## 



18

## The Highest Functions of Nervous System - Psychological and Social Aspects of Brain Activity II

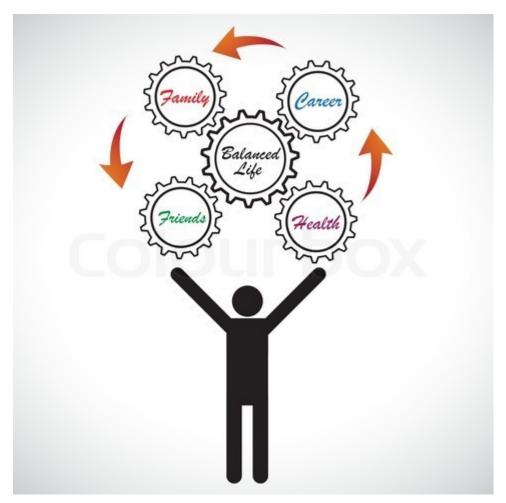
### The conflict between the limbic system and the neocortex

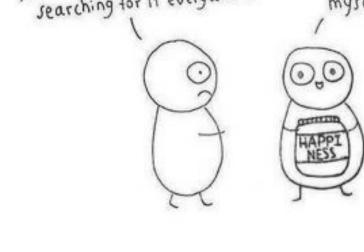


√The problem with effective control of the neocortex



#### The conflict between the limbic system and the neocortex





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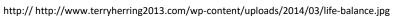
I created it





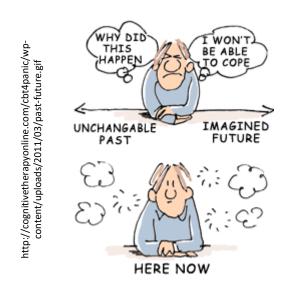
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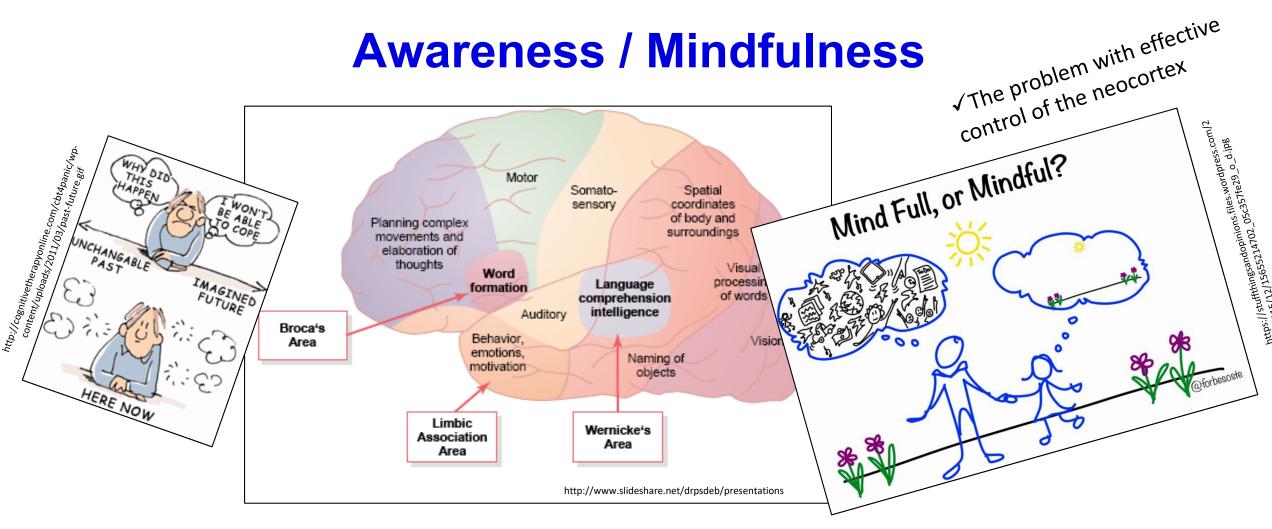
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"When you are hungry, eat; when you are tired, sleep" Zen Budhist quote



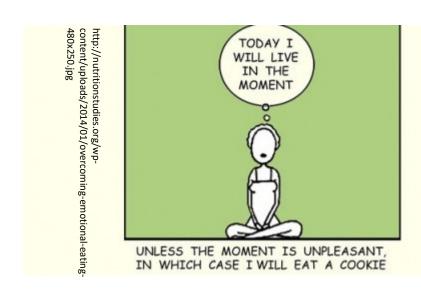


"When you are hungry, eat; when you are tired, sleep"

Zen Budhist quote



The problem with effective of the neocortex





IS MINUTES OF CARDIO, 15 MINUTES OF WEIGHTS, AND AN HOUR OF TALKING MYSELF INTO IT.

http://1.bp.blogspot.com/-\_GpQ4Y4Dn10/T8WmcpPUtlI/AAAAAAAAAww/9kCQYEuoTBg/s1600/ex ercise-cartoon.jpg



Future Me The problem with effective problem **Past Me Present Me** Damn it! Why are you Why didn't Past Me Ugh, so much work two such lazy bums? already do this? Oh to do... I'll do it later. Stop leaving me all the well, I'm sure Future work! Me will get it done. Work passes forward **Complaints pass backward** WellingtonGrey.net



#### **Procrastionation**

- Putting off an action to later time
- It is not a laziness!



http://68.media.tumblr.com/7dc8ae528d3b8732ffd837ef94536423/ tumblr\_nvanv5R3oJ1tdi9a1o1\_400.jpg



#### **Procrastionation**





#### **Procrastination**

A critical role of the limbic system

Physiologically, it's a struggle between two parts of the brain:

#### Prefrontal cortex:

controls problem solving and planning

#### Limbic system:

craves immediate gratification

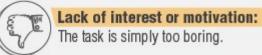
Why do people procrastinate?



**Fear of failure:** You won't settle for anything less than perfection.



**Skill deficit:** You don't know how to complete the task.





It can ...

... hurt your health: Chronic procrastinators suffer more illnesses, get less exercise, sleep less and drink more alcohol than non-procrastinators.

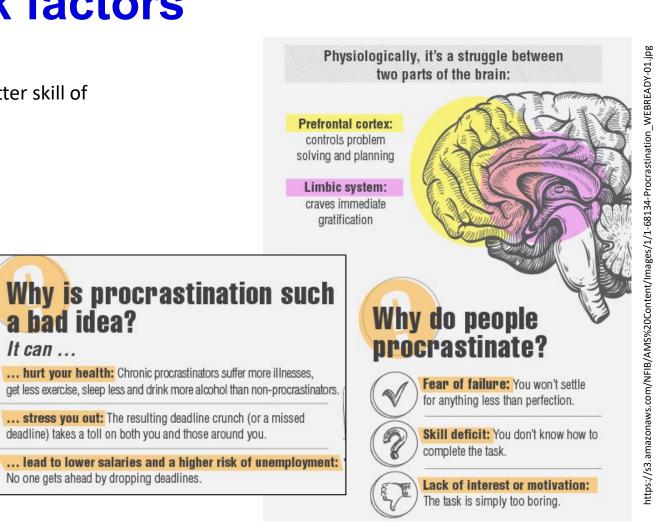
... stress you out: The resulting deadline crunch (or a missed deadline) takes a toll on both you and those around you.

... lead to lower salaries and a higher risk of unemployment: No one gets ahead by dropping deadlines.

It can ...

No one gets ahead by dropping deadlines.

- Intelligence
  - ➤ A higher intelligence is associated with a better skill of rationalization



Intelligence

➤ A higher intelligence is associated with a better skill of rationalization

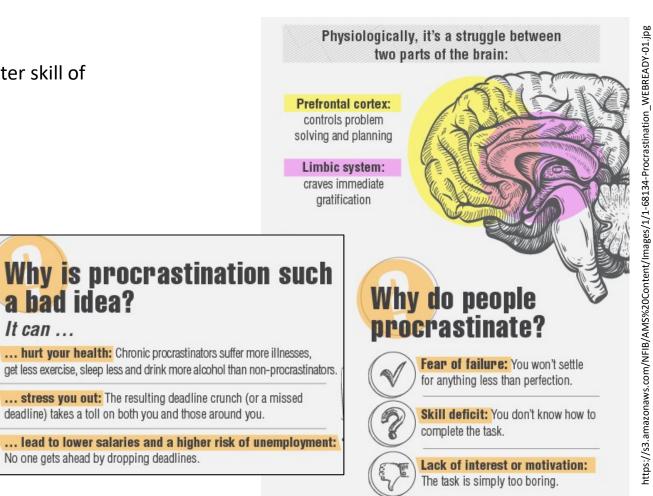
✓ Fatigue✓ Hunger✓ Other stressors Why is procrastination such a bad idea? It can ... ... hurt your health: Chronic procrastinators suffer more illnesses, get less exercise, sleep less and drink more alcohol than non-procrastinators. ... stress you out: The resulting deadline crunch (or a missed deadline) takes a toll on both you and those around you. ... lead to lower salaries and a higher risk of unemployment: No one gets ahead by dropping deadlines.

Physiologically, it's a struggle between two parts of the brain: Prefrontal cortex: controls problem solving and planning Limbic system: craves immediate gratification nttps://s3.amazonaws.com/NFIB/AMS%20Content/Images/1/1-Why do people procrastinate? Fear of failure: You won't settle for anything less than perfection. Skill deficit: You don't know how to complete the task. Lack of interest or motivation: The task is simply too boring.

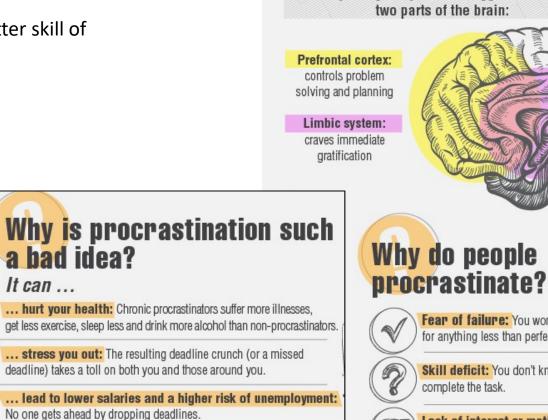


It can ...

- Intelligence
  - ➤ A higher intelligence is associated with a better skill of rationalization
- A task has low meaning
  - Why to do it?
- A task is boring
  - > I do not like it
- A task is difficult
  - How to start?
- A task is frustrating
  - I cannot move on...



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- Bad organization
  - ➤ I have to do it ina a different way
- Lacking in rewards(mainly intrinsic)
  - > It does not bring me anything



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Physiologically, it's a struggle between

Fear of failure: You won't settle

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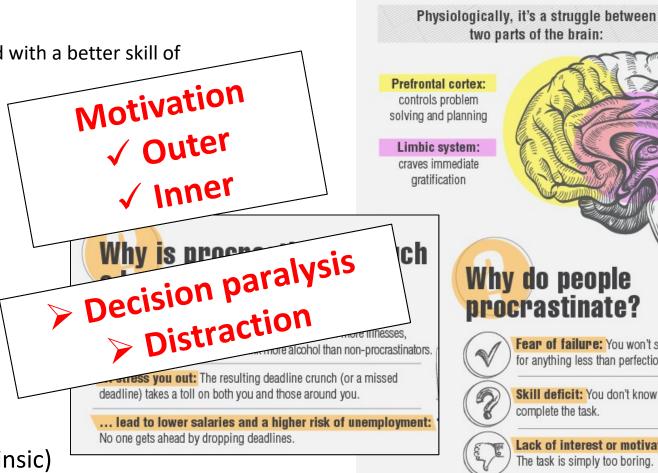
complete the task.

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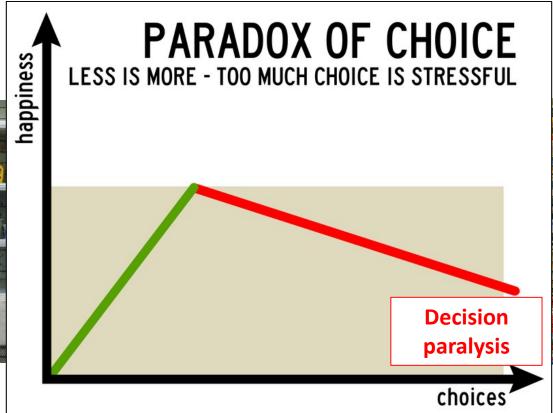
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for anything less than perfection.

#### More choice does not make us more happy



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https://11tx7b411ycc3zja3v2vhqz9-wpengine.netdna-ssl.com/wp-content/uploads/2015/07/paradox-of-choice.jpg



https://kristenleoneblog.wordpress.com/2016/04/03/decision-paralysis/



#### **Distraction**

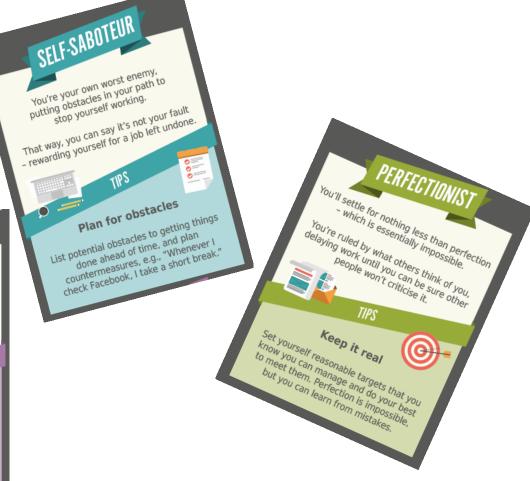




#### **Procrastination**









# PROCRASTINATION PROCRASTINATION Is like a Credit Card: Is like a Credit Car

#### **Procrastination**

A critical role of the limbic system



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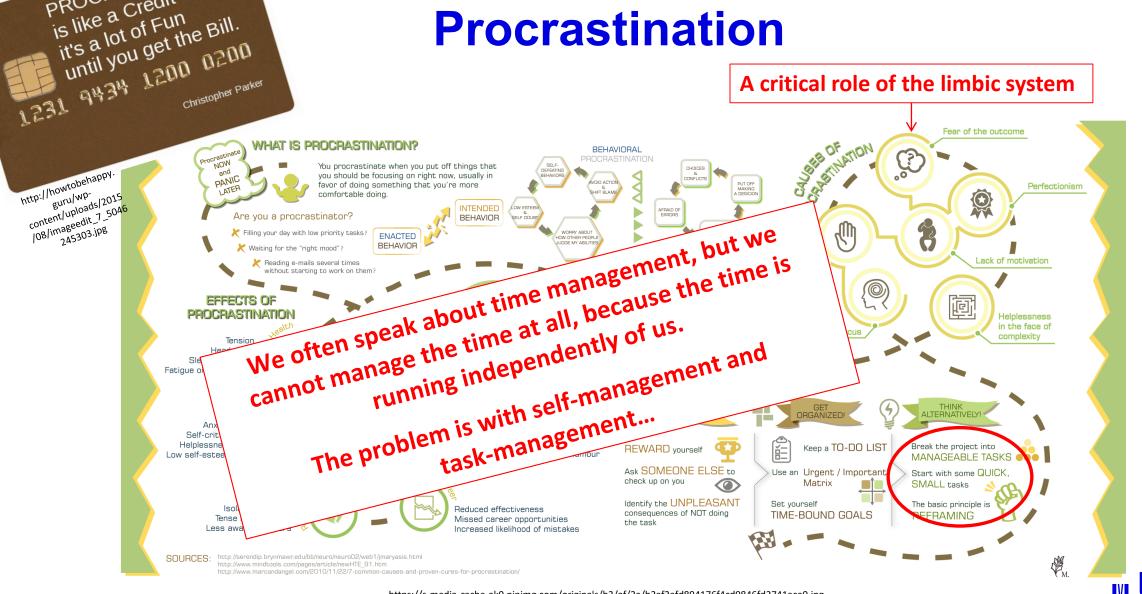
## A critical role of the limbic system

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## PROCRASTINATION is like a Credit Card: is lot of Fun it's a lot of Fun ustil your get the Dill until you get the Bill.

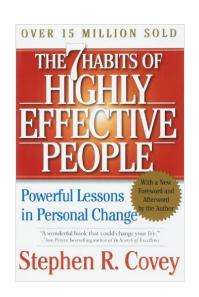








#### Stephen Covey – Quadrant system



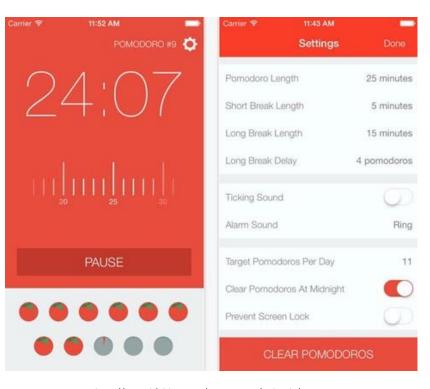
|               | Urgent Quad I   |  | Not Urgent<br>Quad II   |  |
|---------------|---|--|---|--|
| Important     |   |  |   |  |
|               | Activities  Crisis Pressing Problems Deadline Driven  | Results  Stress Burn-out Crisis management Always putting out fires  | Activities  Prevention, capability improvement Relationship building Recognizing new opportunities Planning, recreation | Results  |
| _             | Quad III  |  | Quad IV   |  |
| Not Important | Activities  Interruptions, some callers Some email, some reports Some meetings Proximate, pressing matters Popular activities | Results  Short term focus Crisis management Reputation – chameleon character See goals/ plans as worthless Feel victimized, out of control Shallow or broken relationships | Activities  Trivia, busy work  Some email Personal social media Some phone calls Time wasters Pleasant activities       | Results  Total irresponsibility Fired from jobs Dependent on others or institutions for basics |

http://thecontextofthings.com/wp-content/uploads/2015/10/covey-4-quad-1.jpg



#### Pomodoro technique





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http://smartlifeblog.com/wp-content/uploads/ 2015/03/pomodoro-timer.jpg

Brain Hacks for beating procrastination

1. Focus on the PROCESS not the Product.

Tips: When studying, avoid thinking about how many pages you have to write or problems to solve as that brings on the pain that leads to procrastination. Rather, calmly put the effort into doing the work. No need to grasp or finish everything in one session.

- 2. Distractions will happen, so accept them and train yourself to move past them quickly. Tips: Find a quiet space, use noise-cancelling headphones.
- 3. Plan: Write down 3-6 tasks you want to accomplish. Tips: Do it the night before, so your mind starts working on them while you sleep. Plan your breaks and quitting time too. It's okay if you did not finish all tasks if you gave it

4. Trust in your new system and yourself. Tips: Get support when you get stressed out or overwhelmed. Seek out friends who are successful, teachers, school counselors and ask for help.



#### 5. Use The POMODORO Technique



START

SET A TIMER TO 25 MINUTES. Let everyone (Fam, BF, GF etc.) know what you are doing, so they don't interrupt or get upset if you don't respond to them.



CONTINUE

FOCUS ON ONE TASK. Study. Write. Do math. Whatever. NO INTERRUPTIONS. No social media, gaming, texting etc.



REWARD YOURSELF. After successfully completing 25 minutes of hardcore awesomeness (studying, working etc.) do something you enjoy for 5 minutes and repeat the process.

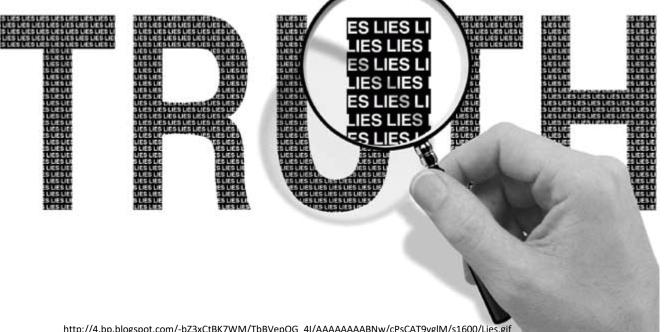
YOU CAN BEAT PROCRASTINATION!



#### Rationalization

√ The conflict between the limbic system and the neocortex

defense mechanism in which controversial behaviors or feelings are justified and explained in a seemingly rational or logical manner to avoid the true explanation, and are made consciously tolerable—or even admirable and superior—by plausible means (wikipedia)

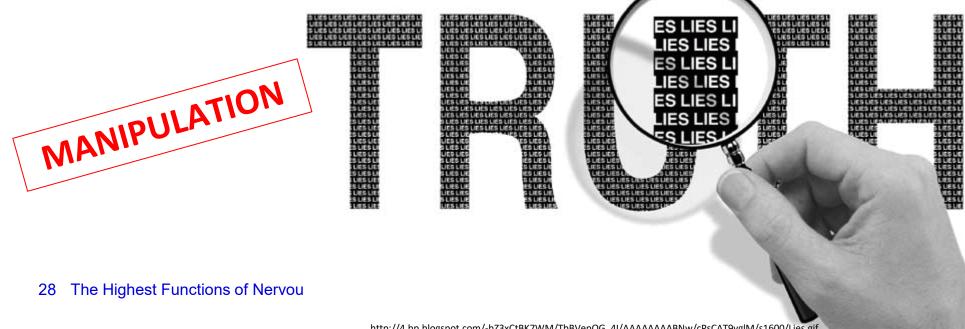




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- Selfmanipulation vs manipulation of others
- Intentional vs unintentional

" Why do you look at the speck of sawdust in your brother's eye and pay no attention to the plank in your own eye? "

Matthew 7:4





- Selfmanipulation vs manipulation of others
- Intentional vs unintentional

Mathematical theory of communication "information" (well-formed) Philosophical theories environmental primary (content) secondary metaoperational derivative instructional factual untrue (information) (disinformation) (misinformation)

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## Selfmanipulation

- Mostly unintentional – Defensive mechanism

## Manipulation of others Mostly intentional

- Offensive mechanism
  - ✓ To defense myself
  - ✓ To obtain some advantage









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Hi i Loss 30Kg Weight & 4 Inches Still maintain You can Also Join Diet4india Weight Loss Prgm No Cruch Diet, Exercise, Eat & Lose, Call Now 09225225161, 9890222689 \*





Before

After

http://www.diet4india.com/images/image4.gif

Playing on emotions / feelings of unhappiness - the limbic system



http://blogsimages.forbes.com/jeffbercovici/files/2012 /08/dr.-oz-weight-loss-pills.jpg

Pseudorational (it is believable)
- neocortex



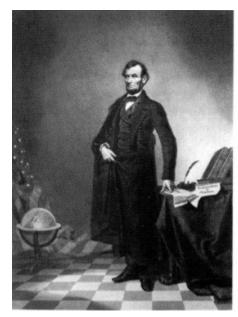
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#### Manipulation and propaganda











https://kristinczerminski.wordpress.com/2013/12/10/photo-manipulation-the-impact-on-society-the-advertising-industry/

#### **Propaganda**

Manipulation / propaganda is as old as mankind itself, and sometimes it may seem absurd



https://2.bp.blogspot.com/-FXZvktB5BuM/V4r9YwAO9VI/AAAAAAAAAKk8/PtlGz94QGXYtA\_KpphdeS0aQGzts8vurgCLcB/s1600/The%2BSoviet%2Bflag%2Bover%2Bthe%2BReichstag%252C%2B1945.jpg

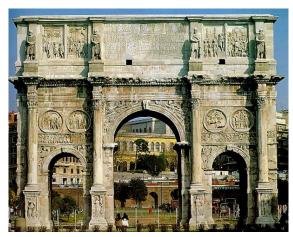


## **Propaganda**

- Historical resources have propagandistic character
- History is written by winners
- Subjective / engaged view vs. pure propaganda



http://soren.faculty.arizona.edu/sites/soren.faculty.arizona.edu/files/newpag10.jpg



http://www.colorado.edu/Classics/clas4091/Graphics/Const arch.jpg



http://www.colorado.edu/Classics/clas4091/Grap



http://www.colorado.edu/Classics/clas4091/Graphics/Constarch.jpg

Athe power of media in the past...

MUNI MED

## The power of media in the present

Media in the past had at least artistic value...



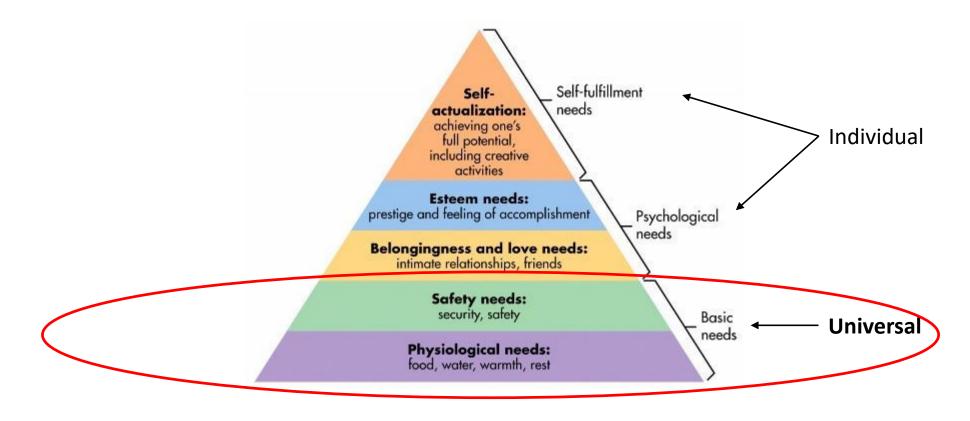
https://www.thesun.co.uk/ news/10144977/kim-jongun-horse-photos-vladimir-



https://faceswaponline.com/trump-travels-overseas



## Propaganda targets basic needs



http://www.simplypsychology.org/maslow-pyramid.jpg



## **Propaganda**





## **Propaganda**





## Propaganda and propaganda



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## Propaganda and propaganda



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The Highast-54darstoashstslanvaussSwatangerhan%20 propaganda&ved=0ahUKEwiNINWay8HSAhUGsBQKHWyeCwcQMwi EAShiMGI&iact=mrc&uact=8#h=407&imgrc=29m5HiOvOat5wM:&ve



Glorification







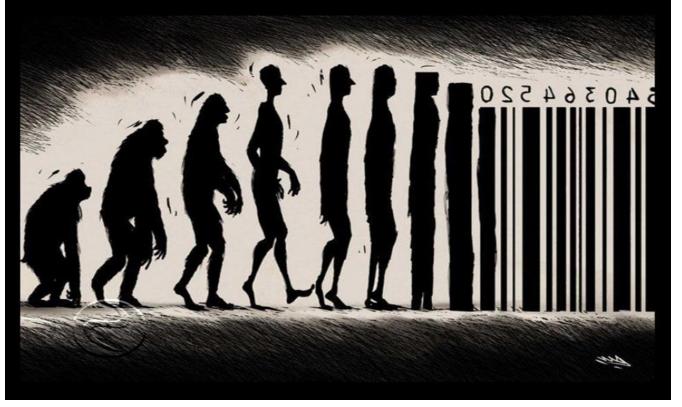




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## **Dehumanization**

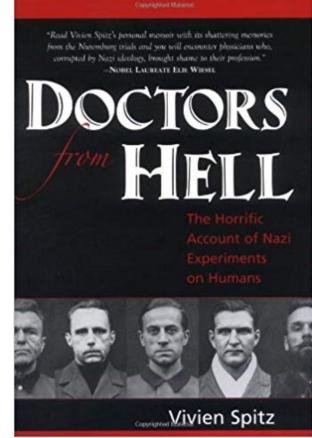
- Debasement the others' individuality as either an "individual" species or an "individual" object
- Animalistic
- Mechanistic





## **Dehumanization**

WINNER OF THE LOS ANGELES TIMES BOOK PRIZE "A monumental achievement: an awesome account of the ultimate transgression of the Hippocratic Oath: a formidable contribution to Holocaust studies." - Francine du Plessis Gray \_1\_1?keywords=dctors+and+nazis&qid=1571405647&sr=8-DOCTORS MEDICAL KILLING AND THE PSYCHOLOGY OF GENOCIDE WITH A NEW PREFACE BY THE AUTHOR **ROBERT JAY LIFTON** 



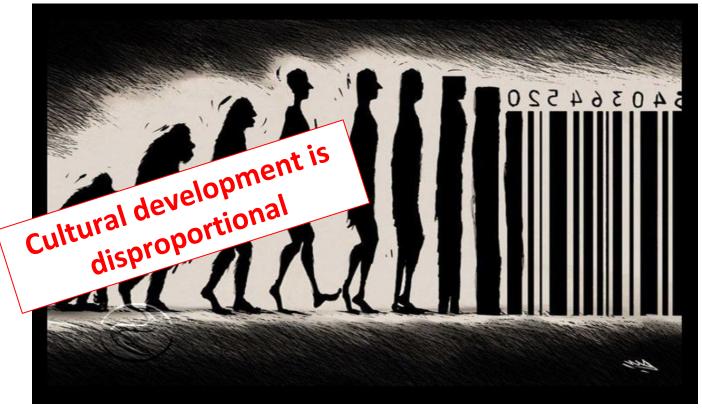
https://www.amazon.com/Doctors-Hell-Horrific-Account-Experiments/dp/1591810329/ref=sr\_1\_2?keywords=dctors+and+nazis&qid=1571405647&sr=8-2-spell



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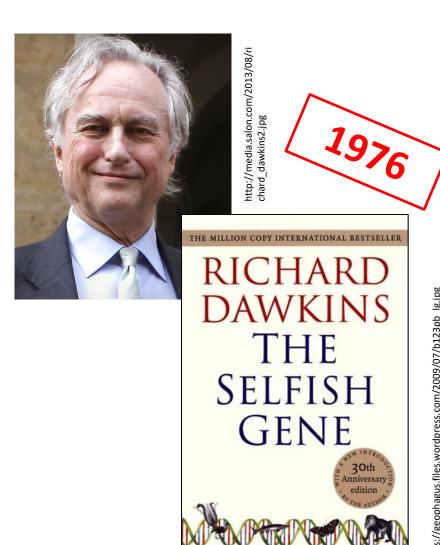
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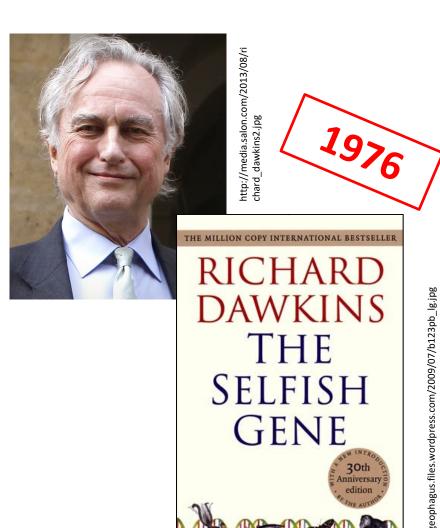


- Evolutionary model of cultural information transfer
- Analogy genetic information transfer



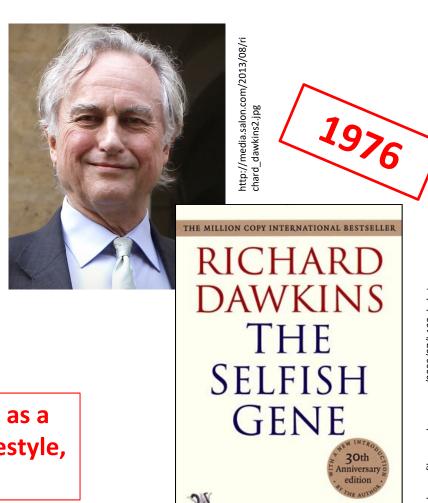


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  - "unit of cultural information"
- Memetic complex
  - System of values/philosophy/religion



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Every system of values has to be considered as a memetic complex (philosophy of consume lifestyle, biker or hooligan)





- Memetic complex has to replicate, otherwise it will become a "dead learning / information"
- Memetic complexes compete each other for "substrate" (human mind)



http://cdn2.5wm83b1.maxcdn-edge.com/wp-content/uploads/2014/08/pepsiad2.jpg



http://4.bp.blogspot.com/\_4ryHM8waEOc/S5ZL9uKNi0I/AAAAAAAAAA4w/9cYf2Jf7rnc/s400/coke\_vs\_pepsi.jpg



## **Society**





Culture

- the sum of knowledge

/ Material

/ Spiritual



Memetics may be applied to any part of the culture, eg. on technological processes



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- Treatment strategy
  - Evidence based
  - Rational
  - Reproducibility
  - Knowledge transfer possible

#### Healer

- Treatment strategy
  - Personal ability based
  - Pseudorational/irational
  - Reproducibility is problematic
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It is possible that people with supernatural abilities exist, but they are in minority and the majority of healers intentionally or unintentionally manipulate their patients



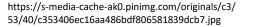
## > Every phenomenon which cannot be explained rationally is similar to miracle/supernatural phenomenon



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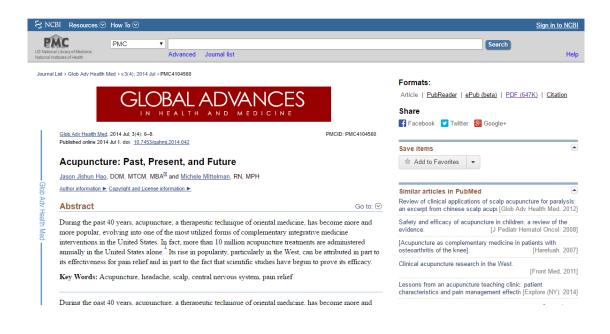


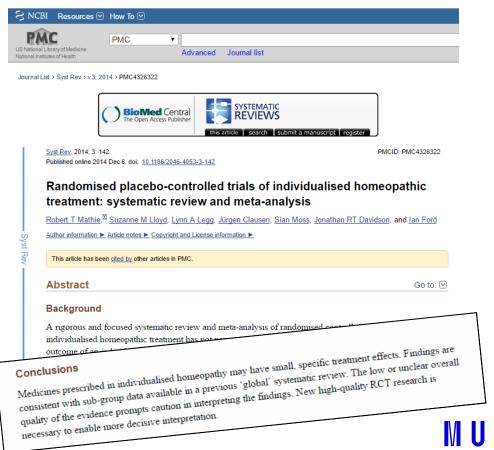
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## ➤ Even we cannot explain some phenomena we should consider its effect, reproducibility and knowledge transfer possibilities





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- Approach to patient
  - More rational explanatory

- Approach to patient
  - More emotional calming



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Placebo has an effect in approximatelly 30% of cases and this is associated with anticipation functions of the brain



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Every illness is a stressor negatively affecting patient's psyche



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- Approach to patient
  - More rational explanatory

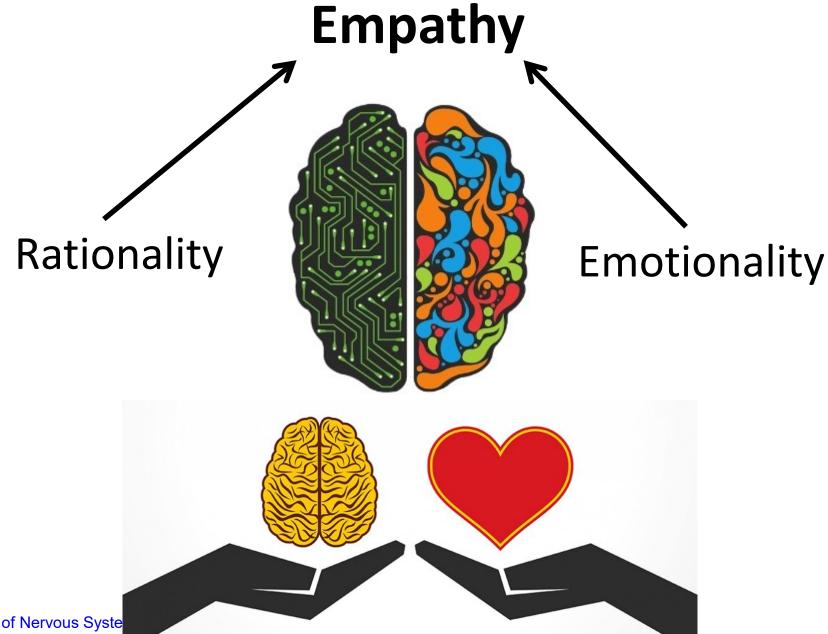
- Approach to patient
  - More emotional calming

Placebo has an effect in approximatelly 30% of cases and this is associated with anticipation functions of the brain

Every illness is a stressor negatively affecting patient's psyche

Good approach to patients may improve treatment results by combining placebo effect with the effect of medicaments







## MUNI MED

# 86. The basic characterization of neocortical functions – language and social brain, basic overview of functional diagnostic methods used in neurology

- Communication and language
  - Language areas localization and fuctuion including lobulus parietalis inferior, aphasia...
  - Lateralization of language functions, gender differences

- Social brain
  - Human is a social beeing, so the brain has to be designed accordingly
  - Frontal lobe and limbic system in behavioral control
  - Triune brain theory, whole brain model, mentalization, dehumanization
- Functional diagnostic methods (EEG, SPECT, PET, fMRI)

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