Psychology 101

or 7±2 Things about Psychology

Claudius Link
@realn2s
000: My Motivation
The major questions regarding technology are not technical but human questions.

Peter Drucker
You “only” need to change Your attitude
001: The Magical Number 7
Be warned,
never hard code numbers in your talk titles

Kevlin Henney
Ineffective Coding Habits

7

Samurai

Wonders of the World

Colours of a Rainbow

Days per Week

Deadly Sins

Ineffective Coding Habits
Cognitive Limit

Not magic
Actually 2 limits
Not fixed

Absolute Judgments
1d Stimuli
Short Term Memory
Typical between 5-9

Described by George A. Miller
In 1956
Chunks of Information
Poll

How many bullet points were on the slide about:

• the Magical number seven?

• George A. Miller?
1 Samurai

2 Wonders of the World

3 Colours of a Rainbow

4 Days per Week

5 Deadly Sins

6 Ineffective Coding Habits
Not magic

Actually 2 limits

Cognitive Limit

Not fixed

Absolute Judgments

1d Stimuli

Short Term Memory

Typical between 5-9

Chunks of Information

Described by George A. Miller

In 1956
Chunking

A word means just what I choose it to mean — neither more nor less

Lewis Carroll

Perenyi Attack
010: Motivation
Maslow's Hierarchy of Needs

- Self-actualization
- Esteem
- Love/belonging
- Safety
- Physiological

You are here

Does Money Motivate?
Motivation by Money

- Physiological
- Safety
- Love/belonging
- Esteem
- Self-actualization

- Loads
- Maybe
- Relative
- Temporary

Yes

http://commons.wikimedia.org/wiki/File:MaslowsHierarchyOfNeeds.png
011: Ignorance
Poll

- Who drives a car?
- Who is an above-average driver?
Dunning–Kruger Effect
Unskilled and Unaware of It
In order to attain the impossible, one must attempt the absurd.

Miguel de Cervantes
It's what you learn after you know it all that counts.

John Wooden
100: More Ignorance
The Five Orders of Ignorance

- Meta-Ignorance ✓
- Lack of Process
- Lack of Awareness
- Lack of Knowledge
- Lack of Ignorance
101: Learning
<table>
<thead>
<tr>
<th>Novice</th>
<th>Advanced Beginner</th>
<th>Competent</th>
<th>Proficient</th>
<th>Expert</th>
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</thead>
<tbody>
<tr>
<td>Monitoring</td>
<td>Guidelines</td>
<td>Real world exposure</td>
<td>Practice</td>
<td>Drive to expand Knowledge and Experience</td>
</tr>
<tr>
<td>Rules Feedback</td>
<td>Experiments</td>
<td></td>
<td>Reflection</td>
<td></td>
</tr>
<tr>
<td>Needs</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

| Checklists | Simulations | Field trips |
| Classroom learning | Games Q&A | Peer-to-peer |
| “Best Practices” | | Mentoring |

| How | |
| | | |
| | | |

<table>
<thead>
<tr>
<th>Proficient</th>
<th>Expert</th>
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<tbody>
<tr>
<td>Practice</td>
<td>“outside” thinking</td>
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<tr>
<td>Reflection</td>
<td>Exploration</td>
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</table>
110: Doubt
I'm a creep, I'm a weirdo.  
What the hell am I doing here?  
I don't belong here.

Radiohead – Creep Lyrics
Impostor Syndrome

Two out of five successful people consider themselves frauds
111: Thinking
Task

LEFT
left
right
RIGHT
RIGHT
RIGHT
left
LEFT
right
upper
lower
LOWER
upper
UPPER
lower
LOWER
upper
## Thinking, Fast & Slow

<table>
<thead>
<tr>
<th>Systems 1</th>
<th>System 2</th>
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<tbody>
<tr>
<td>Active</td>
<td>Inactive</td>
</tr>
<tr>
<td>Instantaneous</td>
<td>Delayed</td>
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<tr>
<td>Fast</td>
<td>Slow</td>
</tr>
<tr>
<td>Effortless</td>
<td>Hard</td>
</tr>
</tbody>
</table>
The Monkey Business Illusion
Daniel J. Simons
Meaning

Don’t require me to activate System 2

Steve Krug
Adaption

Estimate in 5 seconds

\[ 8 \times 7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1 \]

Expected  40320

Actual  2250
111+1: Interactions
Transactional Analysis (TA)

I’m OK, you’re OK
TA: Ego-States

- Parent
- Adult
- Child
TA: States

You
- Parent
- Adult
- Child

Other
- Parent
- Adult
- Child

You can transition to the Other state from any of your states, and vice versa.
TA: States

You
- Parent
- Adult
- Child

Other
- Parent
- Adult
- Child

You
- Parent
- Adult
- Child

Other
- Parent
- Adult
- Child
111+2: Communication
Four-Sides of a Message

Sender

Self-Revelation

Message

Factual Information

Relationship

Appeal

Recipient
Extra: Biases
Availability Heuristic
It's tough to make predictions, especially about the future

Yogi Berra
Confirmation Bias

I used to think correlation implied causation.

Then I took a statistics class. Now I don't.

Sounds like the class helped.

Well, maybe.

https://xkcd.com/552/
Anchoring and Adaption

https://flic.kr/p/8HodGy
Adaption

Estimate in 5 seconds

Group A:

8*7*6*5*4*3*2*1

→ 2250

40320
Anchoring

Estimate in 5 seconds

Group A:
\[ 8 \times 7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1 \rightarrow 2250 \]

Group B:
\[ 1 \times 2 \times 3 \times 4 \times 5 \times 6 \times 7 \times 8 \rightarrow 512 \]

40320
Halo Effect
Conclusion
Müller-Lyer Illusion