


Attitude Determines Altitude: *Engineering Yourself*

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“Improve a mechanical device and you may double productivity, but improve man and you gain a thousandfold.”

– Khan Noonien Singh, *Star Trek*

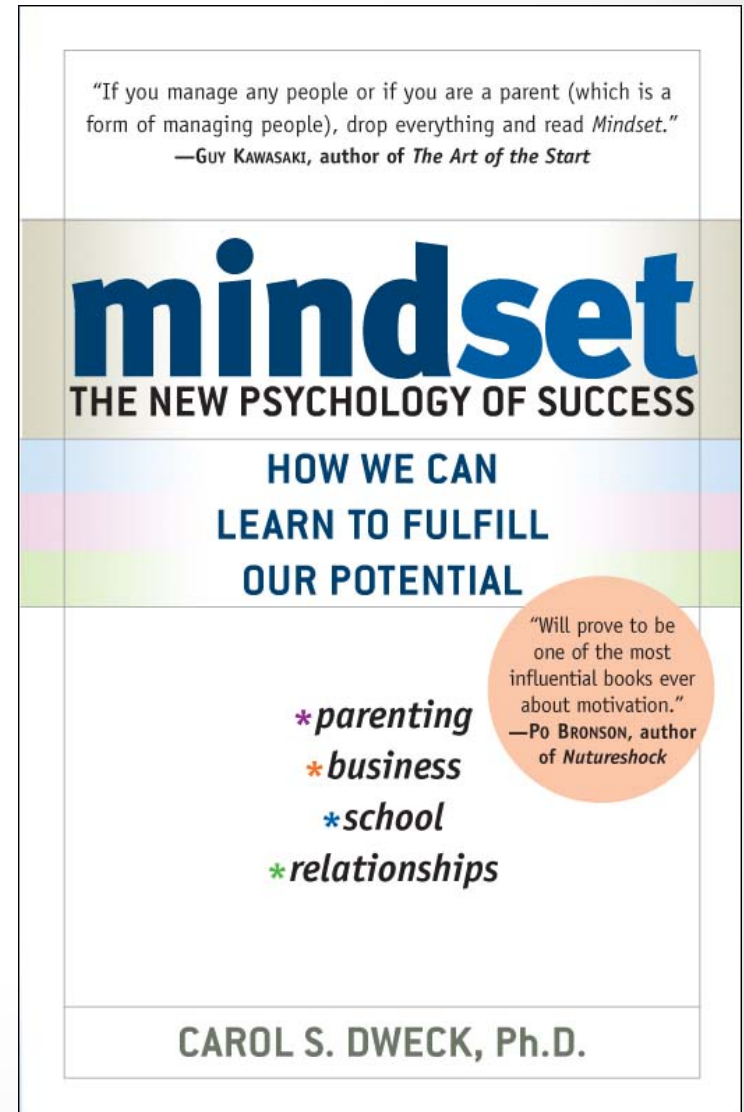


Growth Spectrum



The Growth Mindset

- Dr. Carol Dweck of Stanford
- Your **self-theory about intelligence and talent** determines your learning achievement, skill acquisition, professional success
- Most effective way to improve is to know that you can



Fixed vs. Growth Mindset

Fixed Mindset	Growth Mindset
<i>Talent is static</i>	<i>Talent can be developed</i>
<i>Leads to a desire to look smart and therefore a tendency to ...</i>	<i>Leads to a desire to learn and therefore a tendency to ...</i>
Avoid challenges	Embrace challenges
Give up easily due to obstacles	Persist despite obstacles
See effort as fruitless	See effort as path to mastery
Ignore useful feedback	Learn from criticism
Be threatened by others' success	Be inspired by others' success

“Effort is one of the things that gives meaning to life. Effort means you care about something, that something is important to you, and you are willing to work for it.”

– Dr. Carol Dweck

The Expert Mind

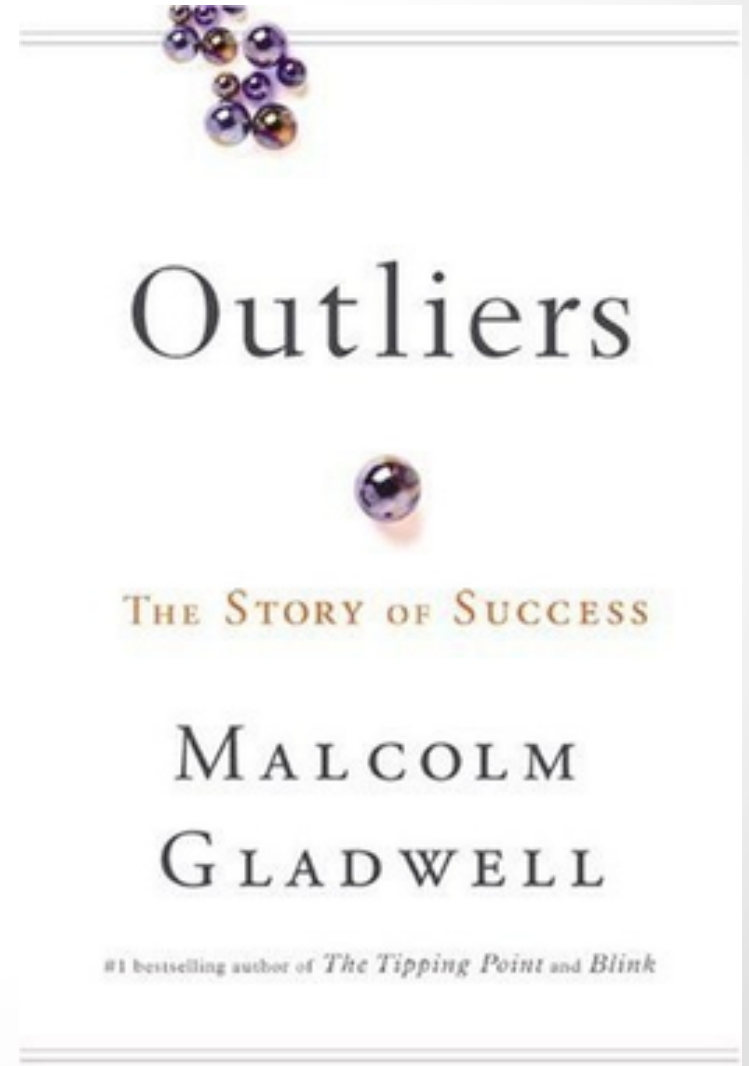
- “The preponderance of psychological evidence indicates that **experts are made, not born.**”
- “**Effortful study is the key to achieving success** in chess, classical music, soccer and many other fields.”



Philip E. Ross, *Scientific American*, August 2006

The 10,000 Hour Rule

- “Ten thousand hours is the magic number of greatness.”
- Deliberate practice with constant challenge

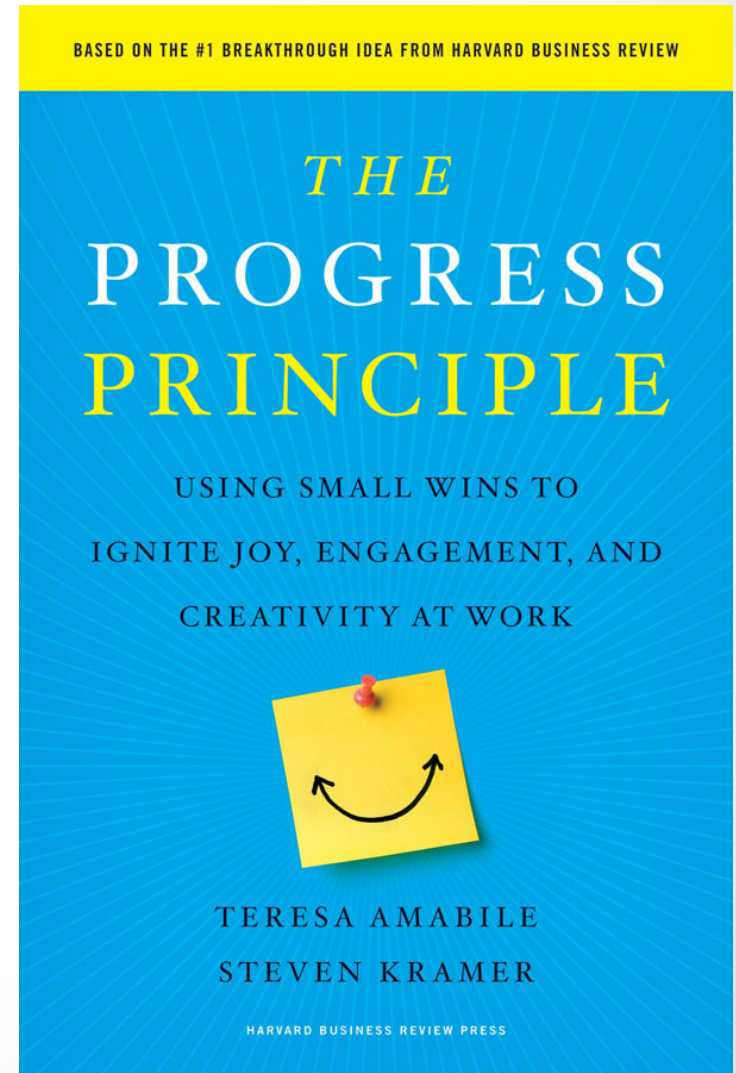


“Practice isn’t the thing you do once you’re good. It’s the thing you do that makes you good.”

– Malcolm Gladwell, *Outliers*

The Progress Principle

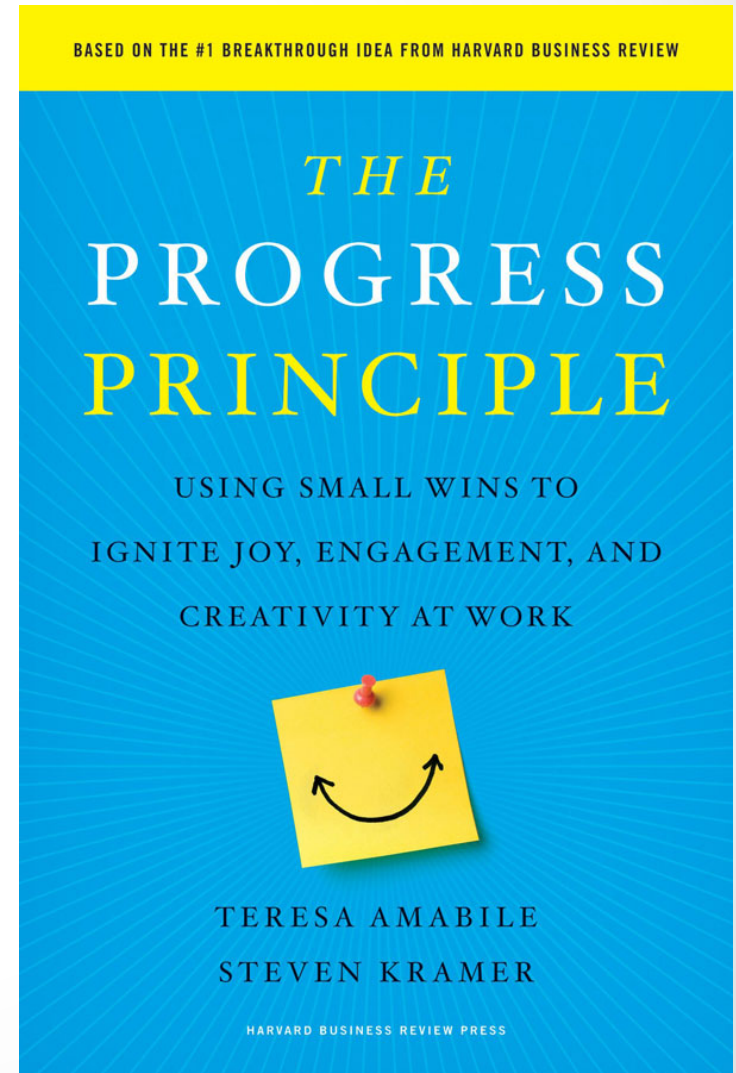
- Dr. Teresa Amabile at Harvard Business School, 2011
- “Inner Work Life” drives **performance** – constant stream of emotions, perceptions, and motivations



The Progress Principle

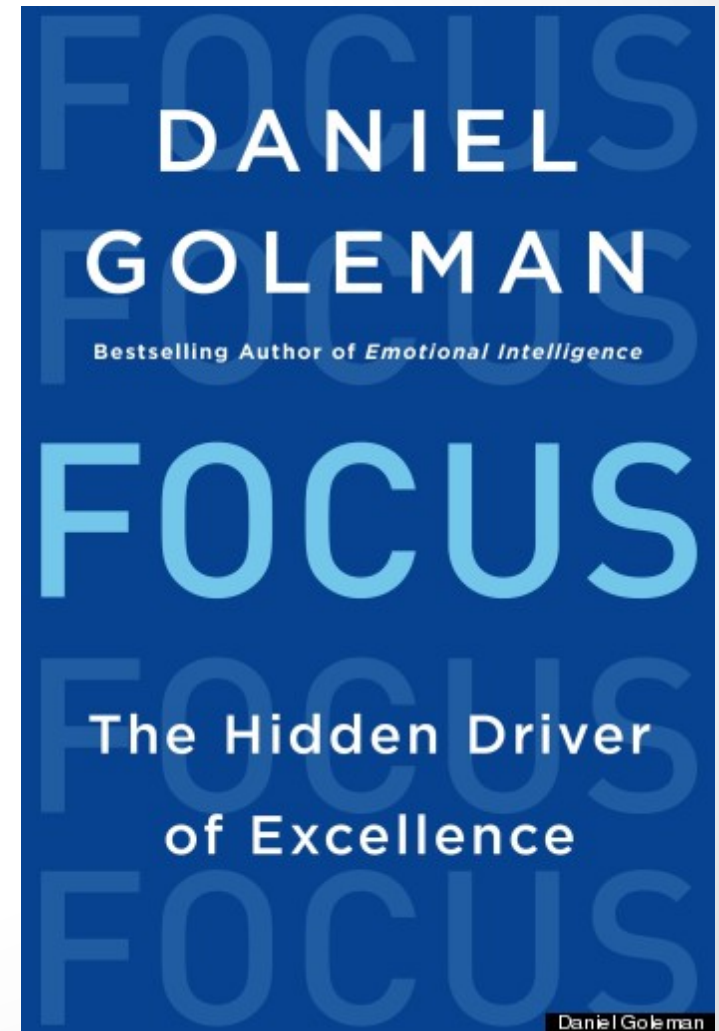
- **Making progress on meaningful work** most strongly improves motivation and performance
- **Steady progress and small wins** lead to big gains

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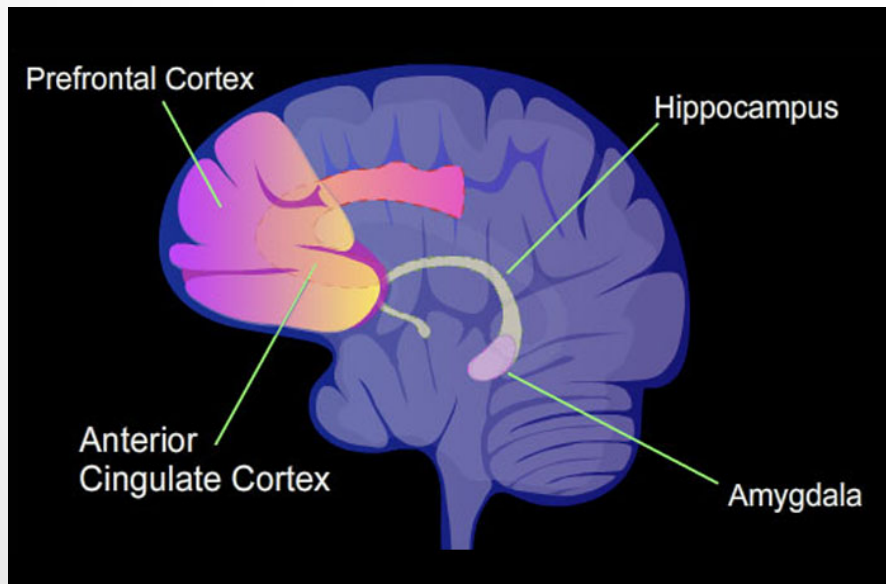
Focus and Attention

- Psychologist Daniel Goleman, 2013
- Ability to focus (“cognitive control”) is the best predictor of success and high achievement



Focus and Attention

Focus is the ability to moderate between two parts of the brain:



- Top-down higher brain
 - Neocortex
 - Executive function
 - Deliberative, reflective, self-aware
- Bottom-up lower brain
 - Amygdala
 - Emotion and motivation
 - Impulsive, uncontrolled

Focus and Attention

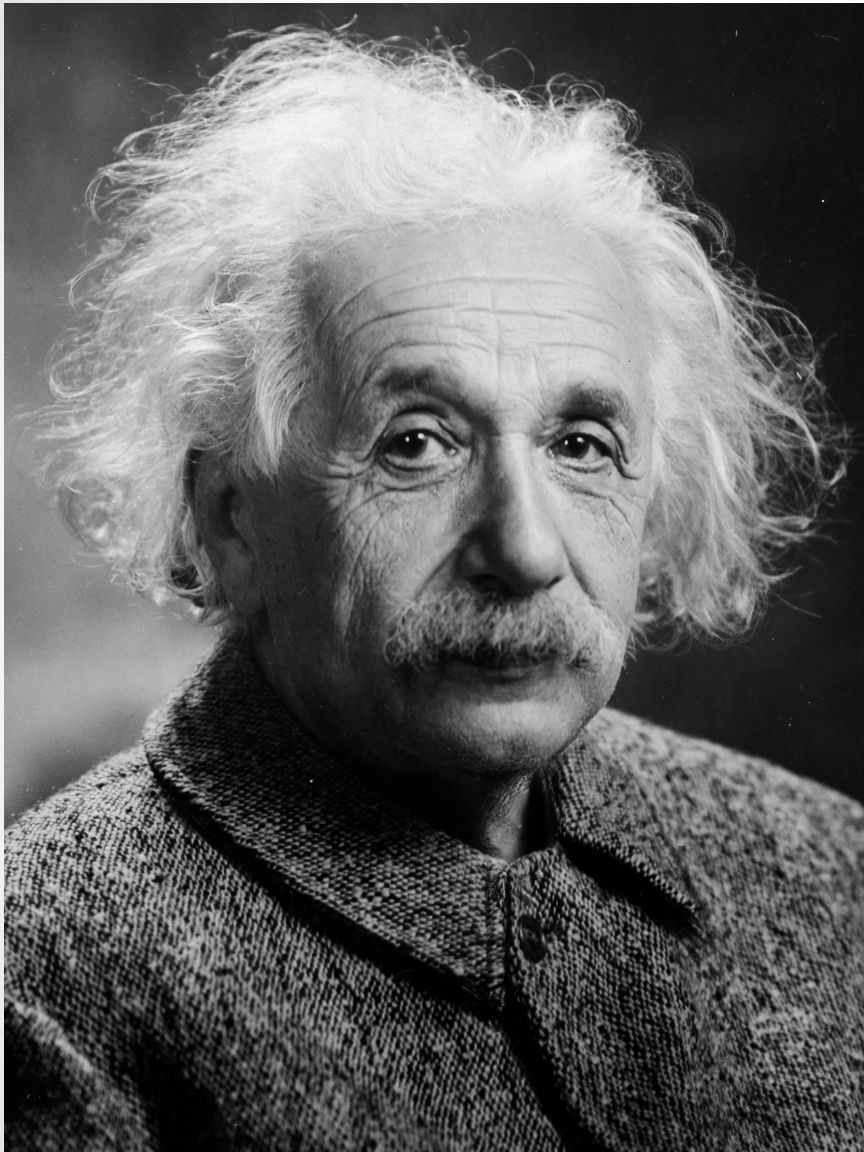
Complex interplay between Creativity and Execution:

- Creativity from “open awareness”
 - Daydreaming
 - Finding unexpected connections
- Execution from focus
 - Goal focus
 - Resistance to distraction

Attention is a “Mental Muscle”

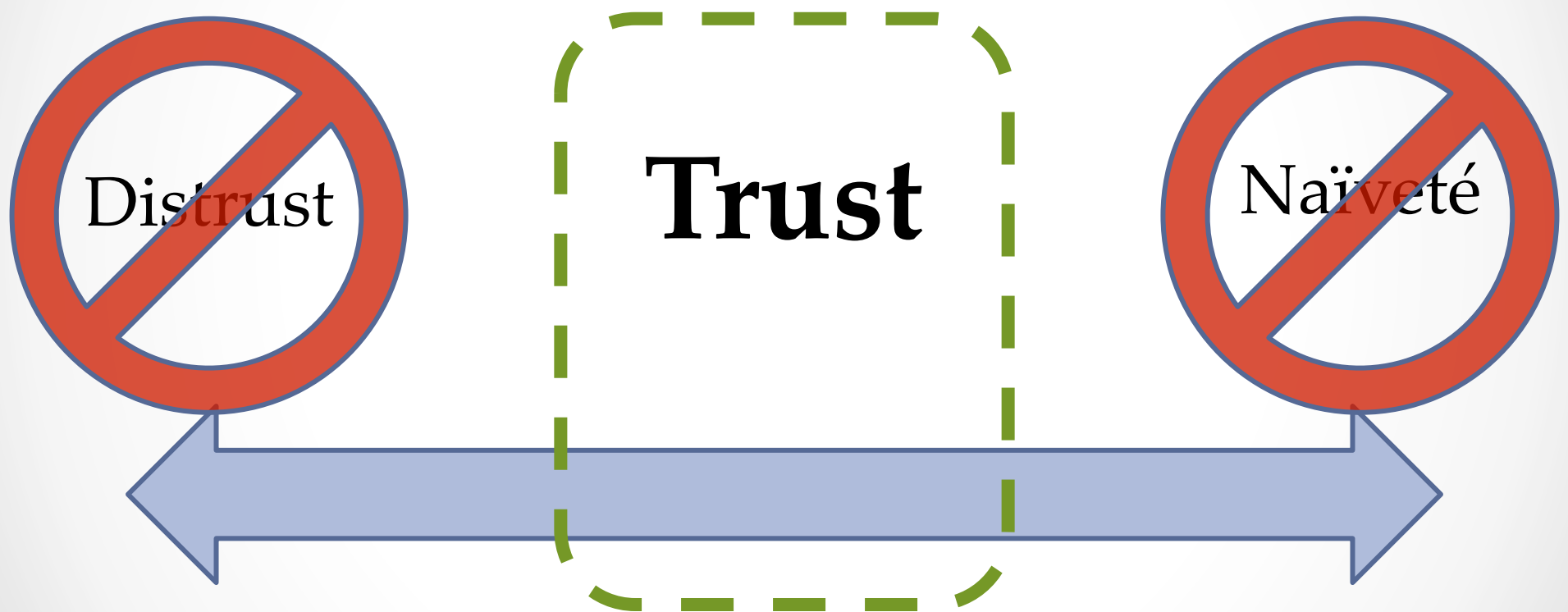
“From the perspective of cognitive science, all meditation methods are methods to train attention.”

– Daniel Goleman



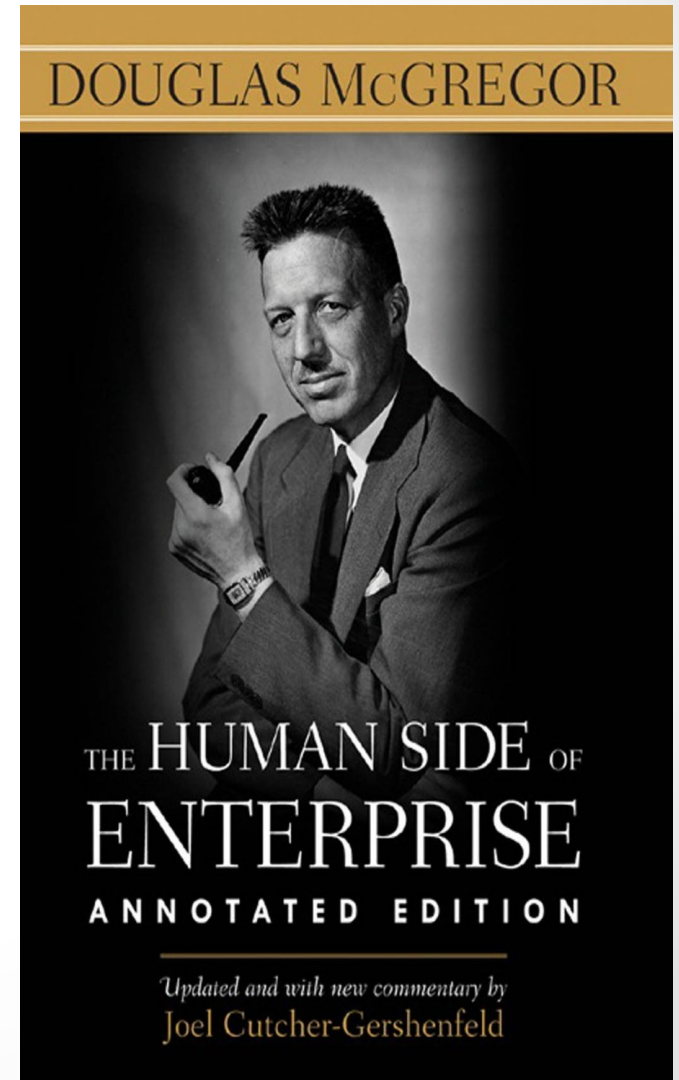
**“It’s not that
I’m so smart;
it’s just that I
stay with
problems
longer.”**

Trust Spectrum



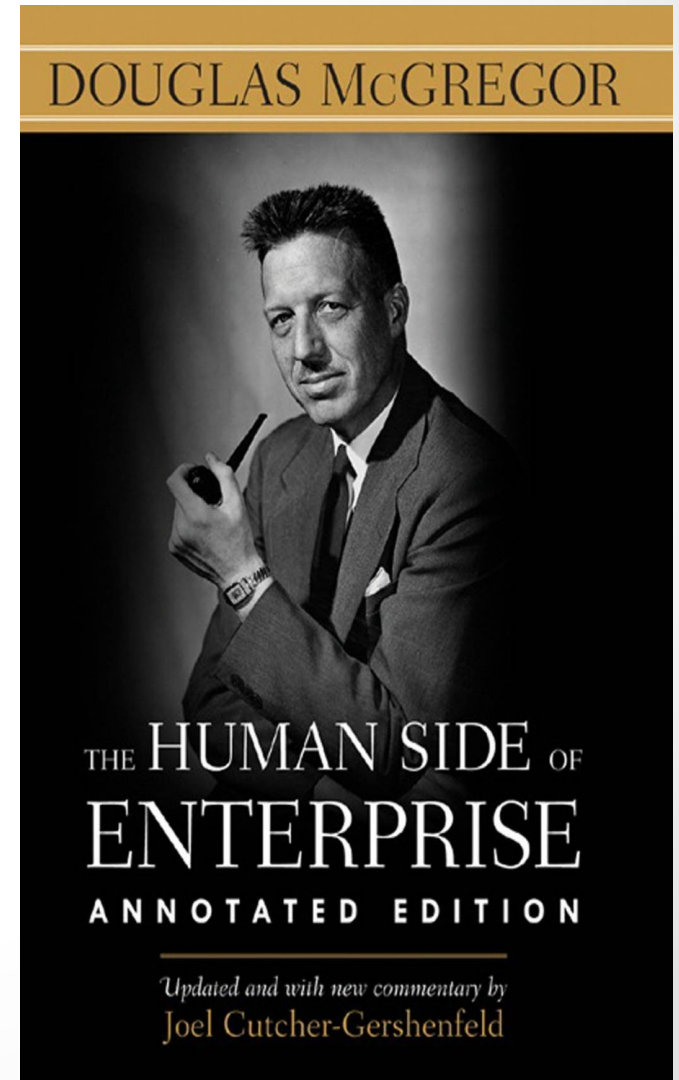
Theory X vs. Theory Y

- Dr. Douglas McGregor, 1960
- Leadership's beliefs about what motivates employees

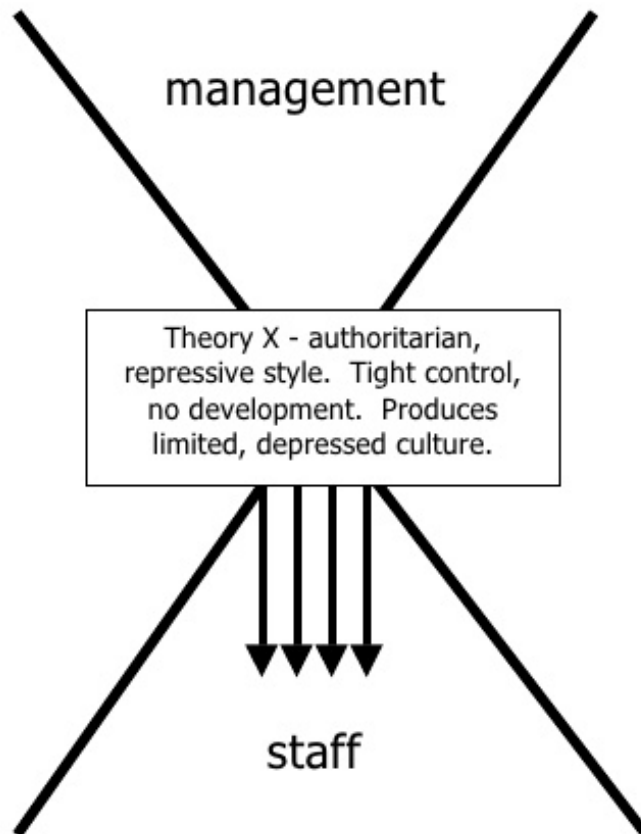


Theory X vs. Theory Y

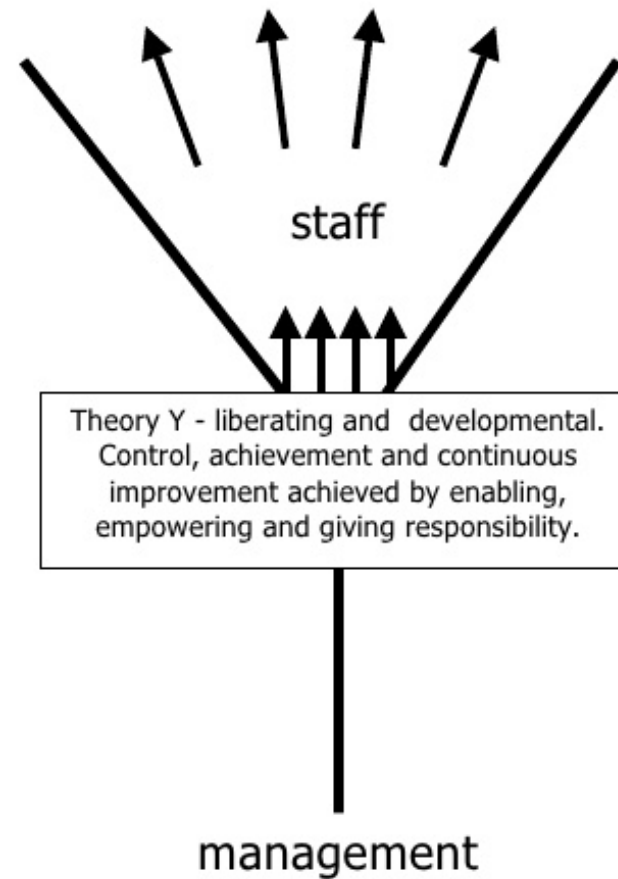
- **Theory X:** people are inherently lazy and avoid responsibility, require extrinsic motivation
- **Theory Y:** people are intrinsically motivated, seek ownership, want to perform well



'Theory X'

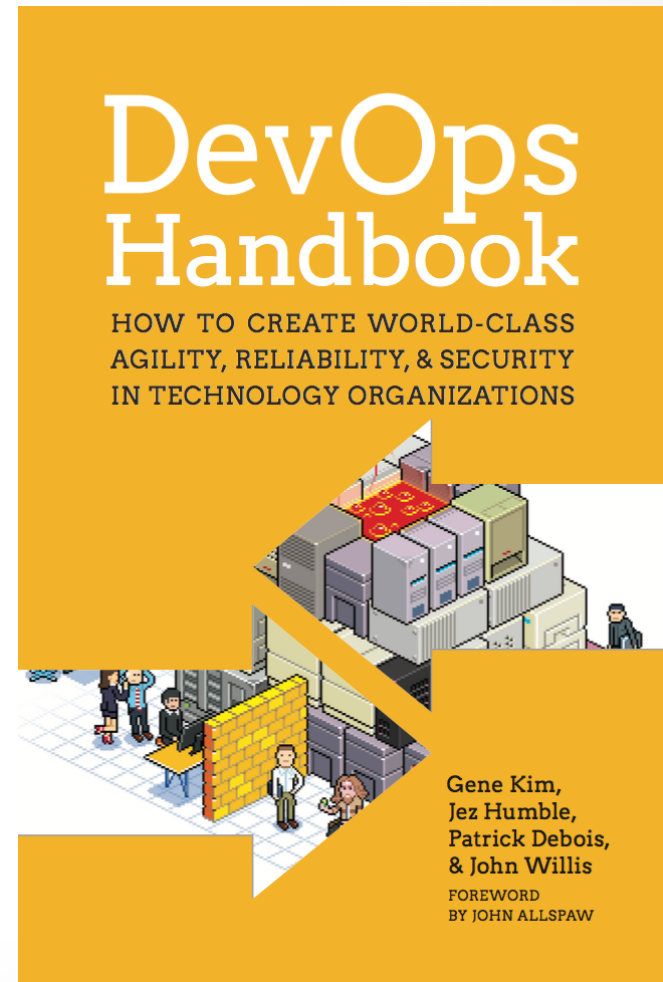


'Theory Y'



Westrum Organizational Model

- Generative Organization
 - Trust and Sharing
- Bureaucratic Organization
 - Rules and Processes
- Pathological Organization
 - Fear and Threat



Psychological Safety



- Team is **safe for interpersonal risk-taking**
- “Being able to show and employ one’s self without fear of negative consequences”
- More important than any other factor in team success

**“If you can’t change your
organization,
change your organization.”**

– Martin Fowler

Confidence Spectrum



“Whether you think that you can or you can’t, you are usually right.”

– Henry Ford

“Despite outstanding academic and professional achievements, women who experience the **Impostor Phenomenon** persist in believing that they are really not bright and have fooled anyone who thinks otherwise.”

– Clance and Imes, 1978

- http://www.paulineroseclance.com/pdf/ip_high_achieving_women.pdf •

“We find that *professional role confidence* predicts behavioral and intentional persistence, and that **women’s relative lack of this confidence contributes to their attrition.**”

– Cech, et al., 2011

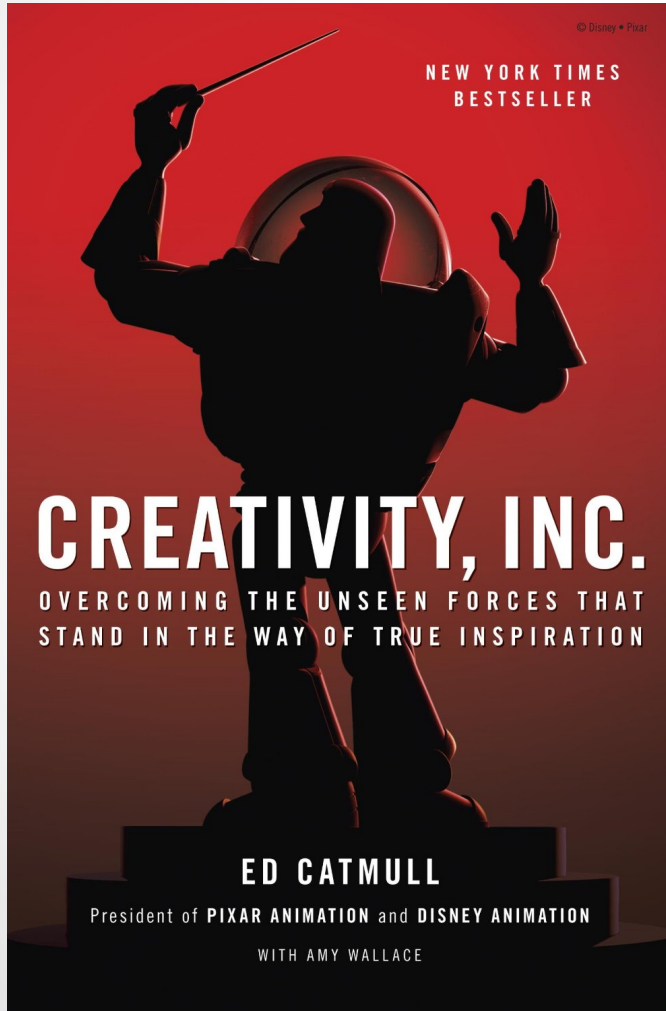
- [Cech, et al., “Professional Role Competence and Gendered Persistence in Engineering”, 2011](#)
-

“Impostorism affects a wide range of people ... **70% of people will experience** at least one episode of this **Impostor Phenomenon** in their lives.”

– Jaruwana and Alexander, 2011

- [Jaruwan and Alexander, "The Impostor Phenomenon", 2011](#)

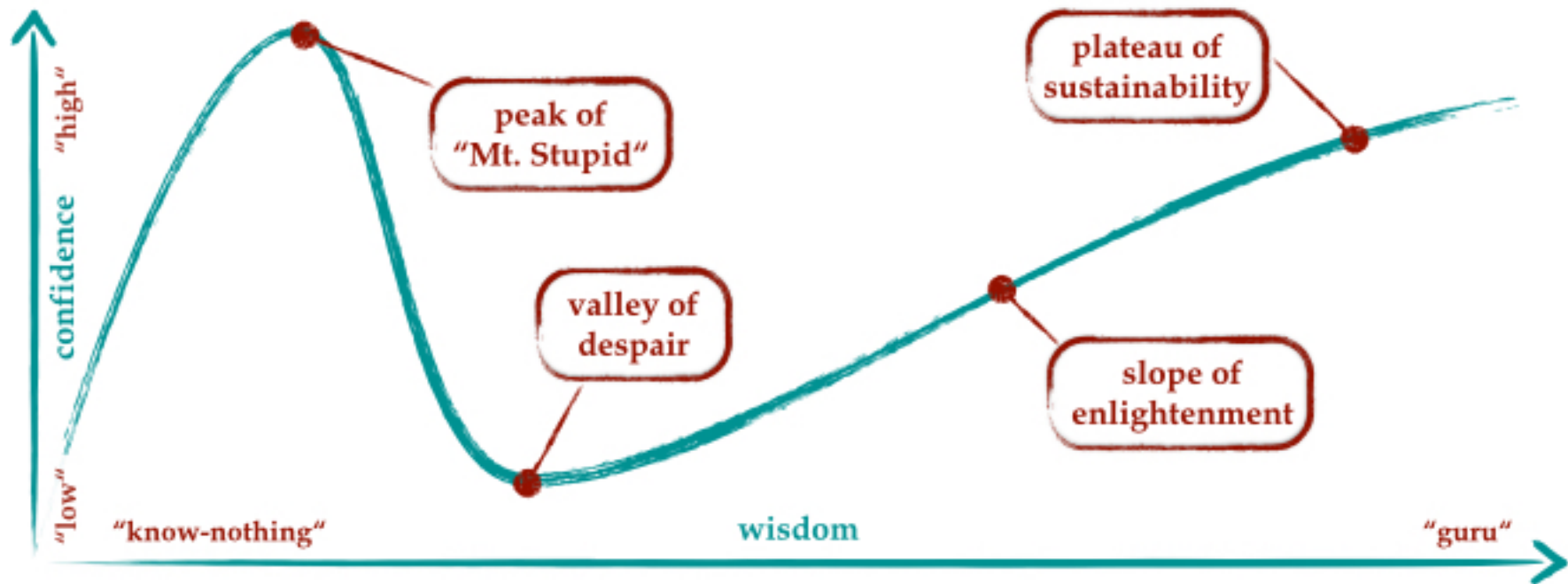
Confidence and Honesty



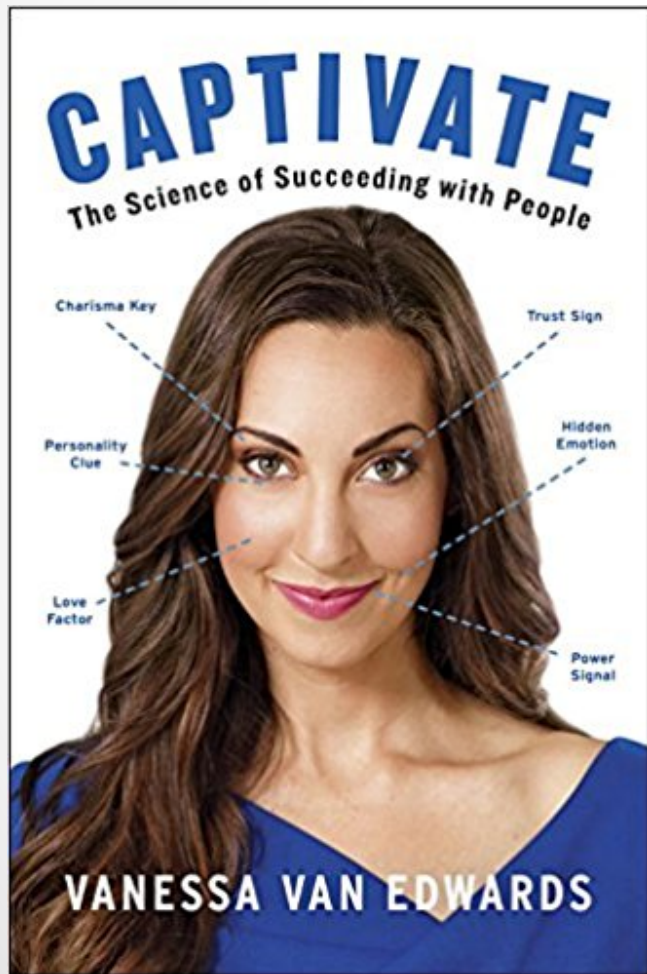
- Ed Catmull was interviewing at Lucasfilm in 1979 to start a computer graphics group
- George Lucas asked "Who else should we be talking to?"
- Catmull suggested <all the big names in computer graphics>
- No other candidate had shared any of those names (!)

Overconfidence and Dunning-Kruger

Dunning-Kruger effect

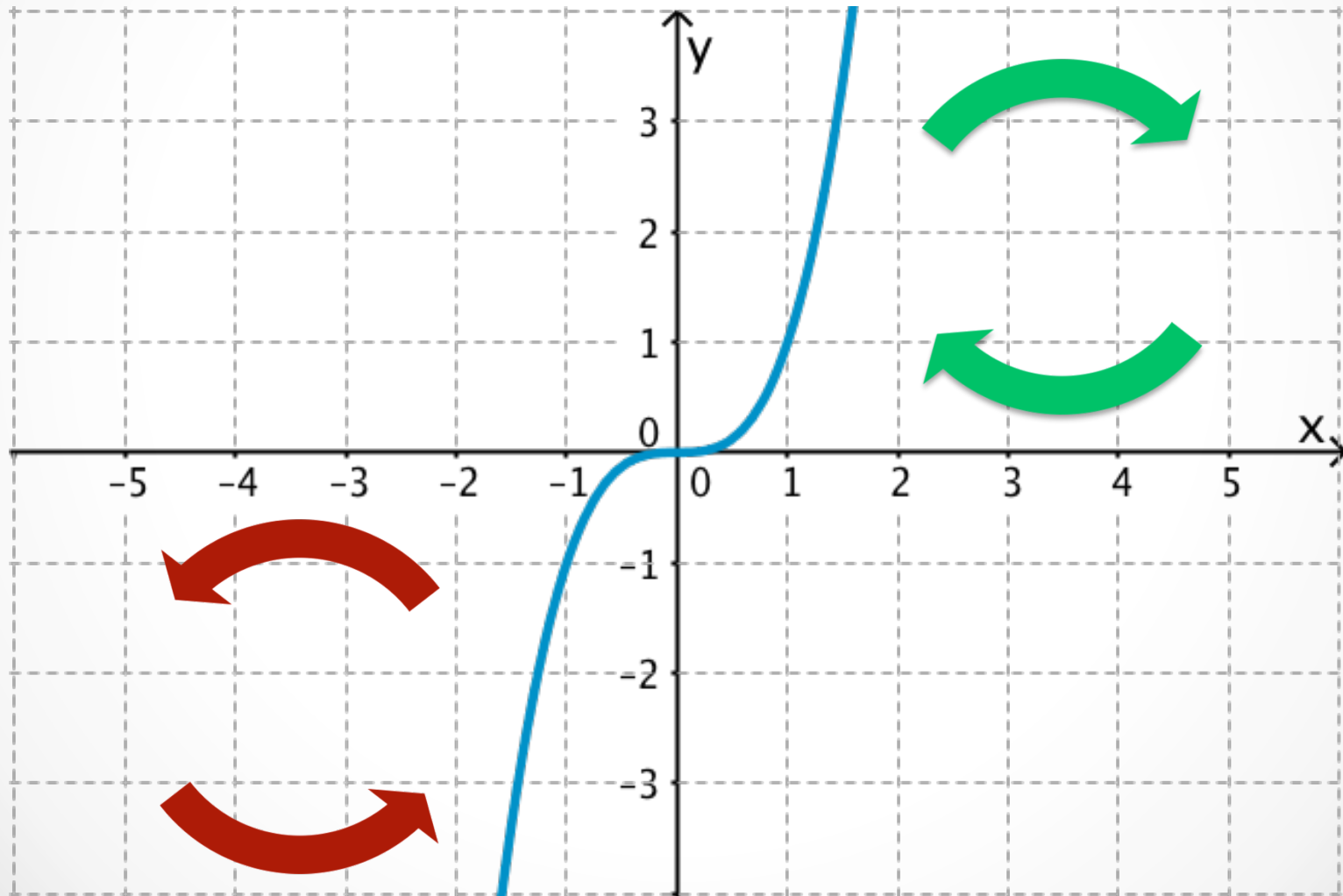


Confidence and Attractiveness



“Attraction is about a certain primal magnetism. Of course, we can be physically attracted to someone, but **we are more often drawn to their confidence, passion, and personality.**”

Cycles of Confidence



Building Confidence

- Amy Cuddy of Harvard Business School
- TED Talk, 2012: “Your body language may shape who you are”
- Nonverbal expressions of power and confidence



- https://www.ted.com/talks/amy_cuddy_your_body_language_shapes_who_you_are

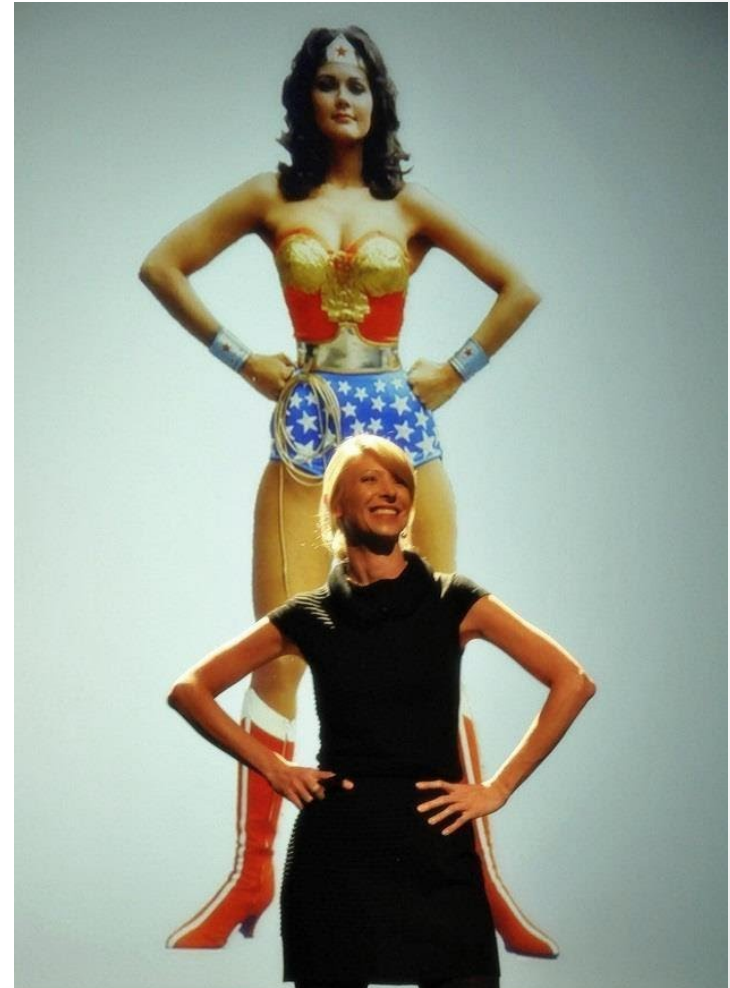
“Postural Feedback Effect”

Adopting a “Power Pose”

- Increases feelings of power and confidence
- Activates approach system instead of avoidance

Improves

- Performance under stress
- Mood and motivation
- Assertiveness
- Physical strength



- <https://ideas.ted.com/inside-the-debate-about-power-posing-a-q-a-with-amy-cuddy/>

Amy Cuddy

Amy Cuddy



Fake It Till You Make It

Game Changers

Amy Cuddy



Do It Till You Become It

Find Your Core

**Connect to your core
and you'll find
strength. Act from your
core and you'll move
mountains.**

Gabriella Goddard

QUOTEHD.COM

- Use your core strength to build your foundation
 - Profession
 - Family
 - Friends
 - Relationship
 - Volunteerism
 - Etc.
- Strength in one area helps you be strong in others

MAKE
YOURSELF
OBSOLETE



Matt Klein

@mattklein123

Following



Mentoring myself out of a job is not an easy thing to do (loss of control) but it's the right thing to do. It's better for [@EnvoyProxy](#), [@lyft](#), and myself.

5:48 PM - 4 Mar 2018

3 Retweets 11 Likes





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If you are a senior engineer, a leader of a team, and are not actively working to make your team productive without you, you are literally not doing your job.

7:19 PM - 4 Mar 2018

7 Retweets 14 Likes



1



7



14



Randy Shoup @randyshoup · Mar 4



You can accomplish this through automation, documentation, hiring, training, etc.

But you do no one any favors — least of all yourself — by perpetuating a bottleneck.



1



1



4





jessie frazelle ✓

@jessfraz

Following



Hire the people who will automate themselves out of a job, then just keep giving them jobs.

5:59 AM - 16 Dec 2017

2,392 Retweets **6,047** Likes



72

2.4K

6.0K







“A ship in port is safe; but that is not what ships are built for. Sail out to sea and do new things.”

