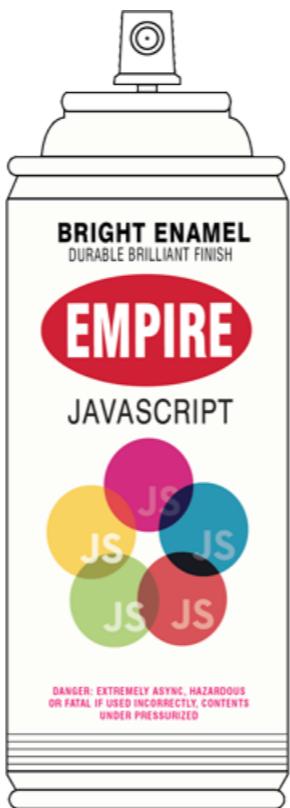
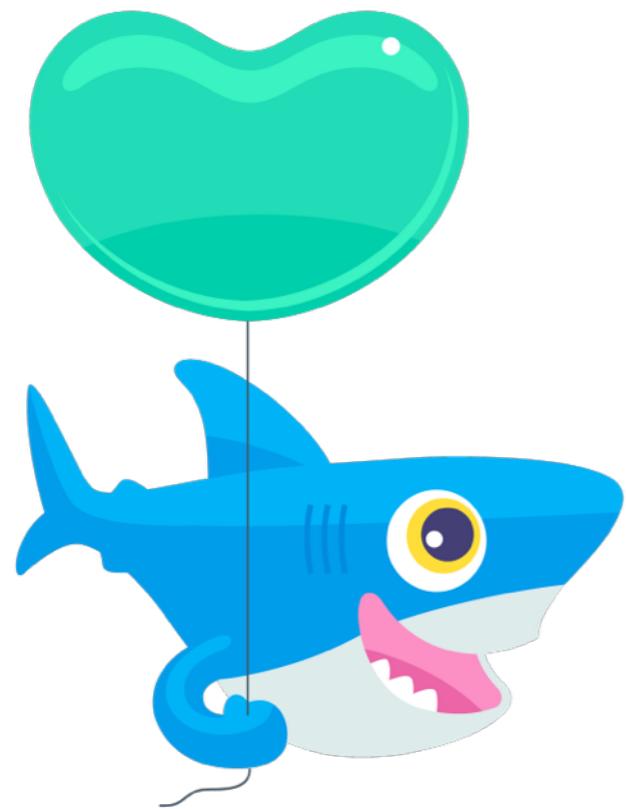


# On how your brain is conspiring against you making good software

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Humans are  
“predictably irrational”

- Dan Ariely

“severe and  
systematic errors”

- Amos Tversky & Daniel Kahneman



software is  
about PEOPLE



1. On Being Logical
2. On Bugs and Debugging
3. On Planning Your Work
4. On Others' Code
5. On Open Offices
6. On Knowing Your Worth
7. On Assembling a Team

# On Being Logical

Humans aren't great logical thinkers.



# On Being Logical

All P are M.

All S are M.

Therefore, all S are P.



# On Being Logical

A

6

J

7

# On Being Logical

But, we get better when  
reasoning about  
concrete examples!



# On Being Logical

Beer

22

Soda

16

# On Bugs and Debugging

“Debugging is twice as hard as writing a program in the first place”

- Brian Kernighan



# On Bugs and Debugging

We tend to interpret and favor information to confirm our pre-existing beliefs.

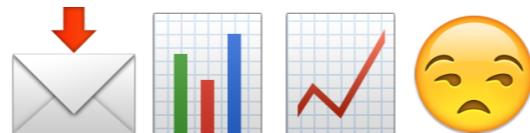


# On Bugs and Debugging

“2, 4, 6”

# On Bugs and Debugging

We even distrust evidence that goes against our prior beliefs.



# On Bugs and Debugging

We often have no idea  
how close we are  
to solving a problem.



# On Bugs and Debugging

We have a tendency to be rigid  
in how we approach a problem.



# On Bugs and Debugging

Breaks are important!



# On Bugs and Debugging

Creativity is just about having  
all the right ingredients.



# On Others' Code

Again, we tend to think about problems in fixed ways.



# On Others' Code

We prefer things that we have  
made or assembled ourselves.



# On Planning Your Work

We're bad at estimating how long it will take to do something.



# On Planning Your Work

We think bad things  
are more likely to happen to others.



# On Planning Your Work

We are motivated more  
by losses than by gains.

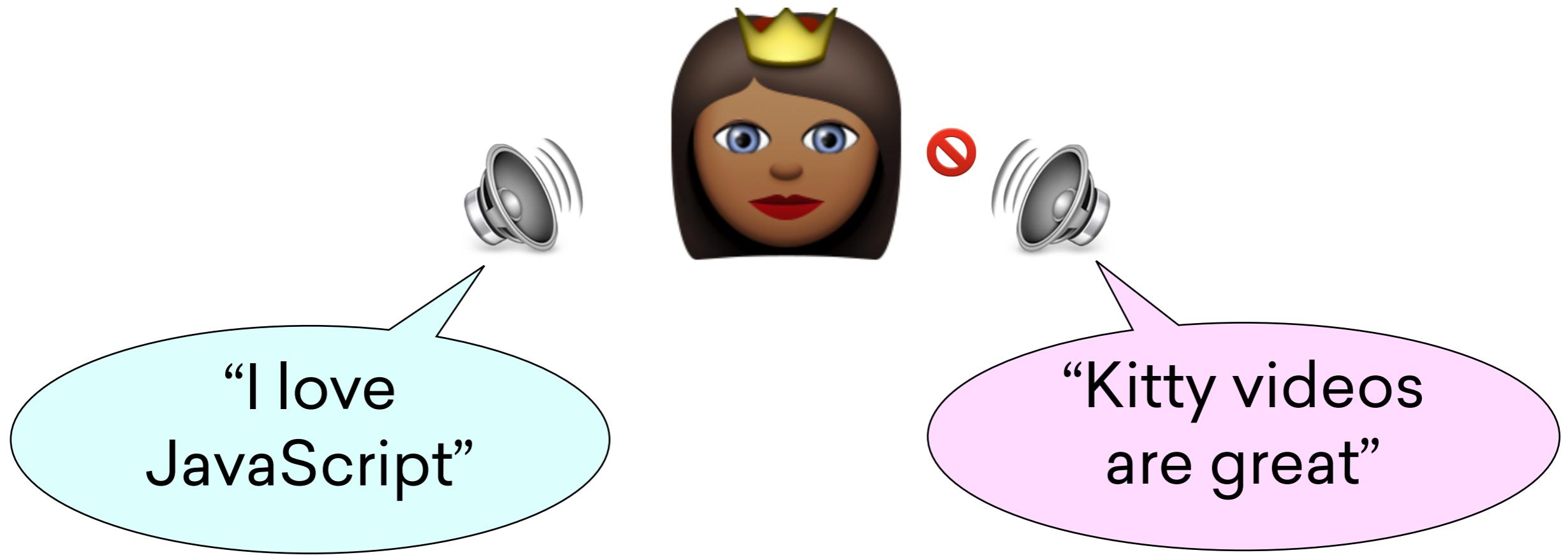


# On Open Offices

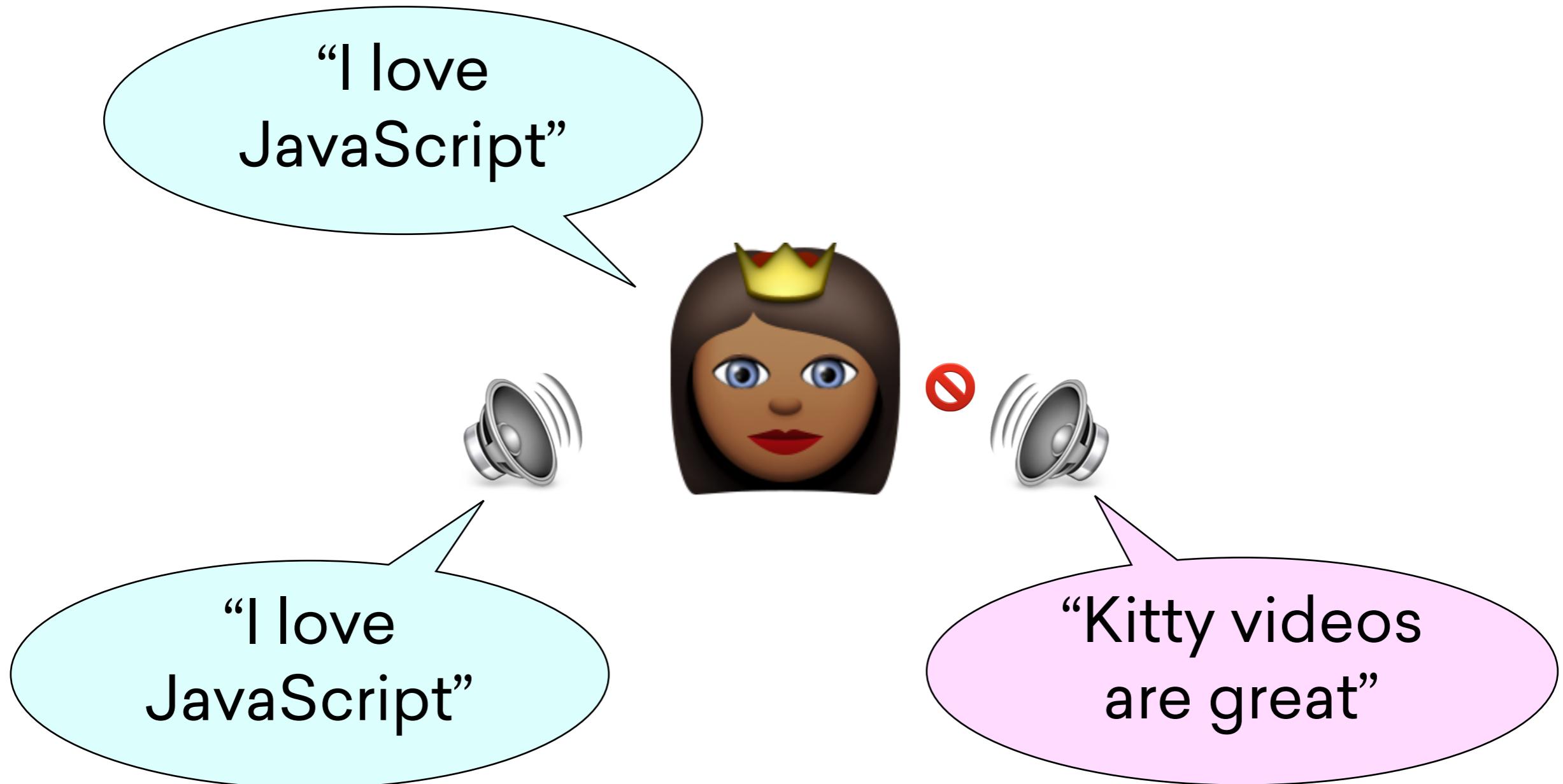
We're \*actually\* pretty good at filtering out unwanted things...



# On Open Offices



# On Open Offices



# On Open Offices

...but we're not totally oblivious to it.



# On Open Offices

Selective attention requires both ignoring and paying attention.



# On Open Offices

But what about that  
🔥 juicy conversation 🔥  
happening next to you?



# On Open Offices

We're helpless to the  
processing power of our brain.



# On Open Offices

BLUE PURPLE RED  
GREEN PURPLE  
GREEN

# On Open Offices

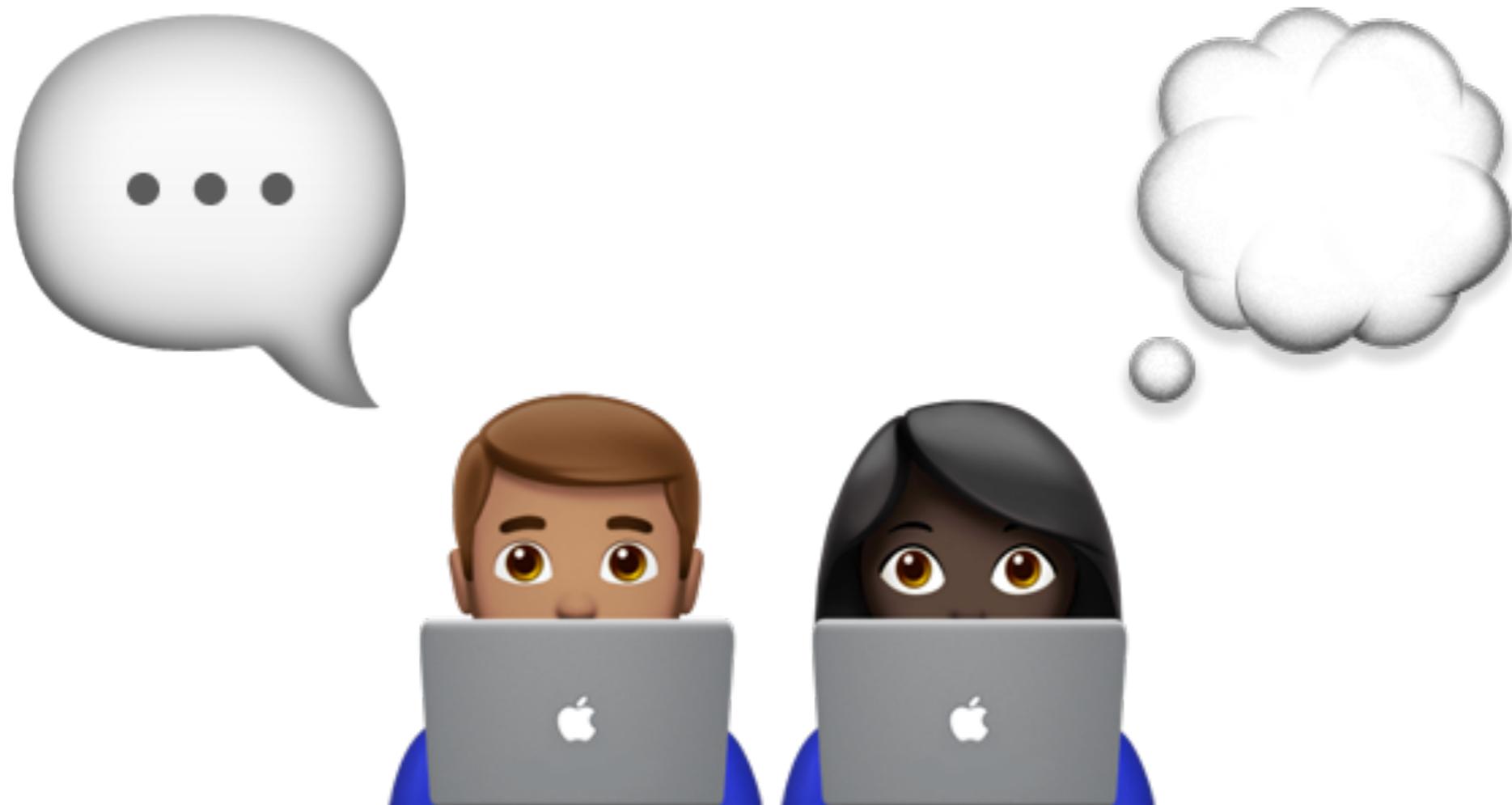


# On Open Offices

BLUE PURPLE RED  
GREEN PURPLE  
GREEN

# On Open Offices

BLUE PURPLE RED  
GREEN PURPLE  
GREEN



# On Knowing Your Worth

Unskilled people think they are better at tasks than they actually are.



# On Knowing Your Worth

We tend to overestimate our own skills and abilities compared to others.



# On Knowing Your Worth

Skilled people underestimate their abilities and think tasks that are easy for them are easy for others.



# On Knowing Your Worth

Skilled people sometimes  
feel their accomplishments  
are the result of luck or deception



# On Assembling a Team

We favor members  
of our own in-group.



# On Assembling a Team

We tend to attribute situations  
to others' character  
rather than to external factors.

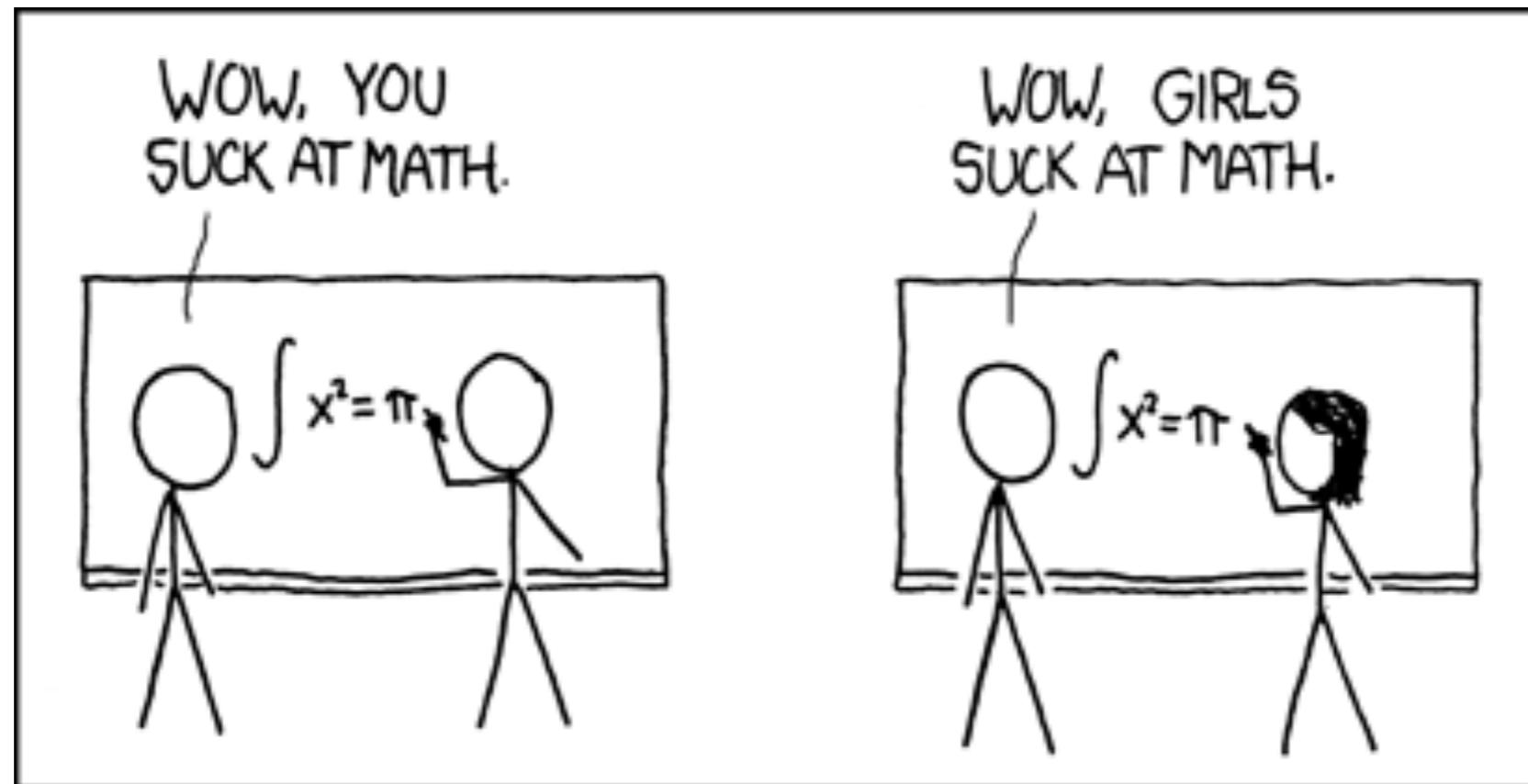


# On Assembling a Team

We tend to believe that  
attributes of a group member  
reflect the entire group.



# On Assembling a Team



# On Assembling a Team

We rely on examples  
that come to mind  
when evaluating something.



# On Assembling a Team

We assume group members will resemble the prototype for that group, and vice versa.



# On Assembling a Team

In some cases, we ignore probabilities  
in favor of focusing on details.



# On Assembling a Team



# On Assembling a Team



# On Getting Past This



# On Getting Past This



Thinking Fast  
(System 1)

# On Getting Past This



Thinking Fast  
(System 1)



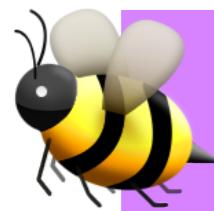
Thinking Slow  
(System 2)

# On Getting Past This



# On Getting Past This

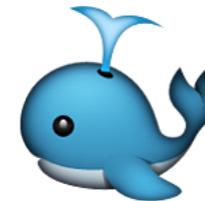
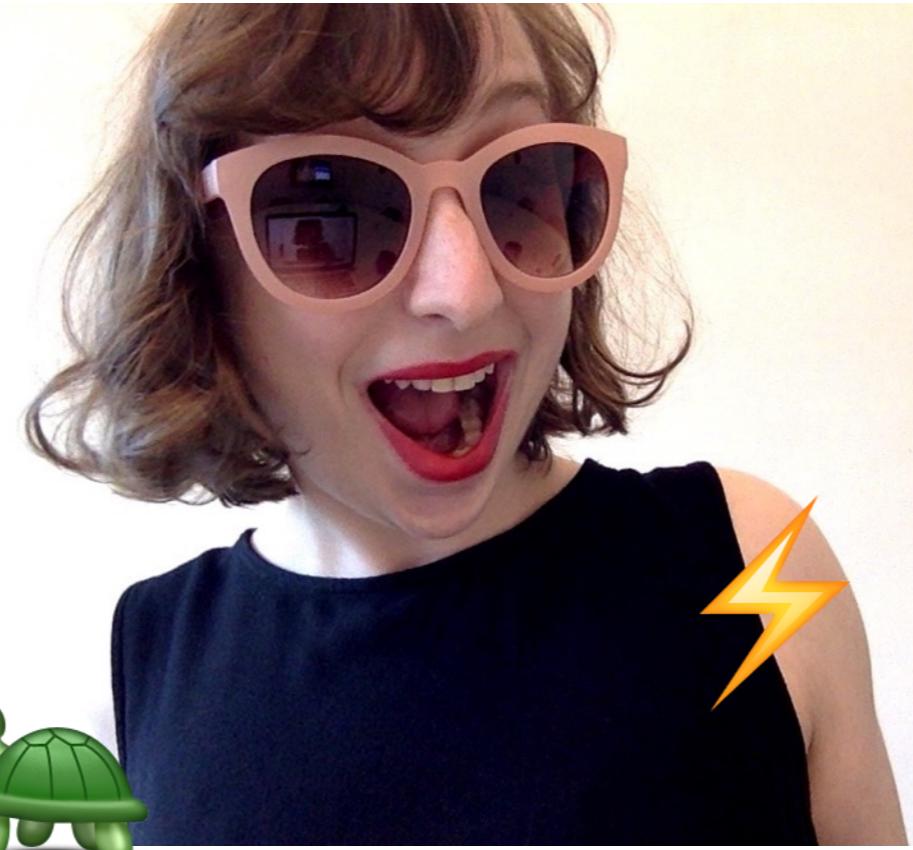
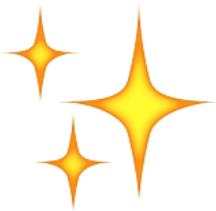




# Thanks!



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