Wetware Craftsmanship

Brian Bozzuto
What Does the Brain Have to do with Agile?

► **Align our behavior** with the **natural way** our mind operates

► Understand and appreciate the **strengths & limits** of the mind

► Understand **brain behaviors** that **inhibit our own agility** & ability to change
First, a Disclaimer

► Beware “Brain Porn”
► Superfluous Technical Details Can Distract from Content
► Our Goal is to Build Better Mental Models of how the Mind Works
The Brain as a Computer

False!!!
3 Topics for Today

► Limits of mind
► Threats to ego
► Desire for Certainty
The Limits of Our Mind
Who Wants a Cookie?
Two Systems in Your Mind

The Rider (System 2)
Slow, serial, controlled, effortful, rule governed, flexible

The Elephant (System 1)
Fast, parallel, automatic, effortless, associated, slow-learning
Challenges of the Elephant

► Framing
► Anchoring
► Accessible information

BUT!!! It is fast and efficient
Clear the Path

Strengthen the Rider
Strengthen the Rider

► **Prioritize** the use of your mind when your **energy is highest**

► **Build Awareness of Your Thoughts**

► **Leverage as many parts** of your mind as possible

Stand up in the morning!

Coaching Can Help Build Your Mental Capacity
Without writing down, please sort these objects by their value:

- **Object A**
  
  \[ 1 + 3 = 4 \]

- **Object B**
  
  \[ 2 \times 3 = 6 \]

- **Object C**
  
  \[ 3 / 2 = 1.5 \]

- **Object D**
  
  \[ 8 - 3 = 5 \]
Let’s Try a Harder Example with Stickies

<table>
<thead>
<tr>
<th>Object A</th>
<th>Object D</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 + 6</td>
<td>4 – 3 = 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Object B</th>
<th>Object E</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 x 4</td>
<td>6 / 3 = 2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Object C</th>
<th>Object F</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 / 2</td>
<td>3 + 4 = 7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Object D</th>
<th>Object A</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 - 3</td>
<td>2 + 6 = 8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Object E</th>
<th>Object B</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 / 3</td>
<td>3 x 4 = 12</td>
</tr>
</tbody>
</table>

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Chunking Demonstrated

► Try to memorize as many of these numbers as you can…

310412873634

► Let’s try one more time…

97  14  23

75  30  12
The Real Power of Information Radiators
Clear the Path

Deliberate Practice to build more Subconscious Capability

Build Concrete Processes to Follow
What Does this All Mean for Coaches?

- Changing behaviors takes energy, and brains get tired
- Failure to change doesn’t mean people don’t want to
- Coaches can offer support and clear the path to increase the likelihood people will be able to follow through

You need to make the elephant want to go where you want to go
Let’s Try Something...
Time for a Coaching Exercise

Instructions

► Split into pairs
► One of you will be the coach, the other the coachee
► Coachee, you’re going to share your problem with the coach and they are going to help you.

► Coachees, close your eyes, we have specific instructions for coaches…

Instructions for Coaches

► Listen to the coachee, but your goal is to offer them solutions.
► Your job is to be as useful as you can by offering as much advice as you can
► Remember, you’re the Jedi master!
Debrief

People Being Coaches
► What was that experience like?
► How did it feel?
► Did you get useful information?

Coaches
► What was that experience like?
► How did it feel?
► We they open to your infinite wisdom?
Need for Social Acceptance
What Happened?

► We perceive social threats & physical threats with the same part of our minds
► Threats to ego may engender the same fight or flight reactions that physical danger would

The brain is lazy. Our default state is to start offering suggestions rather than listen and cooperatively problem solve

David Rock, “Managing with the Brain in Mind”, Oxford Leadership Journal. Dec 2009 Vol 1 Issue 1
So… On to Coaching
Fight or Flight in the Office

**Fight**
- “I don’t have any real problems”
- “You don’t understand my situation”
- “Your ideas are wrong”

**Flight**
- “I can’t do anything about this”
- “It’s because of these other people”
- “I’ll just muddle through”

The response to threats is generally a narrowing of options, the precise opposite of what we are trying to achieve as coaches.
A Full Coaching Conversation

- Setting the Foundation
- Co-Creating the Relationship
- Communicating Effectively
- Facilitating Learning and Results

Don’t Start Here
Let’s Try It Again…
Another Exercise

► Pair up again

► People being coached, share your problem

► Coaches, listen and only ask questions to better understand the situation

→ You MAY NOT make suggestions
Debrief

People Being Coaches
► What was that experience like?
► How did it feel?
► Did you get useful information?

Coaches
► What was that experience like?
► How did it feel?
► Do you feel like you helped them?
It must be considered that there is nothing more difficult to carry out, nor more doubtful of success, nor more dangerous to handle, than to initiate a new order of things. For the reformer has enemies in all those who profit by the old order, and only lukewarm defenders in all those who would profit by the new order.

→ Niccolo Machiavelli “The Prince”
Remember the Brain is Lazy…

► Uncertainty requires more conscious thought
► The mind seeks to match patterns and make things predictable
► We delight in certainty
We May See Patterns That Don’t Even Exist
Or Interpret Them Based on Context

We Will Always Have an Explanation

► “Markets fell on fears about the upcoming jobs report”
► “Markets rallied due to a good monthly sales report, which experts attribute to the weather”
► “The market fell today due to uncertainty about upcoming legislation in Congress”

We observe something, then we tell ourselves a story to explain it.

Sometimes it happens so fast we can’t distinguish between the two
Some Cognitive Biases

Confidence from Narrative Coherence
“Of course the butler did it! It all makes sense now.”

Confirmatory Bias
“Look at the confirming evidence!”
How Can These Biases Impact Projects?
## Give Ranges You’re 90% Confident In

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Temperature of the Sun</td>
<td>10,000° F / 6,000° C</td>
</tr>
<tr>
<td>Latitude of Shanghai</td>
<td>31 degrees North</td>
</tr>
<tr>
<td>Area of the Asian Continent</td>
<td>17,139,000 sq. miles 44,390, sq. kilometers</td>
</tr>
<tr>
<td>The Year of Alexander the Great’s Birth</td>
<td>356 BC</td>
</tr>
<tr>
<td>Total Volume of the Great Lakes</td>
<td>5,500 cubic miles / 23,000 cubic kilometers</td>
</tr>
<tr>
<td>Worldwide box office receipts for the movie Titanic</td>
<td>$1.835 billion</td>
</tr>
<tr>
<td>Total length of the coastline of the Pacific Ocean</td>
<td>84,300 miles 135,663 kilometers</td>
</tr>
<tr>
<td>Number of book title published in the U.S. since 1776</td>
<td>22 million</td>
</tr>
<tr>
<td>Heaviest blue whale ever recorded</td>
<td>380,000 pounds 170,000 kilograms</td>
</tr>
</tbody>
</table>

McConnell, 2006
Results from Other Estimators

**Distribution of Correct Answers**

People usually estimate to about 30% confidence

McConnell, 2006
Imagine the Horse Tracks

- Book keepers asked to pick winners based on their 10 most important pieces of data
- Then, they were allowed to check 10 more pieces of data and adjust predictions
- Both set of predictions were equally accurate
- Book keepers were much more confident in the second set

Once we form an idea, it becomes very hard to change it.
Hey do you have a high level estimate for the XYZ project? I promise I won’t hold you to it.
One Last Exercise

► Pair up again
► People being coached, share your problem
► Coaches, try to help tease observations & facts from interpretations and stories
“That’s Okay, It’s Just My Brain!”

- Awareness of how our mind works leads to better effectiveness
- Attention to our state of mind, makes us aware of some of the shortcuts our mind makes
- With proper context, coaching can greatly help us overcome the constraints of our mind
Thank You!

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Further Reading


