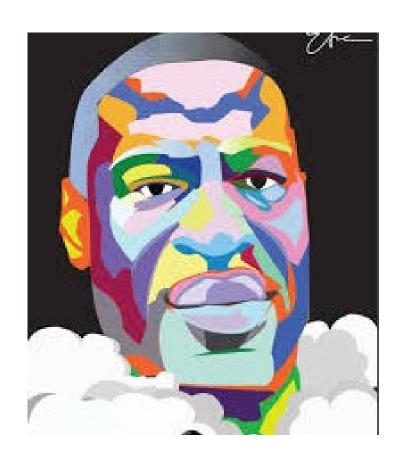
ROBIN WOLPERT, J.D., Ph.D.

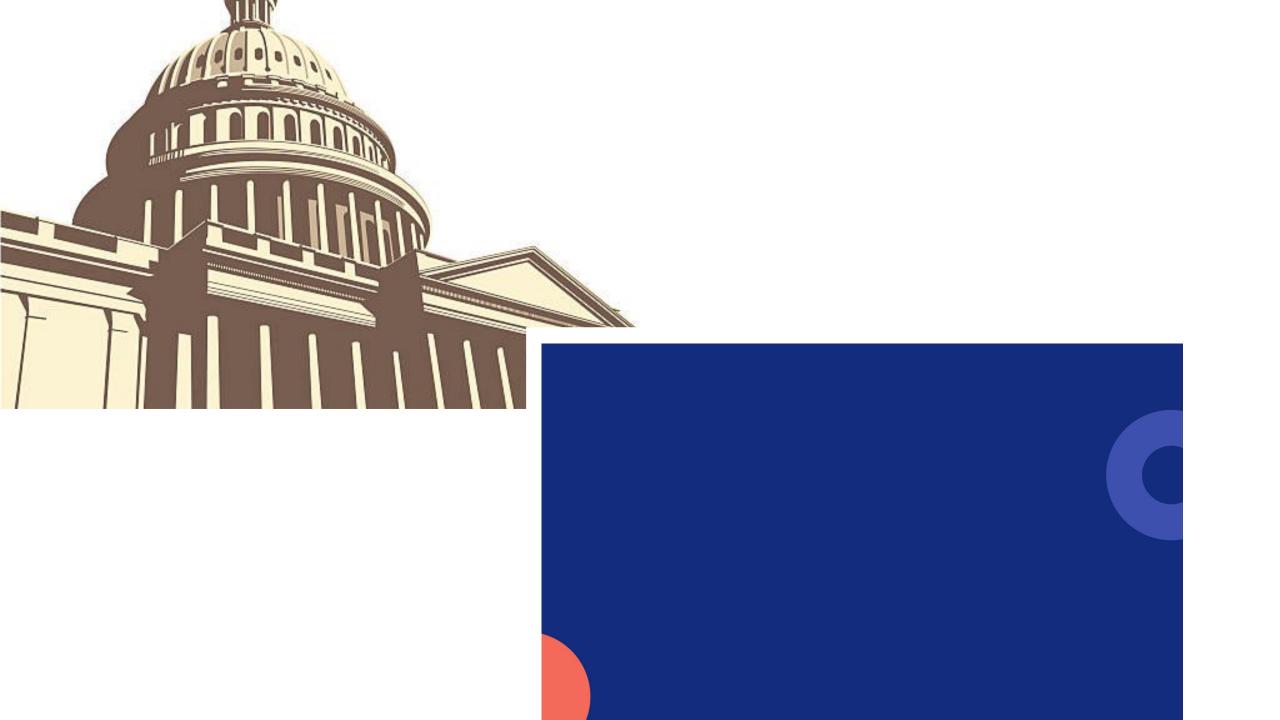
# NEUROSCIENCE, WELL-BEING &

**ETHICS** 

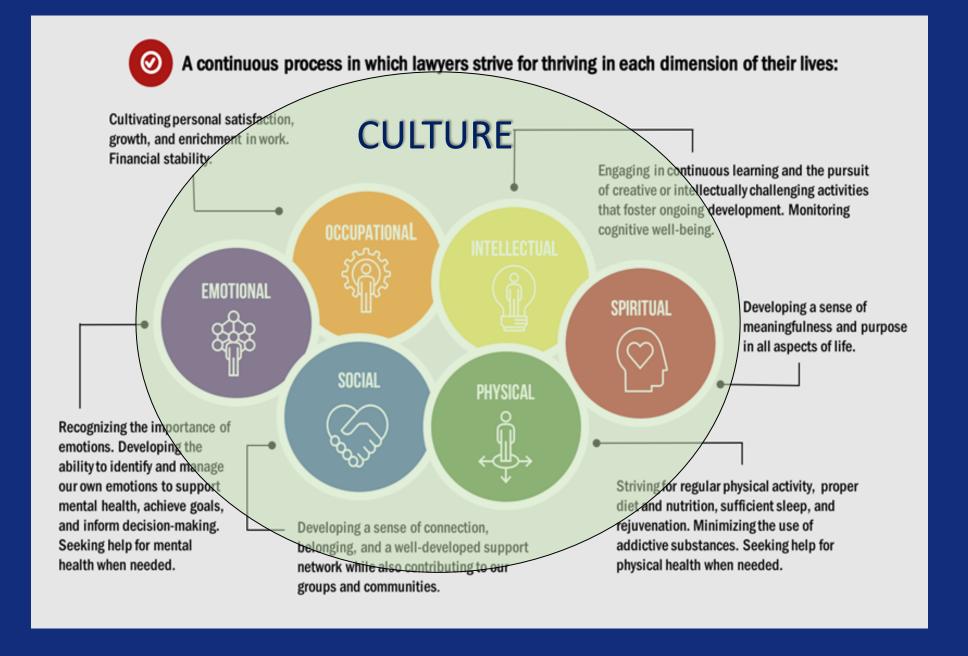






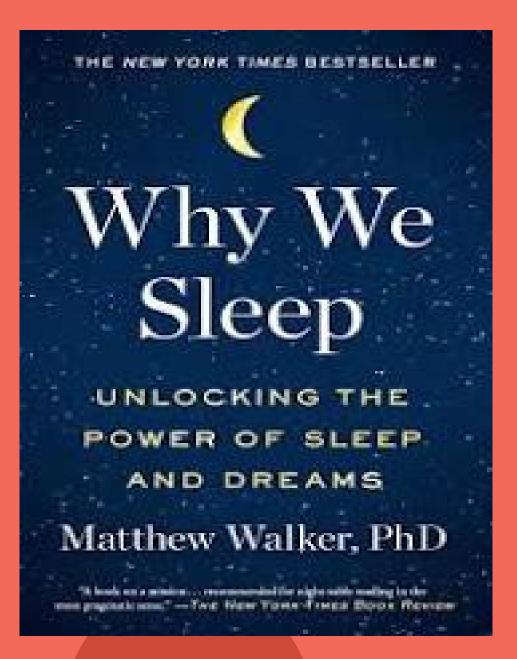


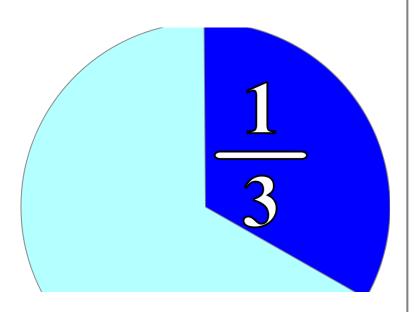
## The whole profession feels the impact



## Sleep + Oxytocin





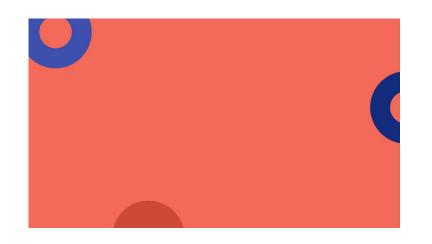


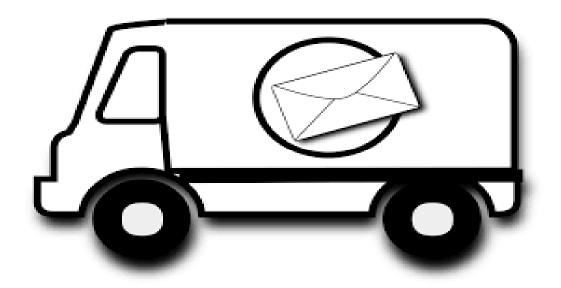




#### Sleep and Memory

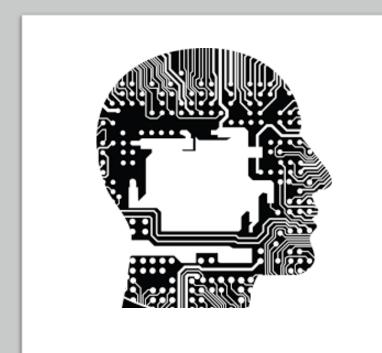
- Sleep is a memory aid—
  - before learning, to prepare your brain to make new memories
  - after learning, to cement those memories and prevent forgetting.

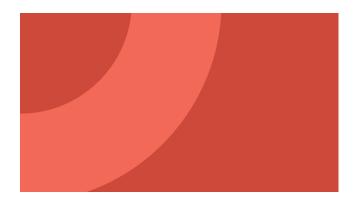




## NREM sleep

moves memory packets of recent experiences from a short-term, more fragile storage area to a safer longterm storage site





## REM sleep

Creates and strengthens neural connections

- Wisdom and creativity
- Emotional intelligence
- Dissolves emotional sting of events

#### Failure Point For Humans

- The recycle rate of a human being is around 16 hours.
- After 16 hours of being awake, the brain begins to fail.
- We need more than seven hours of sleep each night to maintain cognitive performance.

#### The brain is not like a bank

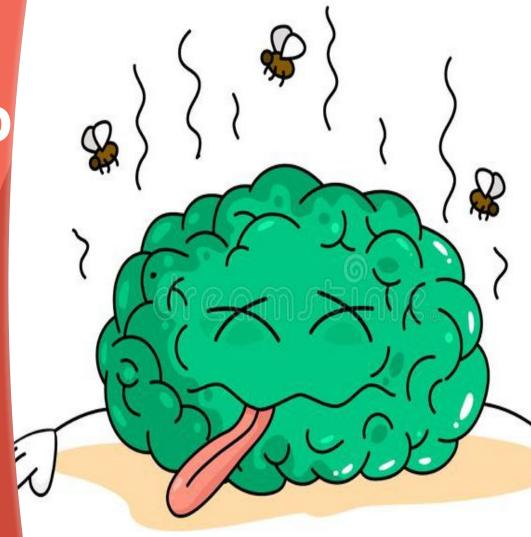
The brain can never recover the sleep it has missed

The brain is incapable of this



## Your brain without sleep

- If we sleep seven hours per day for just 10 days, the brain is just as dysfunctional as it would be after going without sleep for 24 hours
- Getting three full nights of recovery sleep is insufficient to restore performance back to normal levels.



### Physical Health

- Dementia
- Alzheimer's
- Cardiovascular disease, stroke, stress, anxiety
- Immune system
- Cancer
- Type 2 diabetes, weight
- Genetic profile

#### Alcohol

- Alcohol is a sedative
- It disrupts sleep.
- It does not induce natural sleep.
- One of the most powerful suppressors of REM sleep.
- Consuming moderate amounts in the afternoon or evening reduce REM sleep

## Driving

- Vehicular accidents caused by drowsy driving exceed those cause by alcohol and drugs combined.
- Sleep deprivation slows your reaction time and *makes you stop* responding all together.
- That's why drowsy driving is worse than driving drunk.

#### Caffeine

- Sleep pressure is determined by your circadian rhythm and sleep pressure (build up of adenosine)
- Artificially mute the adenosine sleep signal by using caffeine
- Caffeine has an average halflife of 5-7 hours—so early afternoon coffee impacts sleep



## Led Lights

- LED lights disrupt our sleep.
- Winds back our internal 24-hour clock by two to three hours, on average.
- Using LED devices at night such as iPads, phones, and computers disrupts our natural sleep rhythms and hurts the quality and quantity of our sleep



#### Mental Health

- Sleep disruption contributes to all major psychiatric conditions, including depression, anxiety, and suicidality.
- Sleep disturbance is a recognized hallmark associated with addictive substance abuse.
- Insufficient sleep also determines relapse rates in numerous addiction disorders.



#### Anxiety, Stigma and Ethics

- Anxiety = increased perception of threat, acting rashly, self-preservation
- Our inner conflict:
- Maintain positive self-image and behave ethically, or
- Advance our self-interest and behave unethically.
- Anxiety = ethical sinkhole

## Sleep Strategies

- Stick to a sleep schedule and go to bed and wake up at the same time each day—regularity!
- No naps if you struggle to fall asleep
- Try to exercise no later than two to three hours before your bedtime.
- Avoid caffeine and nicotine.
- Avoid alcoholic drinks before bed because this will rob you of REM sleep and make you frequently wake up in the middle of the night.

## Sleep Strategies

- Avoid large meals and beverages late at night, which can interfere with sleep.
- If possible, avoid medications that delay or disrupt sleep.
- Don't take naps after 3:00 p.m. because it makes it harder to fall asleep at night.
- Sleep in a dark, cool, gadget-free bedroom—65 degrees.
- Avoid sleeping pills!
- Avoid LED devices
- Consider "sleep divorce."

#### Matthew Walker:

"Sleep is the single most effective thing we can do to reset our brain and body health each day."

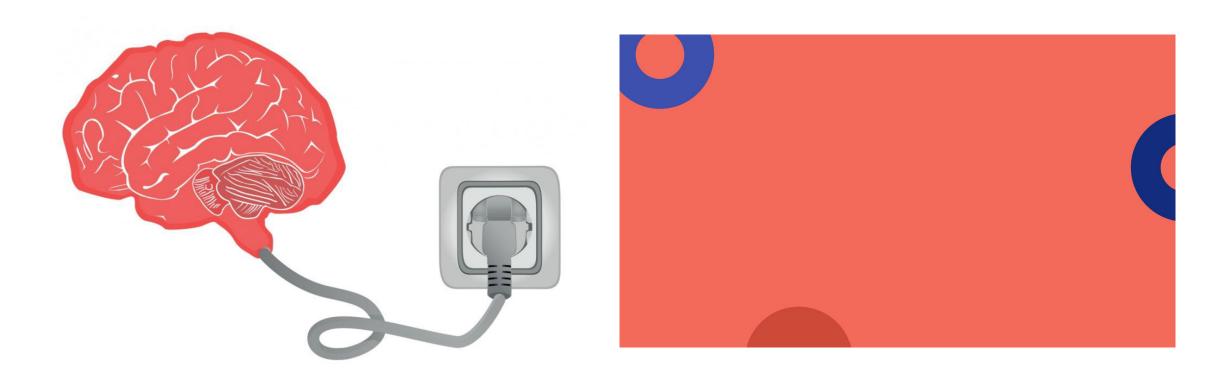
## Sleep loss epidemic

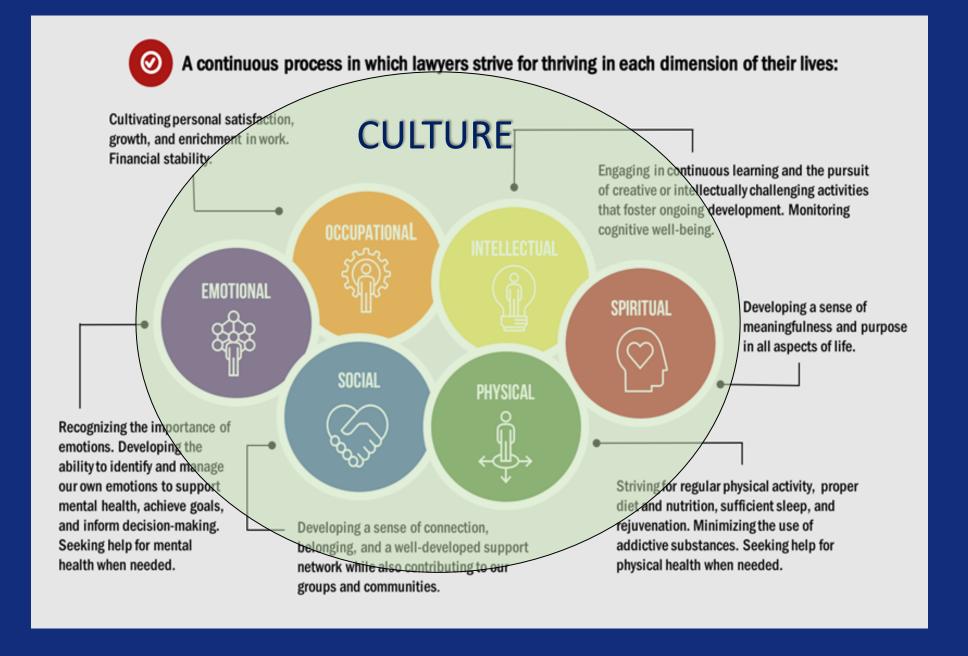


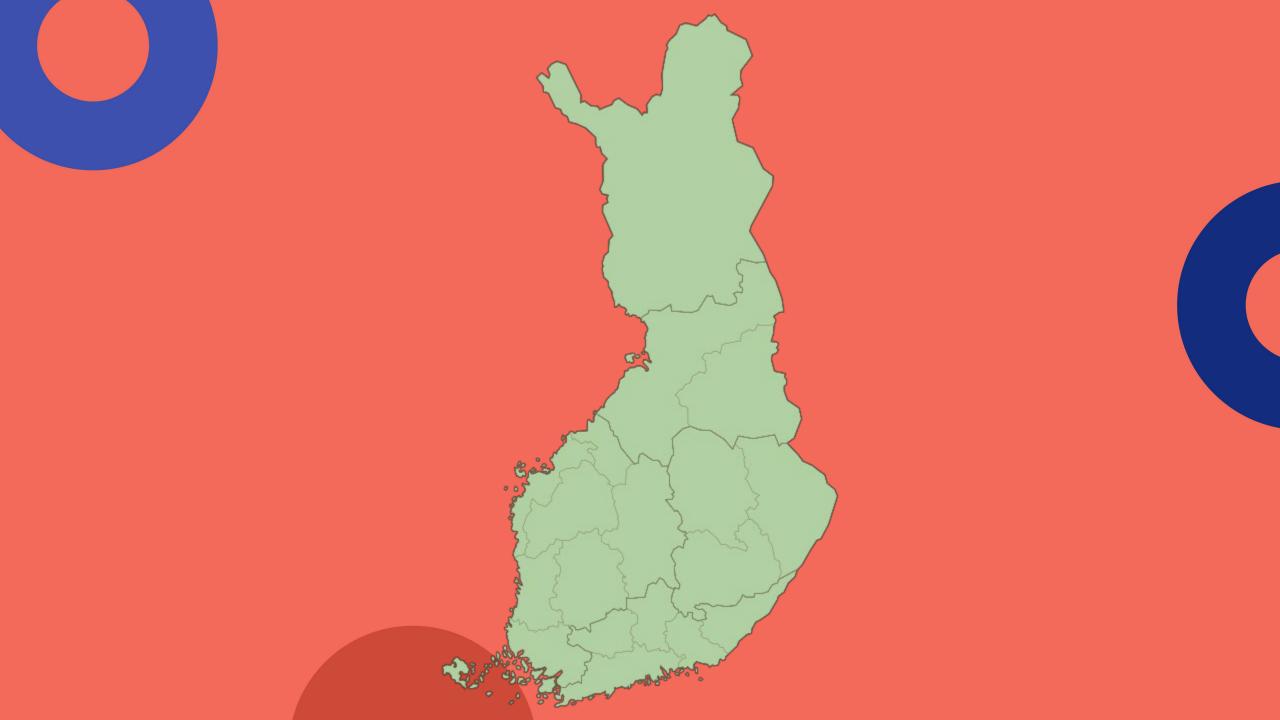


#### The shorter you sleep, the shorter your life







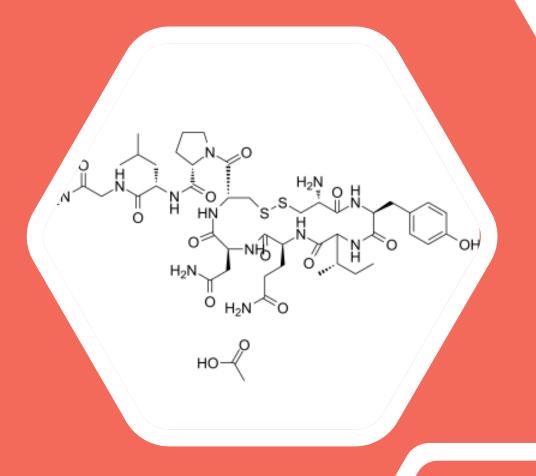




**World Happiness Report** 

## Trust begets trust

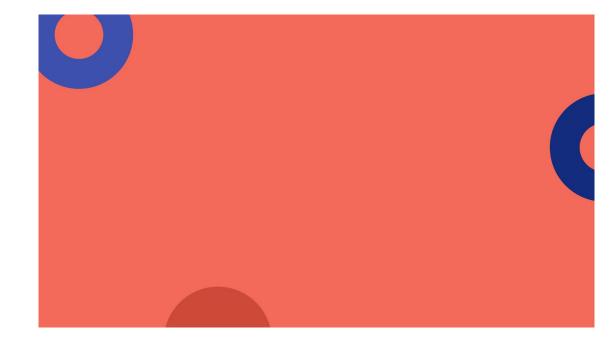
This is how your brain works

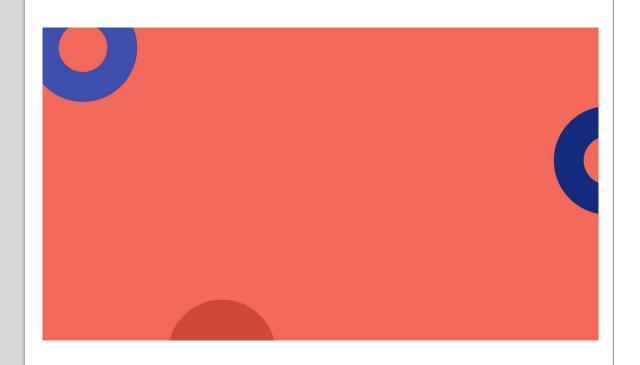


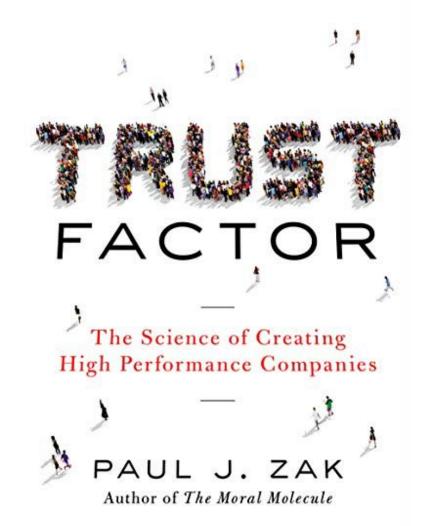
## OXYTOCIN

· \*\* 更大行人的专行并行,在它的大型种门企业。 未知及 法自己人的信任 MAKE RARELY BEEN SO SHIERTAIRING." -MATT BIBLEY, ANTHON OF SERONE THE MORAL MOLECULE

PAUL J. ZAK







## OXYTOCIN

- •When someone trusts you...
- •When you are extended trust...
- •This is the basis of THE GOLDEN RULE

#### **OXYTOCIN**

- Enhances empathy
- Literally can walk in another's shoes
- Treat others like family

#### **OXYTOCIN**

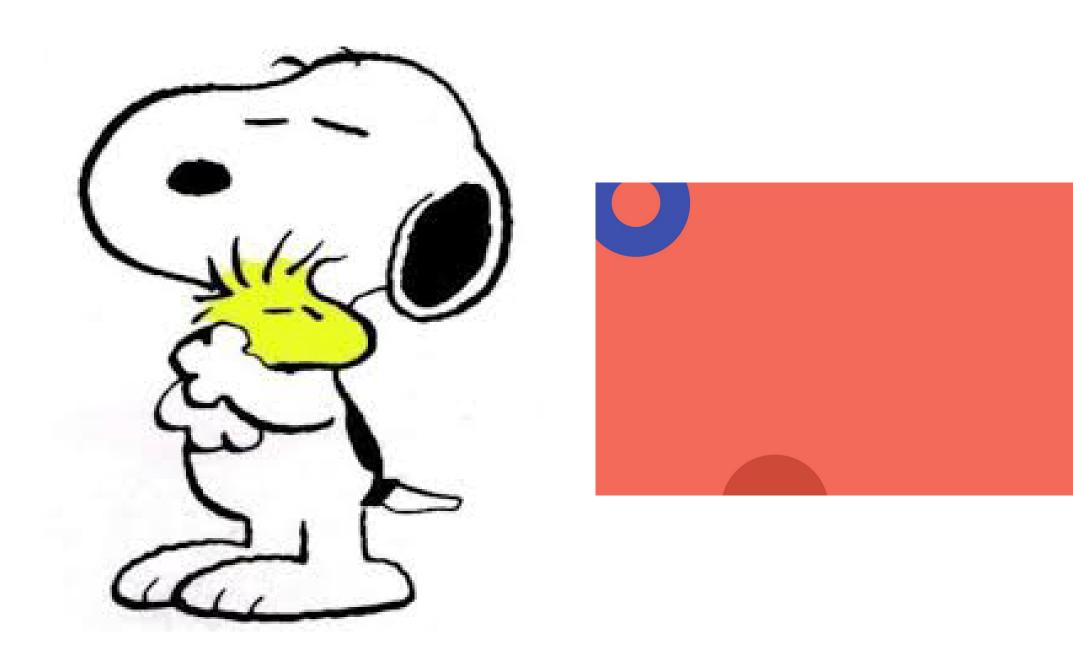
- Makes us feel good to be part of a team, organization, group
- Brain rewards us for cooperation

### Inhibitors...high stress + testosterone

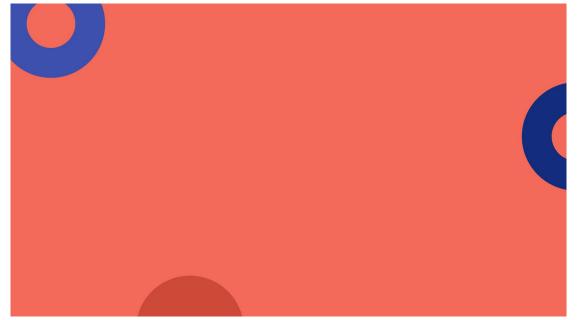


# Brain hacks

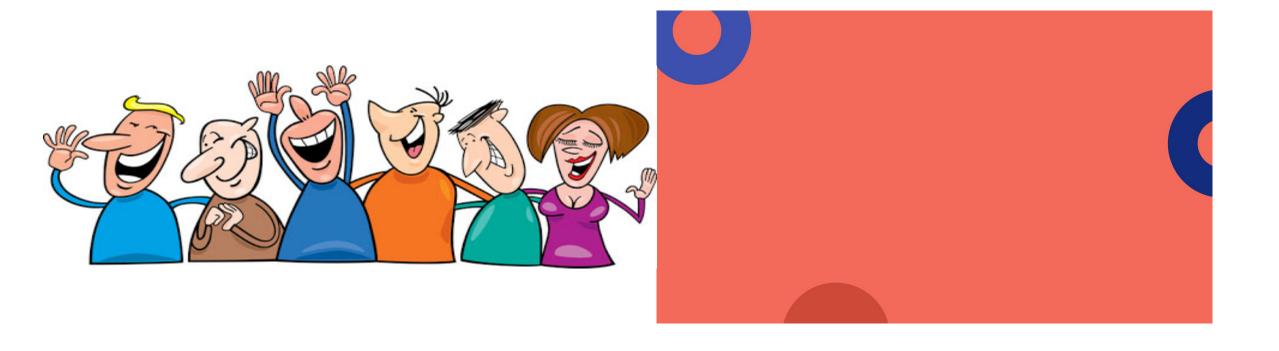
interrupt











## Neuromanagement

## Design Culture

- Oxytocin
- Trust
- Purpose
- Engagement and service
- Joy
- Performance

## ovation

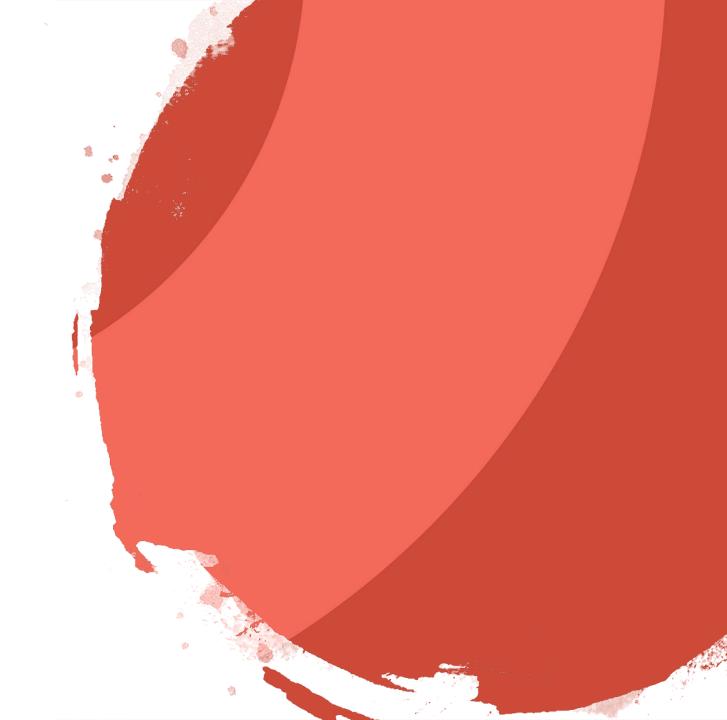
- Recognizes colleagues who contribute to successes (and mistakes)
- Accounts for 67 percent of organizational trust

#### expectation

- Occurs when colleagues face a challenge as a group
- Accounts for 83 percent of organizational trust

## yield

- Occurs when colleagues choose how to do a project
- Accounts for 51
   percent of organizational trust



## transfer

- Transfer enables selfmanagement by permitting colleagues to craft their own jobs
- Accounts for 82 percent of organizational trust

#### openness

- Openness shares information broadly with colleagues
- Accounts for 65
   percent of
   organizational trust

### caring

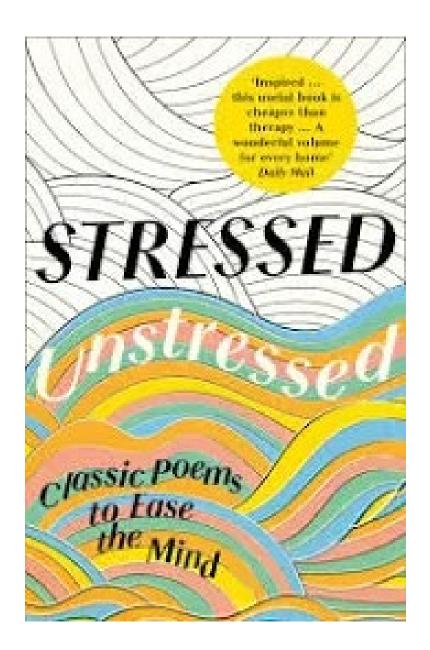
- Intentionally building relationships with colleagues
- Accounts for 84 percent of organizational trust

### authentic

- Leaders are honest and vulnerable
- Accounts for 82
   percent of
   organizational trust

# Poetry + Fourishing

ennyson, Robert Brusse 1930). The 18th cent., xpected to Write odes for ro other court occasions. Poetry Language whinstead of m labelling an object and melody, by symbol and hearer a precise, cohere or attitude. This can and verse, which are nalling the rhythm



## Poetry

- Heart rate
- Positive emotion
- Engagement and flow experiences
- Social relationships
- Meaning or purpose in life

### THANK YOU!

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