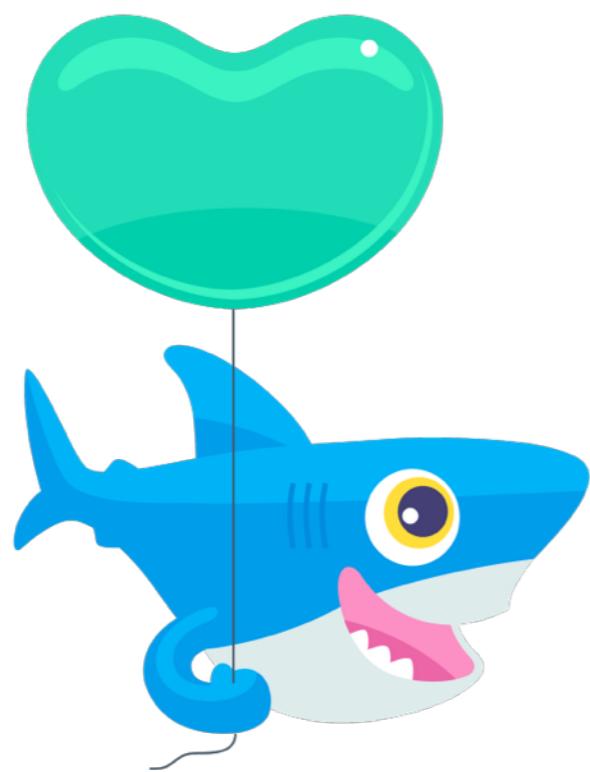


On how your brain is conspiring against you making good software

Jenna Zeigen • JSConf Iceland • August 26, 2016

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Humans are
“predictably irrational”

- Dan Ariely

“severe and
systematic errors”

- Amos Tversky & Daniel Kahneman



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 much better about 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

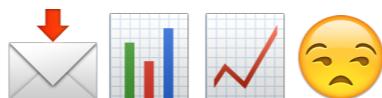
We tend to interpret and favor information
in a way that confirms our pre-existing beliefs.

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



On Bugs and Debugging

We sometimes block problem solutions based on past experiences.



On Bugs and Debugging

We often have no idea we're going to solve a problem,
even thirty seconds before we crack it.



On Bugs and Debugging

Breaks are more important than you think.



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 making predictions about how much time it will take us to do something.



On Planning Your Work

We think that bad things are more likely to happen to other people than to us.



On Planning Your Work

We are often so worried about wasting already invested resources that we don't consider the loss of continuing to invest more.



On Open Offices

We're actually pretty good at
filtering out unwanted stimuli...



On Open Offices

“I love JavaScript”



“I love JavaScript”

“Kitten videos are the best”

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

Sometimes we're helpless to the processing power of our brain.



On Open Offices

BLUE PURPLE RED

GREEN PURPLE GREEN



software is
about PEOPLE

On Knowing Your Worth

Relatively 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.



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

Impostor Syndrome.

On Assembling a Team

We favor members of our own in-group.



On Assembling a Team

People have a tendency to attribute situations to others' character rather than to external factors.

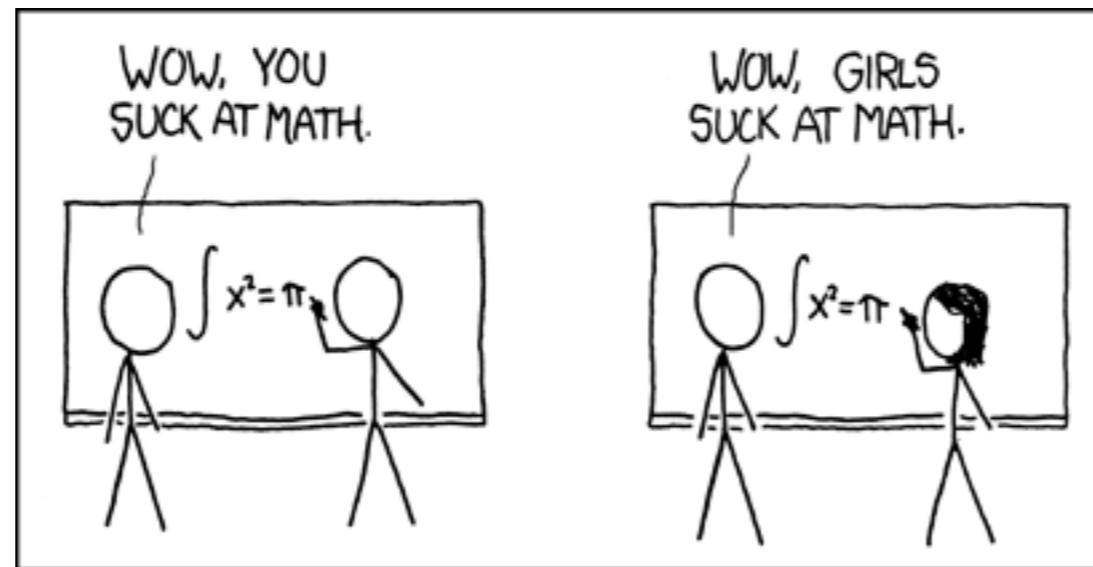


On Assembling a Team

People have a tendency 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 things in a group 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



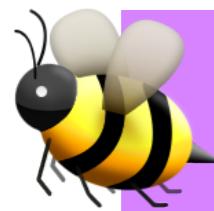
System 1



System 2

On Getting Past This

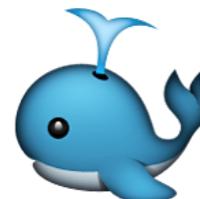
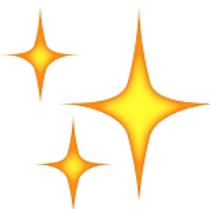




Thanks!



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