

FORENSIC EXPERIENTIAL TRAUMA INTERVIEW – A CONVERSATION WITH THE BRAINSTEM



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The Victim's Narrative



Interruptions: Fatal Flaws

In a recent study, it was found that the average police interview had **3 open-ended questions and 26 closed-ended questions** with an average of only **1-second pauses** between each question. Most detectives **interrupted responses to open-ended questions after 7.5 seconds with an average of 4 interruptions per response.** Not one of the interviews studied had a victim that was allowed to complete an uninterrupted response.

Trauma Trauma Trauma

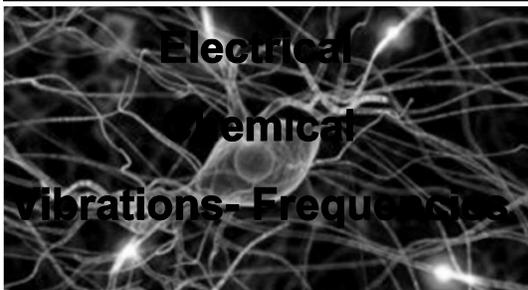
□ It is life changing!

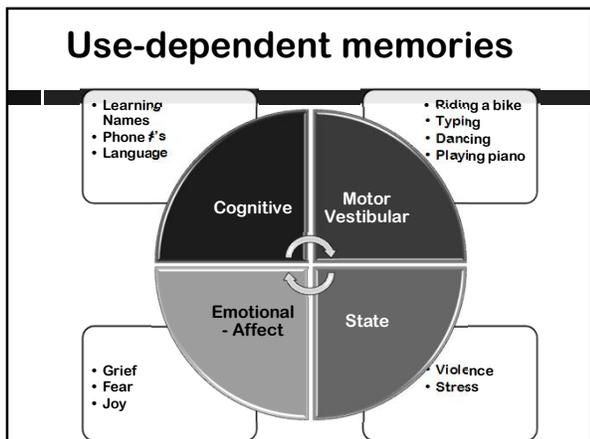


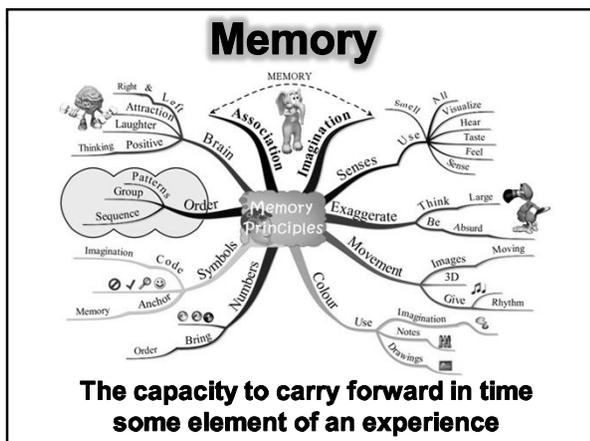
- The assault experience is remembered in fragments but infused with intense emotion and recollections of sensations such as tastes, smells, and sounds.
- Some victims may become haunted by feelings and senses they know are related to the trauma, but have difficulty identifying the source of the feeling or sensation

Impact

What is memory really?







The Prefrontal Cortex



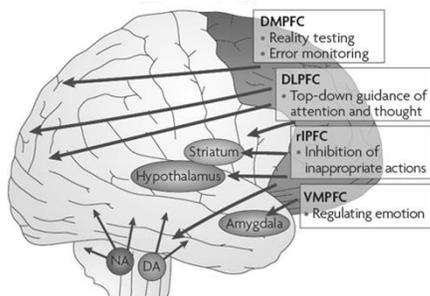
Allows control . or at least *guidance* . of older and more primitive brain areas

(Hopper, 2012)

Key Functions of Prefrontal Cortex

- ~ Choosing where you focus attention and thoughts
- ~ Holding thoughts, memories, and other information in mind (so you can imagine alternatives to your present and past)
- ~ Focusing inside and reflecting on your feelings, thoughts and actions
- ~ Inhibiting habits and automatic responses, including unhelpful ones
- ~ Regulating emotions, including how strong they are, how long they last, and how you express them (or not)

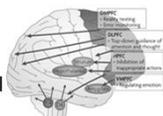
Non-Traumatic Situations: Prefrontal



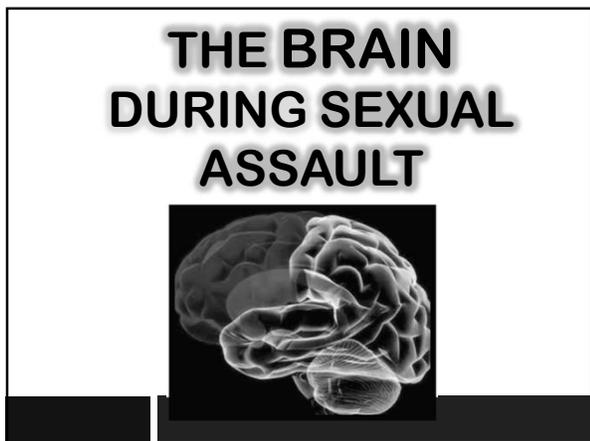
Chosen and deliberate, mostly in conscious

Arnsen 2008, *Neuroscience*, 410

Non-Traumatic Situations

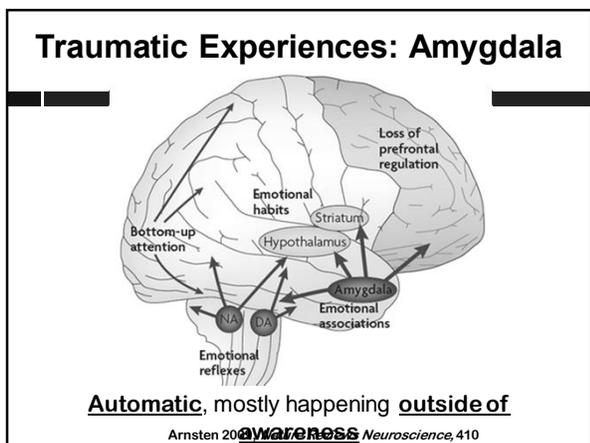


- ~ **Top-down guidance of attention and thoughts:** Your conscious goals for the situation . and your values . determine what you focus on and what you think, including problem solving
- ~ **Inhibition of inappropriate actions:** Stopping yourself before acting on an unhelpful impulse, going too far down a wrong path
- ~ **Regulating emotions:** Decreasing the intensity of your feelings; reducing their grip on how you perceive things, think, and act
- ~ **Reality testing:** Checking out whether perceptions and

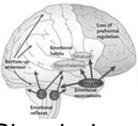


High Stress = Impaired Prefrontal Cortex

- " Stress chemicals basically **turn it off**
- " Old and primitive brain structures take control
- " **We can't...**
 - " Control our attention
 - " Remember our values
 - " Think logically
 - " Over-ride emotional reflexes or habits
- " Evolutionary origins: Stop to think . you're lunch

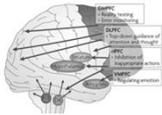


Traumatic Experiences Like Assault or Combat



- ~ **Loss of prefrontal regulation:** Chemicals from brain stem impair prefrontal cortex, turn it off
- ~ **Bottom-up attention:** Automatically captured by anything dangerous or threatening
- ~ **Emotional reflexes:** Amygdala-triggered automatic responses

SEXUAL ASSAULT: PERPETRATOR



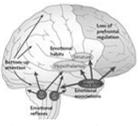
Personal History

- ~ Vast majority are repeat offenders: Have done it before, likely many times. It's rewarding . even intoxicating.
- ~ Thoughts and actions are planned, practiced . even habitual.

Brain During Assault

- ~ Not traumatized or even stressed, unless victim fights fiercely
- ~ Prefrontal cortex in control (even if driven by compulsion)
 - ~ Plan of action, with practiced strategies and tactics
 - ~ Focus on overcoming resistance, with threats and force, while engaging in habitual assault behaviors

SEXUAL ASSAULT: VICTIM

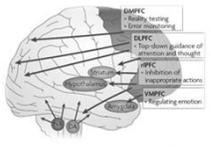


Personal History

- ~ **Not trained** to detect signs of coming sexual assault . or to resist
- ~ May have **childhood 'training'** . from being verbally, physically and/or sexually dominated or abused
- ~ May have childhood **emotional habits** of responding and behaving

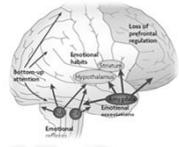
Brain During Assault

- ~ Shocked, fearful, overwhelmed, traumatized
- ~ Emotional brain in control
 - ~ No prefrontal cortex thinking, problem-solving, etc.
 - ~ Attention and thoughts controlled by perpetrator's actions
 - ~ Emotional reflexes and habits, including based in childhood



Perpetrator

- ~ Not stressed
- ~ **Prefrontal cortex in control**
- ~ Thinking and behavior:
 - ~ Planned
 - ~ Practiced
 - ~ Habitual



Victim

- ~ Terrified, overwhelmed
- ~ **Amygdala in control**
- ~ Attention and thoughts driven by perpetrator actions
- ~ Behavior controlled by emotional reflexes and habits from childhood (incl. abuse)

WHO WILL HAVE MEMORIES OF THE ASSAULT THAT MAKES MORE SENSE?



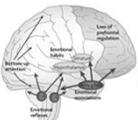
States become traits

Mental State	Calm	Arousal	Alarm	Fear	Terror
Primary Secondary Brain Areas	Neocortex Sudocortex	Subcortex Limbic	Limbic Midbrain	Midbrain Brainstem	Brainstem Autonomic
Cognition	Abstract	Concrete	Emotional	Reactive	Reflexive
Sense of Time	Extended Future	Days and Hours	Hours and Minutes	Minutes and Seconds	Loss of Sense of Time
Dr. Bruce Perry					





Assault and Memory

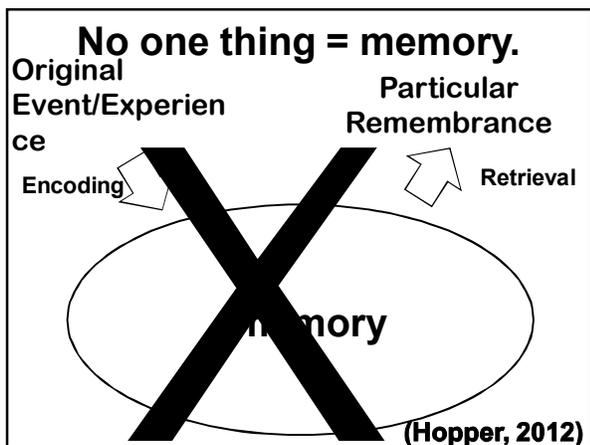


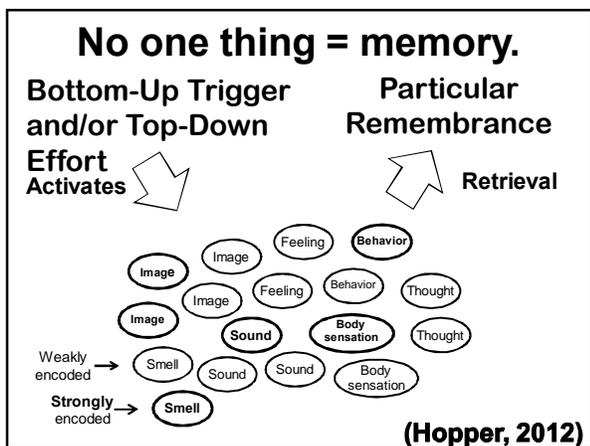
Brain during trauma

- ~ High fear, high arousal
- ~ High activation of stress chemicals + high **amygdala** activity and plasticity = Strong encoding of emotional and sensory memories
- ~ Deactivation of PFC, including language production area
- ~ Altered functioning of **hippocampus**, brain region crucial for forming coherent complex memories =
 - ~ Elements and context **poorly** woven into whole
 - ~ Sequence of events **poorly** encoded
 - ~ Well-encoded **emotional** memories

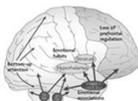
Joels et al., 2012, Pharmacol Rev, 901.







What Gets Encoded During Trauma



- “ **Parts or fragments of experience** deeply ‘burned into’ memory
 - “ Traumatic **emotions**
 - “ **Sensations** processed as central details
- “ **Not** sequence of events
- “ **Minimal or no words or narrative**

(Hopper, 2012)

IMPLICIT VS. EXPLICIT MEMORY



Explicit = You know it's a memory

Implicit = You don't realize it's a memory

Central vs. Peripheral Details

- Central details of experiences, which are strongly encoded into memory (but not necessarily accessible for retrieval):
 - What attention is focused on, especially in a sustained way
 - For repeated experiences, elements present all or most times
- Peripheral details, which are relatively poorly encoded
 - Not focus of attention
 - For repeated experiences, elements relatively less often present

Vulnerability to Distortion?

- **Peripheral details = High Vulnerability**
 - "Was there a stop sign or a yield sign?"
 - Maybe not even encoded
 - If encoded, can't "erase," only inhibit retrieval
 - Imagine then re-encode replacement = no big deal
- **Central Details = Very Low Vulnerability**
 - By definition, originally encoded
 - Encoded more strongly than peripheral

Attention and Memory

During assault, attention is focused on what seems most important to survival and coping in the moment

Central Details

- " Weapon focus
- " Can vary greatly depending on nature of assault, victim's brain's interpretation of situation, etc.
- " **Consequences:** Central (vs. peripheral) details are
 - " Deeply encoded
 - " More likely to be remembered (a) accurately and (b) consistently over time

Effective Interviewing

First, do no harm

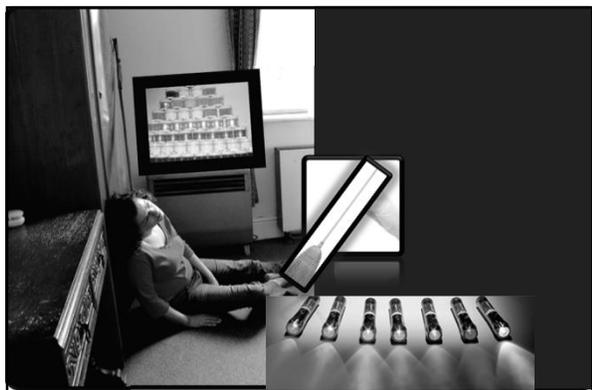
Any possible efforts should always be made to minimize potential further trauma to the victim.

Understanding the Context of the Crime

LOOK... MY DRESS WAS TORN TOO...
TORN TOO...
DRESS TOO...



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How do we find latent evidence?

Crime Victims' Nonverbal and Emotional Expression

- Contrary to empirical evidence showing otherwise, most respondents [law enforcement/prosecutors] thought that crime victims' nonverbal and emotional expression is to some extent related to the truthfulness of their accounts (Ask, 2010)
- Failure to take in to account the psychological reactions of a victim may result in misinterpretations of the victim's demeanor (Ask, 2010)

**WE CANNOT TRULY
UNDERSTAND BEHAVIOR
WITHOUT UNDERSTANDING
THE EXPERIENCES OF THE
PERSON OR CONTEXT IN WHICH
THE BEHAVIOR OCCURS**

Working with trauma victims

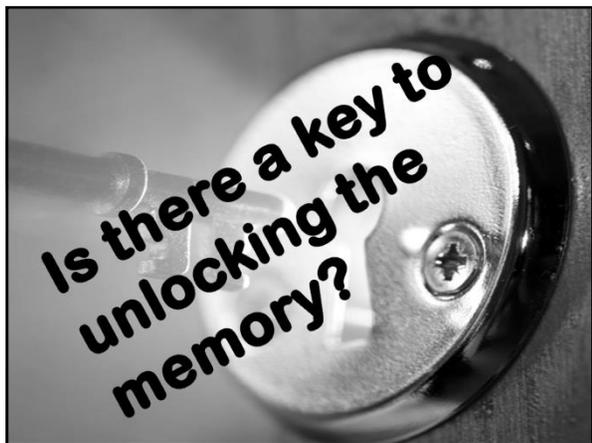
- Memories of personal trauma are particularly durable and accurate (so don't worry if you don't get everything in the ER)
- The content of traumatic memory is usually vivid, detailed and more accurate than that of ordinary day-to-day memories
- Traumatic events are first organized in memory on a perceptual or sensory level
 - This often depends on the way trauma was first received
 - Visual images, smells, pain, taste, body positions, sounds
- For some people recalling sensations is the only way to describe the traumatic event initially
- The narrative emerges over time as the individual tries to explain what has happened (Schacter, 1996)

Victim Interview Best Practices

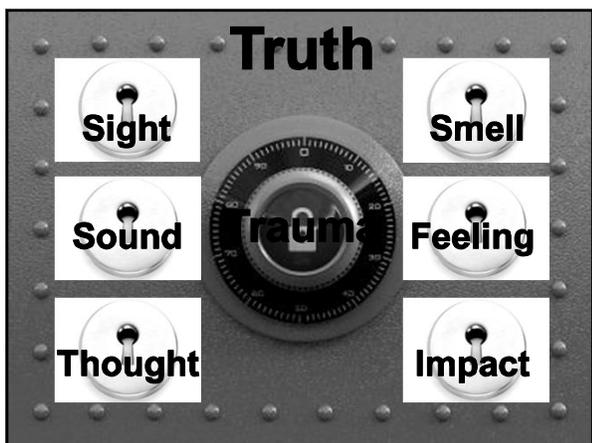
- People speak more freely and fully when
 - When they feel they are being listened to
 - When they feel the listener can tolerate what they have to say
 - When the listener can understand what they have to say
 - When they can imagine it to be true

Victim Interview Best Practices

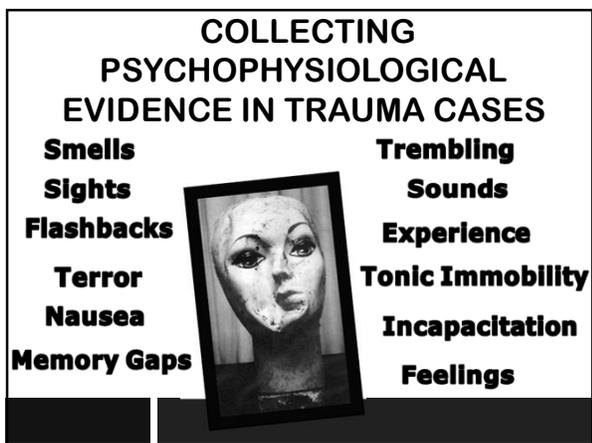
- The capacity to hear about trauma (rape/DV) does not come easily or all at once
- It must be developed
- Developing this capacity requires
 - An active willing, and empathetic extension of the self into areas of human failure and malevolence
 - Practice













Russell W. Strand
Chief, Behavioral Sciences Educational
& Training Division, U.S. Army Military
Police School
Email - russell.strand@us.army.mil
Phone: (573) 563-8061 DSN: 676
