

# Closing Keynote



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

*Presented by:*

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Christopher F. Wilson, Psy.D, LLC., Licensed Psychologist

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



# New slim-silhouette HOOVER Convertible

Gets the deep-down dirt other cleaners miss

the cleaner with the Automatic Shift

Color's star bright in a Hoover brand! The new Hoover Convertible™ vacuums all 18 inches, just cleaning... gets all the deep down dirt that other cleaners miss. Comes over lightly, and rubs out stains. Cleans like a Hoover. It's the Hoover that's new. It's the Hoover that's new. It's the Hoover that's new.

HOVER THE APPLIANCES ... around the house, around the world.

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**F. W. Woolworth Co.**

BAKED HAM and CHEESE	30c	LEAN or TORSTED SANDWICHES	
Roasted Three Dollar Sandwich	30c	HAM SALAD Sandwich	30c
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ROASTED TURKEY	50c	PREPARED HAM Sandwich	30c
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FOR A REAL TEST! GET OUR SUPER BAKED HAM. Experience a taste that's better than any other. You'll like it! YOU WILL LIKE IT! YOU WILL LIKE IT!

**Fountain Features**

ICE CREAM	SAFARI SODA 25c	EXTRA RICH ICE CREAM SODA 25c
TAPIOCA SUNDAY 25c	SAFARI SODA 25c	EXTRA RICH ICE CREAM SODA 25c
TAPIOCA SUNDAY 25c	SAFARI SODA 25c	EXTRA RICH ICE CREAM SODA 25c

Home Style Desserts

Woolworth Coffee - Always Good



HORNUNG

Marlboro the filter cigarette with the unfiltered taste

With Marlboro's Green Box Cigarettes and Red Packard Cigarettes, There's a Star in Every Marlboro pack all the way.

Marlboro

... NOW a NEW "Claim to Fame!"

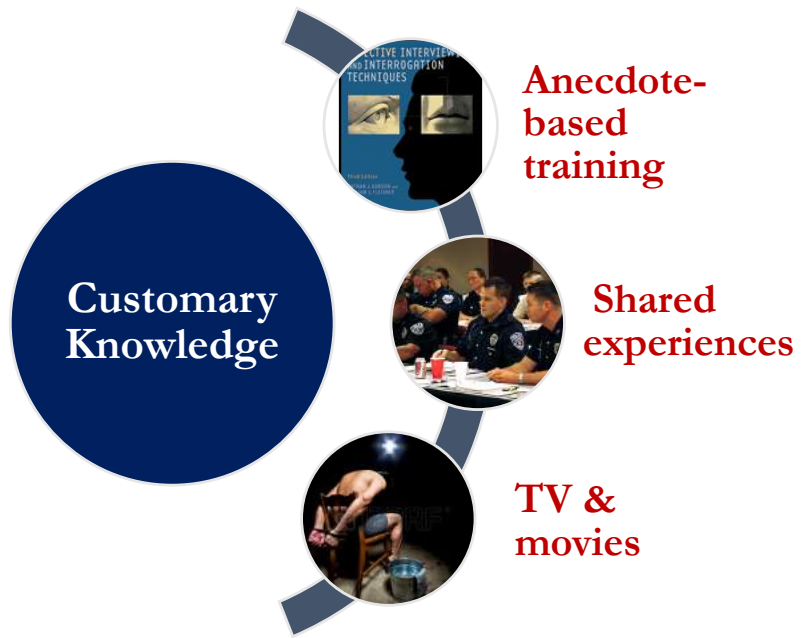
FILET O' FISH Sandwich ONLY 24 CENTS

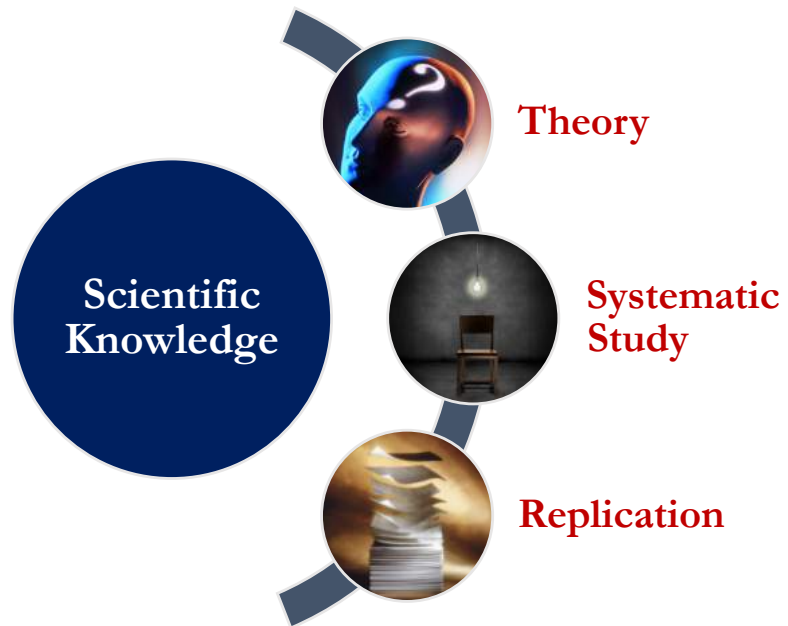
McDonald's

THROUGHOUT THE ROCKY MOUNTAIN AREA

24 cents







Why science?





- seeing more than what is
- decision biases
- fail to attend

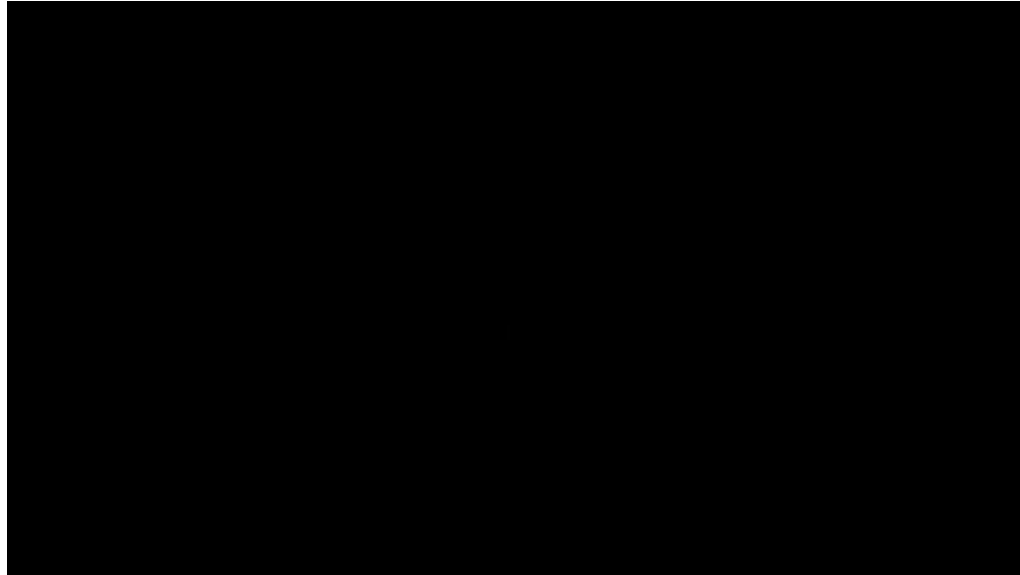


confirmation

hindsight

stereotyping





not attending

*inattention blindness*

- seeing more than what is
- decision biases
- remembering wrong
- recalling nonevents

Challenges to getting a narrative

beach

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

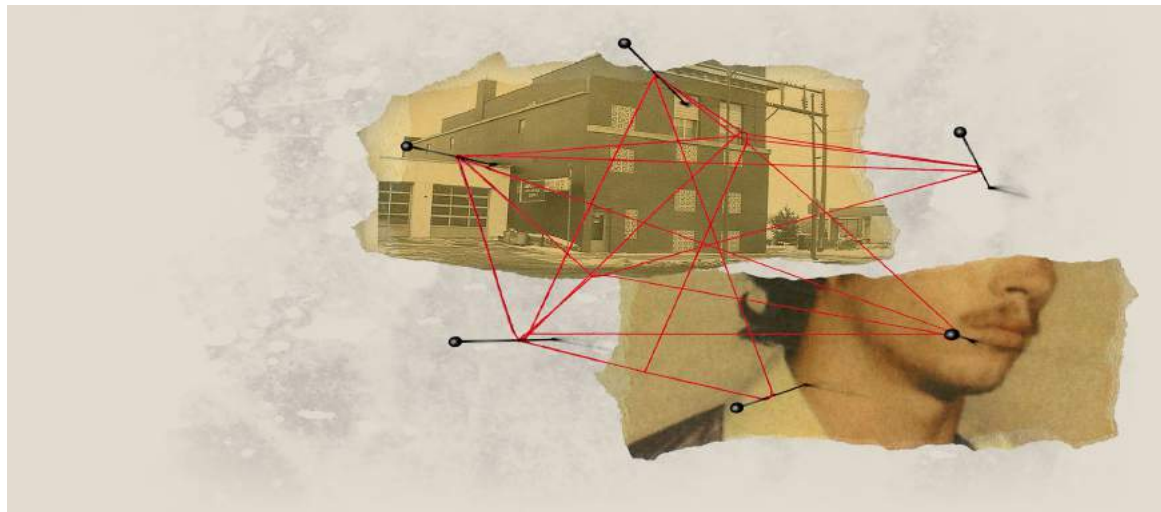


## Remembering the Murder You Didn't Commit

*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**

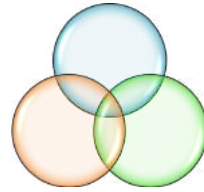




**Autonomy**



**Empathy**



**Self-Disclosure  
& Common  
Ground**



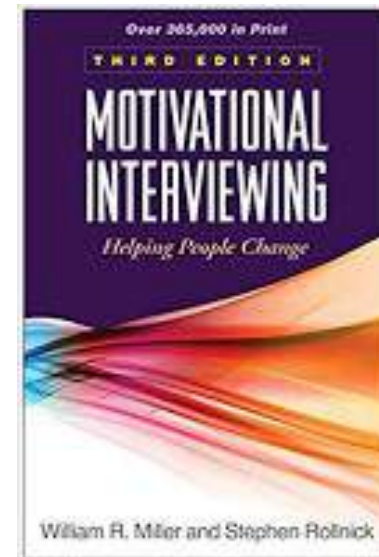
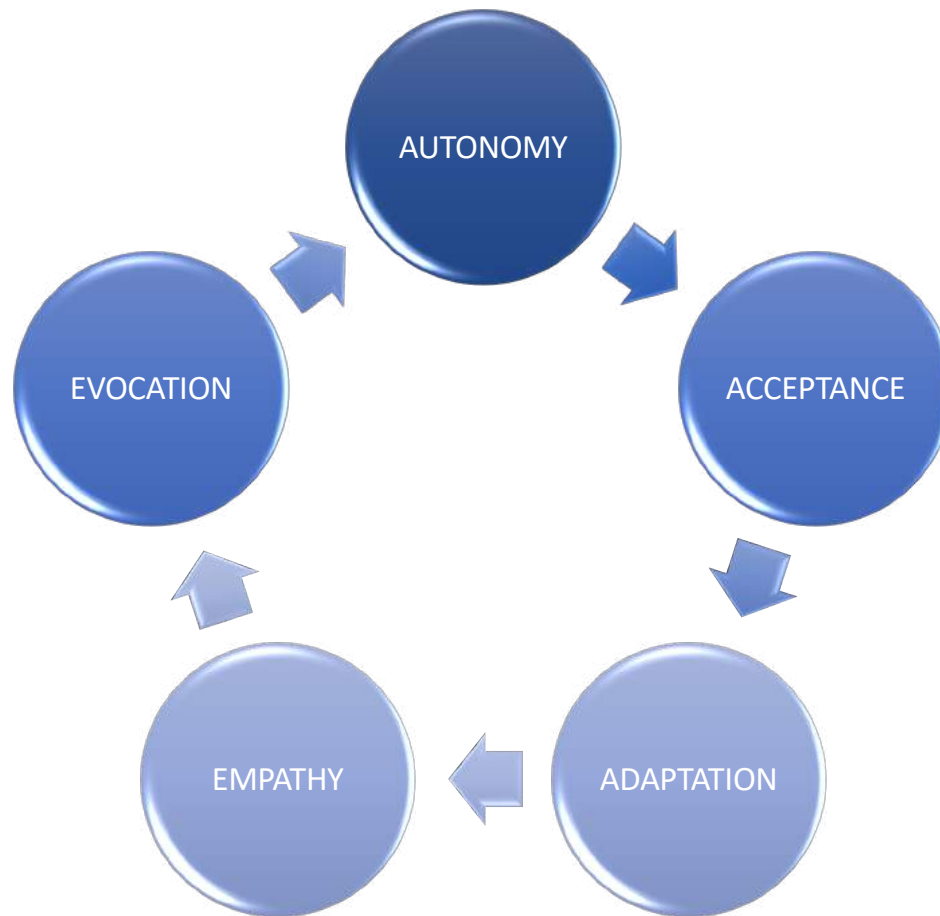
**Affirmation  
&  
Verification**



**Reciprocity**



RAPPORT → COOPERATION



Client-centered counseling style for eliciting behavior change

878 hours, 181 sets of UK  
terrorist subject interviews  
(2013)

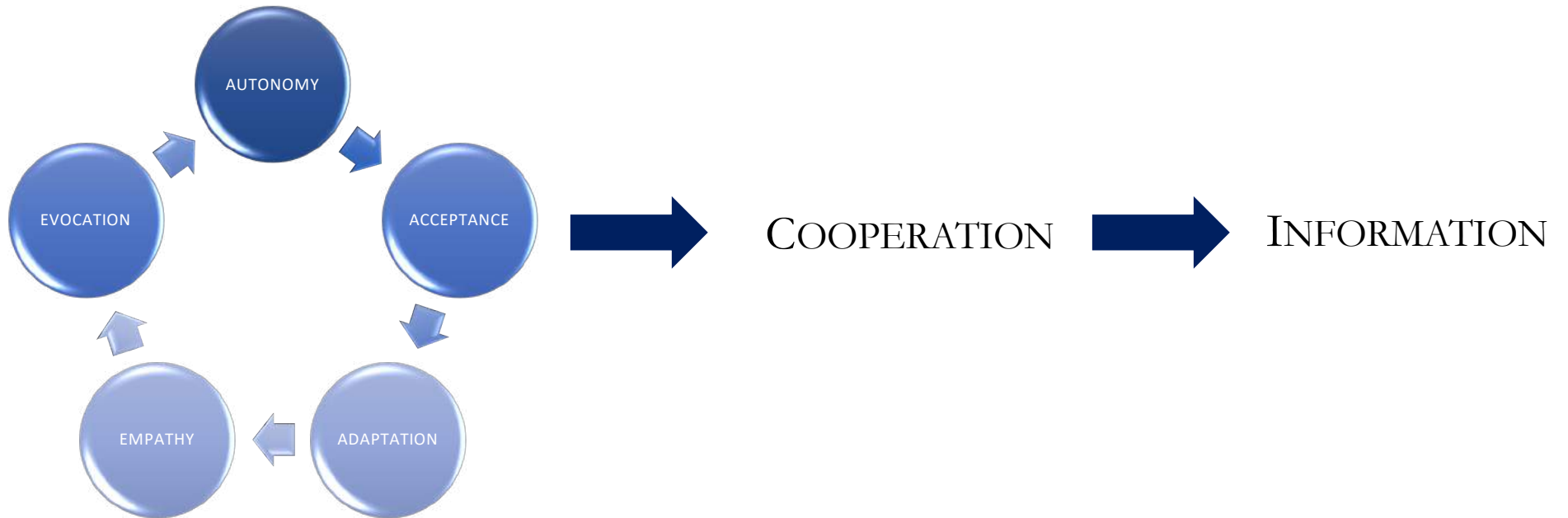


103 hours, 83 alleged  
victims of sexual assault  
(2020)



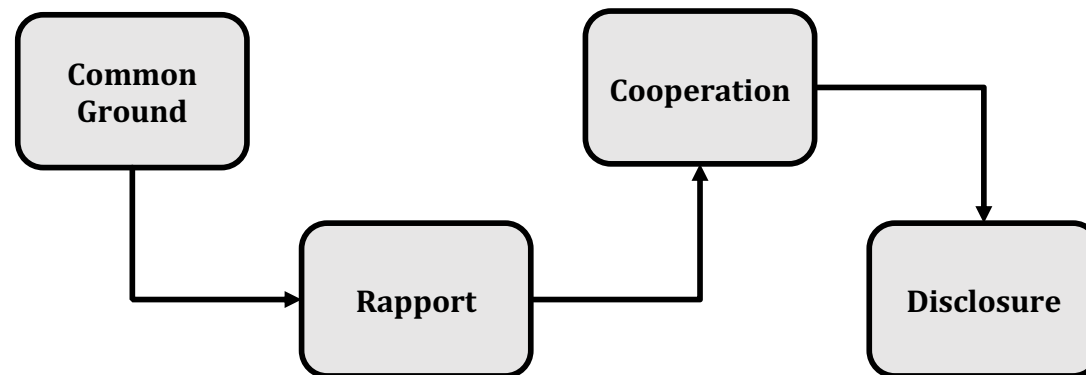
Alison, Alison, Noone, Elntib, & Christiansen, 2013; Kim, Alison & Christiansen, 2020.

RAPPORT  COOPERATION



## 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**

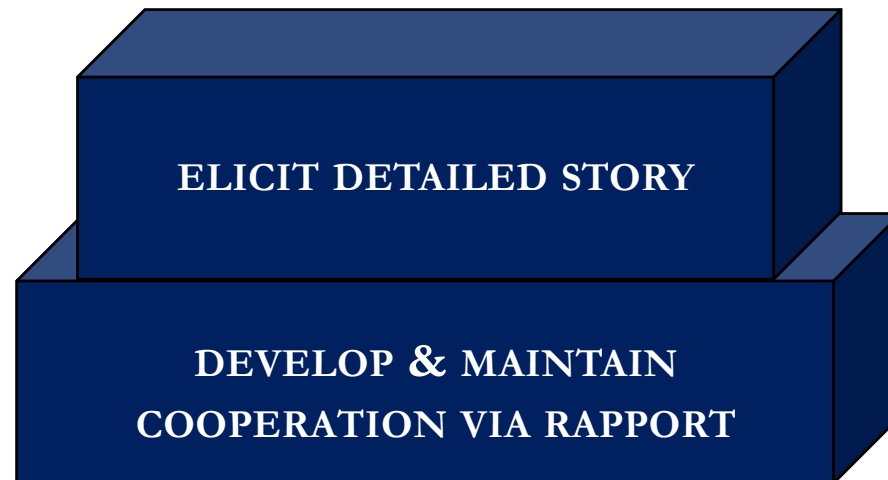


**Explains purpose & process**

**Engages in reciprocity (coffee)**

**Develops rapport (“respect”)**

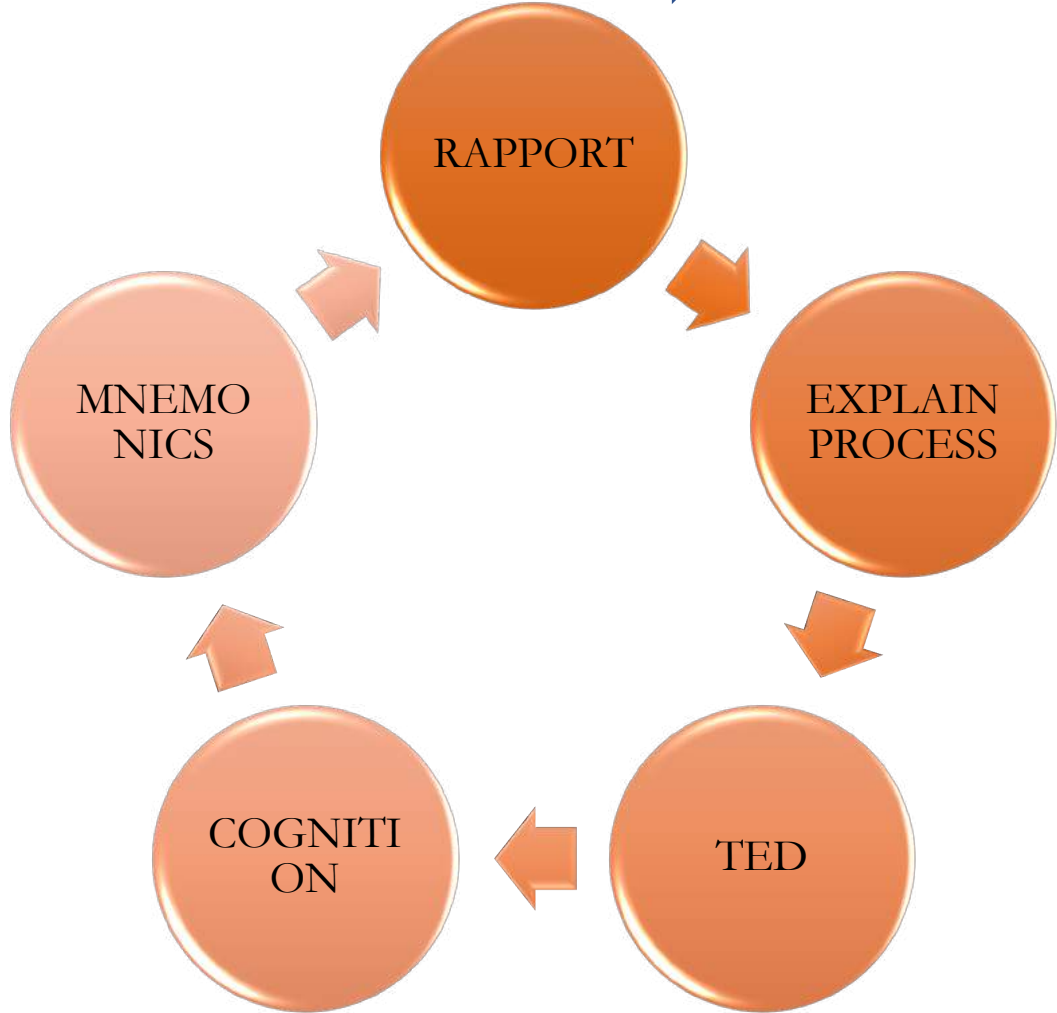
**Reinforces autonomy**



**ELICIT DETAILED STORY**

**DEVELOP & MAINTAIN  
COOPERATION VIA RAPPORT**

COGNITIVE INTERVIEW  INFORMATION



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....



US

US



UK



Canada



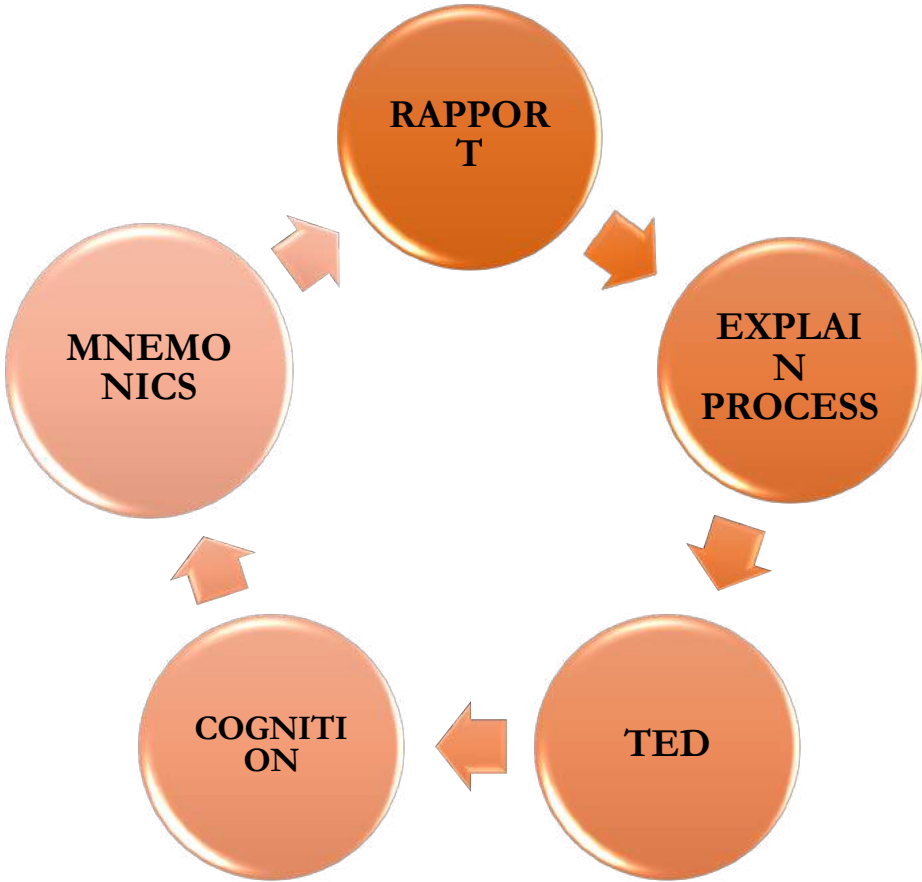
France

## COGNITIVE INTERVIEW - MNEMONICS

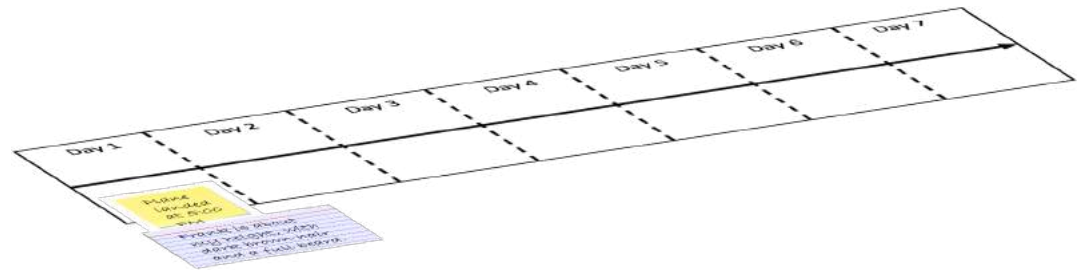
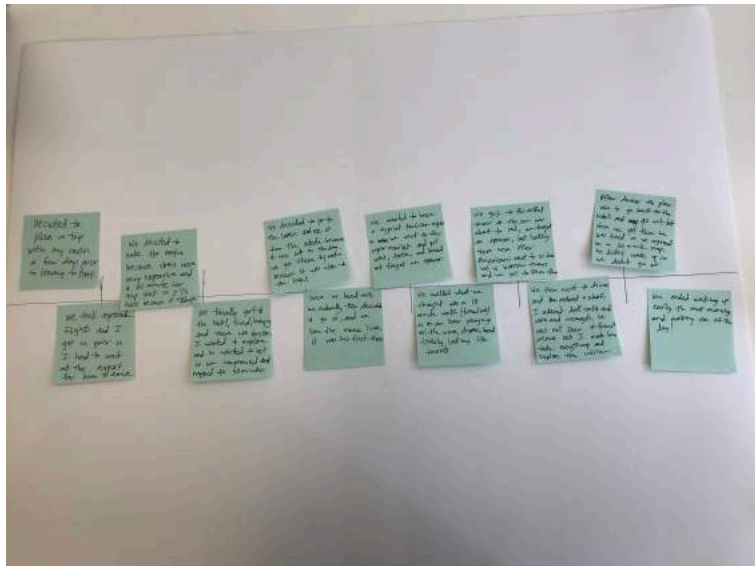
Context reinstatement	Memories are tied to contexts (associative principles).
Reverse order recall	This provides a different (temporal) perspective on the events of interest, which may provoke additional recall.
Draw a sketch & narrate while drawing.	This helps the subject describe spatial details, which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

MEMORY 1 → MEMORY 2 → MEMORY 3 → MEMORY 4 .....

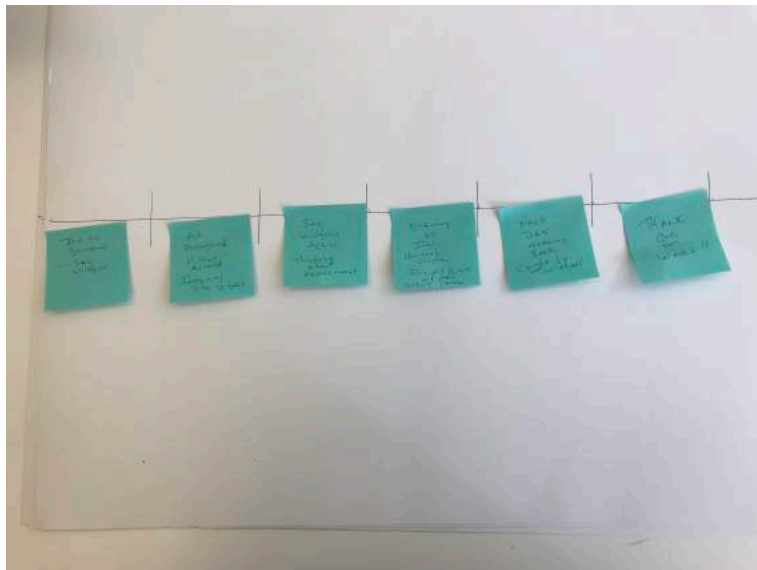
COGNITIVE INTERVIEW  INFORMATION



COOPERATION  INFORMATION



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).





## 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 ½ hours



## Complications

Bought wine, cheese, bread

Bought breakable glasses

No bag so had to carry

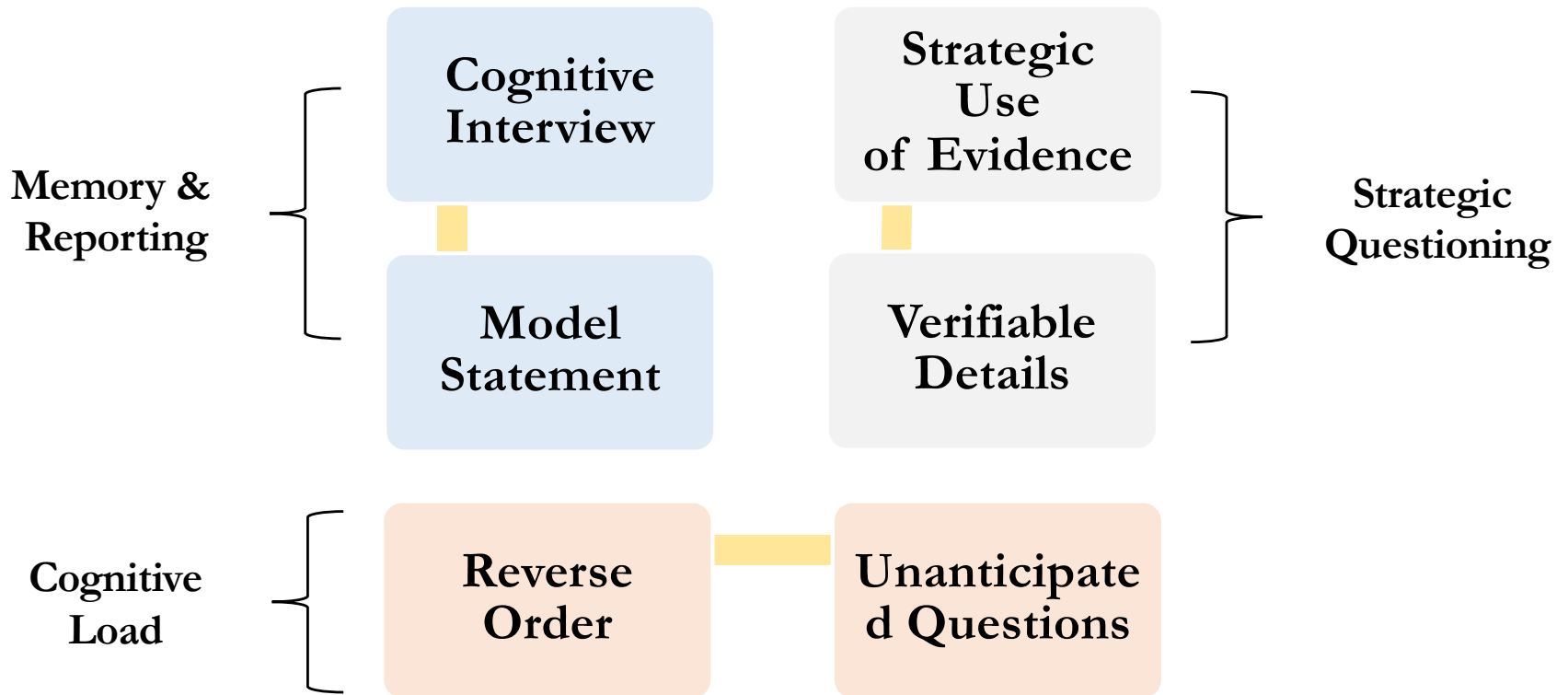
1 hour walk (thought 10 min)

Sun about to set (just in time)

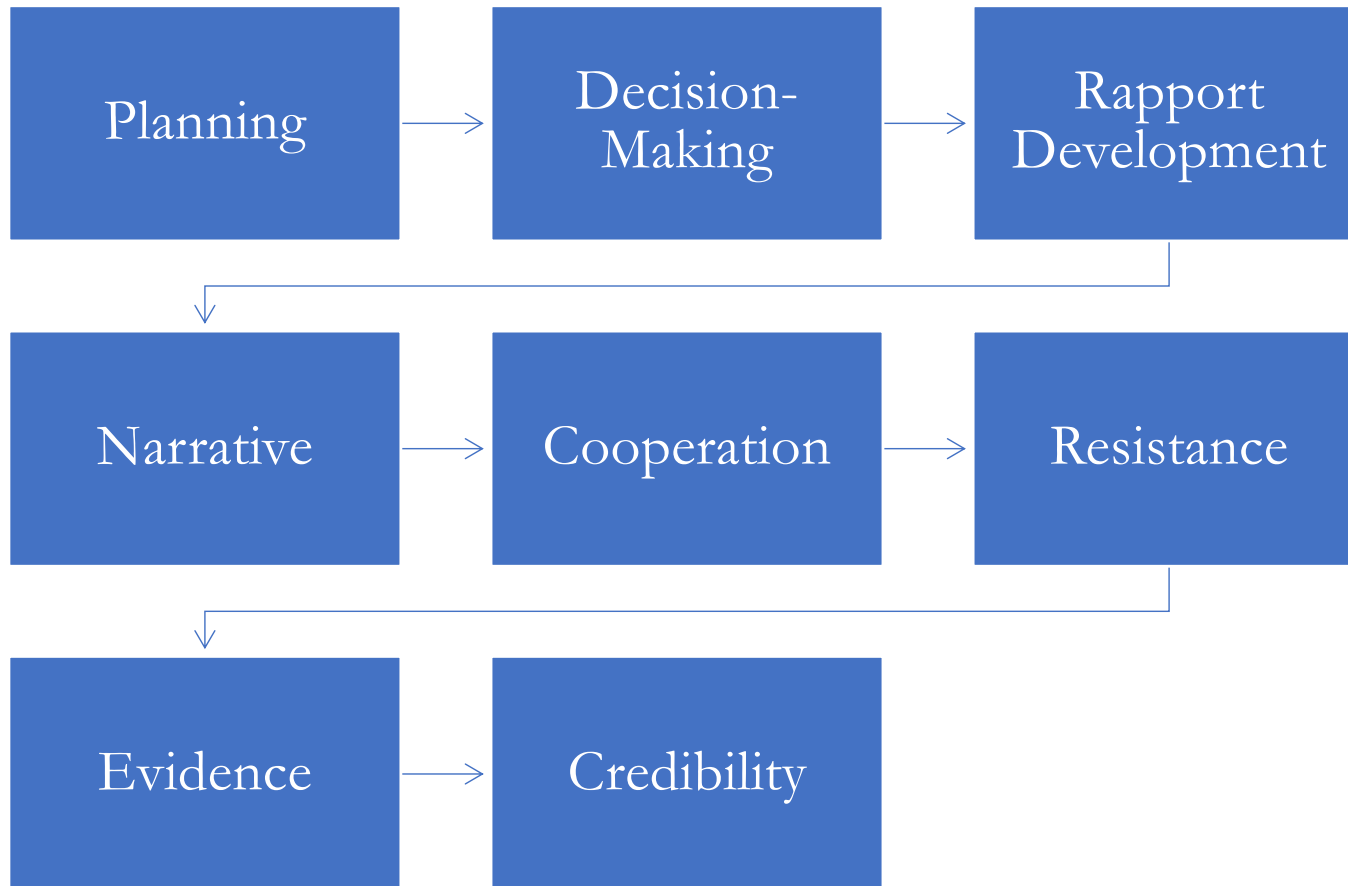
Forgot corkscrew ('wine opener')

Borrowed from Americans

# A Cognitive Approach to Credibility Assessment







# SCIENCE-BASED INVESTIGATIVE INTERVIEWING

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# Sexual Assault & The Brain:

## Experience, Cognition, Behavior, and Memory

*ATIXA Conference, Philadelphia  
October 2020*

**Jim Hopper, Ph.D.**

Independent Consultant &  
Harvard Medical School  
drhopper@jimhopper.com

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

It can **help us answer** four common important questions...

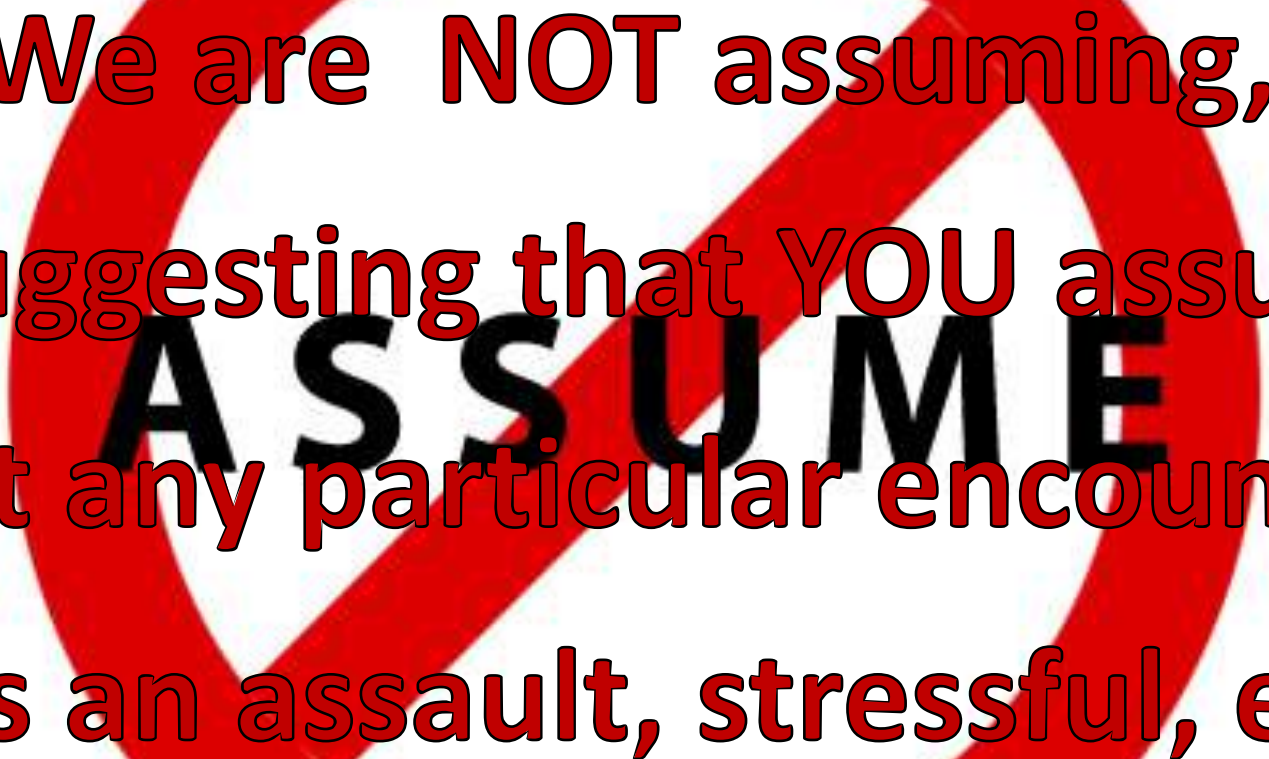


# 4 Common Questions

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?

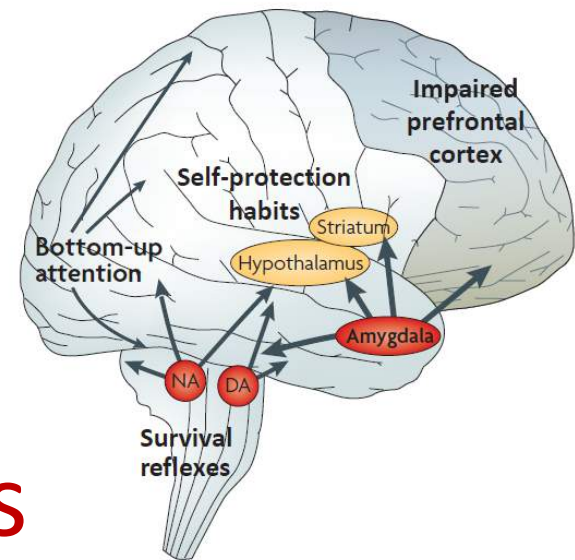


# Defense Circuitry



# 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

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

Jim Hopper, Ph.D.



## 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.

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# 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.?
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# Sexual Assault and Memory

A photograph of a man with dark hair and a serious expression, holding a handgun directly towards the camera. The lighting is dramatic, with strong highlights on his face and the gun, and deep shadows elsewhere. The background is a plain, light-colored wall. The image is framed by black bars on the left and right sides.

**Weapon  
Focus**

**Bottom-up  
Attention**

# Bottom-Up Attention and Memory

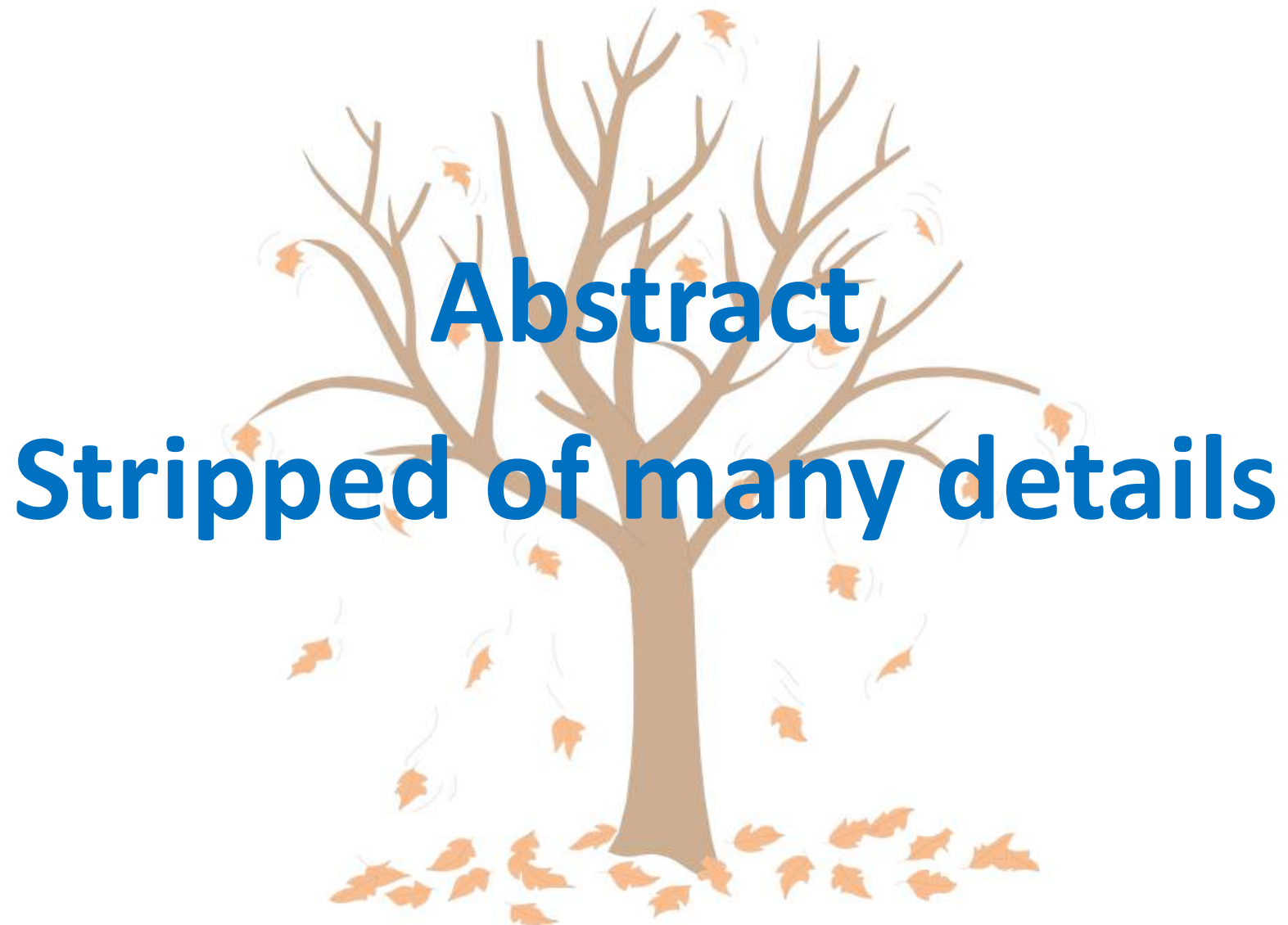
Defense circuitry focus: **what seems most important** to survival and coping

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





# Gist



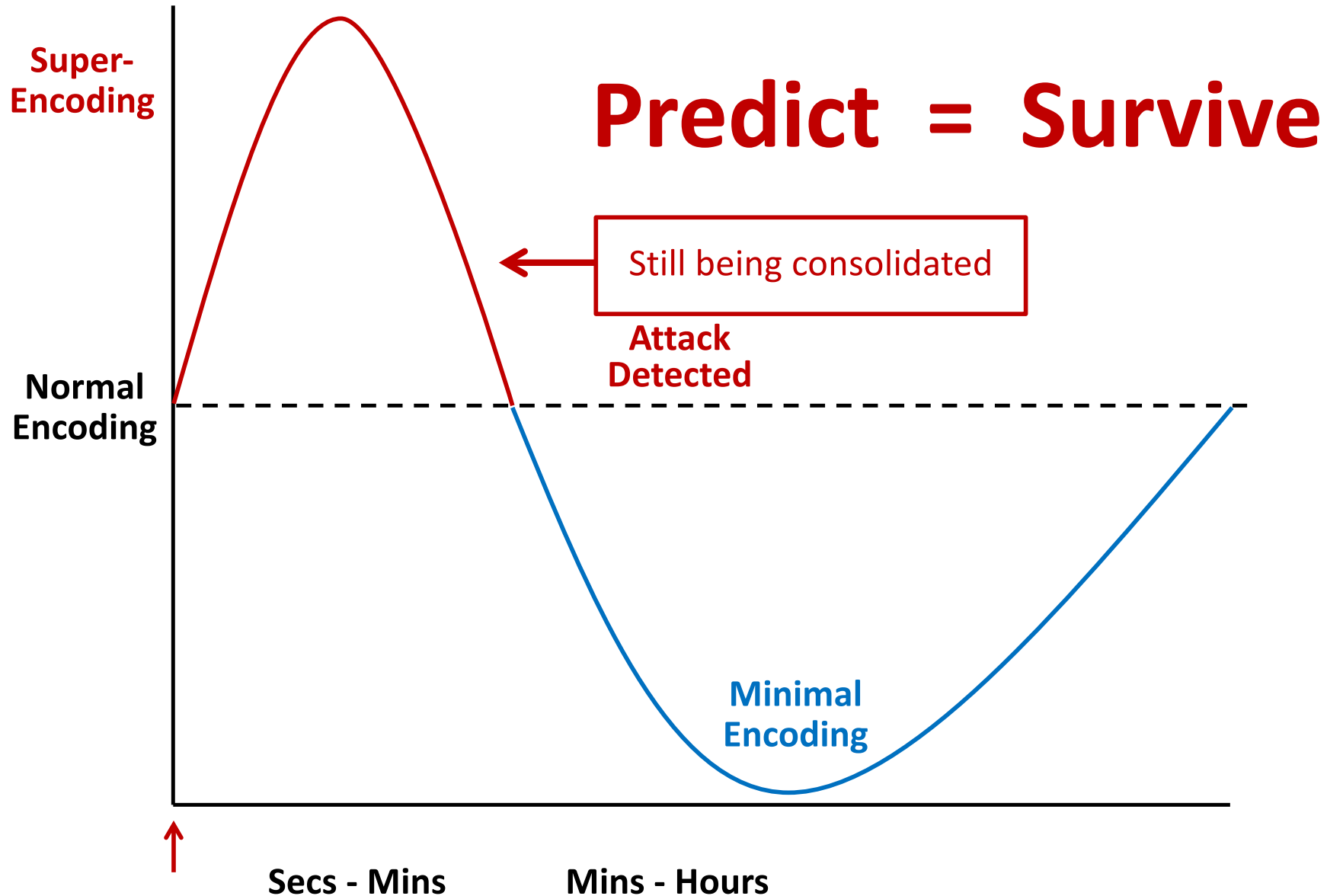
**Abstract**

**Stripped of many details**

# **Vulnerability** to Distortion?

- **Gist & Central Details = Very Low**
- **Peripheral details = High**

# Time-Dependent Hippocampus Effects



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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 **rappport** with stressed or traumatized interviewees, which will not only increase cooperation and information, but enable **valid credibility assessments.**

# Writings, Videos, Handouts



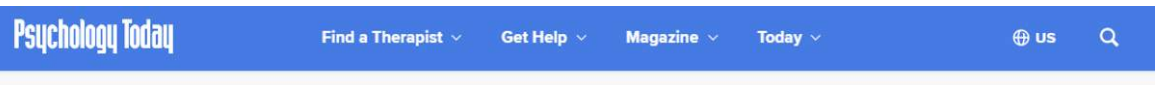
Available in English, [Spanish](#) and [German](#), with other languages coming.

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.



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# Interviewing and Neurobiology: Applying the Science

*ATIXA Conference, Philadelphia  
October 2020*

**Chris Wilson, Psy.D.**

Director, Being Trauma Informed

[chris@beingti.com](mailto:chris@beingti.com)

# The old paradigm



**Just the facts, mam.  
Just the facts.**



## 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 Westtown
- 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



~~Why?~~





# 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.