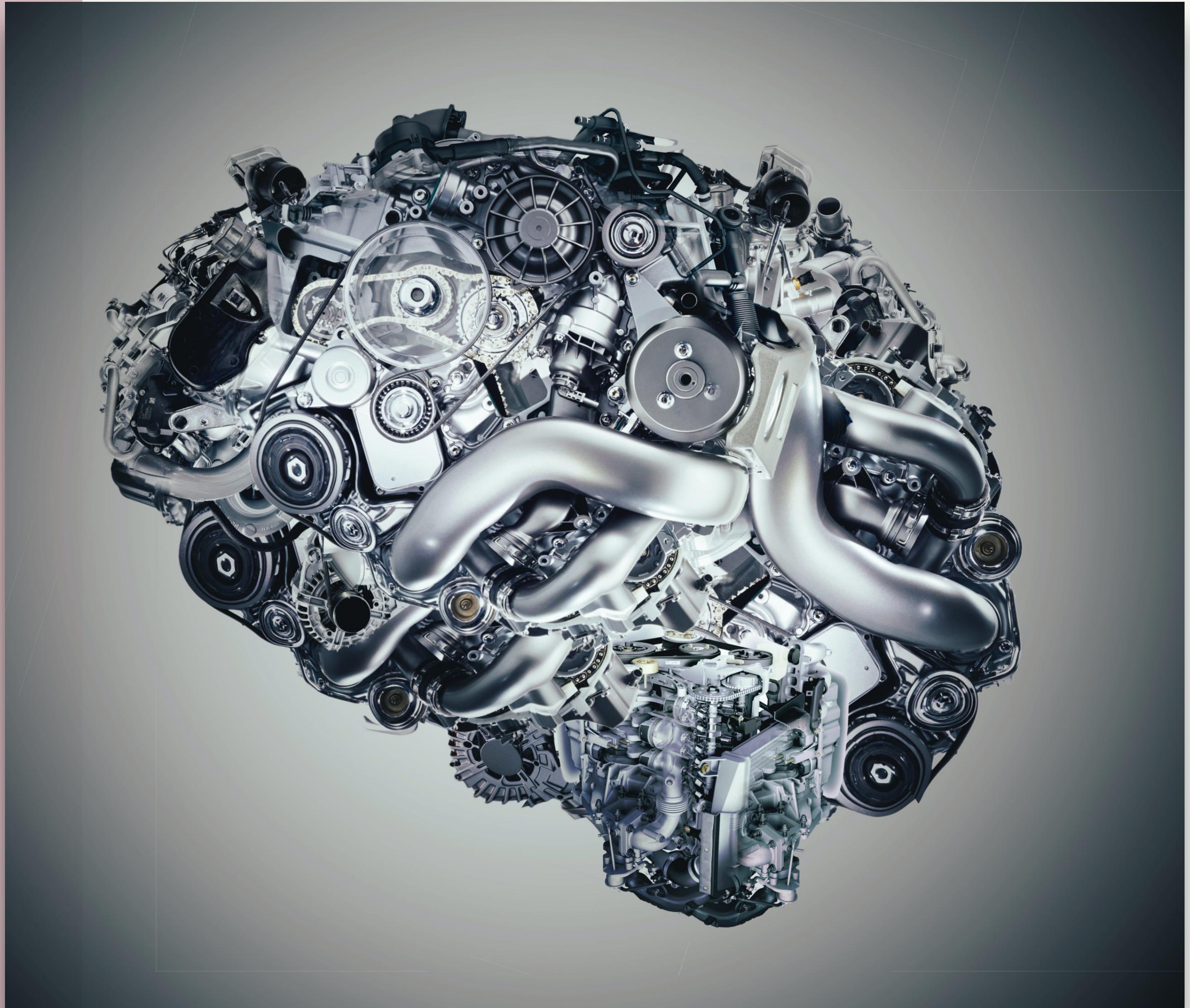


Emotional Machines

Aaron Turon @ PLMW 2021



© Can Stock Photo / agphotography

Who is this guy?

Part 1

- PhD @ Northeastern University
- Award-winning dissertation
- Postdoc at MPI-SWS
- Led Rust team at Mozilla
- Now working with WebAssembly at Fastly



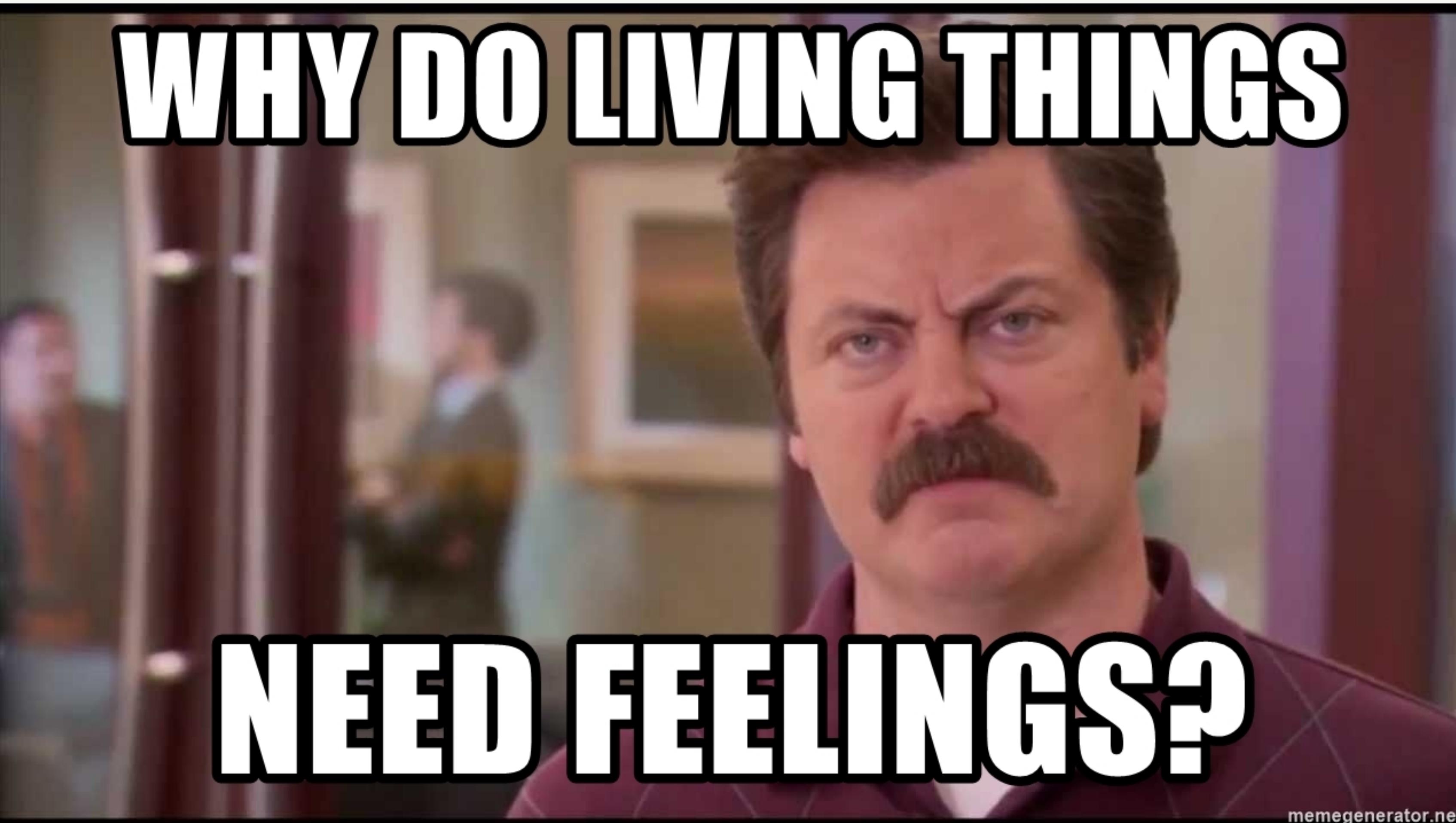
Who is this guy?

Part 2

- Imploded during faculty interview process
- Debilitating burnout with Rust
- Years of mounting anxiety, dissociation, and depression
- Complex PTSD
- ~3 years into recovery



Feelings: for or against?



WHY DO LIVING THINGS

NEED FEELINGS?



“You’ve met Sadness... I’m not
actually sure what she does.”

Joy, INSIDE OUT

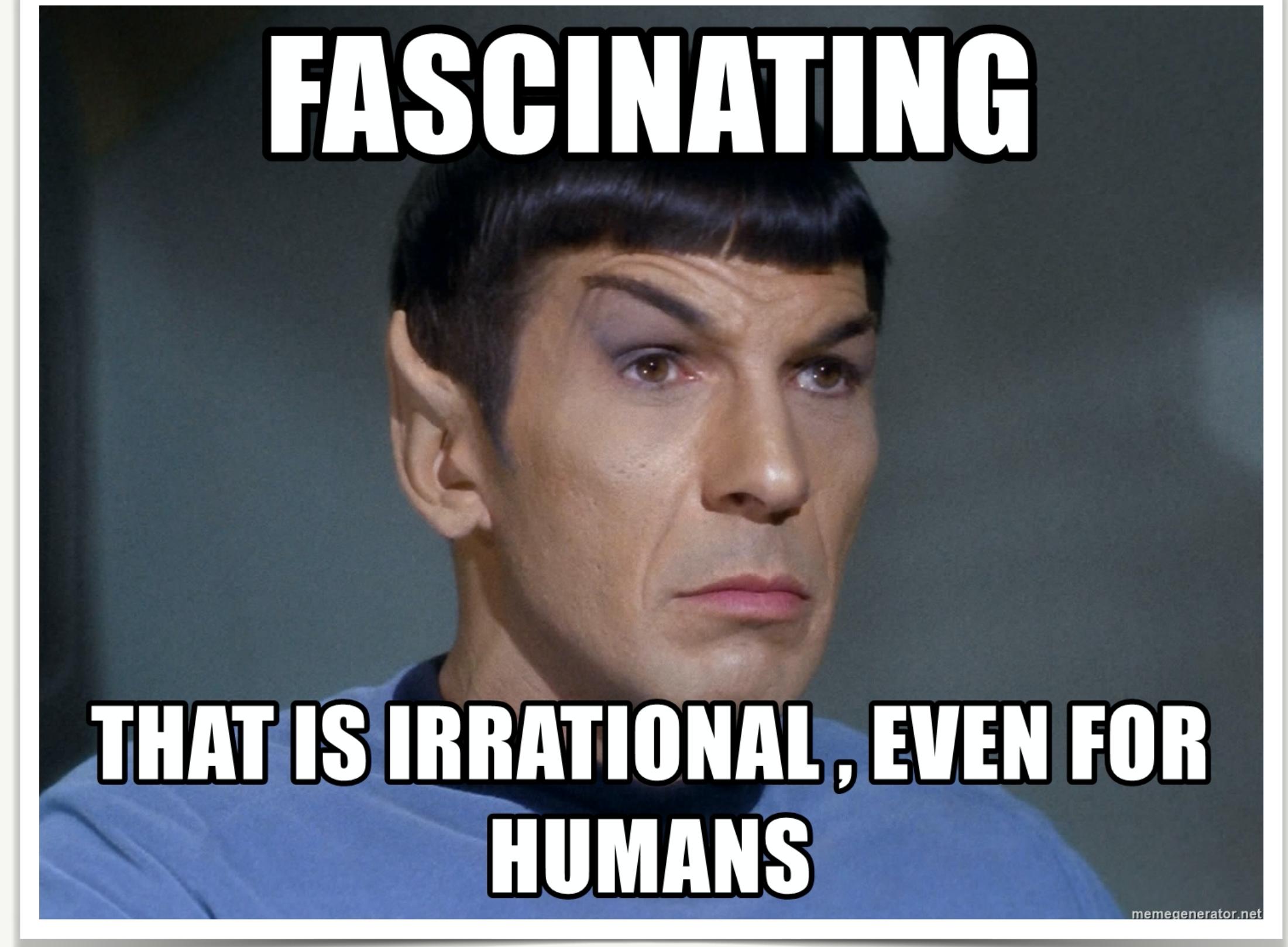
**Don't worry;
Be happy?**

**Irritation, Annoyance, Anger,
Rage, Hatred, Envy, Jealousy,
Fear, Panic, Anxiety, Sadness,
Regret, Grief, Depression,
Embarrassment, Shame, Disgust**

Could we just... not?

Why feelings get a bad rap

- Often unpleasant
- Unpredictable
- Uncontrollable
- Irrational
- Disproportionate
- Push us toward regrettable action

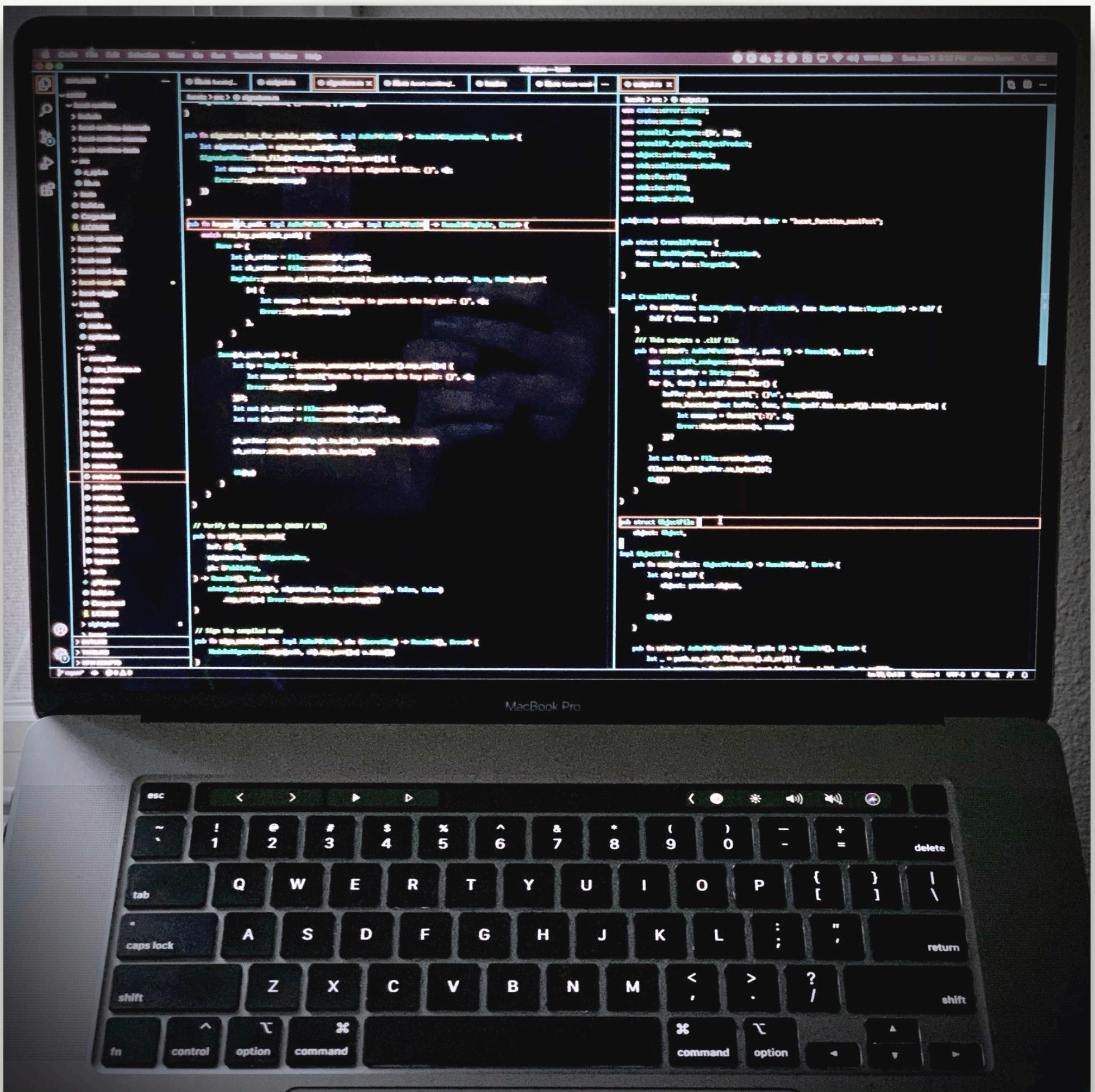


“Nothing is more usual in philosophy,
and even in common life, than to talk
of the combat of passion and reason,
and to give the preference to reason.”

David Hume, *A Treatise of Human Nature*, 1739

By Contrast: Computing

- Predictable
- Controllable
- Rational
- *Anything else is “human error”*



“Reason is, and ought only to be
the servant of the passions.”

David Hume, *A Treatise of Human Nature*, 1739

“The Lambda Calculus will never tell you what program to write.”

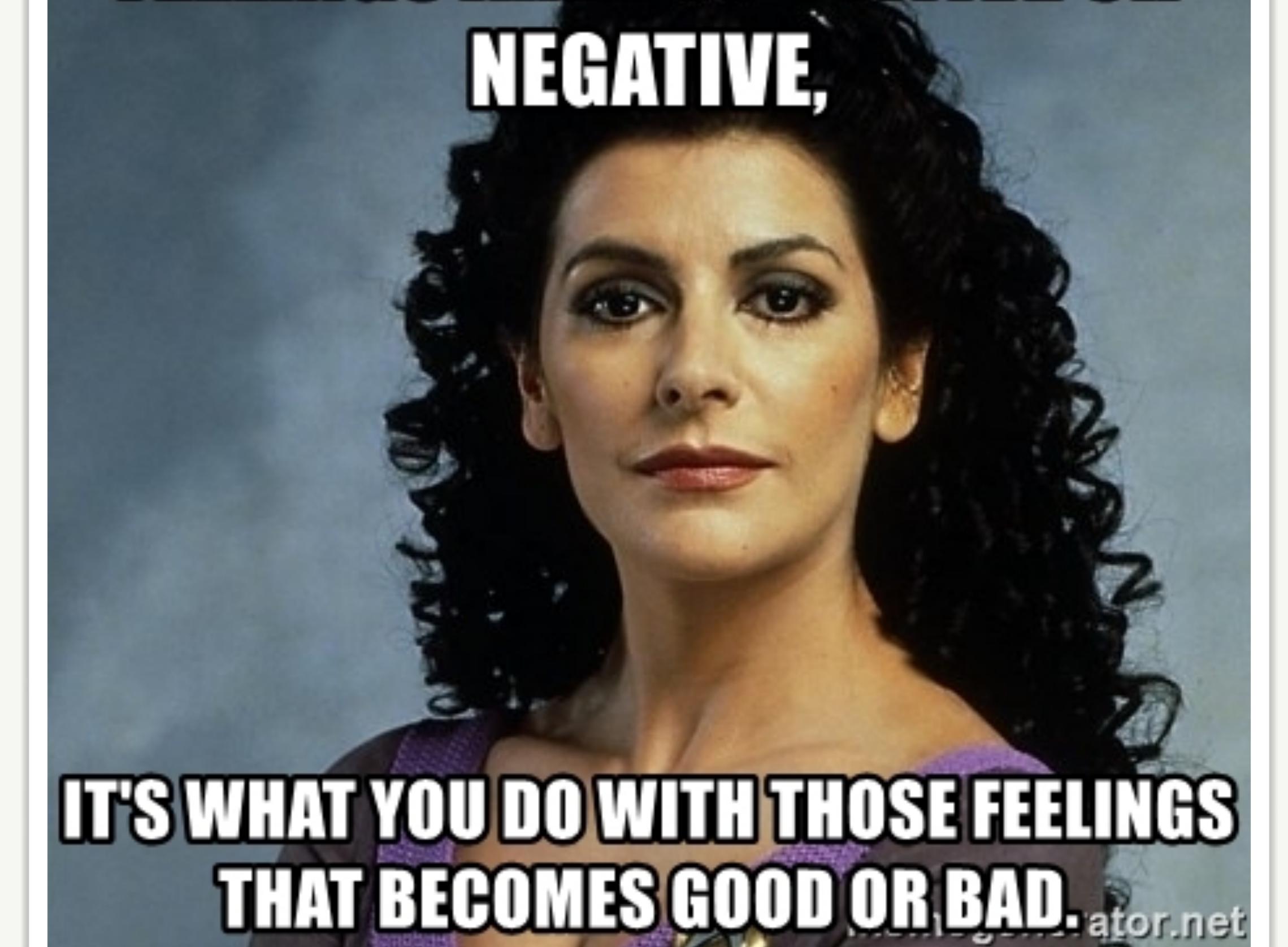
Me, *This talk*, right now

In favor of feelings

(even the “bad” ones)

- Feelings are impulses **toward** or **away**
- These impulses shed light on **who we are**: our needs, our values, and our past
- They draw **attention** and provide **energy**
- They **catalyze cognitions**
- They enable us to **experience life**, to be “in” our own story

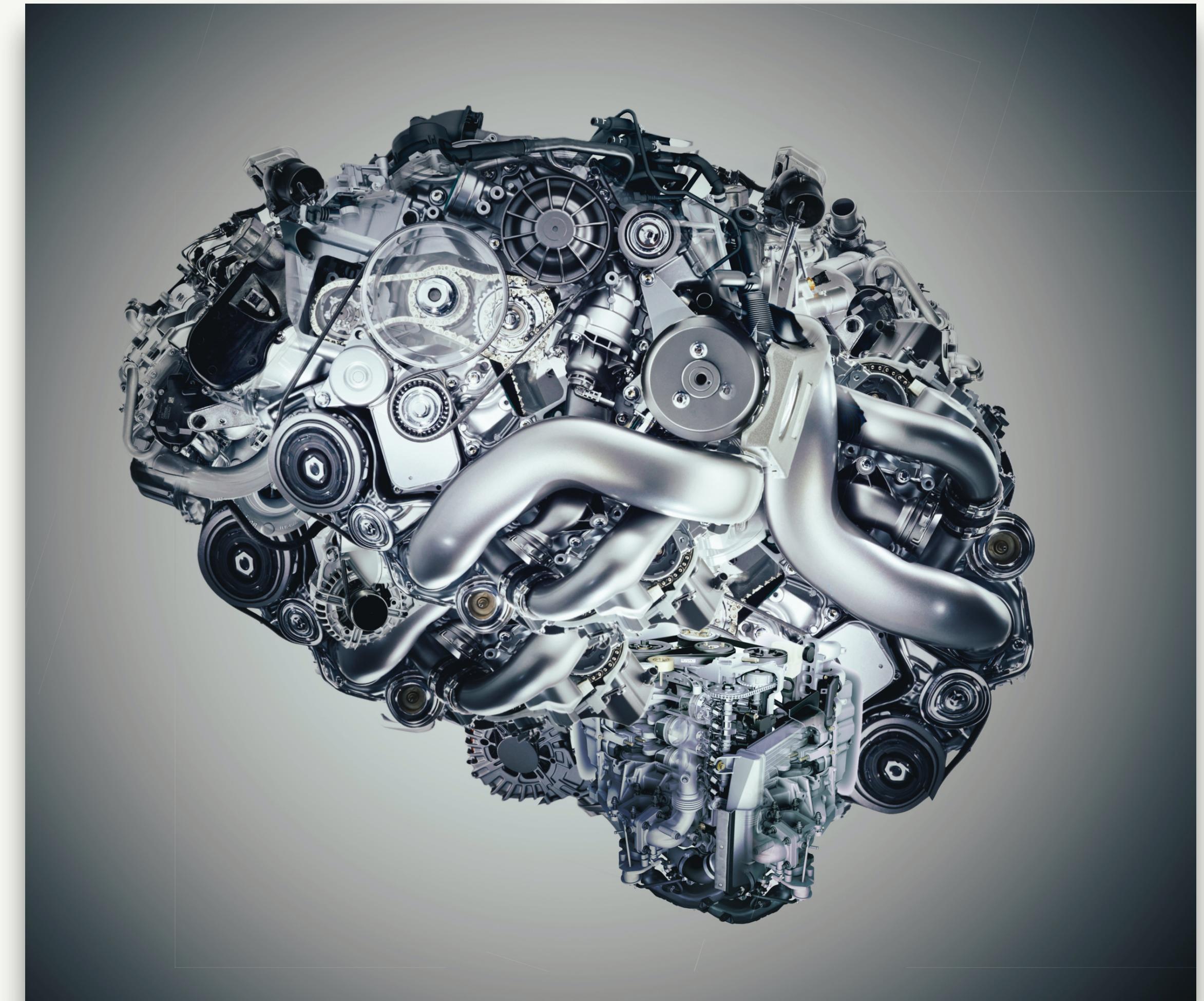
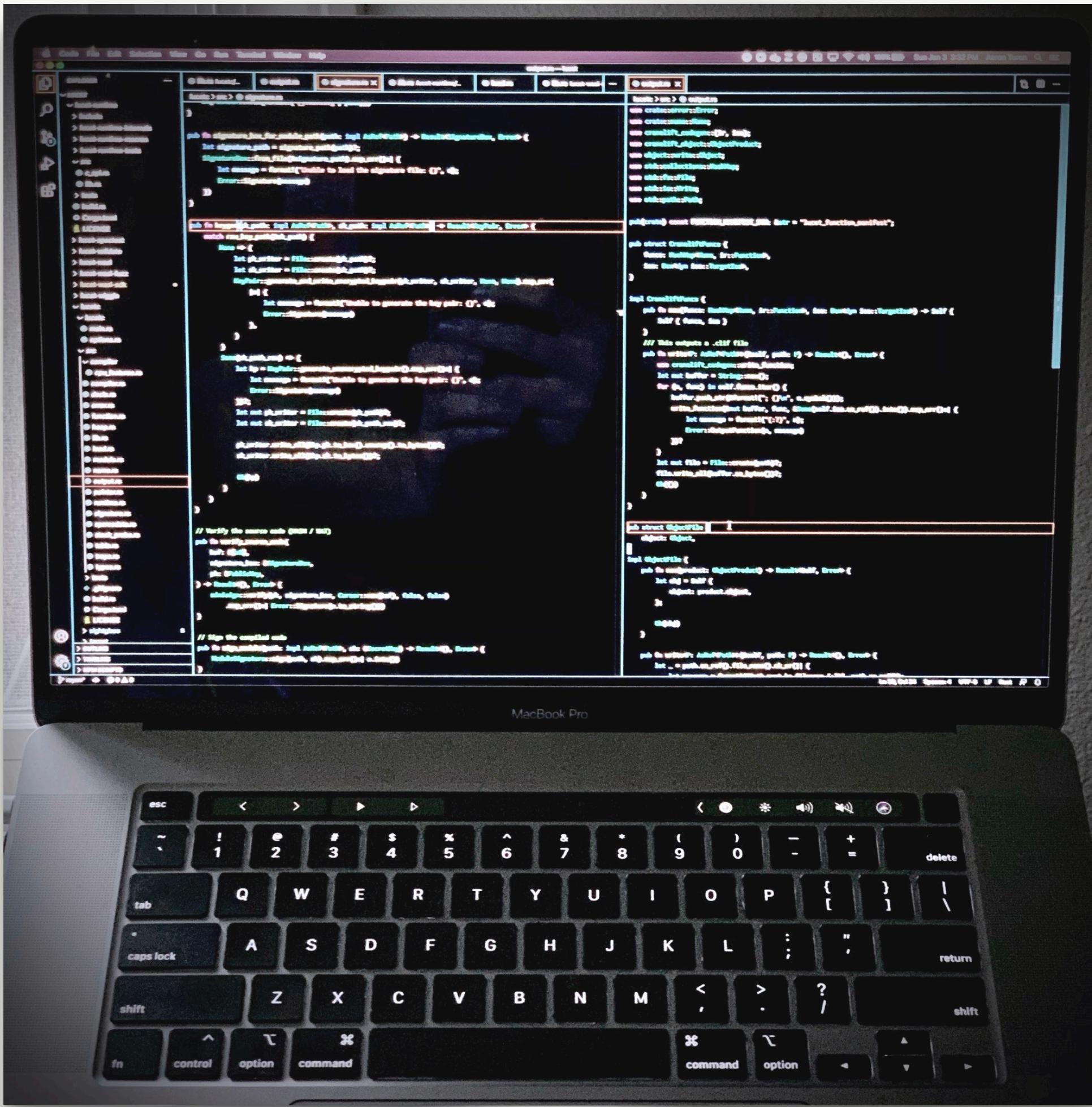
FEELINGS AREN'T POSITIVE OR
NEGATIVE,



IT'S WHAT YOU DO WITH THOSE FEELINGS
THAT BECOMES GOOD OR BAD.
ator.net

But... all the bad stuff is true, too

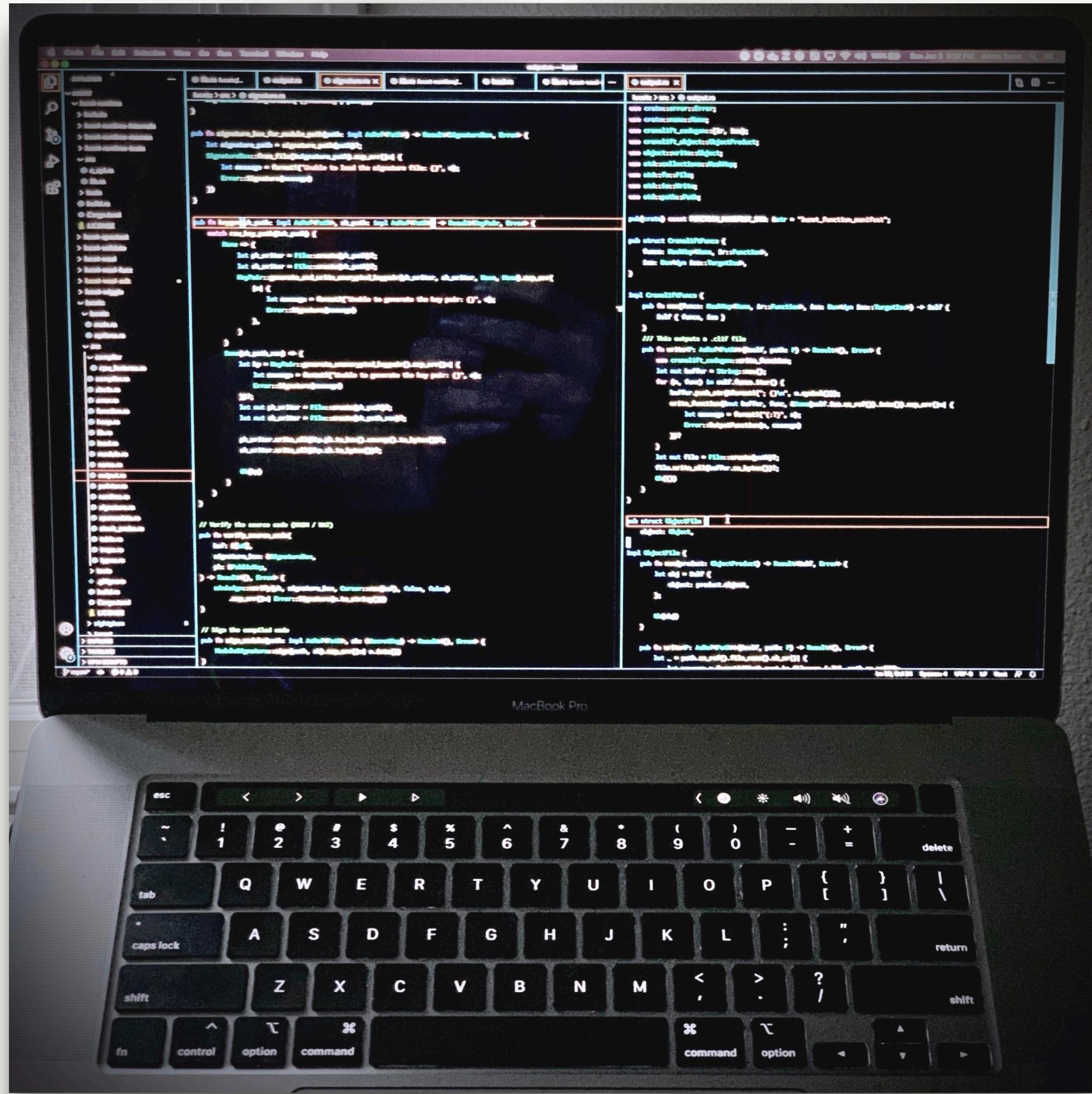
Rational mechanisms, irrational systems



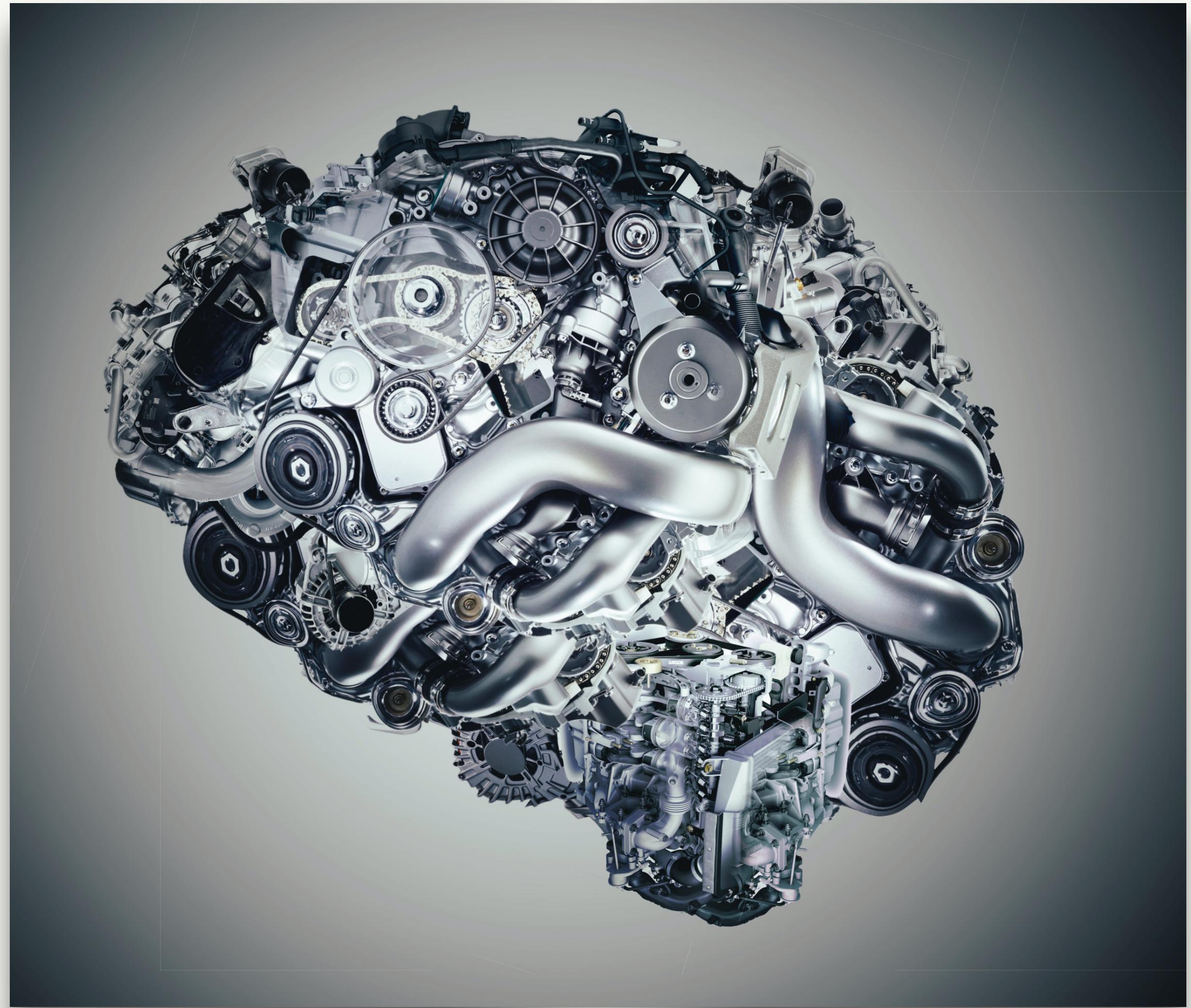
Programs vs Systems

The slow accretion of irrationality

- A small amount of code can be coherent and rational
- As systems grow, they become less rational
 - “Technical debt” and ossification
 - Outdated assumptions
 - Inconsistencies and bugs
 - Legacy APIs and protocols
 - Unpredictable, difficult to explain behaviors



Legacy code



Emotional baggage

The ideal

(One definition of mental health)

A dynamic harmony between:

- Reality
- Beliefs/values/narrative
- Thoughts
- Feelings
- Behaviors



KEEP
CALM
AND
MAINTAIN
HOMEOSTASIS

Emotional Health

Emotional health: A cornerstone of mental health

You are ***emotionally healthy*** if, most of the time, you can tolerate your feelings enough to listen to them and consciously choose how to respond.

Emotional health is fundamentally social

- Being human entails difficult-to-process experiences
- Venting, validation and compassion is a key way to process feelings
- Especially true in childhood, when our brains lack key structures for emotional regulation



"I can validate both your feelings and your parking."

Emotional health in childhood

A child falls and scrapes their knee:

Notice feeling in body

Name the feelings

Validate the feelings

Provide comforting presence

Consciously respond

“You’re crying.”

“I think you are scared and sad.”

“That makes sense, it must have hurt!”

“You can snuggle with me.”

“And when you’re ready we can talk about it.”

Less healthy “help”

Teaches that the *feeling* is the problem

Denial:

“Shhh, shhh, it’s OK, it’s not that bad”

Repression:

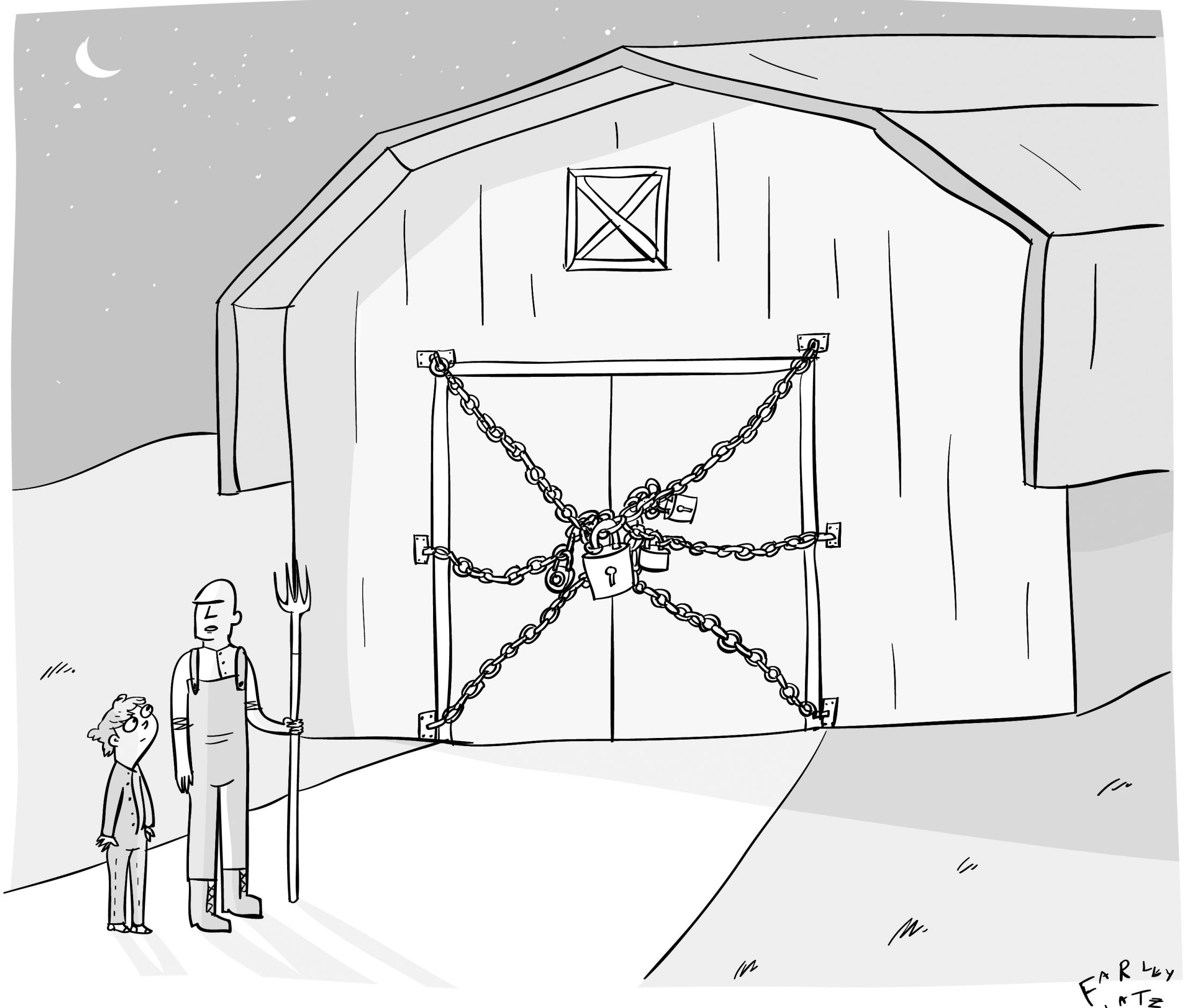
“Shhh, it’s OK, don’t cry”

Distraction:

“Do you want to play with this toy?”

Abuse; fear, shame & submission:

“Don’t cry, or I’ll give you something
to cry about!”



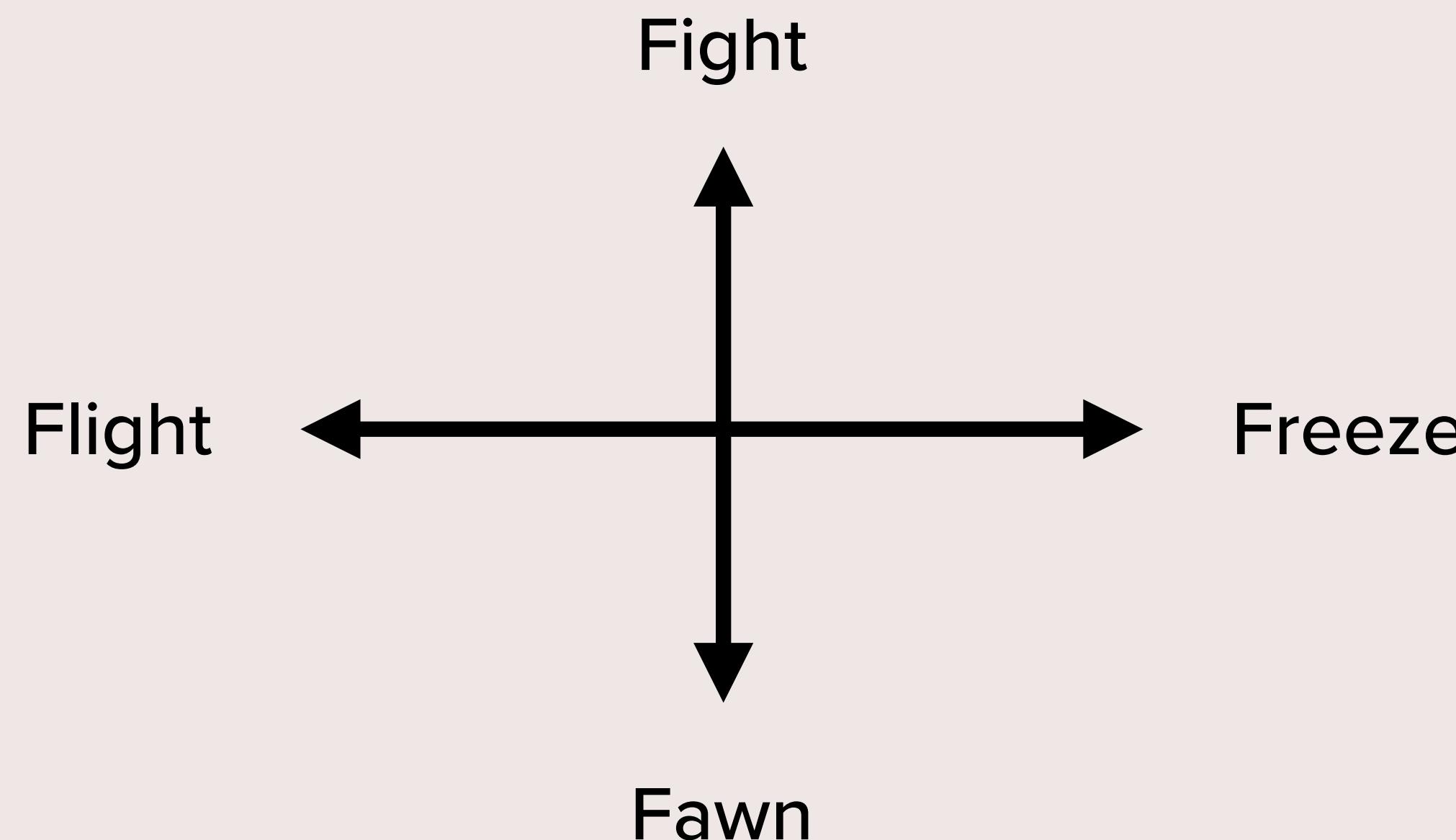
“This is the barn where we keep our feelings. If a feeling comes to you, bring it out here and lock it up.”

The vicious cycle of poor emotional health

The slow accretion of irrationality

- Treating negative feelings as dangerous/undesirable/problematic
 - *Increases* emotional activation
 - *Decreases* emotional tolerance
- Without tolerance, we lose full awareness of our feelings and responses
 - Rely on habitual strategies for unconsciously “managing” (but not resolving) feelings
- The feelings are **still there** and still influence us
 - They leak out in unexpected and “disproportional” ways

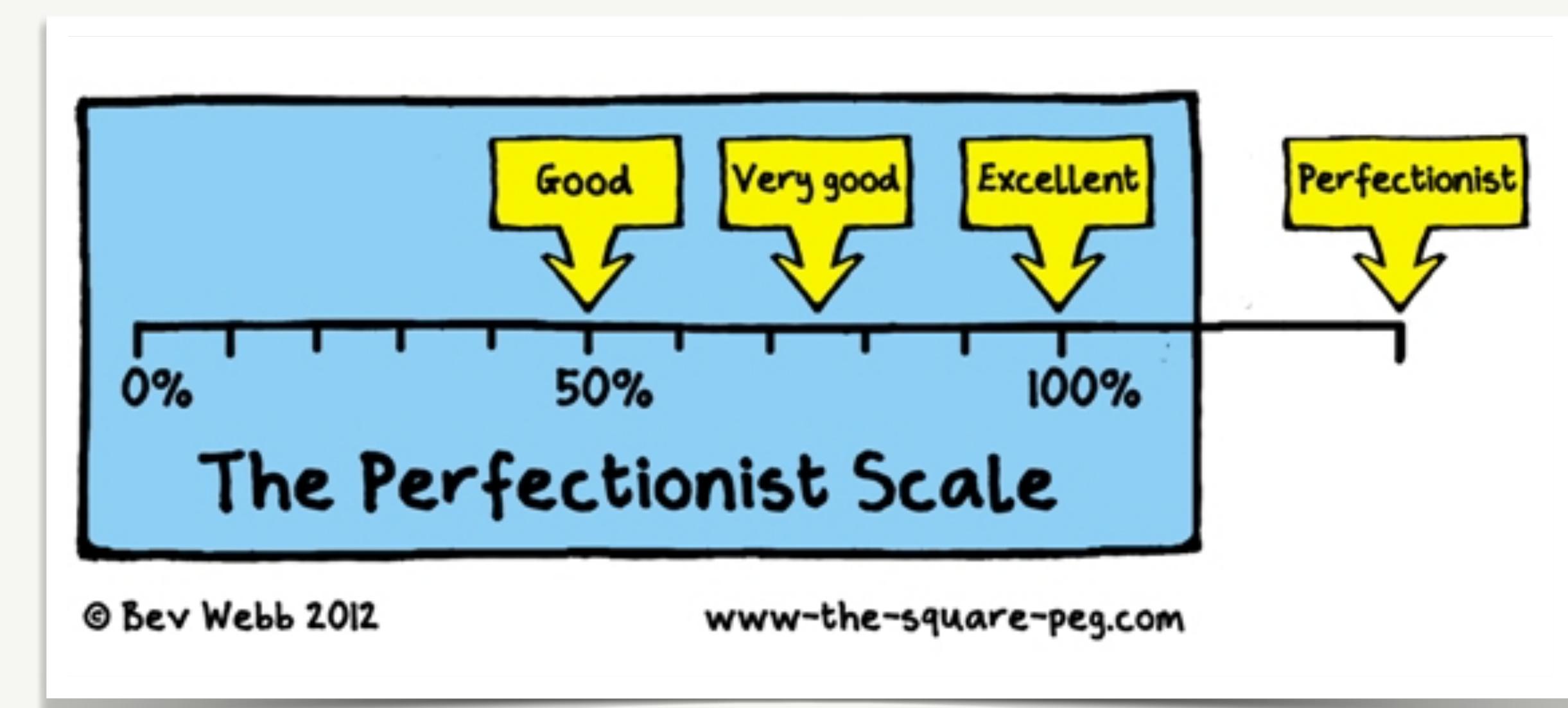
Instinctual responses to overwhelm



Flight

Outrun the danger

- Perfectionism
- “If only”-style thinking
- Distraction; keep feelings at bay by staying busy
- Fueled by adrenaline
- Workaholism



Fawn

Keep safe through appeasement

- “Such a mature child”
- Difficulty saying “no”
- Poor boundaries
- People-pleasing
- Servitude/loss of self



*“I would’ve called and cancelled, but
you know how I hate disappointing cable companies.”*

Freeze

Hide from the danger

- Procrastination
- Hiding aspects of self
- Isolation/withdrawal
- Narrowing life — staying small — underachievement
- Dissociation



You and your strategies

What does it all mean?

- If you struggle with perfectionism, procrastination, people-pleasing?
 - *Or the anxiety, depression, or dissociation they often lead to*
- **Those were adaptive, necessary strategies at some point for you**
- They may no longer serve you
- You can learn new responses
- **But this requires improving your emotional health**

Improving emotional health

- **Psychoeducation:** grow awareness of “emotional debt” by learning about the mind
- **Relationships:** practice sharing feelings *as you have them*, with safe-enough friends
- **Meditation:** improve emotional tolerance and awareness
- **Therapy:** gain awareness of habits and practice new approaches *in relationship*
- **Medication and exercise:** boost window of tolerance

Additional resources

- **Book:** “*Why do I do that?*” by Joseph Burgo — general psychoeducation
- **Book:** “*Complex PTSD, from surviving to thriving*” by Pete Walker — childhood trauma
- **Book:** “*Codependent no more*” by Melody Beattie — for people-pleasers
- **Movie:** “*Inside Out*” by Pixar — wonderful psychoeducation
- **Social media:** @aaron_turon on Twitter, where I steadily share my own journey