Mind Busters: Test Your Mind

Maaike & Göran

Welcome!

Exercise: System 1 vs Sytem 2

What was going on?

System 1:

Automatic

Fast

error-prone

System 2:

Slow

Effortful

concious

Quiz time!
I'll ask you 4 questions and you'll answer based on gut feeling

Question 1

A new disease is about to reach Australian shores and it is estimated 600 people will die. There are two options for medical treatment; you have been called upon to make the choice.

A) Program A: 200 people will be saved

B) Program B: one third probability that 600 people will be saved, and a two thirds probability that no-one will be saved.

Question 2

You're feeling unwell and go see a doctor. The doctor runs an accurate test (99% accurate for both positive and negatives) for a rare disease (1/11,000). What is the closest probability that you have the disease if the result is positive?

A: 9%

B: 99%

C: 0.9%

D: 0.09%

Question 3

"Linda is a thirty-one year old woman, single, outspoken, and very bright. She majored in philosophy. As a student, she was deeply concerned with issues of discrimination and social justice, and also participated in anti-nuclear demonstrations." Which is more likely?

A)Linda is a bank teller

B) Linda is a feminist bank teller

Question 4

A second disease is about to reach Australian shores and it is again estimated 600 people will die. There are two options for medical treatment; you have been called upon to make the choice.

A) If program Y is adopted, there is a one third probability nobody will die and a two-thirds probability that 600 people will die.

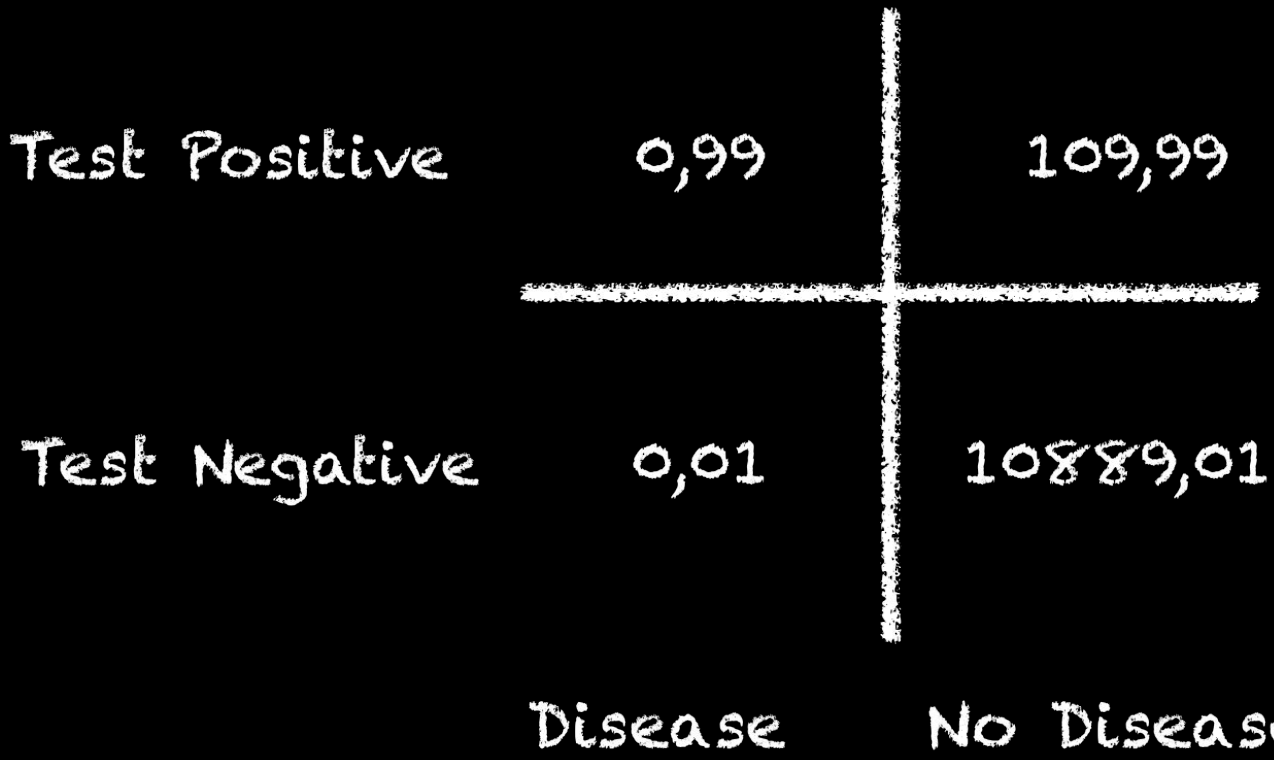
B) If program X is adopted 400 people will die

Answers!

Question 1 and Question 4 were the same!

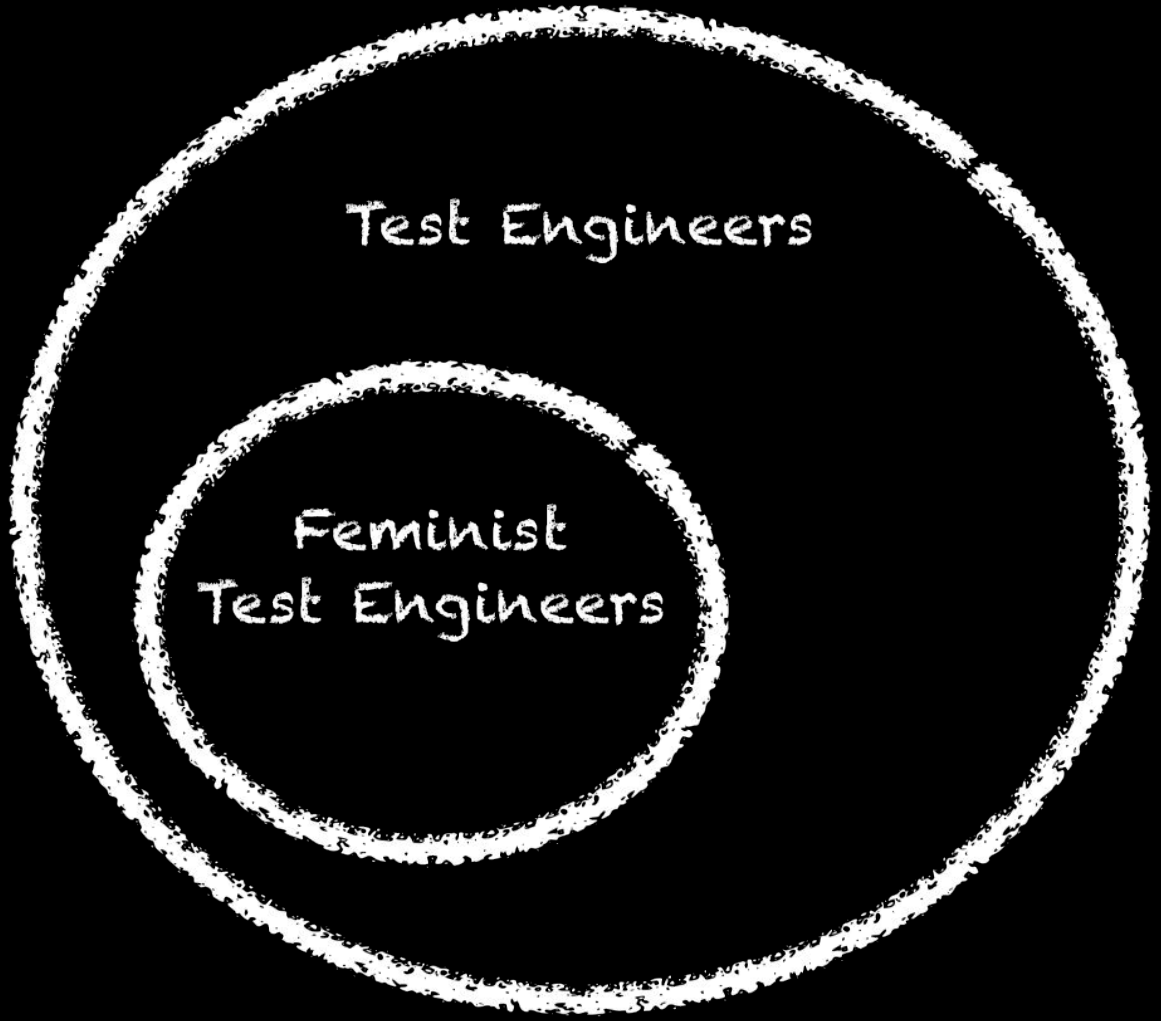
Expected outcome 200 people will die or 400 people will live is the same. But when framed as 400 people will die, people are more likely to take the gamble.

This bias is called: the Framing Effect



0,99/
(0,99+109,99)
= 0,89%

The linda problem

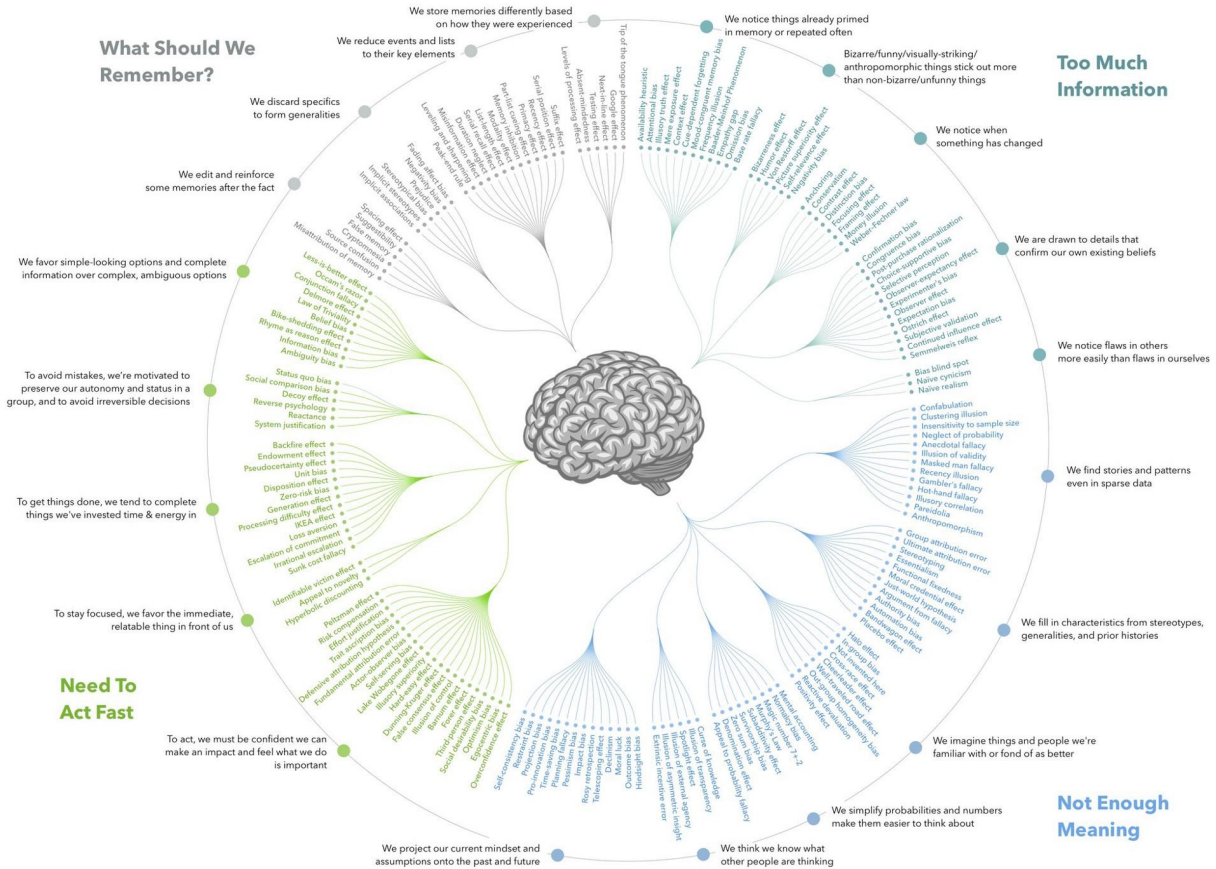


You're Biased

175+ biases, 4 main categories:

- **Not enough meaning**
- **Too much information**
- **What to remember**
- **Need to act fast**

COGNITIVE BIAS CODEX, 2016



ALGORITHMIC LAYOUT + DESIGN BY JM3 · JOHN MANOOGIAN III // CONCEPT + METICULOUS CATEGORIZATION BY BUSTER BENSON // DEEP RESEARCH BY WIKIPEDIANS FAR + WIDE


BBC

Some biases:

Confirmation Bias / Cognitive Dissonance

Inattentional Blindness

Illusion of Control

Sunk Cost Fallacy

Automation Bias

Link to Testing / Software Development

Existing beliefs about the product / developers (Confirmation bias)

Making false assumptions about requirements (Assumption fallacy, shallow understanding)

Missing ‘obvious issues’ because of focusing on something very specific (Inattentional blindness)

Requiring estimates on tasks that cannot be estimated (Illusion of control)

Stereotyping in software development

Testers vs Developers

How are testers stereotyping developers

How are developers stereotyping testers

What can we do differently?

Exercise: Your Story

github.com/Maaikees/cognitivebiasesresources

And now, for something completely different

Meditation, really?!!

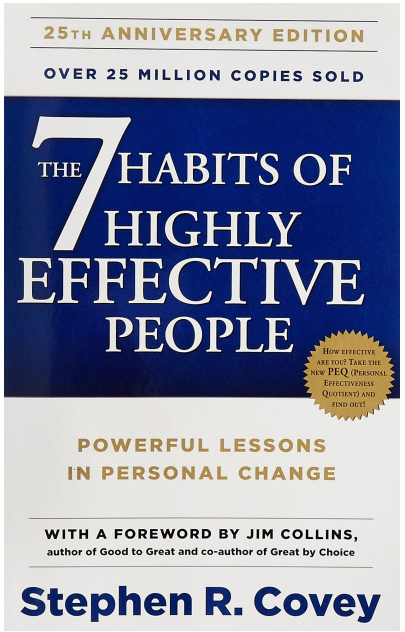
Mindfulness comes in many forms

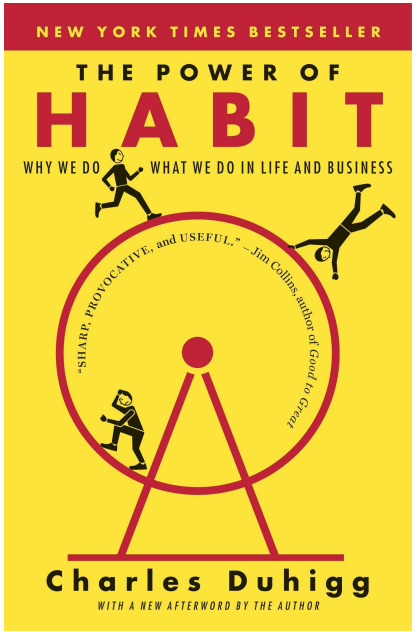
Not to be more zen, but to **focus** your attention in the now and back to your body

No need to become a monk, 1 minute can already help

Alternatives: pomodoro technique, take a walk, (heavy) excersise, avoid your mobile phone during every idle moment

It's about habits

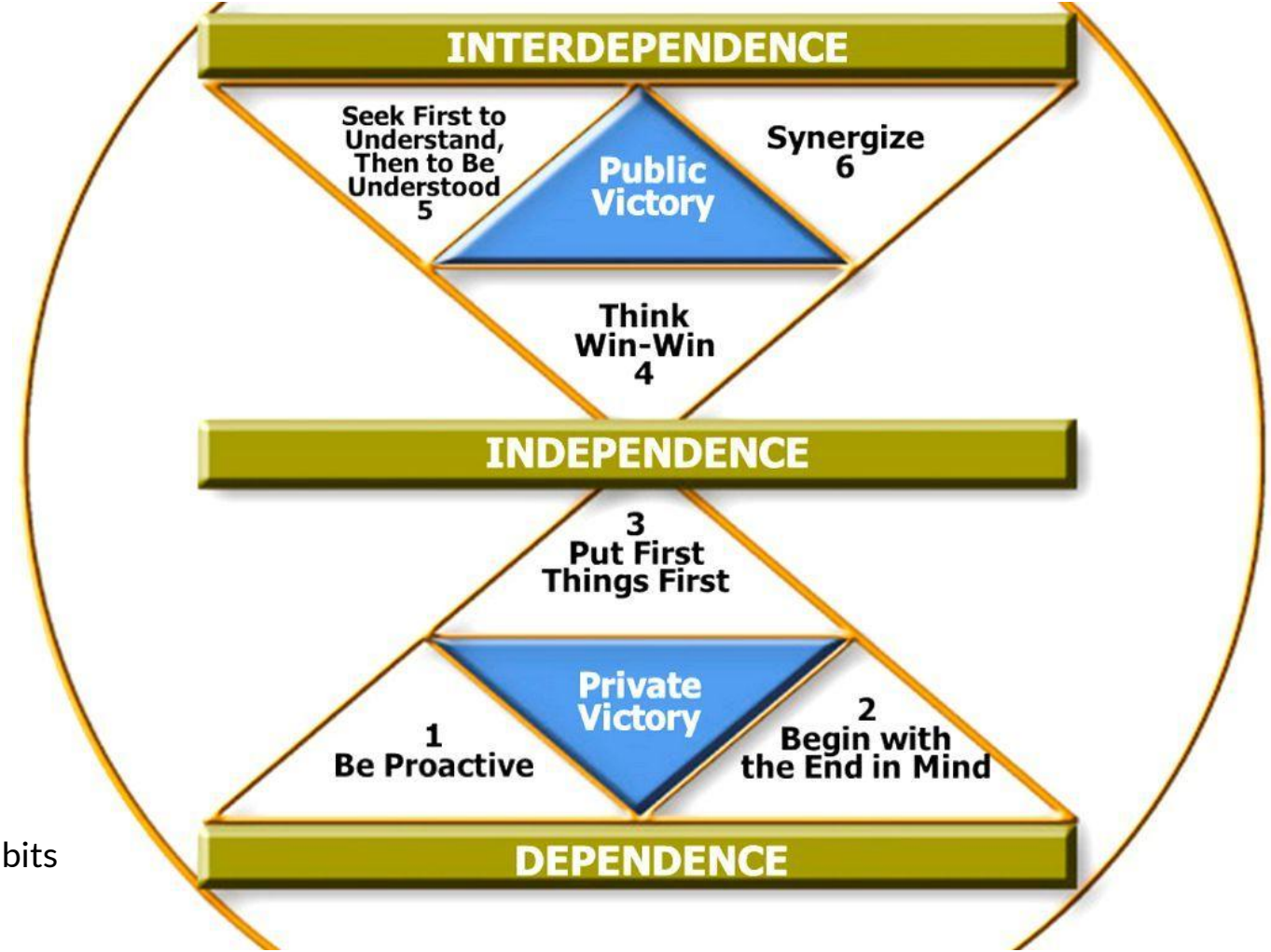




Book Review / Recommendation of

The 7 Habits of Highly Effective People

by Stephen Covey



Source: 7 habits model

	Urgent	Not Urgent
Important	I (MANAGE) • Crisis • Medical emergencies • Pressing problems • Deadline-driven projects • Last-minute preparations for scheduled activities	II (FOCUS) • Preparation/planning • Prevention • Values clarification • Exercise • Relationship-building • True recreation/relaxation
	Quadrant of Necessity	Quadrant of Quality & Personal Leadership
Not Important	III (AVOID) • Interruptions, some calls • Some mail & reports • Some meetings • Many "pressing" matters • Many popular activities	IV (AVOID) • Trivia, busywork • Junk mail • Some phone messages/email • Time wasters • Escape activities • Viewing mindless TV shows
	Quadrant of Deception	Quadrant of Waste

7 Habits Exercise

With your group, draw the quadrants of Habit 3.

Think of typical (test) activities and put them in the correct quadrant.

Quadrant 1: Urgent/Important

Deadlines for a project
Rushed testing
Fixing problems in production

Quadrant 2: Not urgent/important

Optimising test automation
Evaluating your testing
Learning new skills
Creating good test data
Doing testing as you planned (not rushed)
Deep testing / Exploratory Testing
Creating valuable automated tests

Quadrant 3: Urgent/not important

Some requests from colleagues
Some Mails
Some meetings
Creating a test rapport for test manager on short notice
Interruptions (about testing)

Quardant 4: Not urgent/not important

Arguing about testing
Code coverage
Counting test cases
Writing out a detailed test case
Following a test process to the T

Individual Exercise: Habit 1 “Be Proactive”

Identify growth areas for you to be more proactive

Think about your role at work

Remember the example from the YouTube clip?

Given that...

You’re biased...

Habits play a big role in your behaviour...

Your mind can’t handle constant distraction...

Shifting focus costs energy….

…..How do you learn?

Learning Techniques

DBSIOBFQLSDI

CHUNKING

DBSIOBFQLSDI

FBISQLIOSBDD

CHUNKING

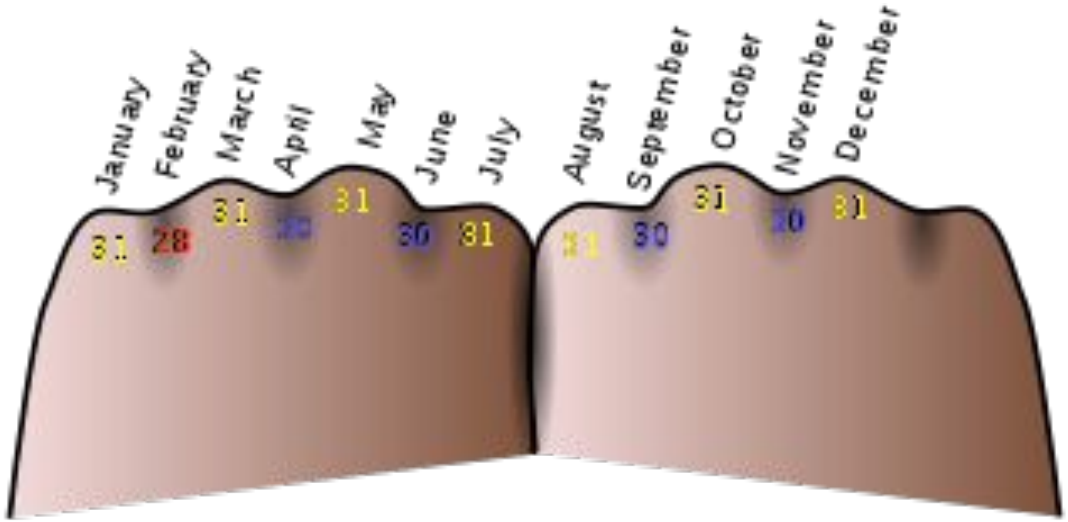
DBSIOBFQLSDI

FBISQLIOSBDD

FBI SQL IOS BDD

Mnemonics

aids information retention or retrieval



FOCUSED vs DIFFUSED LEARNING

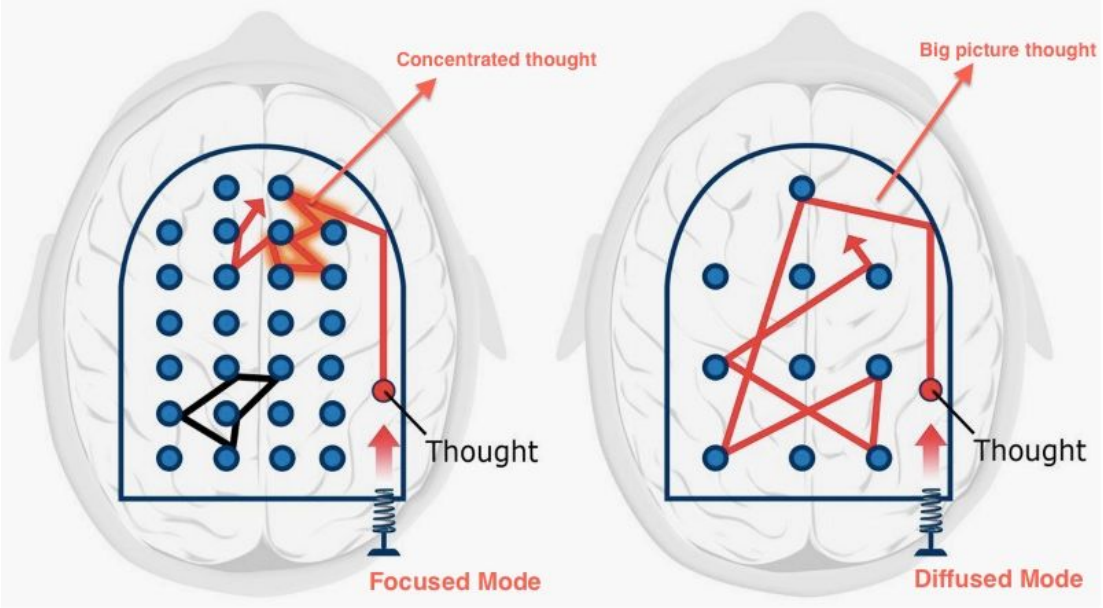
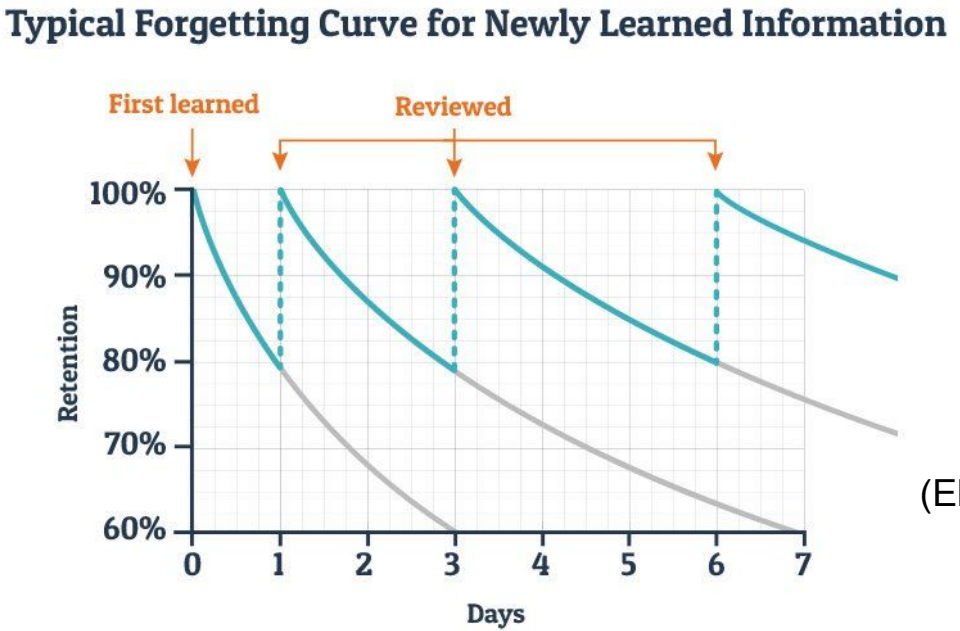


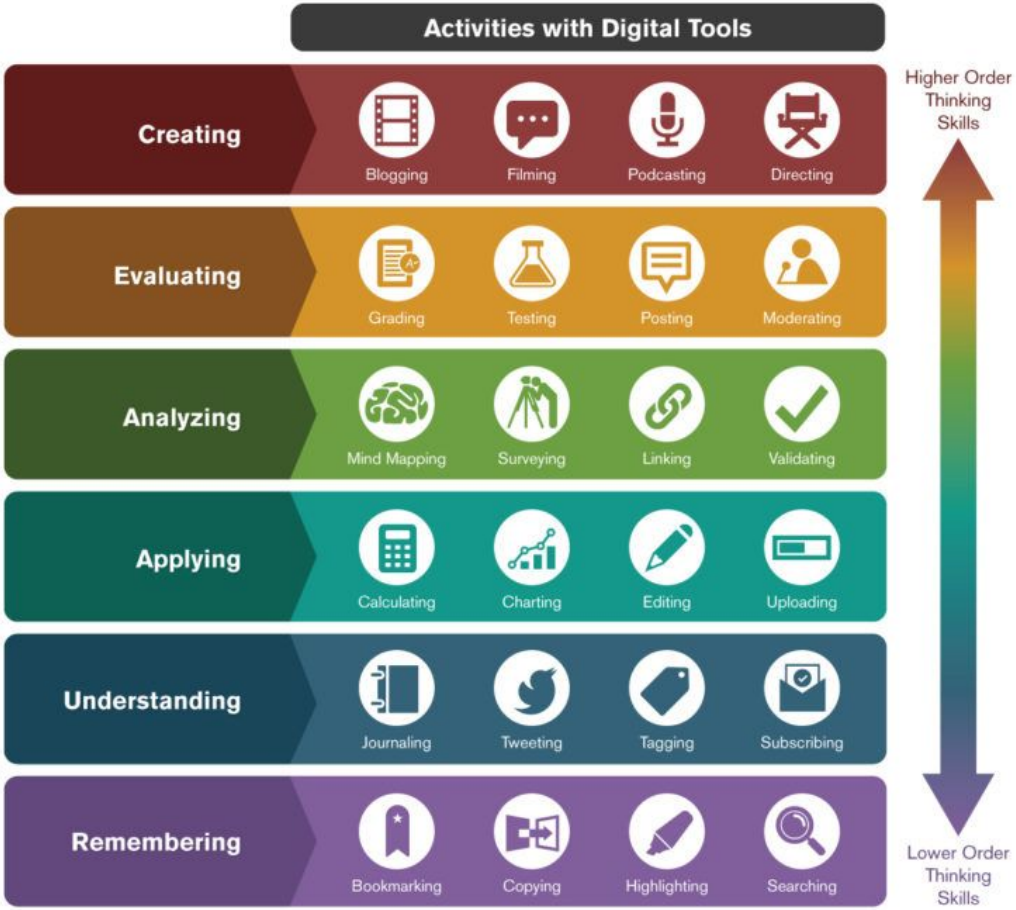
Image credit:
Barbara Oakley
Terrence Sejnowski

SPACED REPETITION



(Ebbinghaus forgetting curve)

Bloom's Digital Taxonomy



Infographic Credit: Ron Carranza

Exercise: Chunking & Mnemonics, Japanese Style

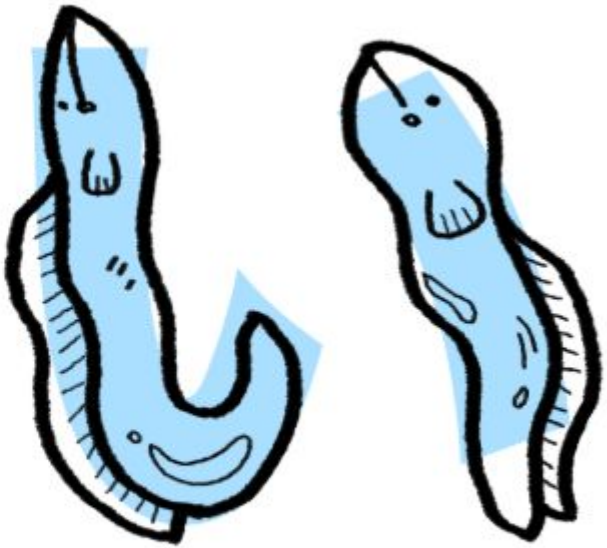
Using: http://www.tofugu.com/japanese/learn-hiragana/

The first five Hiragana characters

あ い う え お

source: http://www.tofugu.com/japanese/learn-hiragana/

い



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source: http://www.tofugu.com/japanese/learn-hiragana/

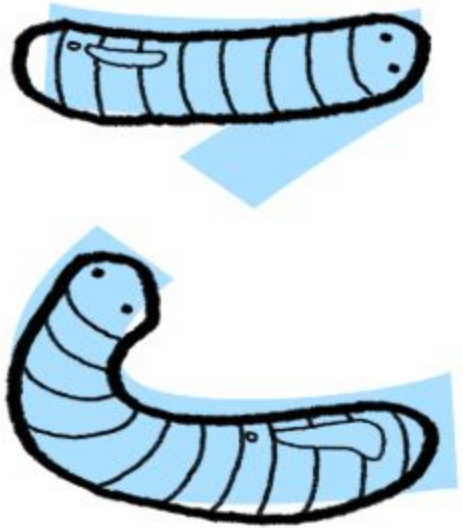
The next five Hiragana characters

か き く け こ

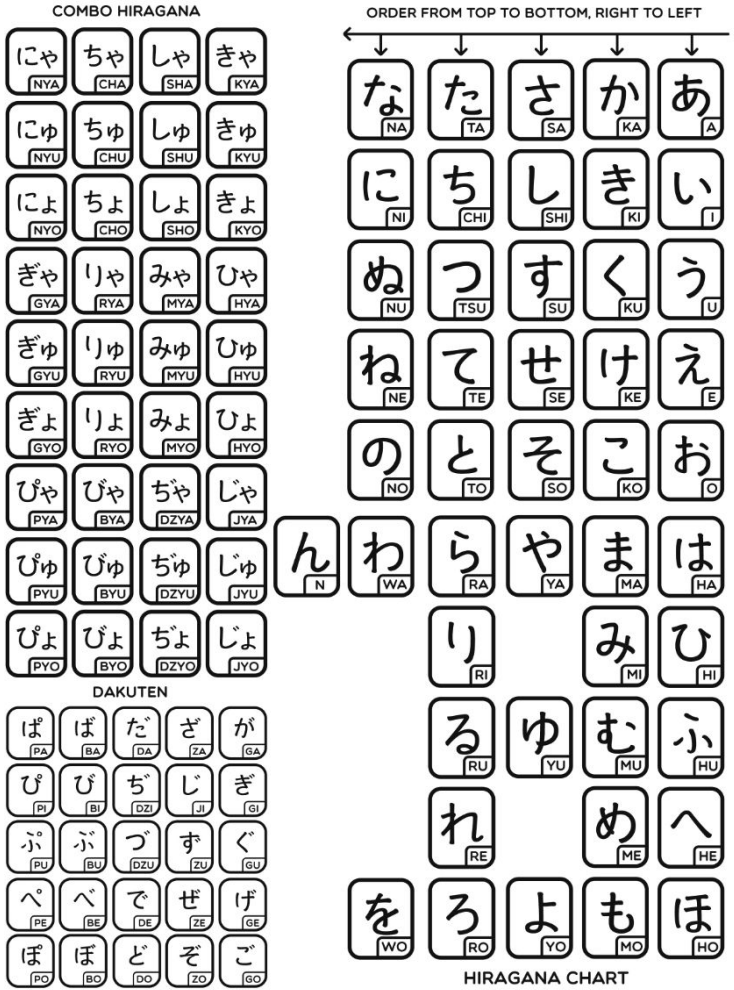
か

04

け



Practice time!
realkana.com



source: http://www.tofugu.com/japanese/learn-hiragana/

Observing & Coaching others

How good are you at observing?

Coaching, Mentoring, Managing, Leading: start with observing!

Use this fact to your advantage: **it's easier to observe others than it is to observe yourself**

Observing examples from a testing perspective

Developer says: “It’s done”
Anyone who says: “just”, “it’s simple”, “it’s easy”
Team member who says: “I only have to do X”
Developer says: “I’ll be finished with the code tomorrow”
Manager who says: “Have you tested everything?”
Manager who says: “I want all testing to be automated”
Manager who says: “How do we know there aren’t any bugs?”

I have observed: now what?

Remember the 7 habits? **Be Proactive! A first step to being a leader**

> This is an opportunity to speak up, to address risk, risky thinking, improve collaboration

Risks while observing others

Biases (Stereotyping, halo effect)

Projection (You project your own values onto others)

Assumptions (You don’t have all the information others have)

Pattern seeking (Fundamental Attribution Error)

You can both be right at the same time

Coaching, Mentoring, Managing, Leading

Group exercise: What do you think is the difference between these concepts?

Coaching Heuristics

1. Ask one question at a time
2. Opening question: “What’s on your mind?” (cut the small talk, no judgement)
3. Avoid leading questions and closed (yes/no) questions
4. Don’t give your solution

Exercise: Baby Steps in Coaching

What we hope you will remember

Source material & Further Reading

https://github.com/Maaikees/cognitivebiasesresources

Thank you for joining our workshop!

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