

TRAUMA MEMORY & BEHAVIOR

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TRAUMA, MEMORY, & BEHAVIOR

Hey there!

This e-book accompanies the video series *Trauma, Memory, and Behavior*. If you haven't watched that video series, you can find it on my website @ RobynGobbel.com/course/traumamemorybehavior

I'm Robyn!

I help parents and professionals get curious and compassionate about the baffling behaviors of children with histories of trauma. Being curious and compassionate changes them...and you! Memory processing is just one piece of the complex trauma puzzle- but it's an important one! I hope this helps to demystify one way your child has been impacted by trauma.



LET'S CONNECT!



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I love talking about memory science!!!

And I love talking about it in a way that helps you understand that your child's baffling behaviors are simply about memory!!

How we store and access memories is a lot more complicated than accessing a filing cabinet in the brain and pulling out the memory we want!

There is a complex process of:

Encoding: Having an experience that activates a neural pattern

Storage: The likelihood that the neural pattern could be activated again in the future

Retrieval: Activation of a neural pattern that is SIMILAR but not identical to the neural pattern activated in the past.

Something that happened in the past, helps create my experience in the now, and impacts how I behave in the future.

When we have an experience, there is a firing of a specific neural pattern in the brain. The same neural pattern never fires again twice but SIMILAR neural patterns are fired for similar experiences. The more an experience happens, the stronger the neural pattern, the more likely that similar neural pattern is going to fire again in the future.

Neural patterns share neuron! So a reactivation can prompt another close neural pattern to fire.

Kind of like when you forgot something, and you re-create a part of the experience in order to help remember

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The brain is encoding 11 million bits of information in every moment!

Of those 11 million bits, we are only consciously aware of between 6 and 50!!!
6-50 versus 11 million!!! That ratio is hard to comprehend!

IMPLICIT MEMORY

Feelings
Sensations
Behavioral Impulses
Perceptions

EXPLICIT MEMORY

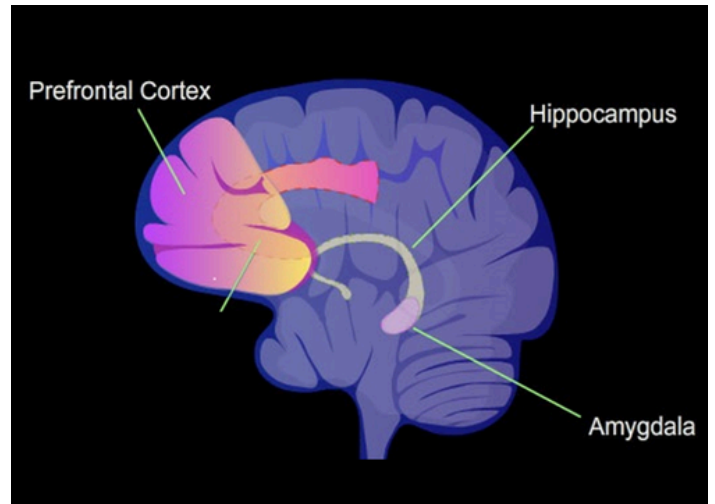
Knowledge and facts
The felt-sense of remembering
Has a time stamp

All of these bits of information come together to form a neural pattern or "memory ball" (metaphor from *Inside Out* movie).

Not every experience makes it into long term storage with the ability to retrieve-
that would be debilitating!

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Implicit Memory- Prior to approximately age three, all experiences are encoded, stored, and retrieved **IMPLICITLY**. Implicit memory helps babies understand the world and anticipate what's going to happen next. Even though babies don't have explicit memories, they are still encoding memory.



In normal memory processing, the brain encodes all this data (the 11 million bits of information entering into our conscious and unconscious awareness in any given moment) links up the explicit and the implicit (the data we are aware of and the data we aren't) and creates one big memory network.

Explicit Memory- As the hippocampus starts to come 'online' between 18 and 36 months-old, the brain starts to encode explicit memories. Explicit memories give us the felt-sense of remembering, including how long ago the experience happened. Explicit memory are facts, data, and they have a time stamp!

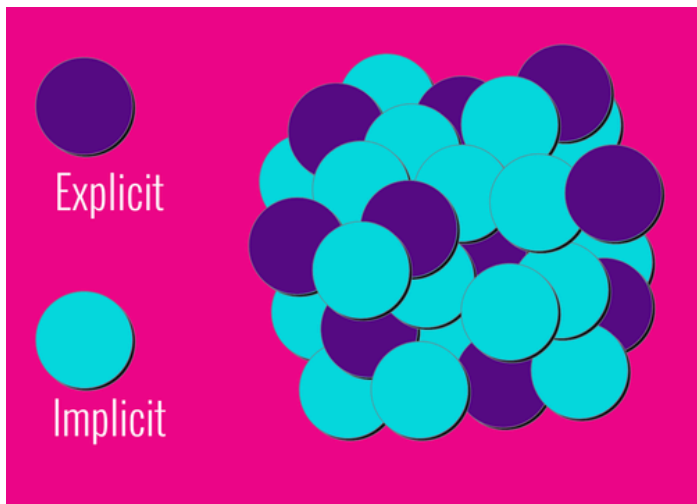


Implicit versus Explicit

11 Million to 6-50

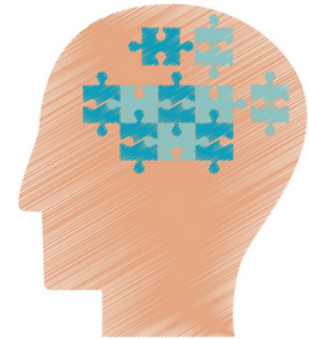
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A memory network is awoken when something happens in the now that is similar to something that happened in the past. When implicit data from the past gets awakened in the now, we know that it's from the past because it's connected to some explicit data in the memory network. It's FEELS like the past.



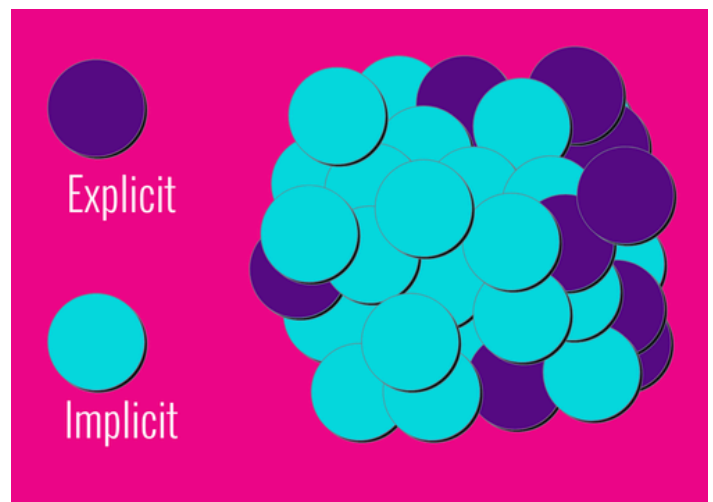
The hormones and neurochemicals that are released during an overwhelming and traumatic experience turns off the hippocampus. This allows us to react and ultimately survive, instead of overthinking and slowing down our reactions. The hippocampus is involved in helping the implicit and explicit data find each other in a memory network, so after a traumatic experience there is a chance that those pieces of data don't find each other.

**Disconnect
Due to
Trauma**



Remember- when something happens in the NOW it awakens something that happened in the past. If the implicit from the past isn't connected to the explicit data, the implicit is activated without the time stamp and feels like it's happening right now.

If something in the NOW activates a sensation that was life-threatening in the past (hunger, pain, loneliness) our behaviors in the NOW will be based on those life-threatening experiences from the past (tantrum, lying, aggression, control, etc.)



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When we understand that what seems like an overreaction is actually the perfect size reaction because the brain feels as though what happened in the past is actually happening in the now...



We aren't confused and are able to stay regulated ourselves! Then we can respond with attunement-which means responding to what the real problem is (the terror that was awakened from the past).



We might change what we are doing or it might mean we change how we are responding with empathy.

"Ugh, it's so hard to wait five more minutes for dinner. It feels like you'll never eat again and that is terrifying."

You may offer a snack even though dinner is only five minutes away, or you may continue to respond with regulation, connection, empathy, and compassion, instead of "You are being irrational! You can see that dinner is almost ready! You just need to wait!"



This response surprises your child's brain (a fearful, dysregulated brain is expecting fear and dysregulation). It is this surprise that CHANGES the way memories are stored in the brain and begins to help those implicit and explicit memories find each other!

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With enough of these unexpected and surprising experiences of empathy, compassion, and boundaries- while having the real need met- the implicit and explicit parts of the memory network will move toward integration. This increases the likelihood that when the implicit is activated again in the future, the child will respond to the experience as a MEMORY, not as what's happening *right now*.

This could mean that a request to wait five more minutes for dinner will be met with some complaining and disappointment- which are reasonable feelings and appropriate to express! - without the intensity of a behavior that matches "I will die if I don't eat right now."

Changing how we see our kids changes our kids.

When we see them as humans doing the best they can in the moment and having a reaction that makes perfect sense based on what's happening in their neurobiology, we stay more regulated. This we are more likely to respond with compassion, empathy, and boundaries. Our children begin to see themselves the same way- as humans who are struggling, who are sometimes swept away with emotion, and that their behaviors don't mean they are a bad person, just a struggling person.

When our kids believe they are simply a struggling kid- and not a bad kid- their behaviors start to change to match their beliefs.

This is exactly what we want.

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Thank you!

Parenting and supporting children with a history of trauma is confusing, baffling, and overwhelming. Understanding memory processing is just one small piece of understanding the impact of trauma- but it's an important one!! I hope this helps you demystify some of those more confusing moments!

INTERESTED IN MORE?

I support families and professionals in a lot of different ways!

- ▶ Podcast
RobynGobbel.com/podcast
- ▶ Free Resources
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- ▶ Forum for Parents
RobynGobbel.com/theclub
- ▶ Immersion Program for Professionals
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