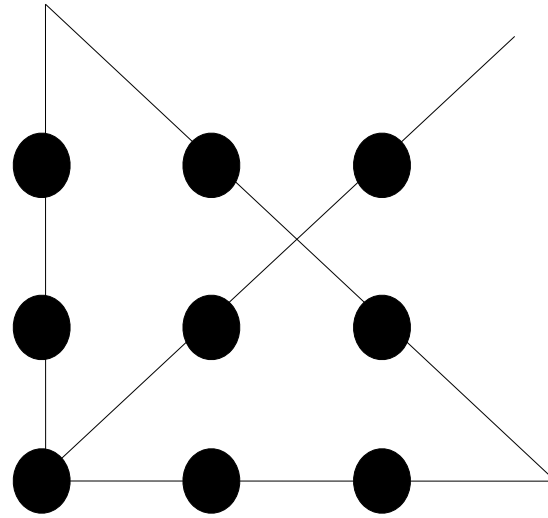
Heuristics & Biases

The
“Follow the Rules”
Experiment





Queue the thinking music



Information overload

The
“Information Overload”
experiment

Last night at 2115 hours a firefighter was playing volleyball and broke his jaw. He got on his motorcycle to drive himself to the hospital. While enroute to the hospital he took a wrong turn and ended up in the chief's neighborhood. As he drove by the chief's house, the chief's cat ran in front of him and as he swerved to miss it he almost hit the chief's daughter, Rose. He then drove through the chief's wife's favorite bed of daisies. It appears as though the flowers are not going to make it. The firefighter was admitted to the hospital. The chief's daughter is distraught over the near-miss and is in bed recovering. The chief's wife is very upset about her flowers dying.



Flawed attention

The “pay attention” experiment.





○ 1
M G 2
W T F 3
S T F U 4
P W N 3 D 5
U R A N O O B 6
L M A O R O T F 7
K T H X B Y E : P 8

IF YOU CAN READ THIS, SO OTHERS CAN TOO.



Avoid the Blame Game

An easy trap for observers of behavior

- “They should not have...”
- “They could have...”
- “They didn’t...”
- “They failed to...”
- “If only they had...”

Be weary of hindsight bias

Applying what you know about a casualty event (after the fact) in a way that makes decisions or behaviors look flawed or less sensible.

Asking the right questions to get the right answers:

- How did things look at the time they were happening?
- How did events unfold around them?
- What were the cues and clues?
 - Did the responders see and/or hear the clues & cues?
 - Did the responders understand the clues and cues?
 - Did the clues and cues make sense?
- What were the responders trying to accomplish?
- What were the responders doing at the moment in time when things went bad... and why did it make sense to be doing that?

7 General Situational Awareness (SA) Lessons

1. Responders with poor SA can still have good outcomes... if only by luck.
2. Responders with good SA can still have a bad outcomes.
3. Stress can challenge SA.
4. What to pay attention to... is NOT always intuitive or obvious.
5. Humans can only hold about 7 (+/- 2) pieces of unrelated pieces of information in working memory.
6. Attention is drawn to things that are perceived as threatening.
7. Responders rarely realize they are losing their SA... Until it's too late - making it a stealth killer.

Thank you to the members of our military,
past and present.





I have a favor to ask...

Pay it forward



Helping you see the bad things coming...
in time to change the outcome.

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