A Neurobiologist's Guide

To Team Empowerment

Casey Watts!

@kyloma <u>caseywatts.com</u>



Intro





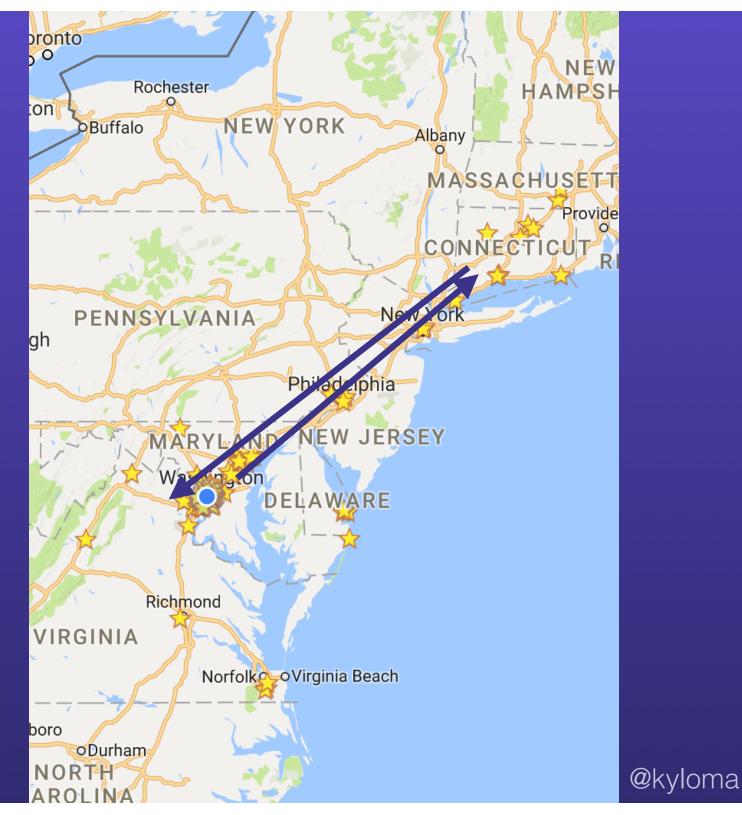




Baltimore, MD

New Haven, CT

Washington, DC

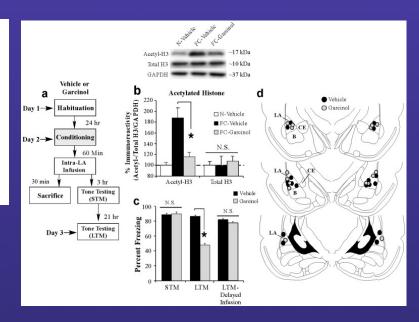


Casey's Research

My Papers

"Intra-LA infusions of garcinol impair training-related acetylation of histone H3 and fear memory consolidation."

- DNA methyltransferase activity is required for memory-related neural plasticity in the lateral
 amygdala.
- Maddox SA, Watts CS, Schafe GE. Neurobiol Learn Mem. 2014 Jan;107:93-100. doi: 10.1016/j.nlm.2013.11.008. PMID: 24291571 Free PMC Article Similar articles
- A naturally-occurring histone acetyltransferase inhibitor derived from Garcinia indica impairs newly
 acquired and reactivated fear memories,
 Maddox SA, Watts CS, Doyère V, Schafe GE.
 PLoS One. 2013;8(1):e54463. doi: 10.1371/journal.pone.0054463.
 PMID: 23349897 Free PMC Article
 Similar articles
- p300/CBP histone acetyltransferase activity is required for newly acquired and reactivated fear
 imemories in the lateral amygdala.
 Maddox SA, Watts CS, Schafe GE.
 Learn Mem. 2013 Jun 17;20(2):109-19. doi: 10.1101/lm.029157.112.
 PMID: 23328899 Free PMC Article
 Similar articles





excited

or

nervous



"physiologically aroused"



what outcome is expected?



Anxiety

a feeling of worry, nervousness, or unease, typically about an imminent event or something with an

uncertain outcome.



You might feel:

tired, sitting all day focused on dinner hangry



You might focus on:

curious about <u>brains</u> <u>excited</u> about this talk just grabbed a <u>coffee</u>



Overview

A. Cognitive RestructuringB. Psychological SafetyC. Inclusive Culture





A. Self B. Team C. Team



Notes, links, slides, homework at: <u>caseywatts.com/mindmanipulation</u>

Video at: <u>caseywatts.com/mindmanipulationvideo</u>

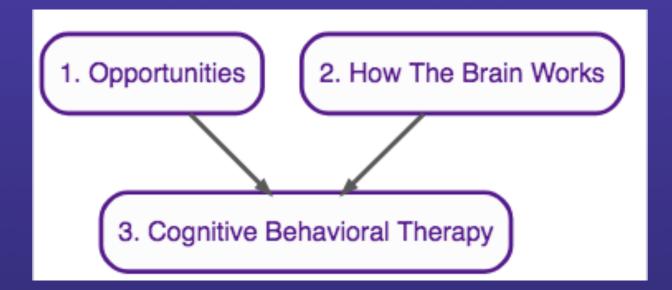


Part A Cognitive Restructuring



- 1. "Opportunities"
- 2. How The Brain Works
- 3. Cognitive Behavioral Therapy







- 1. "Opportunities"
- 2. How The Brain Works
- 3. Cognitive Behavioral Therapy





downward spiral





argument at work



snapping at your kids

Hangry, wet, raining, late Stepped in a puddle





during or after



Rumination

compulsively focused attention on the symptoms of one's distress, and on its possible **causes and consequences**, as opposed to its **solutions**



- 1. "Opportunities"
- 2. How The Brain Works
- 3. Cognitive Behavioral Therapy



Inner vs Outer Brain

Brain as as System



Inner vs Outer Brain







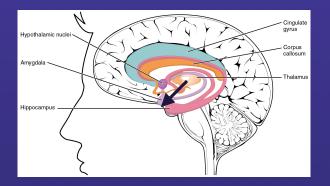
LeDoux's Dual Pathway Inner vs Outer Brain



Feelings

Limbic System "inner brain"

"low road" FAST ~ms





Feelings

Limbic System "inner brain" Thoughts

Cortex "outer brain"

"high road"

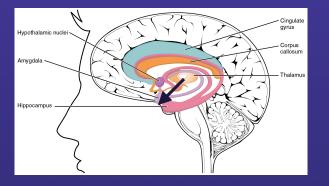
Temporal lobe

Parietooccipital

Occipital

"low road" FAST ~ms



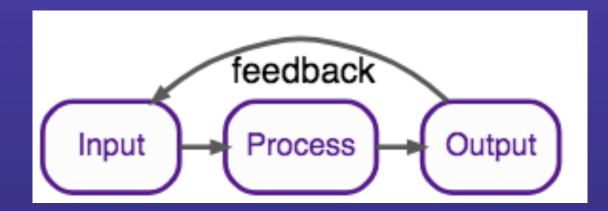




Brain as a System

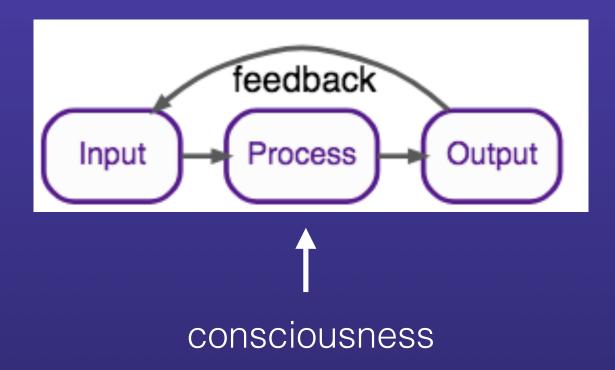


An Engineer's System

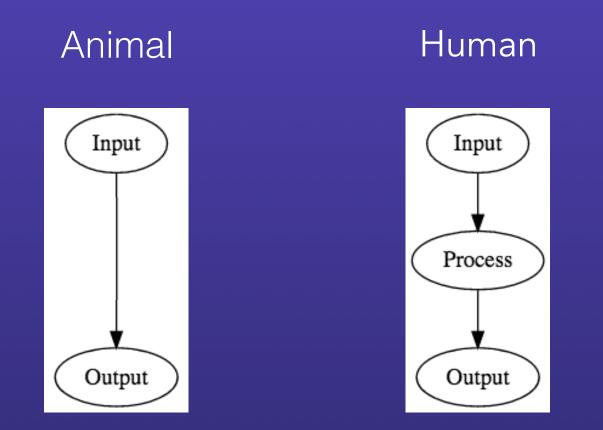




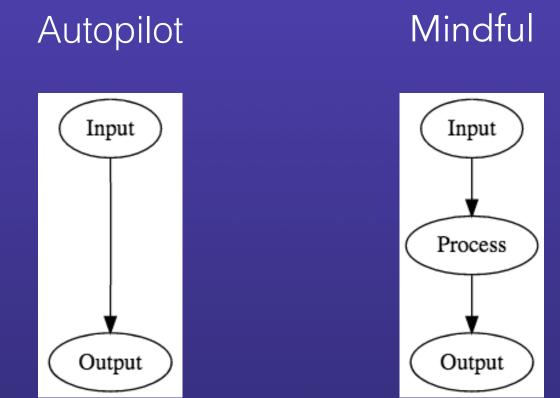
An Engineer's System





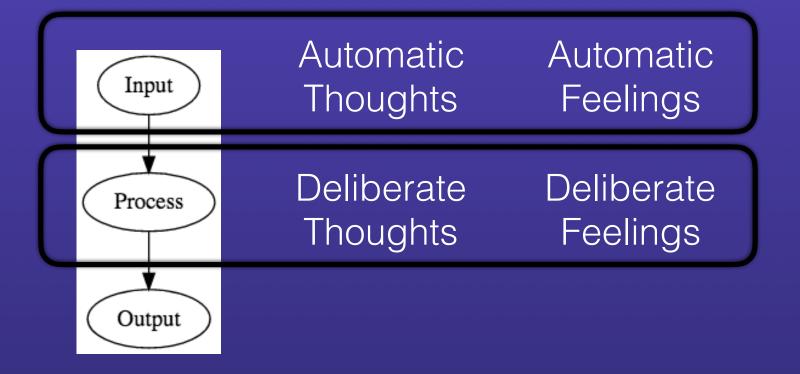














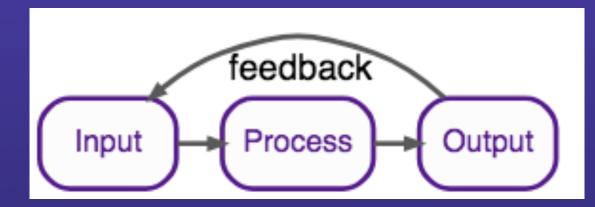
Negative Thoughts Negative Feelings



How to intervene?



Optimize this system! (CBT)





Cognitive Restructuring

- 1. "Opportunities"
- 2. How The Brain Works
- 3. Cognitive Behavioral Therapy



Mental Illnesses

Depression Anxiety Bipolar disorder Eating disorders Schizophrenia Obsessive Compulsive Disorder + more



CBT is as effective as

antidepressant drugs

for treating depression



Cognitive Behavioral Therapy Training

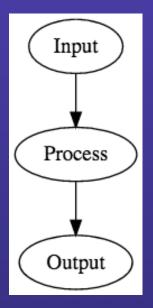


debugging tool

npm install constant-introspection



0. Whoop!



1. Input

2. Process Thoughts & Emotions

3. Response



0. Whoop!







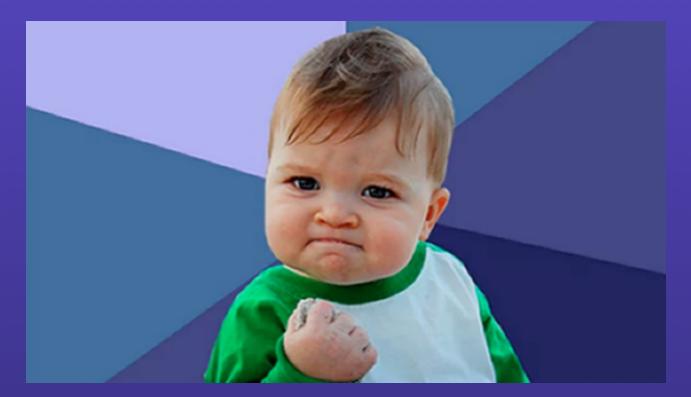






"The Whoop State"





breakpoint successfully hit

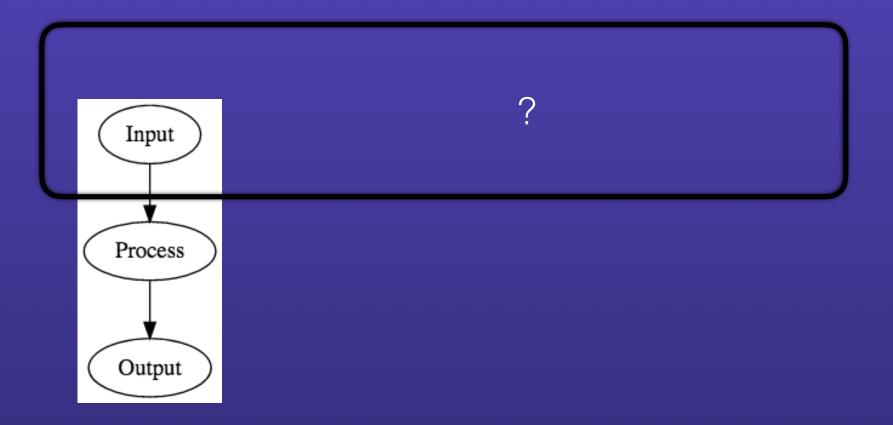




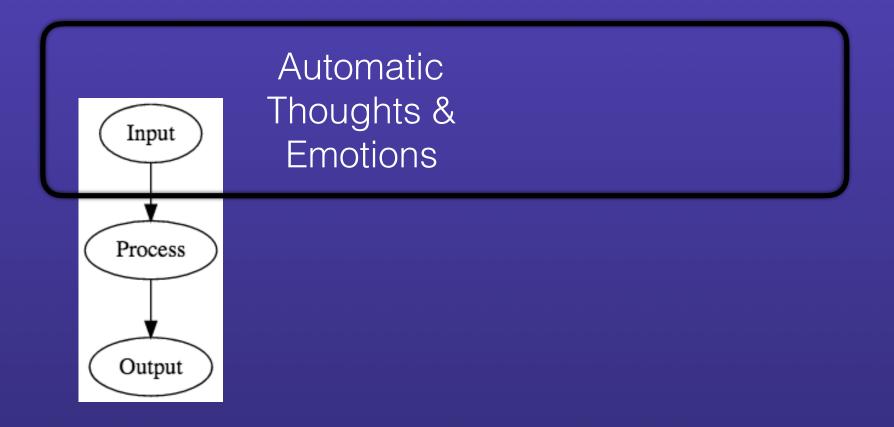


1. Input

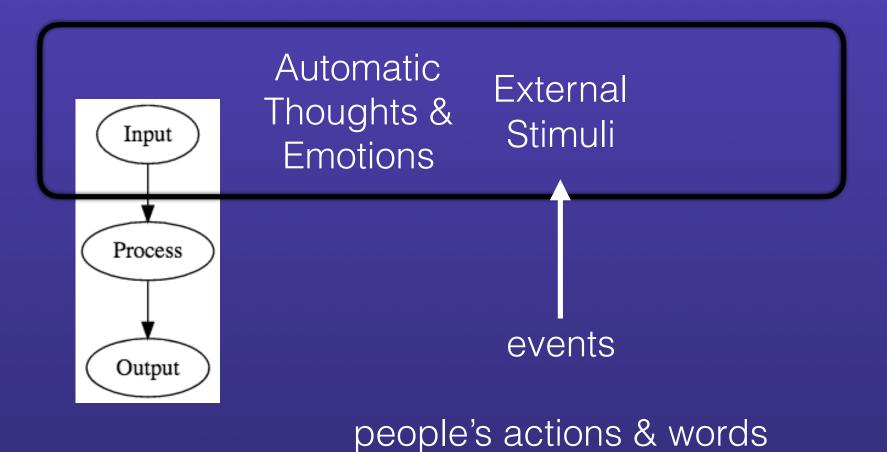




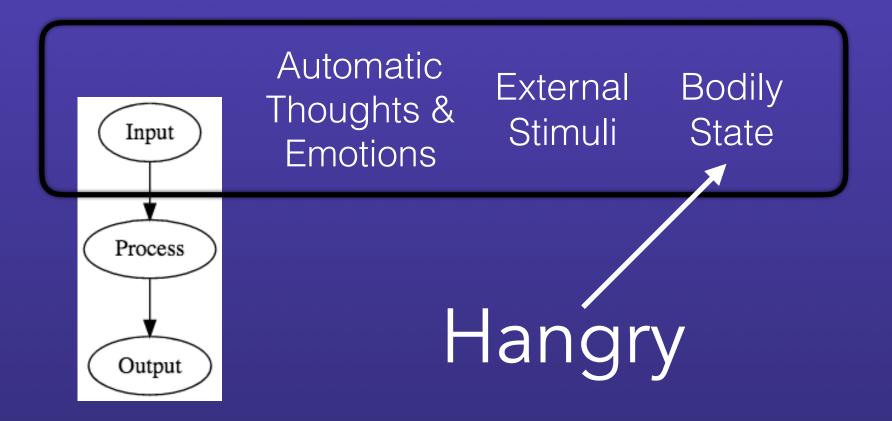




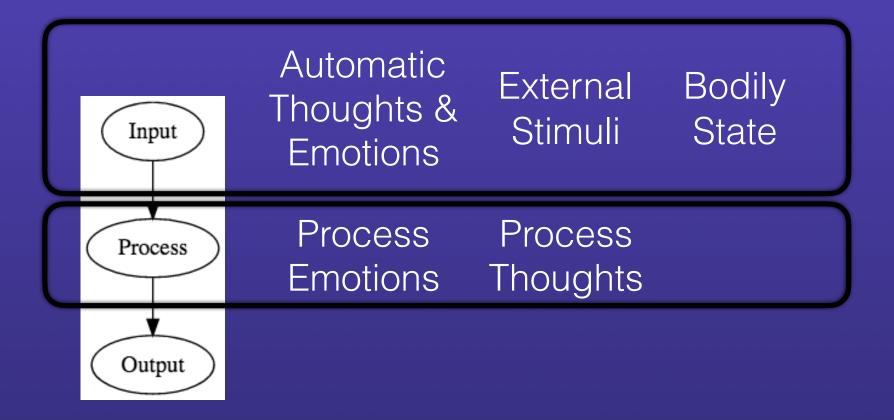














2a. Emotions



6 Processing Techniques

Angry	Sad	Anxious	Hurt	Embarrassed	Нарру
Grumpy	Disappointed	Afraid	Jealous	Isolated	Thankful
Frustrated	Mournful	Stressed	Betrayed	Self-conscious	Trusting
Annoyed	Regretful	Vulnerable	Isolated	Lonely	Comfortabl
Defensive	Depressed	Confused	Shocked	Inferior	Content
Spiteful	Paralyzed	Bewildered	Deprived	Guilty	Excited
Impatient	Pessimistic	Skeptical	Victimized	Ashamed	Relaxed
Disgusted	Tearful	Worried	Aggrieved	Repugnant	Relieved
Offended	Dismayed	Cautious	Tormented	Pathetic	Elated
Irritated	Disillusioned	Nervous	Abandoned	Confused	Confident









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Expand emotional vocabulary

A List of Emotions

Go beyond the obvious to identify exactly what you're feeling.

Angry	Sad	Anxious	Hurt	Embarrassed	Нарру
Grumpy	Disappointed	Afraid	Jealous	Isolated	Thankful
Frustrated	Mournful	Stressed	Betrayed	Self-conscious	Trusting
Annoyed	Regretful	Vulnerable	Isolated	Lonely	Comfortable
Defensive	Depressed	Confused	Shocked	Inferior	Content
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Irritated	Disillusioned	Nervous	Abandoned	Confused	Confident

SOURCE SUSAN DAVID

© HBR.ORG



Talking with close friends





Rubber Duck





Journaling





Reading Fiction





Meditation



View emotions as data: non-judgmentally

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6 Processing Techniques

Angry	Sad	Anxious	Hurt	Embarrassed	Нарру
Grumpy	Disappointed	Afraid	Jealous	Isolated	Thankful
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Irritated	Disillusioned	Nervous	Abandoned	Confused	Confident









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2b. Thoughts



10 Most Common

Maladaptive Thought Patterns

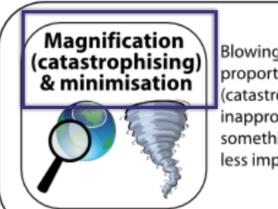


Hangry, wet, raining, late Stepped in a puddle



Hangry, wet, raining, late Stepped in a puddle

"Wet shoes are THE WORST"

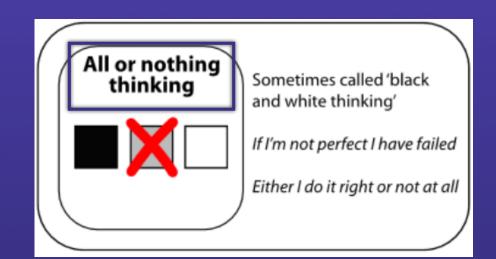


Blowing things out of proportion (catastrophising), or inappropriately shrinking something to make it seem less important



Hangry, wet, raining, late Stepped in a puddle

"If I'm late, I should just not go."



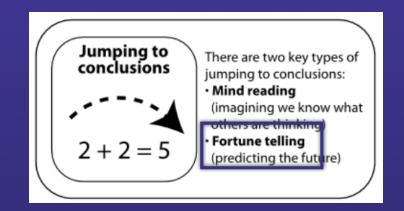


Hangry, wet, raining, late Stepped in a puddle

"Today sucks."









More Adaptive Thoughts

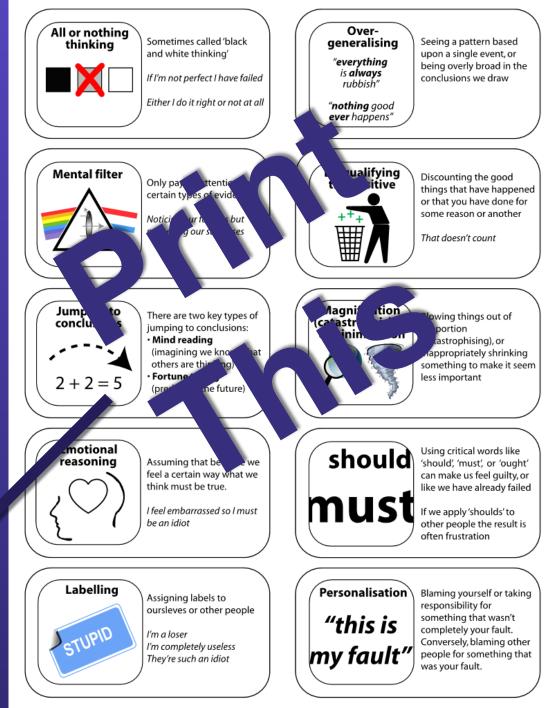
"I am feeling frustrated" "This hangriness will go away when I eat"

"I'll feel great after I dry off"

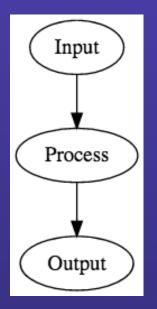


10 Most Common

Maladaptive Thought Patterns



0. Whoop!

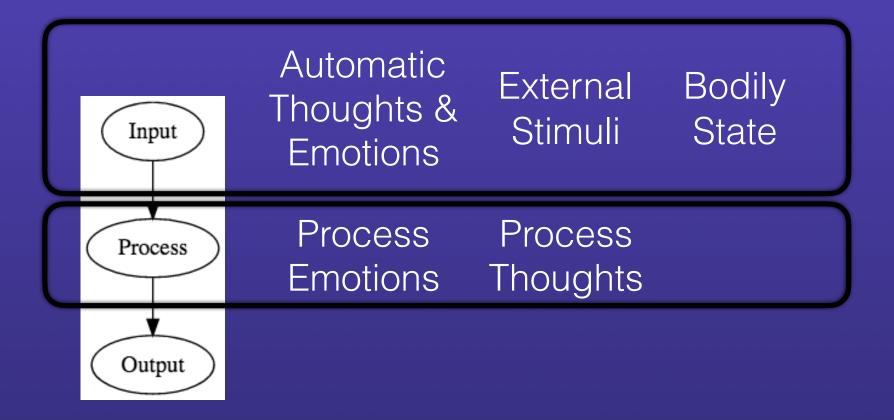


1. Input

2. Process Thoughts & Feelings

3. Response







Other Tools

Therapist

CBT Book "Feeling Good"

Headspace (app)

Joyable (webapp)



A downward spiral drains your "social battery"



Social Battery



Goals: understand yourself understand others





"gains energy from people vs <u>loses energy from people</u>"

isolation?

people-ing forever?





more people around less familiar people high-risk interactions





being alone





fewer people around more familiar people low-risk interactions



"Social Battery"

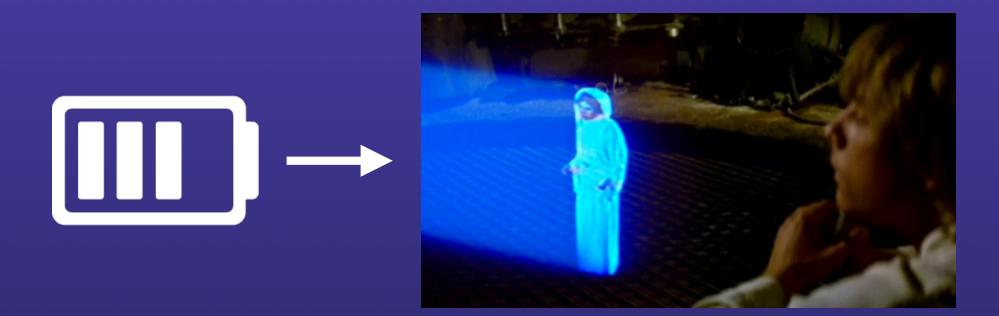
drain rate charge rate size

VS

"Social Satisfaction"



Mental Simulation of Others





Why doesn't everyone already do CBT?



time

effort / energy

skill (CBT)



How do I get other people to do this?



you can influence others

apply this to yourself share your experience

share these ideas with others



Part B Psychological Safety



What makes teams perform better? (Google)



Failed Correlations

personality types skills backgrounds management style

Successful Correlations

"group norms"



PsycSafety

shared belief held by members of a team that the team is safe for interpersonal risk-taking

- Amy Edmondson



Safe Space

anyone would feel safe in this group

with respect to their identity etc



Safe Space anyone would feel safe in this group with respect to their identity etc

Safe Space PsycSafe Group

current members feel safe



safe for interpersonal risk-taking

~higher collective IQ



6/6 voices heard

smarter than

5/6 voices heard



PsycSafe Traits

1. communication

2. empathy



Measures

1. **communication** "conversational turn-taking"

2. empathy

"average social sensitivity"



Goals:

increase trust decrease defensiveness



Goal: Improving PsycSafety



10 Techniques 10 Minutes



Communication

Empathy

Earned Dogmatism Effect Declare Unknowns Frame as Learning Acknowledge Fallibility Model Curiosity

Propinquity Task vs Relationship (PEARLS) Validation Depersonalize Ideas Vulnerability



Communication Earned Dogmatism Effect Declare Unknowns Frame as Learning Acknowledge Fallibility Model Curiosity



Earned Dogmatism Effect

"I am experienced, therefore my idea is right."



link at: caseywatts.com/mindmanipulation

Declare Unknowns

"We don't fully understand X yet."



"learning opportunity" not "BAD WRONG BAD"



Acknowledge Fallibility

"I make mistakes and I know it - tell me what you notice"



Model Curiosity

ask many questions



Communication Earned Dogmatism Effect Declare Unknowns Frame as Learning Acknowledge Fallibility Model Curiosity



Empathy

Propinquity Task vs Relationship (PEARLS) Validation Vulnerability Depersonalize Ideas



Propinquity social closeness





"[potential issues with your idea]"

Relationship

You aren't competent. (implicit)



Task
ChannelContentImplicitRelationship
Channel???





ImplicitExplicitImplicitTask
ChannelcontentRelationship
ChannelPEARLS???



PEARLS

- Partnership:
 - "I really want to work on this with you."
 - "I bet we can figure this out together."

Empathy:

- "I can feel your enthusiasm as you talk."
- "I can hear your concern."
- Acknowledgement:
 - "You clearly put a lot of work into this."
 - "You invested in this, and it shows."
- Respect:
 - "I've always appreciated your creativity."
 - "There's no doubt you know a lot about this."
- Legitimation:
 - "This would be hard for anyone."
 - "Who wouldn't be worried about something like this?"

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- Support:
 - "I'd like to help you with this."
 - "I want to see you succeed."

PEARLS

• Partnership:

- "I really want to work on this with you."
- "I bet we can figure this out together."
- Empathy:
 - "I can feel your enthusiasm as you talk."
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- Legitimation:
 - "This would be hard for anyone."
 - "Who wouldn't be worried about something like this?"
- Support:
 - "I'd like to help you with this."
 - "I want to see you succeed."



Validation

increases trust often diffuses defensiveness



Validation

recognition and acceptance of another person's [thoughts, feelings, sensations, and behaviors] as understandable

(whether or not you agree)



Validation Levels

Be Present
 Accurate Reflection
 Mind Reading
 Context: their background
 "anyone would"
 Radical Genuineness



Vulnerability

increases trust shows you're not defensive



link at: caseywatts.com/mindmanipulation

Depersonalize Ideas

"Idea A"

not "Casey's Idea"



Empathy

Propinquity Task vs Relationship (PEARLS) Validation Vulnerability Depersonalize Ideas



Communication

Empathy

Earned Dogmatism Effect Declare Unknowns Frame as Learning Acknowledge Fallibility Model Curiosity

Propinquity Task vs Relationship (PEARLS) Validation Depersonalize Ideas Vulnerability



Part C Inclusive Culture



Goal: PsycSafe for everyone









Background

Specific Tips

D&I and who should drive it? Implicit Association Test (IAT) Culture vs Ethnicity Cultural Relativism Norms & Norm Regulation Political-view minorities Cultural differences, now what? Visibility Norm regulating speech Bonus?



Background

D&I and who should drive it? Implicit Association Test (IAT) Culture vs Ethnicity Cultural Relativism Norms & Norm Regulation



Diversity & Inclusion

1. PsycSafe

2. Fair (macro sense)



Diversity & Inclusion

Recruitment Development Retention



Who should drive D&I?



HR?



HR trainings only go so far



Minorities?



not fair to put it all on the minorities



Management?



Employees?



Who can affect cultural change?



Implicit Association Test







Fercent of web respondents with each score					
Strong automatic preference for White people compared to Black people	27%				
Moderate automatic preference for White people compared to Black people	27%				
Slight automatic preference for White people compared to Black people	16%				
Little to no automatic preference between Black and White people	17%				
Slight automatic preference for Black people compared to White people	6%				
Moderate automatic preference for Black people compared to White people	4%				
Strong automatic preference for Black people compared to White people	2%				
Click for detailed summary					

Percent of web respondents with each score



implicit.harvard.edu



accept your biases

identify/counter your biases



Culture vs Ethnicity



Culturally <u>Heterogeneous</u> Society vs Culturally <u>Homogeneous</u> Society



Culture Ethnicity Nationality Origin



Culture	Ethnicity	Nationality	Origin	
Experience (Senior vs Junior) Gender				
Political Views Hearing / Deaf Physical Ability Way more				







"German American"



Culture	Ethnicity	Nationality	Origin
in-brain	on-skin	where-citizen	where-born



Visible?

Culture	Ethnicity	Nationality	Origin	



Visible?

Culture	Ethnicity	Nationality	Origin
no	visible	no	no



Strong predictive power?

Culture	Ethnicity	Nationality	Origin	



Strong predictive power?

Culture	Ethnicity	Nationality	Origin
	no	no	no

false positive associations



Okay: "Where do you live?"

Bad: "Where are you really from?"



Strong predictive power?

Culture	Ethnicity	Nationality	Origin
sometimes	no	no	no

false positive associations



Culture is hard to label/define

like music "genre"



People want to be treated as <u>individuals</u>



Cultural Relativism



Cultural Relativism

the idea that a person's beliefs, values, and practices should be understood <u>based on that person's own culture</u>, rather than be judged against the criteria of another.



Ethnocentricity

the belief that <u>your own</u> cultural or ethnic group is superior to that of another



Xenocentricity

the belief that <u>another</u> cultural or ethnic group is superior to that of your own



Cultural Norms & Norm Regulation



Norm

<u>expectations and rules</u> that guide behavior of people within social groups



Norm Regulation

an <u>action</u> that enforces another group member to follow a certain norm



useful norms seatbelt



less useful norms

you don't watch football?? (incredulous tone)



Specific Tips

Political-view minorities

Cultural differences, now what?

Visibility

Norm regulating speech

Bonus?



Political View Minority



Your coworkers



Haidt's "Moral Foundations Theory"

from the book "A Righteous Mind"



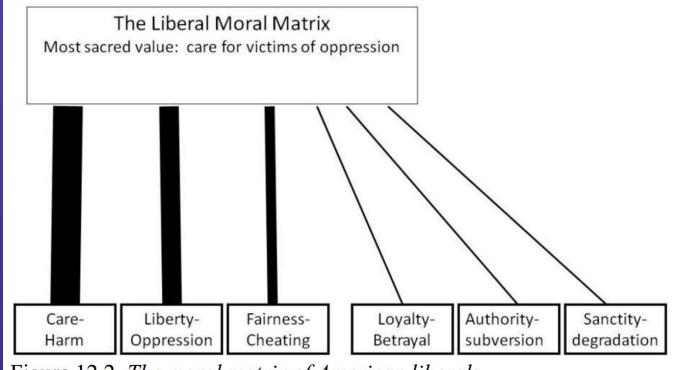


Figure 12.2. The moral matrix of American liberals.



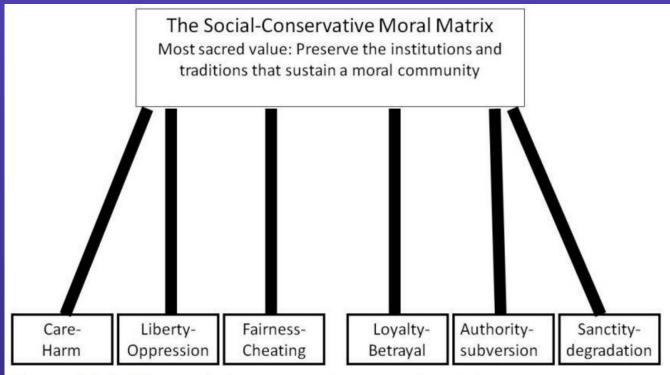
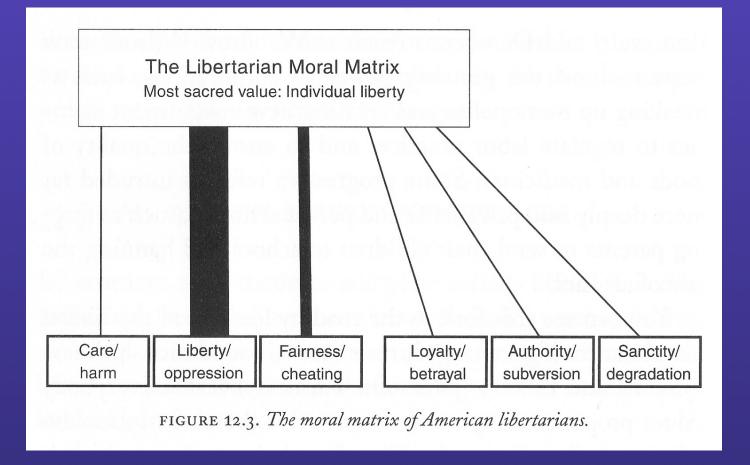


Figure 12.4. The social conservative moral matrix.







Deep Values



positive customer impact

conserving engineering resources



Difference in Culture?



Try to understand theirs

Help them understand yours



Critique/analyze norms together

explicitly



Meet in the middle



Visibility



minorities:

can you be visible?



Casey's 3 visibility tricks

rainbow lanyard
 #queeries
 talk about partner





intersectionality

support your own minority AND be an ally to others

allies:

don't call attention to their minority status



Norm Regulating Speech



Inclusive Speech vs Exclusive Speech



You don't watch Rick and Morty??? (incredulous tone)



_1

I like Rick and Morty! You might too?



Judginess



everyone is concerned that others will judge them negatively



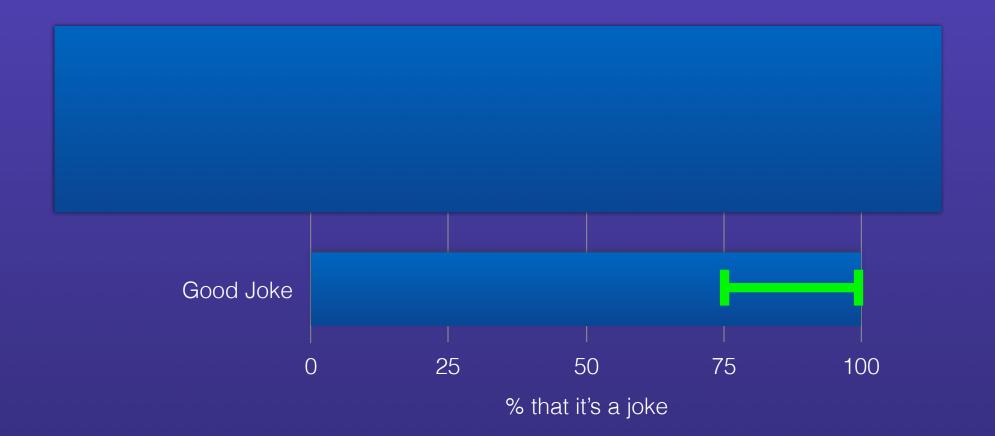
Example:

Casey schedules an event for the wrong time

"Casey Watts - such a mess!"



Good joke? Bad joke?



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Good joke? Bad joke?



@kyloma

Good joke? Bad joke?





A: "You know I'm just joking... right??"

B: "...you're only half joking, aren't you?"



50% joking recovery:

A: "sorry - I don't know exactly what I meant by that. [more accurate description]"



Negation



I like vim!

<u>I hate vim!</u> I like emacs!



I like vim!

<u>Cool!</u> I like emacs!



just and should

both overgeneralizing



Automatic prompts:

Slack keywords?
<u>Remove word from Chrome dictionary?</u>

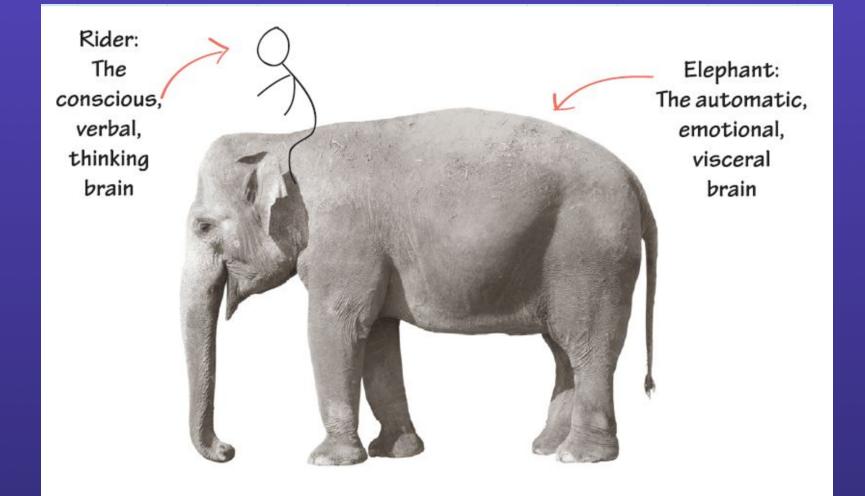






Haidt's Elephant Model







Rider wants to seem "in charge"

reliable, predictable



Why did you just come in the room and walk right back out?



Post-hoc Rationalization



Overlapping speech



Pronouns



Casey vs Corey



he vs she vs they



What if you don't know?



it is polite to ask

your intent is appreciated



don't focus on yourself

just thank them



Tips

Try using "they" in your head for everybody for a while.

Try using their pronoun in sentences for practice. Flashcards?



Summary



Cognitive Behavioral Therapy

Whoop!





6 Processing Techniques

Angry	Sad	Anxious	Hurt	Embarrassed	Нарру
Grumpy	Disappointed	Afraid	Jealous	Isolated	Thankful
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Irritated	Disillusioned	Nervous	Abandoned	Confused	Confident









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10 Most Common

Maladaptive Thought Patterns



Psychological Safety

Communication

Empathy

Earned Dogmatism Effect Declare Unknowns Frame as Learning Acknowledge Fallibility Model Curiosity Propinquity Task vs Relationship (PEARLS) Validation Depersonalize Ideas Vulnerability



Inclusive Culture

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Political-view minorities Cultural differences, now what? Visibility Norm regulating speech Bonus?







A Neurobiologist's Guide to Mind Manipulation

Quick link to this page: caseywatts.com/mindmanipulation

<u>Video</u>

<u>Slides</u>



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caseywatts.com/mindmanipulationvideo

Cognitive Restructuring / Cognitive Behavioral Therapy

- <u>Cognitive Behavioral Therapy overview</u>
- How to do Cognitive Restructuring
 - Whoop! and the "whoop space"
 - Improve Noticing Inputs
 - Improve Processing Emotions
 - Expand Emotional Vocabulary (print/save this)
 - Journaling
 - Discussing with a friend
 - Read more Fiction
 - Improve Processing Thoughts
 - Mindfulness training
 - Cognitive Distortions / Maladaptive Cognitions / Unhelpful Thinking Styles
 - Full List (wikipedia)
 - 10 Unhelpful Thinking Styles Poster (print/save this)
- <u>Joyable</u> (webapp for social anxiety)
- CBT Book (David Burns)

Psychological Safety (PsycSafety)

Homework

- 1. Bookmark caseywatts.com/mindmanipulation
- 2. Print ones in purple
- 3. Weekly 15-min calendar event to go through the articles ^



Help motivate me?

twitter, slack, email

Share Back To Me?

Feedback really helps me keep going. Feedback helps me continue giving this talk, discussing these topics, and even introspecting myself. I'd love to hear from you!

How has this talk affected you? Or people around you? I especially want to hear things like:

- You come across an article/video/book [that reminds you of this talk]
- You have an experience [that reminds you of this talk]
- You share with a friend, and they're impacted too

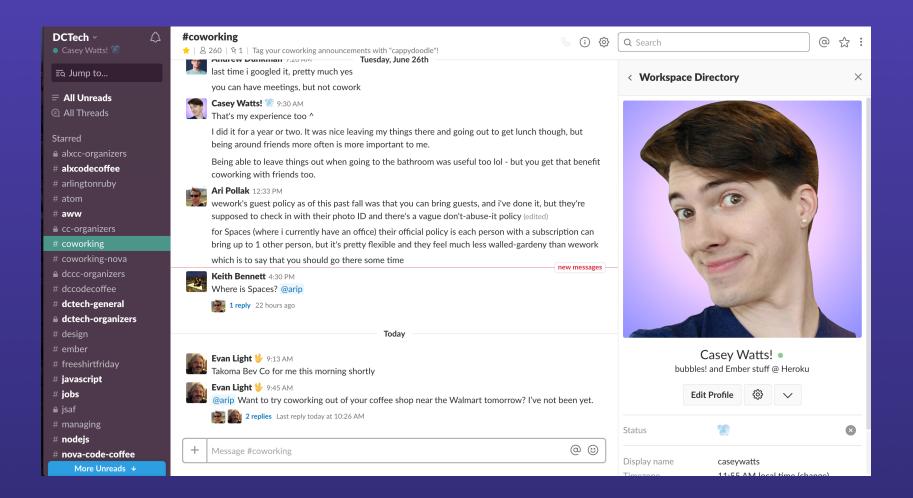
Share with me me any of these ways:

- Twitter (<u>@kyloma</u>)
- DCTechSlack (@caseywatts) (get access at dctechslack.com)
- Email (casey.s.watts@gmail.com)



dctechslack.com

@caseywatts



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Want your company to learn all this?

"Lunch & Learn"
 Half-day workshop



Questions?







Credits Several Icons from <u>TheNounProject.com</u>

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Credits

Diagrams generated by graphviz and graphviz.it

