Emotional Code

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What Are Emotions?

- Out of band interrupts
- Deliver a conclusion without all the supporting evidence clearly listed
- Some of us act on them, some less so
- Emotional Intelligence is a skill that varies among people
- People who lack it often distrust emotions
- Some consider using them to be lazy, non-rigorous, or cutting corners

No Emotions Allowed

Life Isn't Just Making Final Decisions

- I feel like 5 is the perfect number of arguments for this function
  - It just makes me happy seeing it like that
- Just because that is wrong doesn't mean all emotional reactions to work decisions are wrong
- An API that makes me say EEEWWW is telling me something
  - You may have to wait for details to argue with
  - You may have to trust me while I look deeper
- But some people want to say "don't feel that!"

OH THE HUMANITY!!!
AIRLANDER
makeameme.org

Here’s a Little Logic

- Programmers are human beings
- Human beings have emotions
- Therefore…
- Programmers have emotions
- Emotions are not for the weak: emotions are for **people**

Emotions in Software Development

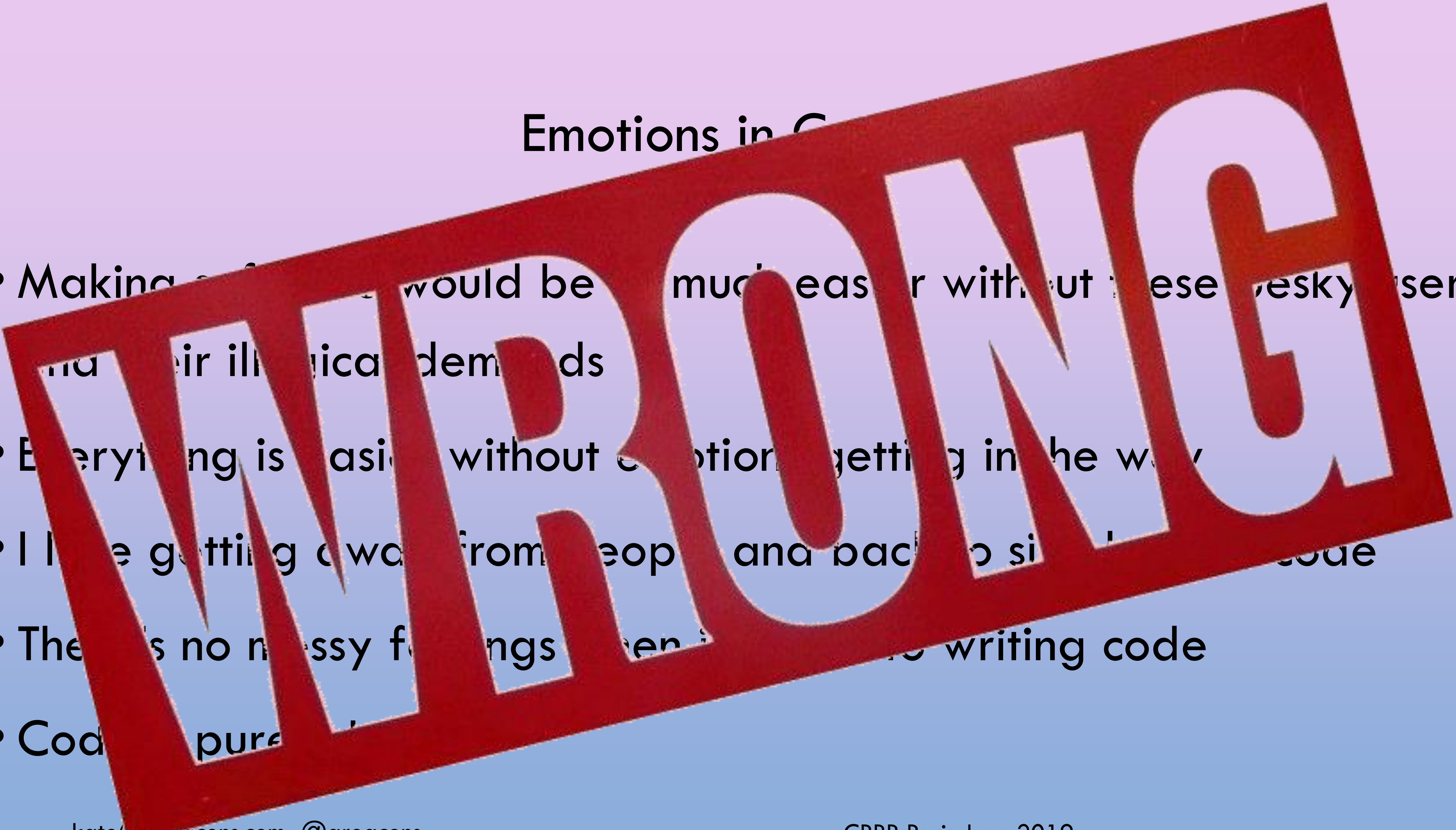
- Persuading people to do things your way
- Listening to what people want and why
- Being seen as helpful and valuable
- Getting what you want from a meeting
- Trusting your team to help you
- Being someone your team can trust
- Standing up for your values

Emotions in Code?

- Making software would be so much easier without these pesky users and their illogical demands
- Everything is easier without emotions getting in the way
- I love getting away from people and back to simple pure code
- There's no messy feelings when it comes to writing code
- Code is purely logical

Emotions in [illegible]

- Making software would be [illegible] much easier without these pesky users and their illogical demands
- Everything is easier without emotions getting in the way
- I love getting away from people and back to [illegible] code
- There's no messy feelings when [illegible] to writing code
- Code is pure [illegible]



There Are No Emotions In Code

- There are
- I can see them

- Commented out code
  - I might not be doing this right; I might need this
- Comments with who told you to change this
  - Don’t blame me if this does the wrong thing
- Unused variables and code not removed
  - How can I be sure we won’t need it?
- No time taken to clean up
  - I’m on a knife edge as it is, I can’t take time for that
- Follow the same bad patterns that were there
  - I can’t stand up for doing it differently or better

Fear

- Commented out code

```
//if (m_nCurrentX != g_nCurrentX
//  || m_nCurrentABC != g_nCurrentABC) {
//}
```

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```
// int nData;  3/22/03 uninitialized catch by VC7
int nData = 0;
```

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- No time taken to clean up
  - I'm on a knife edge c
- Follow the same bad p
  - I can't stand up for d

```
int c,n;
int r1,r2,r3,r4;
double factor;
double pct1,pct2,pct3,v1,v2,v3,v4,v5;
double d1,d2,d3;
```

Fear

- Checking what doesn’t need to be checked
  - I can’t be sure I’ll be looked after
- Checking again and again
  - I can’t remember if I did or not, I can’t count on it
  - That was in a team-mate’s code, they might have changed it without telling me
- Doing everything by hand
  - I need to see it, step through it
  - I can’t trust anyone else’s code
  - I’ve been hurt before

Fear

- Checking what doesn't need to be checked
    - I can't be sure I'll be looked after

```
if (pPolicy) { delete pPolicy;}
```

- Checking again and again
    - I can't remember if I did or not, I can't count on it
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Fear

- Tiny variable names
  - Aren't you smart enough to figure out what these are?
- Obscure function names
  - Why should I explain myself to people who can't understand it without an explanation?
- Deliberately opaque names
  - foo and bar considered harmful
  - f(), g(), etc not much better
- Raw loops, own containers, own algorithms
  - In most cases
  - Perhaps "it ain't bragging if you can do it" applies
- Sneering comments and names
  - If you say lusers, pebcak, and rtfm in slack, you say it in your code too

Anger

Arrogance

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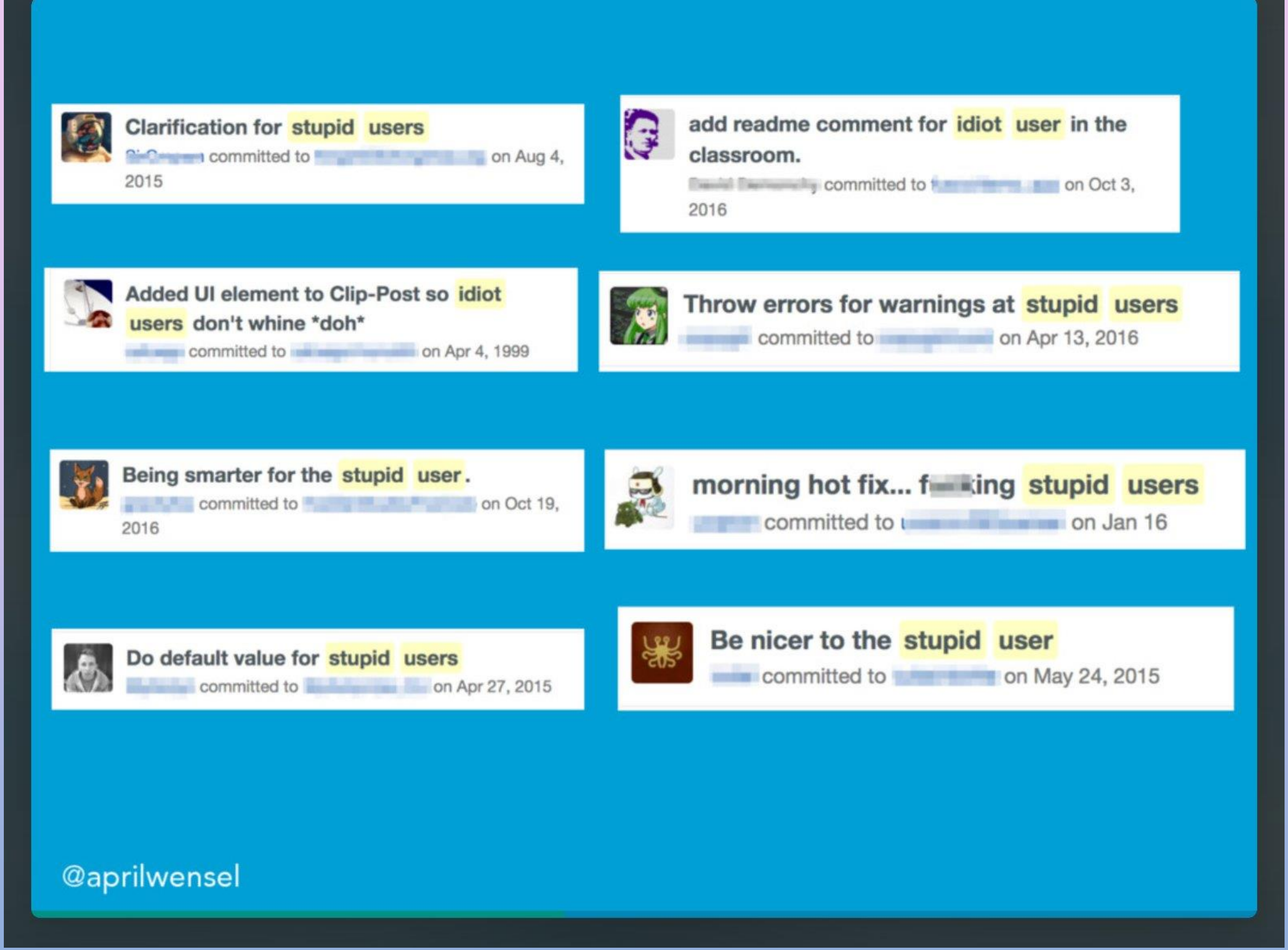
```
void UndoStevesNonsense();
```

Anger

Arrogance



Clarification for stupid users
[redacted] committed to [redacted] on Aug 4, 2015

add readme comment for idiot user in the classroom.
[redacted] committed to [redacted] on Oct 3, 2016

Added UI element to Clip-Post so idiot users don't whine *doh*
[redacted] committed to [redacted] on Apr 4, 1999

Throw errors for warnings at stupid users
[redacted] committed to [redacted] on Apr 13, 2016

Being smarter for the stupid user.
[redacted] committed to [redacted] on Oct 19, 2016

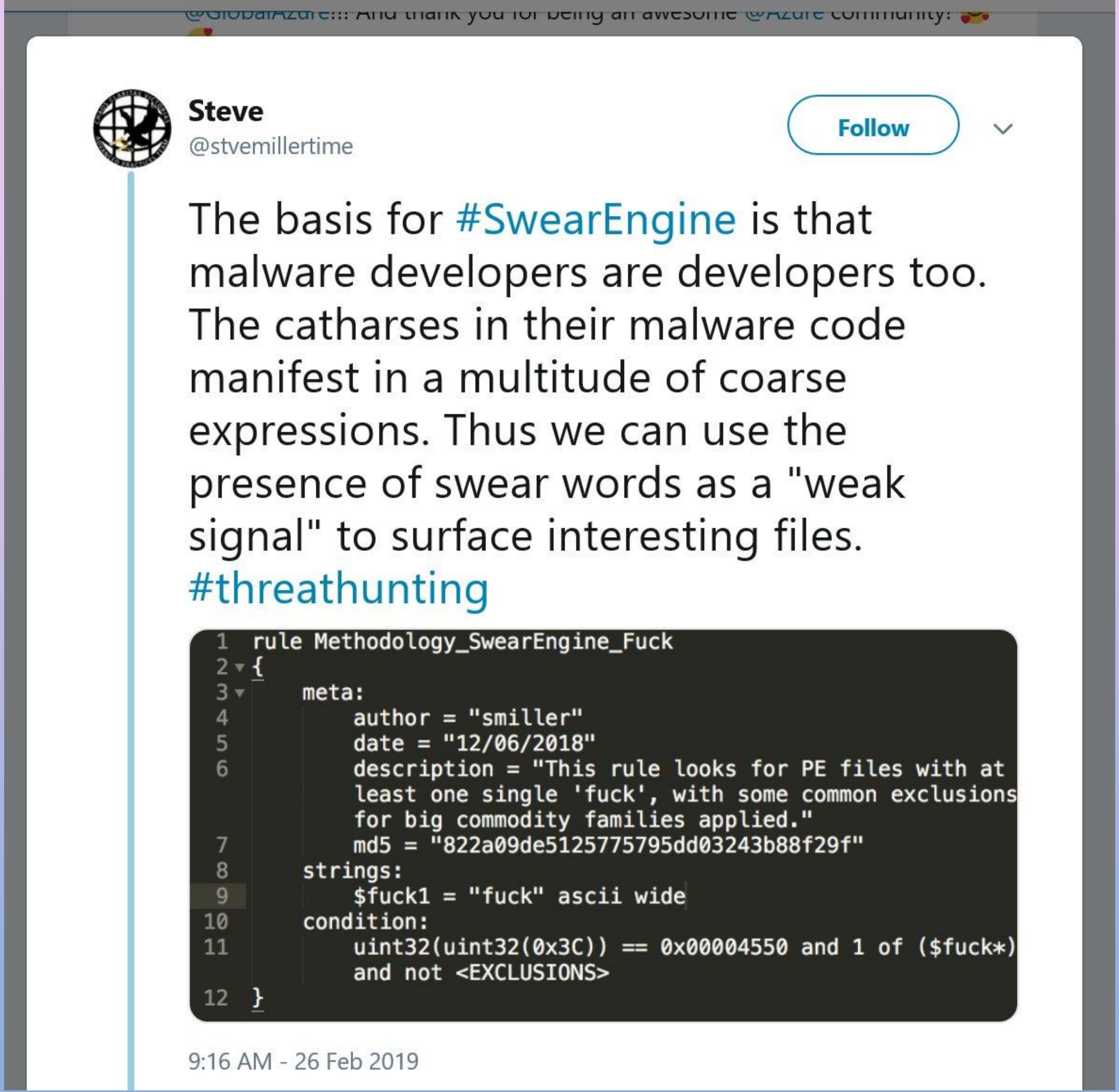
morning hot fix... f[redacted]ing stupid users
[redacted] committed to [redacted] on Jan 16

Do default value for stupid users
[redacted] committed to [redacted] on Apr 27, 2015

Be nicer to the stupid user
[redacted] committed to [redacted] on May 24, 2015

@aprilwensel

From April Wensel



@GlobalAzure!!! And thank you for being an awesome @Azure community!

The basis for #SwearEngine is that malware developers are developers too. The catharses in their malware code manifest in a multitude of coarse expressions. Thus we can use the presence of swear words as a "weak signal" to surface interesting files. #threathunting

```
rule Methodology_SwearEngine_Fuck
{
    meta:
        author = "smiller"
        date = "12/06/2018"
        description = "This rule looks for PE files with at
        least one single 'fuck', with some common exclusions
        for big commodity families applied."
        md5 = "822a09de5125775795dd03243b88f29f"
    strings:
        $fuck1 = "fuck" ascii wide
    condition:
        uint32(uint32(0x3C)) == 0x00004550 and 1 of ($fuck*)
        and not <EXCLUSIONS>
}
```

9:16 AM - 26 Feb 2019

Malware Detection

Steve Miller finding executables with swear words in them as a way of finding malware

Selfishness

- No time taken to clean up: refactor, rearrange, rename
  - Why should I spend my time making things easy for you?
- Short and opaque names, magic numbers
  - I’m being measured here, and I’ve got tickets to close
- Side effects and consequences everywhere
  - Public variables because it’s quicker
  - Mutable global state because it’s quicker
- Information Hoarding
  - My job is safe if nobody else can do this

- Whatever, it works
  - Mostly, enough anyway
- No STL, no libraries to speak of
  - I can't be learning new stuff, I have code to write
- No testing, no build automation, no scripts
  - If you think that matters, you do it
- Copy-paste-edit
  - Abstraction? Sounds like work to me!
- No commitment to the future

Crunch

Burnout

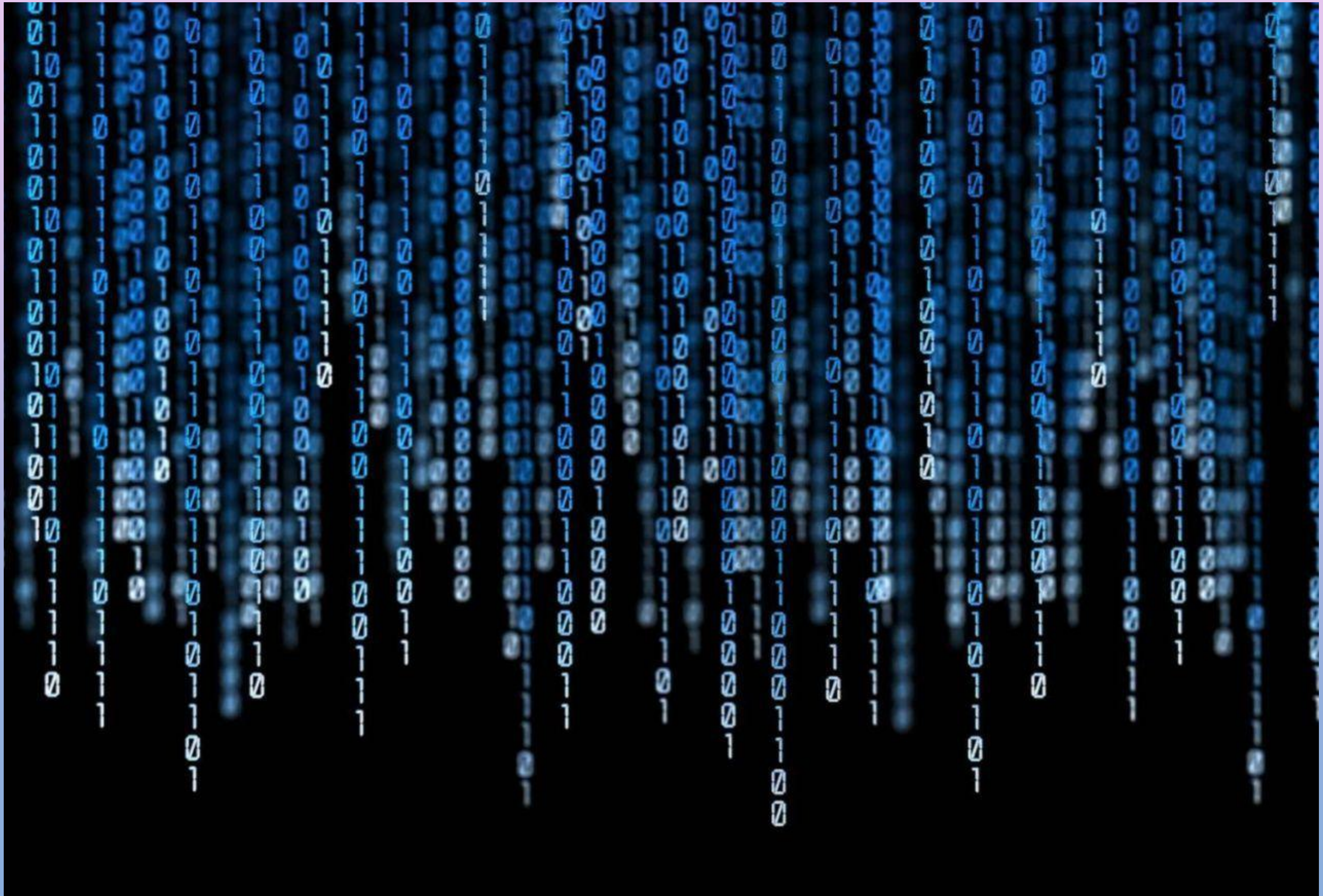
Laziness

Crunch

- Indefinite crunch looks like laziness
- They just don't have that hour
- One lazy person?
  - Why wasn't it caught and fixed in code review
- One crunch period that ended?
  - Why did no-one go back and fix it afterwards?
- Perennial crunch?

Code Shows Emotions

- Fear
- Arrogance
- Selfishness
- Laziness



One single-letter variable name does not a psychopath make

Why Does This Matter?

- Empathy as you read and fix that legacy code
- Does your team or workplace need to change?
- Are your management practices causing runtime performance issues?
- A lodestar for yourself as you write new code or tidy old

No Neutrality

Instead Of	Choose to Be
Insecure and afraid	Confident and capable
Inexplicable or slapdash	Reassuring and obvious
Information hoarding	Open and transparent
Arrogant	Humble
Selfish	Generous and empathetic

Look Where You Want to Go

- Delete things you don’t need
  - I have source control and work notes
- Take time to clean up
  - It might help me, it might help someone else
- Comments and names explain thinking
  - I know I’m right, let me show you
- Obsolete or handrolled things replaced
  - I’m brave enough to stand up for doing things the right way

Confidence

- Use libraries
  - Include a link to the doc if it’s not just cppreference.com
- Gentle comments
  - Where things aren’t obvious, leave some help for the next person
- Helpful names
  - For functions, variables, everything
- I know you’re as good as me and will understand it if I explain it
  - you’re worth explaining this to

Humility

- Use libraries
  - Include a link to the doc if it’s not just cppreference.com

```
//Set page size to standard 8.5 x 11 (96 is DPI for WPF)
page->Height = 8.5 * 96;
page->Width = 11 * 96;
```

- Helpful names
  - For functions, variables, everything
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Humility

- Clean engineering to make next time easier
  - Well thought out encapsulation
  - Appropriate level of abstraction
- Again, take time to clean up: refactor, rearrange, rename
- Code that strikes you as brilliant
  - Clearly and obviously right
  - Dramatically easy to grasp
- Information sharing
  - My job is safe if we can all do this

Generosity

- Clean engineering to make next time easier

```
var creditScore = application.CreditScore;

switch (creditScore)
{
    case int n when (n <= 50):
        return false;
    case int n when (n > 50):
        return true;
    default:
        return false;
}
```

sity

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```
return (application.CreditScore > 50);
```

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Generosity

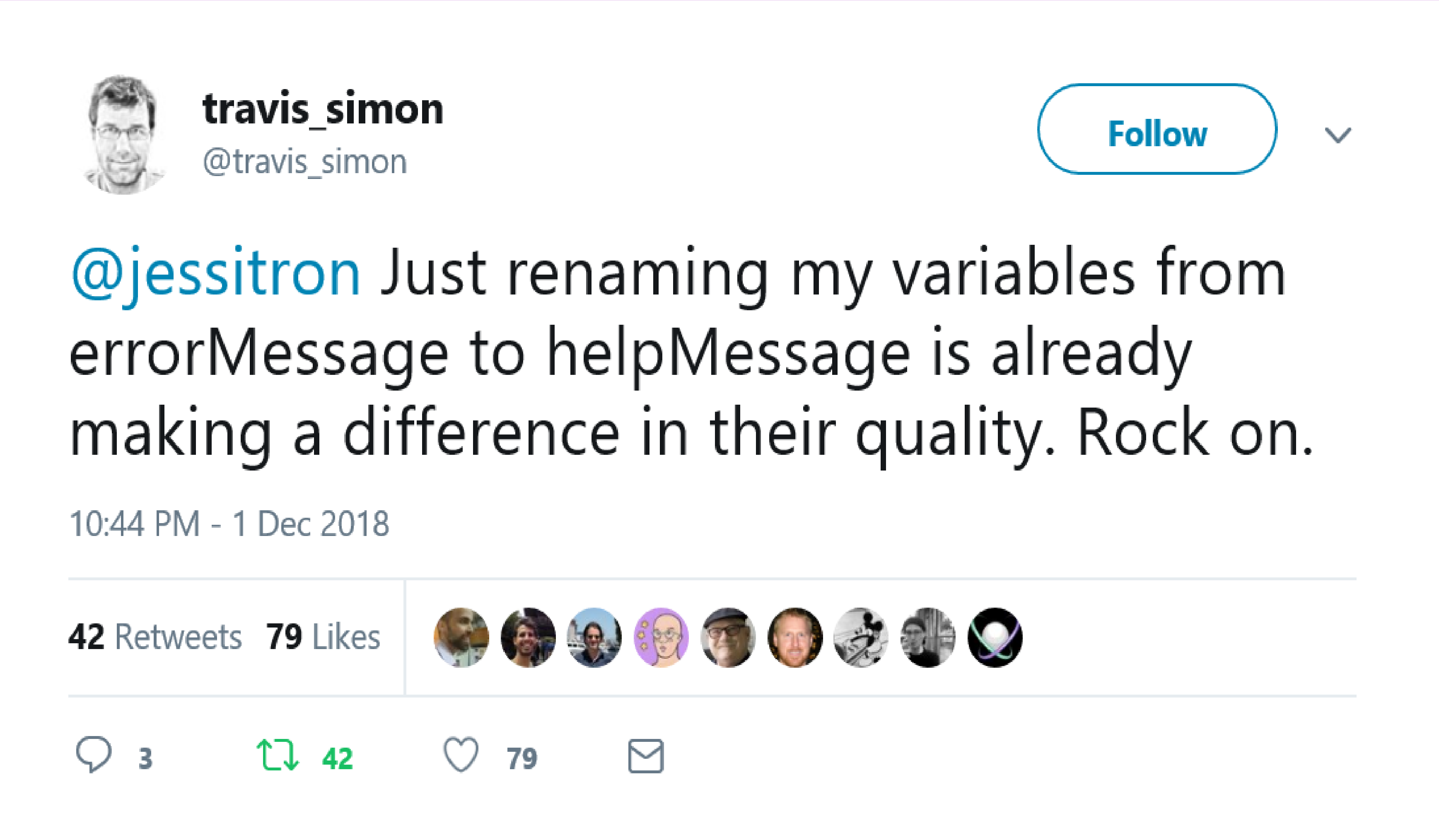
Let’s Talk About Names

- Naming is hard
- We’re famously bad at it
- Why?
- It requires empathy

An Algorithm Story

- sort()
- partial_sort()
- partial_sort_copy()

- top_n()



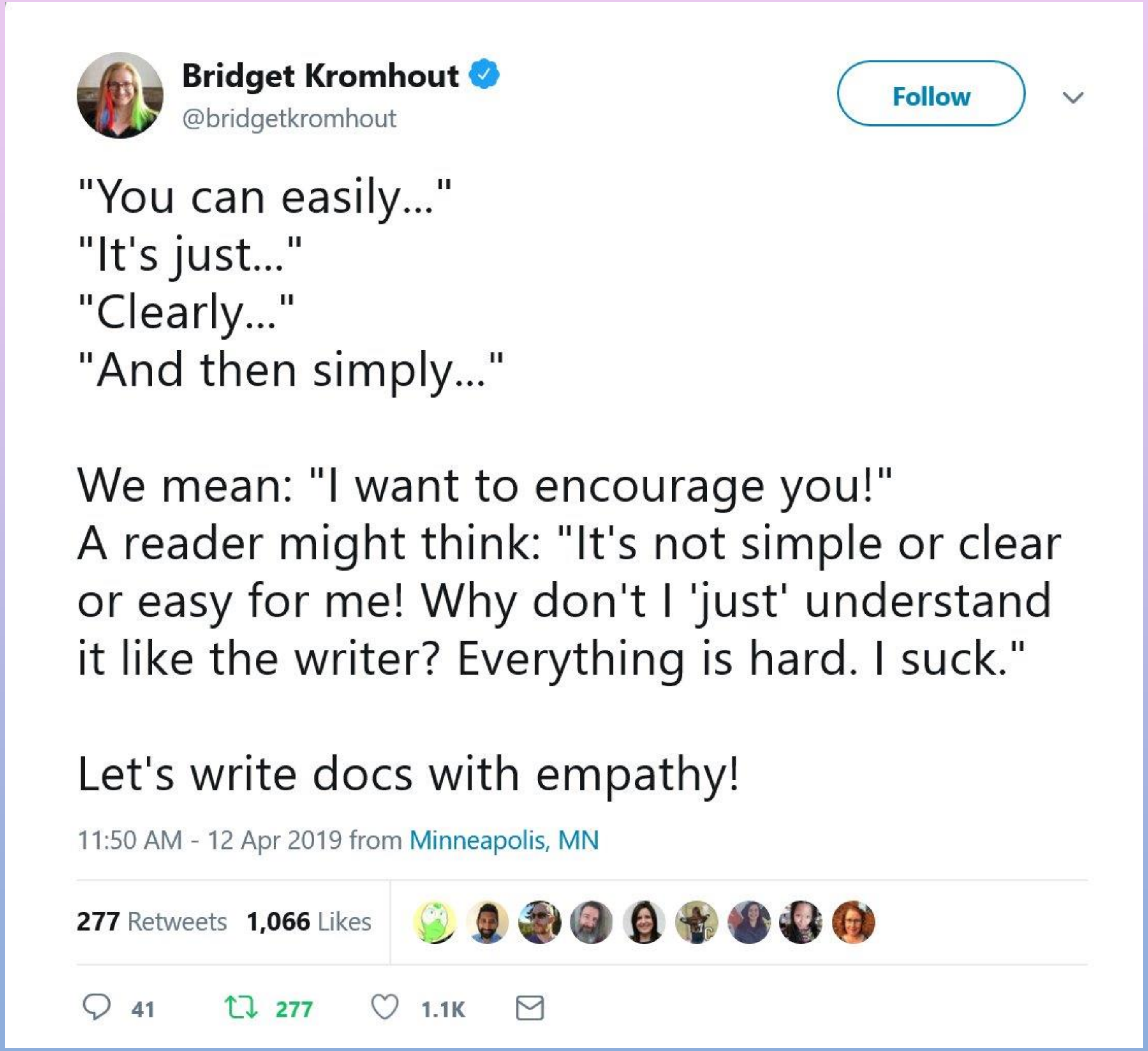
travis_simon
@travis_simon

@jessitron Just renaming my variables from errorMessage to helpMessage is already making a difference in their quality. Rock on.

10:44 PM - 1 Dec 2018

42 Retweets 79 Likes

More on Empathy



Bridget Kromhout
@bridgetkromhout

"You can easily..."
"It's just..."
"Clearly..."
"And then simply..."

We mean: "I want to encourage you!"
A reader might think: "It's not simple or clear or easy for me! Why don't I 'just' understand it like the writer? Everything is hard. I suck."

Let's write docs with empathy!

11:50 AM - 12 Apr 2019 from Minneapolis, MN

277 Retweets 1,066 Likes

Hard Working

- It compiles, links, runs, and passes the tests
  - No warnings, no “you get one exception on startup, just hit Continue”, no stray files left behind
  - Tests are complete and well documented
  - I don’t have to be asked to do it right
- It uses modern constructs or libraries or tools
  - I’m always learning; my code gets the benefit
  - But not tools for the sake of tools or for fun
- Modern practices
  - Not just churning out code
- Commitment to the future
  - My own ease
  - The team’s success

Choose to Show Positive Emotions

- Your code will be easier to read and maintain
- You will enjoy reading and maintaining it more
- Your reputation will improve
- Even if the code isn't better
  - But it probably will be

Call to action

- Care about those who wrote the code you maintain
- Show your confidence
- Be generous and empathetic
- You are going to show emotions in your code