Closing Keynote

Science-Based Investigative Interviewing, the Neurobiology of Trauma, and Sexual Assault Investigations

Presented by:
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SCIENCE-BASED INVESTIGATIVE INTERVIEWING
Memory Test

Watch the next series of words. Afterwards, you will have 2 minutes to write down as many of the words as you can remember.

Do not write anything down now.
SAND
TOWEL
SHORE
DECKCHAIR
BUCKET
SHOVEL
SWIM
SHORE
ICE CREAM
ARTICHOKE
SUN
TAN
PALM
SHORE
HOT
WAVES
COCKTAIL
PEBBLE
Take 2 minutes to write down all the words you remember.
“Executive Order 13440 of July 20, 2007, is revoked…."

“Interrogation techniques, approaches, and treatments described in the Manual shall be implemented strictly in accord with the principles, processes, conditions, and limitations the [2006 Army Field] Manual prescribes…. Nothing in this section shall preclude the Federal Bureau of Investigation, or other Federal law enforcement agencies, from continuing to use authorized, non-coercive techniques of interrogation that are designed to elicit voluntary statements and do not involve the use of force, threats, or promises.”

“Establishment of Special Interagency Task Force. There shall be established a Special Task Force on Interrogation and Transfer Policies (Special Task Force) to review interrogation and transfer policies… “

Executive Order 13491
January 22, 2008
“study and evaluate whether the interrogation practices and techniques in Army Field Manual 2-22.3….. provide an appropriate means of acquiring the intelligence necessary to protect the Nation, and, if warranted, to recommend any additional or different guidance for other departments or agencies…”

Executive Order 13491
January 22, 2008
Customary Knowledge

- Anecdote-based training
- Shared experiences
- TV & movies
Scientific Knowledge

- Theory
- Systematic Study
- Replication
Why science?
• seeing more than what is
• decision biases
• fail to attend

confirmation
hindsight
stereotyping
not attending

inattentional blindness
• seeing more than what is
• decision biases
• remembering wrong
• recalling nonevents
Challenges to getting a narrative

How many words did you ‘remember?’

Sand
Towel
Shore
Deckchair
Bucket
Shovel
Swim
Shore
Ice cream
Artichoke
Sun
Tan
Palm
Shore
Hot
Waves
Cocktail
Pebble
Remembering the Murder You Didn’t Commit

DNA evidence exonerated six convicted killers. So why do some of them recall the crime so clearly?

By Rachel Aviv

New Yorker, June 19, 2017

https://www.newyorker.com/magazine/2017/06/19/remembering-the-murder-you-didnt-commit
Challenges to getting a narrative

Depiction of actual accident

Leading Question: ”About how fast were the cars going when they smashed into each other?”

Memory reconstruction

remembering something that never happened

misinformation effect
• seeing more than what is
• decision biases
• fail to attend
• recalling nonevents
• not telling/editing
• fatigue
• hiding
Science reveals vulnerabilities
Develop & maintain cooperation via rapport

Elicit detailed story

Cues to veracity
DEVELOP & MAINTAIN
COOPERATION VIA RAPPORT
Interview Tactics \rightarrow Information Yield
Autonomy

Empathy

Self-Disclosure & Common Ground

Affirmation & Verification

Reciprocity
Client-centered counseling style for eliciting behavior change
878 hours, 181 sets of UK terrorist subject interviews (2013)

103 hours, 83 alleged victims of sexual assault (2020)

Enhancing Cooperation and Disclosure by Manipulating Affiliation and Developing Rapport in Investigative Interviews

Laure Brimbal, Rachel E. Dianiska, Jessica K. Swanner, and Christian A. Meissner
Iowa State University

N = 116
Explains purpose & process

Engages in reciprocity (coffee)

Develops rapport ("respect")

Reinforces autonomy
ELICIT DETAILED STORY

DEVELOP & MAINTAIN COOPERATION VIA RAPPORT
Cognitive Interview Information

RAPPORT

EXPLAIN PROCESS

TED

COGNITION

MNEMONICS

Fisher & Geiselman (1992)
Cognitive Interview ⇒ Information
1989 field study in the Metro-Dade PD: “The trained detectives elicited 47% more information after than before training, and 63% more information than did the untrained detectives.”

1999: 53 experiments found that the CI elicited more information than did the comparison interview (median increase=34%)

2012 (FLETC): “The CI elicited approximately 70 percent more information than the Five Step Law Enforcement Interview.”

2010: 57 published studies

Victims, witnesses; children, older adults; persons with autism; Suspects….
## Cognitive Interview - Mnemonics

<table>
<thead>
<tr>
<th>Context reinstatement</th>
<th>Memories are tied to contexts (associative principles).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reverse order recall</td>
<td>This provides a different (temporal) perspective on the events of interest, which may provoke additional recall.</td>
</tr>
<tr>
<td>Draw a sketch &amp; narrate while drawing.</td>
<td>This helps the subject describe spatial details, which are not usually part of a narrative description.</td>
</tr>
</tbody>
</table>

**Memory 1** ➔ **Memory 2** ➔ **Memory 3** ➔ **Memory 4** ……
Research shows that using the Timeline Technique to access information about a complex episodic event elicits more (1) person-description detail, (2) person-action detail, (3) sequence detail, and (4) verbatim detail than requesting a free narrative (at no cost to accuracy).

DEVELOP & MAINTAIN COOPERATION VIA RAPPORT
ELICIT DETAILED STORY
ASSESS CREDIBILITY
Nonverbal cues are weak

Differences between truth and deception:

- gaze aversion =
- eye blinks <
- head movements =
- hand/finger movements =
- pauses >
- speech disturbances =

< less during deception, > more during deception
GET THE NARRATIVE
Verbal cues to deception

**Liars provide:**
- less detail
- less/poor logical structure
- less plausible stories
- less contextual embedding
- fewer verifiable details
- fewer complications
### Complications

- Had to take separate flights
- Had to wait for cousin
- No plan for getting to hotel
- Uber cost €200
- Got lost on metro
- 30 min trip was 2 1/2 hours
Complications

Bought wine, cheese, bread
Bought breakable glasses
No bag so had to carry
1 hour walk (thought 10 min)
Sun about to set (just in time)
Forgot corkscrew (‘wine opener’)
Borrowed from Americans
A Cognitive Approach to Credibility Assessment

Memory & Reporting
- Cognitive Interview
- Model Statement
- Reverse Order

Cognitive Load
- Strategic Use of Evidence
- Verifiable Details
- Unanticipated Questions

Strategic Questioning
DEVELOP & MAINTAIN COOPERATION VIA RAPPORT

ELICIT DETAILED STORY

ASSESS CREDIBILITY
SCIENCE-BASED INVESTIGATIVE INTERVIEWING

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Sexual Assault & The Brain:
Experience, Cognition, Behavior, and Memory

ATIXA Conference, Philadelphia
October 2020

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The **value** of understanding the relevant neurobiological, memory and other science?

It can **help us answer** four common important questions...
4 Common Questions

1. Why didn’t the complainant fight, yell or otherwise resist, leave, etc.?

2. Why do they have memory gaps?

3. Why do they have memories that are inconsistent and/or contradictory?

4. Why do they struggle to recall the sequence of what they can remember?
4 Basic Scenarios

1. Encounter was consensual and person reporting sexual misconduct/assault knows that but is misrepresenting/lying.

2. Was consensual, but person reporting it later reinterpreted as non-consensual.

3. Wasn’t consensual, but accused sincerely believes it was.

4. Wasn’t consensual and accused knows it.

3 and 4: Victim’s responses and memories may be consistent with the neurobiological impacts of stress/trauma.
We are NOT assuming, or suggesting that YOU assume, that any particular encounter was an assault, stressful, etc.
We are NOT assuming or suggesting that YOU assume, that any particular assault or stressful experience will involve any particular responses or memory characteristics.
Not assuming “evidence.”

Pointing to what **could** be consistent with assault.

Providing knowledge to solve problems you face.
1. Why didn’t the complainant fight, yell, or otherwise resist, leave, etc.?

2. Why do they have memory gaps?

3. Why do they have memories that are inconsistent and/or contradictory?

4. Why do they struggle to recall the sequence of what they can remember?
Defense Circuitry in Control

- Impaired prefrontal cortex
- Survival reflexes
- Self-protection habits
- Extreme survival reflexes
Prefrontal Cortex
High Stress and Fear = Impaired Prefrontal Cortex

Survival Reflexes
Freezing

Stop everything, hold down brake, scan
Sexual Assault and the Brain

Why Christine Blasey Ford Can’t Remember How She Got Home
Stress and trauma have time-dependent effects on the hippocampus and memory, not just enhancing central over peripheral details, but eventually leading to a minimal-encoding phase.

Why Incomplete Sexual Assault Memories Can Be Very Reliable
Incomplete memories of sexual assault, including those with huge gaps, are understandable—if we learn the basics of how memory works and we genuinely listen to survivors.

Freezing During Sexual Assault and Harassment
Understanding the neurobiology of freezing can be very helpful in making sense of one’s own experiences, supporting others, and investigating or prosecuting.
Self-Protection Habits

- Polite responses to dominant or aggressive people
- Polite responses to unwanted sexual advances
- Hoping and pretending it’s no big deal – trying to save face
Extreme Survival Reflexes

Escape When There’s No (Perceived) Escape
Tonic & Collapsed Immobility

• **Freezing** = Alert and immobile, but able to move

• **Paralysis**, can’t move or speak

• **Tonic**: Muscular rigidity, maintain alertness

• **Collapsed**: Loss of muscle tone, faint/loss of consciousness

• **Caused by** extreme fear, physical contact with perpetrator, restraint, **perception** of inescapability

Dissociation

Blanked/Spaced Out
Disconnected from Body
Autopilot
# Reflexes & Habits

## Freezing
- Detection
- Shocked
- No-Good-Choices

## Extreme Survival Reflexes
- Tonic Immobility
- Collapsed Immobility
- Dissociation

## Passive, Polite
- From dating
- From child abuse
- From domination

## Dissociative
- Autopilot
- Submission
- Sex acts
1. Why didn’t the complainant fight, yell, or otherwise resist, leave, etc.?

2. Why do they have memory gaps?

3. Why do they have memories that are inconsistent and/or contradictory?

4. Why do they struggle to recall the sequence of what they can remember?
Sexual Assault and Memory
Weapon Focus

Bottom-up Attention
Bottom-Up Attention and Memory

Defense circuitry focus: what seems most important to survival and coping

Attention + Significance = Central Detail
= Encoded + Prioritized for Storage
Gist

Abstract

Stripped of many details

Vulnerability to Distortion?

• Gist & Central Details = Very Low
• Peripheral details = High
Time-Dependent Hippocampus Effects

Predict = Survive

Super-Encoding vs Normal Encoding

Still being consolidated

Minimal Encoding

Secs - Mins
Mins - Hours

Zoladz et al., 2014, Costa & Villalba (Eds.), Horizons in Neuroscience Research (Vol. 14), 1-40
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Problems
This Knowledge Helps You to Avoid
Problem: Ignorance Causing Ineffective Listening and Questioning

• If you don’t know what’s possible, then even with the best methods, you will miss:
  • Reflex behaviors
  • Habit behaviors
  • Memory characteristics

• Not recognizing → Not asking good follow-up questions → Missing key info

• Complainant will feel misunderstood, etc.
Problem: Not Distinguishing Gist and Central Details from Peripheral Details

If you push for peripheral details...

• Complainant will not recall most and may feel:
  • Incompetent and/or unreliable
  • Misunderstood
  • Doubted and/or judged

• You may:
  • Create inaccuracies and inconsistencies
  • Misjudge credibility of complainant
  • Provide ammunition to attack complainant
  • Lose cooperation of complainant
If You Get Gist and Central Details

• Complainant can:
  • Feel understood and supported
  • Be more cooperative
  • Provide compelling testimony

• Adjudicators can:
  • Better understand complainant’s experience
  • Better understand what actually happened
Problem: Expecting and Pushing for Sequential Narrative

• Complainant may not recall the order of some parts of the experience, and feel:
  • Incompetent and/or unreliable
  • Misunderstood
  • Doubted and/or judged

• Complainant may provide inaccurate and inconsistent sequencing information, which will be used against him or her
Conclusion

Even interviewers using the best, science-based interviewing methods need to know the relevant science on stress and trauma.

That knowledge enables you to:

1. Listen for, recognize, and elicit more information about common brain-based sexual assault responses and memories.

2. Establish and maintain rapport with stressed or traumatized interviewees, which will not only increase cooperation and information, but enable valid credibility assessments.
Writings, Videos, Handouts

Available in English, Spanish and German, with other languages coming.

Why don't many people fight or yell when they're being raped?

Why are memories of sexual assault so often fragmentary and confusing?

Is the brain's response to attack essentially the same - controlled by the defense/fear circuitry, running on reflexes and habits - during sexual assault, physical assault, and military combat?

The answers have big implications for people who've been sexually assaulted, for those who investigate and prosecute such crimes, and for everyone else who knows or works with someone who's been sexually assaulted.

Sexual Assault and the Brain

Understanding the brain under attack, and implications for justice and healing.

Jim Hopper, Ph.D.

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Interviewing and Neurobiology: Applying the Science

ATIXA Conference, Philadelphia
October 2020

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Director, Being Trauma Informed
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The old paradigm

Sequence of Events

5:05:32  Bus loses power
5:06:15  Mr. Waggoner gets off bus
5:11:22 – 5:13:13  Multiple gunshots heard
5:13:35  Mr. Waggoner gets back on bus
5:17:49  Bus loses power (second time)
5:18:01  Mr. Waggoner clears the weapon
5:18:54  Bus starts driving again
5:23:15  Arrives at Westown
5:25:15  Police on bus
5:28:24  Paramedics on bus
5:29:20  Mr. Waggoner leaves bus

**Approximate times**
A trauma informed paradigm

Brain Based Reactions

In the moment
After the fact

WHAT WAS CENTRAL?
It’s about education!
Closing Keynote Q & A Session

We will now have a Question and Answer Session. Please use the hand raise feature to ask any questions and refrain from putting substantive questions in Chat.