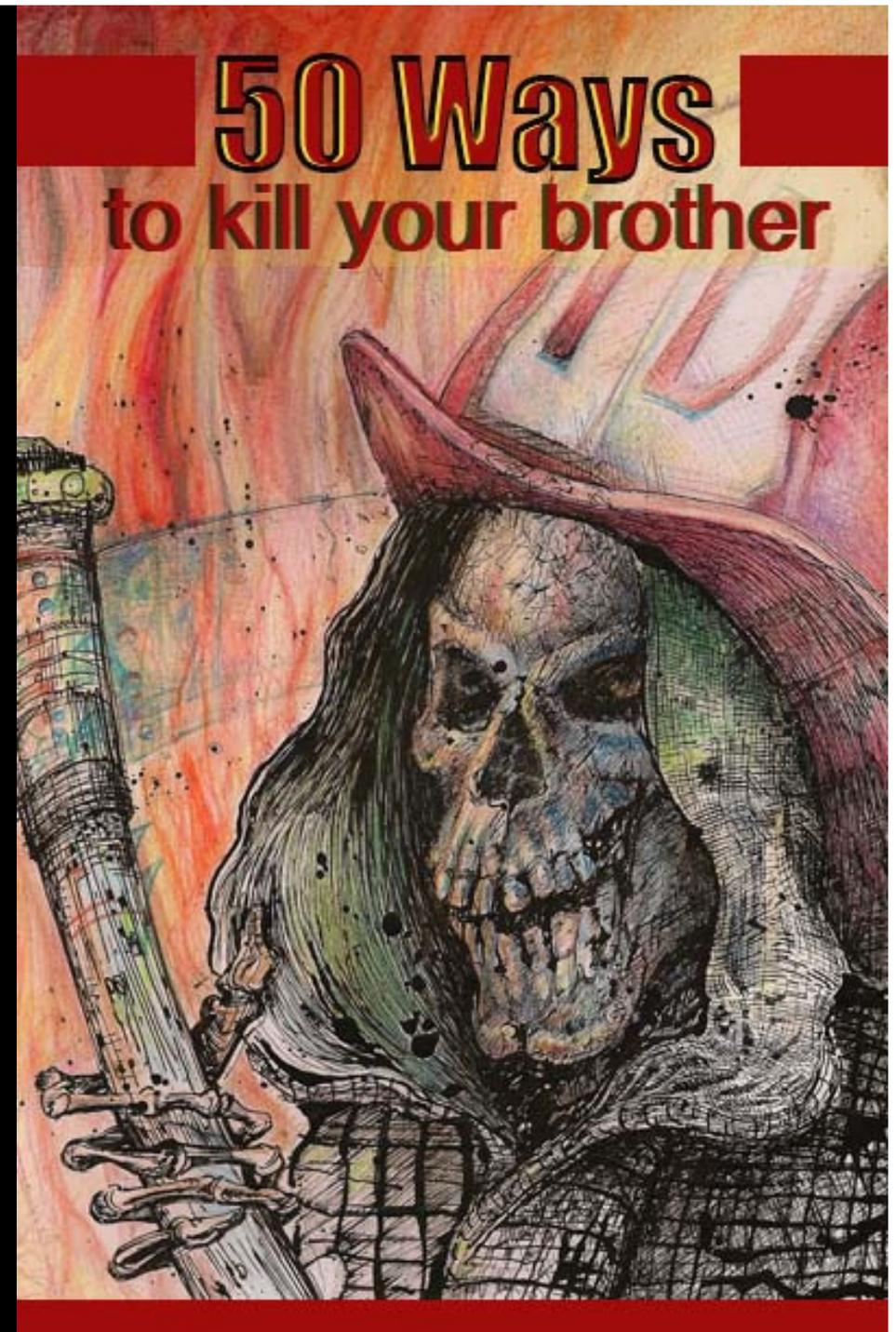


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50 Ways to kill your brother



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Part 1

Understanding Fireground
Command Decision Making
and Situation Awareness

No fireground commander ever responded to a call thinking to him or herself...

“I’m going to lose my situation awareness on this call... make some bad decisions... and jeopardize the safety of my firefighters.”

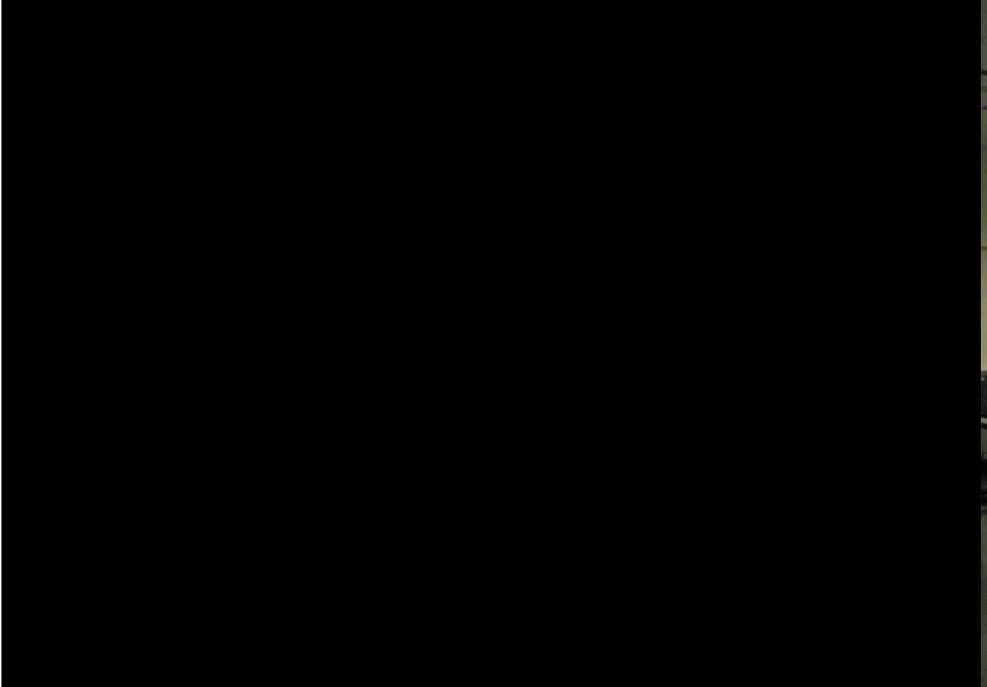
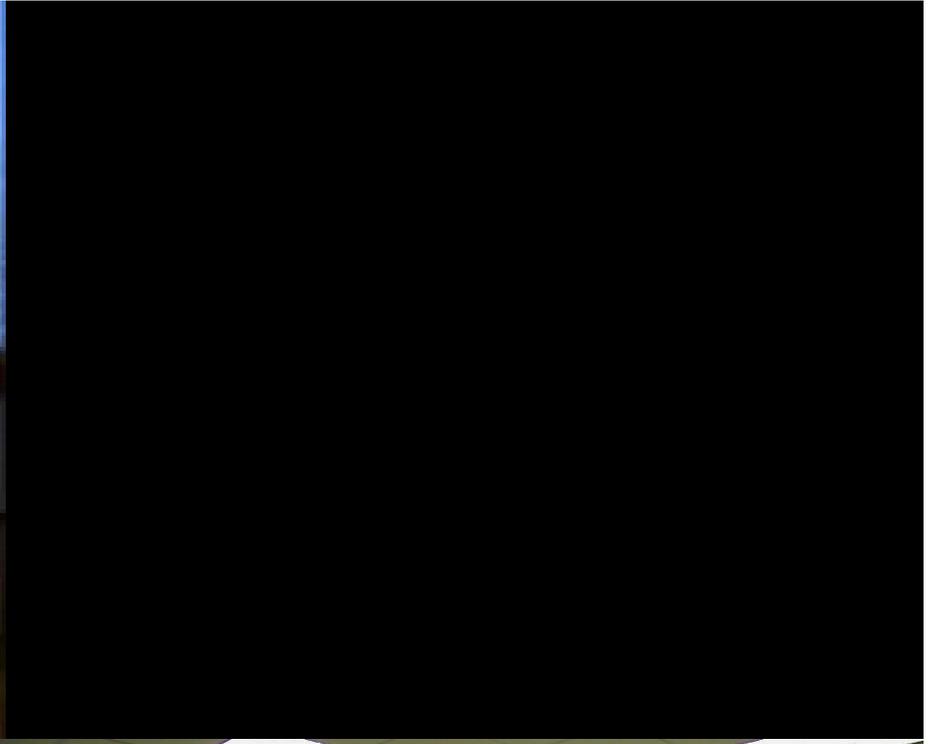
Yet it happens.

The traditional decision making process

Steps in a traditional decision making process

1. Define the problem
2. Identify decision criteria
3. Allocate weights to the criteria
4. Develop the alternatives
5. Evaluate the alternatives
6. Select the best alternative
7. Evaluate effectiveness of the action

Why does the traditional
decision making process not
work on the fireground?



The physical reaction to stress:

- Heart rate increases.
- Respirations increase.
- Pupils dilate.
- Glucose released for instant energy.
- Endorphins are released.
- Blood supply to the kidneys and digestive track is restricted.
- The bowels and bladder may release their content.
- Natural judgment systems can shut down.
- Primitive instincts take over.

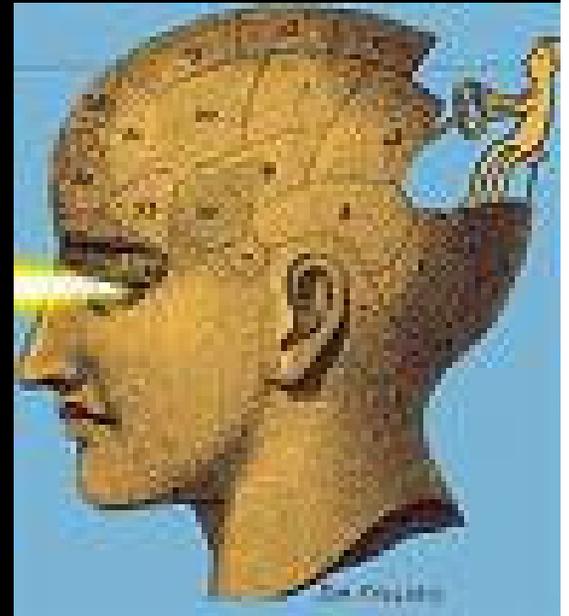


Your cognitive reaction to stress:

1. Your “rational” judgment system shuts down.
2. Your “intuitive” judgment system kicks in.
3. Hereditary instincts engage (like fight or flight)
4. Your decision making becomes intuitive.
5. Your attention is narrowed.
6. You can become hyper vigilant.
7. You may struggle to understand and process complex information and details.
8. You may revert back to behaviors that are routine, comfortable, or habit.

Recognition-Primed Decision Making Process

- Size-up situation quickly
- Recognize “typical” ways of reacting
- Mentally game out your option
- Focus on most relevant information
- Form expectations
- Detect unusual things and problems
- Seek explanations for unusual events
- Make a decision and put it into action



Recognition-primed decision making under stress requires:

- Situation Awareness
(Paying attention)
- Tacit Knowledge
(Unconscious knowledge)
- Ability to conduct mental simulations
(Predicting future events through modeling)
- Self-Confidence
(Be able to trust your gut... your intuition)



Hypothetically speaking:

Two highly trained experts...

Looking at the same thing...

At the same time...

From the same angle...

With all other things being equal...

Should see the same thing.

A simple exercise
will test this hypothesis.

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Part 2

Understanding the Barriers
Challenging Commander
Situation Awareness

About...

The study design

The existing body of research

The list of barriers

Multiple Card Sort Technique

Retrospective Interviews

Interrelatedness of barriers

Barrier categories



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Commanders said their SA was challenged by staffing issues.

1. Under staffing

2. Unpredictable staffing

3. Response time delays

4. Lack of experience

- Over staffing
- Quality of staffing
- Inadequately levels of training

Commanders said their SA was challenged by poor communications.

5. Missed radio communications

6. Updates or progress reports

7. Misunderstood words or phrases

8. Incomplete communications loop

9. Too much radio traffic

- Radio equipment problems
- Non-compatible radios
- Multiple radio channels
- Crews unable/unwilling to communicate by radio

Commanders said their SA was challenged by issues with physical and/or mental stress.

10. Overloaded

- Pressure

11. Overwhelmed

- Underwhelmed (bored)

12. Frustrated

- Afraid

13. Anxious

- Physically ill

14. Angry

- Worried

15. Excited

Commanders stated their SA was challenged by excessive workload or poor workload management.

16. Multitasking

17. Setting tasks aside to do something else

18. Performing non-command tasks

19. Falling behind the incident

20. Assuming multiple command roles

- Complexity of the incident
- Lost span of control
- Mental workload exceeded capacity

Commanders stated their SA was challenged by human factors.

21. Lost focus

- Personality traits

22. Poor assumptions

- Fatigue

23. Over confident / Ego

- Personal biases

24. Perception of reality

- Lack of command presence

25. Organizational Culture

- Over analyzed

26. Complacency

- Under confident

27. Not paying attention

28. Attitude

Commanders stated their SA was challenged from poor attention management.

29. Distractions

- Time distortion

30. Interruptions

- Pre-occupied

31. Selective listening

- Lack of vigilance

32. Tunnel Vision

- Hyper vigilance

33. Task fixation

Lack of help at the command level.

34. No command aide/assistant

- No command advisor
- Did not have, use, or set-up a command board or worksheet
- Did not have or use a checklist

Commanders stated their SA was challenged from poor data/information management.

35. Information overload

- Unexpected data/info

36. Incomplete size-up

- Unable to determine importance of data/info

37. Unable to collect useful data/info

- Disoriented

38. Inaccurate information

- Unable to process what is observed

39. Lost accountability

- Physical act of sharing data/info

Commanders stated their SA was challenged from lack of focus on the most important goals & Mission.

40. Goal fixation

- Unclear goals

41. Failing to continually assess goals

- Poorly communicated goals

42. Lack of SOP/SOG

- Lack of benchmarks

43. Did not follow SOP/SOG

- Defiance of SOP/SOG

44. Independent goal setting (freelancing)

- Passing of command

- Conflicting goals

45. Error creep

Commanders stated their SA has been challenged from flawed mental modeling.

46. Presence/absence of a gut feeling

47. Dismissing cues that “don’t fit” the mental model

48. Improper mental model formed prior to arrival

49. Unexpected situation found

- Unable/unwilling to accept bizarre cues
- Having to change mental models

Commanders stated their SA has been challenged from being poorly situated (located) as a commander.

50. Located too close to the incident

51. Location compelled the commander to performing fireground tasks

52. The commander engaged in fighting the fire

53. Environmental elements (heat, cold, rain, snow, wind, loud noises)

- Moving around too much
- Pumping/assisting pump operator

Who are these coaches talking to?



Commanders stated their SA has been challenged when all personnel were not on the same page.

54. Lack of shared mental model

55. Lack of shared sense-making

Do you see a young lady?
Or an old woman?



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Part 3

Fireground Command
Lessons and
Best Practices

Fireground Command Lessons

1. A commander with poor SA can still make a good decision, if only by luck.
2. A decision made with good SA can still have a bad outcome.
3. Maintaining SA requires a physical, mental and emotional commitment to pay attention.
4. What to pay attention to... is NOT always intuitive or obvious.
5. Your attention is drawn to things that are loud, bright, moving, or in close proximity to you.
6. Commanders rarely realize they are losing their SA... Until it's too late.
7. You can only remember 7 (+/- 2) unrelated pieces of information.

Fireground Command Lessons

Put the puzzle pieces together

What has happened prior to my arrival?

What is happening right **NOW**?

- How fast are things changing?

What is going to happen next?

- You must be able to mentally get out ahead of the fire... to think beyond the current situation.
- Ask yourself: Can I accomplish my goals with the resources I have to work with?

5 ways commanders get into trouble:

1. Don't read the smoke properly.
2. Underestimate the speed of the incident.
3. Overestimate the abilities of their crews.
4. Feel pressured to take "heroic" actions without conducting a risk-benefit assessment.
5. Focus on the wrong things or on too many things.

Commander Best Practices

1. Prioritize incoming information.

- Smoke (fire) condition.
- Construction / decomposition of structure.
- Speed the incident is moving.
- Realistic assessment of savable lives.

2. Set strategy and tactics based on the quality and quantity of staffing.

- The size-up must be constant.
- Do not lock on to a strategy or tactics until adequate help arrives.
- Consider the risk to your personnel versus the benefit of their actions.

Commander Best Practices

3. Stay focused on the big picture incident.
4. Do not perform firefighter duties.
5. Never miss communications from your most at-risk companies.
 - Commanders cannot effectively listen to, and comprehend, multiple conversations simultaneously.
 - The stimulus closest to the commander will occupy his or her attention.

Commander Best Practices

6. Command from a vehicle or a remote location but maintain a visual fix on the incident.

7. Control distractions and interruptions.

- Call a personal time out
- Don't be a high-profile target

8. Use a command aide/advisor/team.

Commander Best Practices

9. Establish and maintain a strong command presence.

- Control your emotions (excitement, frustration, anger, ego).
- Control your people.
- Be clear and concise with your orders.
- Keep track of your people and what they are doing.
- Keep track of the passage of time and the speed of the incident.
- Develop “meta-awareness.”

10. Accelerate command knowledge and expertise.

- Training that is realistic and repetitive.
- Simulation.
- Near-Miss Reports.
- Case Studies
- LODD Reports.
- Mentorship program.
- Post-incident evaluations.

25 Point Fireground Command Health Check-up[©]

Questions?

**To provide feedback on this program
or to schedule a presentation:**

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