Spring Semester 2018

Wed 9-12, Xianlin I-112

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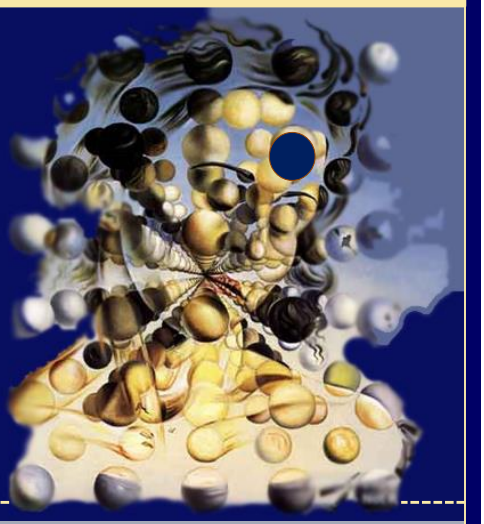
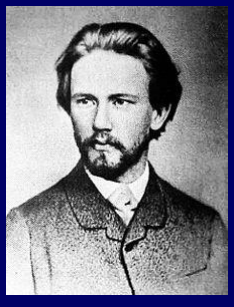


5. Mood disorders

Motivation (1)

"melancholia"



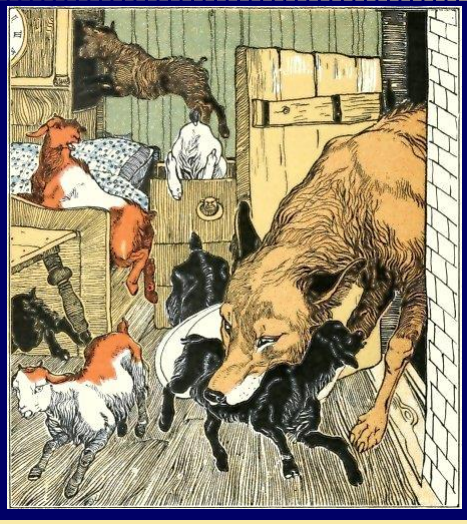
Pjotr Iljitsch Tchaikowsky

Ludwig van Beethoven

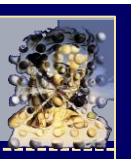
Robert Alexander Schumann

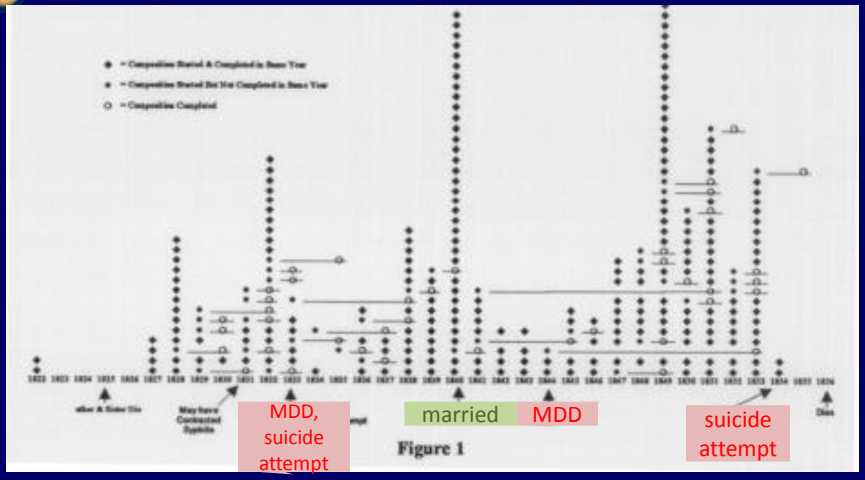
Motivation (2)

Wilhelm Grimm (left)
1786-1859



Robert Schumann's works across lifetime





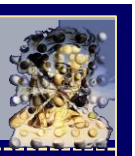
From: Daverio, J. (1997) Robert Schumann: A Herald of a "New Poetic Age." New York: Oxford University Press.

Andreas Lubitz

(1987-2015)

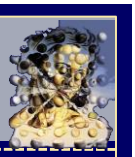
Example: Mary

"Depression"



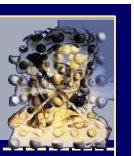
- Mostly used for what is called a "Major Depressive Disorder (MDD)", sometimes also called "unipolar depression".
- Sometimes used for "Major Depressive Episode (MDE)"
- A person diagnosed with MDD had at least one MDE, but not vice versa.
- A MDE is also a constituent of Bipolar I and Bipolar II disorder.
- For MDD, there has never been a reasonably long manic or hypo-manic time in a person's life.

Depressive disorders in DSM-5



- Disruptive mood dysregulation disorder (age 6-18 only)
- Major Depressive Disorder (MDD)
- Persistent depressive disorder (dysthymia)
- Premenstrual dysphoric disorder
- Substance/Medication-induced depressive disorder
- Depressive disorder due to another medical condition
- Other specified/unspecified depressive disorder

Major Depressive Disorder



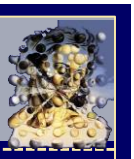
A. Presence of 5 symptoms for at least 2 weeks, one of them depressed mood or loss of interest/
B. Distress/impairment
C. Exclusion of substance/medical condition
D. Exclusion of schizophrenia spectrum disorders
E. Exclusion of prior (hypo-)manic episodes

Specifiers

- Severity: mild, moderate, severe
- Course: chronic, in full/partial remission
- Characteristics:

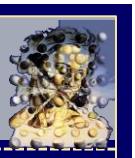
With anxious distress (p. 184)
With mixed features (pp. 184–185)
With melancholic features (p. 185)
With atypical features (pp. 185–186)
With mood-congruent psychotic features (p. 186)
With mood-incongruent psychotic features (p. 186)
With catatonia (p. 186). **Coding note:** Use additional code 293.89
With peripartum onset (pp. 186–187)
With seasonal pattern (recurrent episode only) (pp. 187–188)

Common characteristics of depression



- Depressed mood (sad, empty, hopeless, tearful; in children: irritable)
- Diminished interest or pleasure in all activities
- Weight loss/gain
- Insomnia or hypersomnia
- Psychomotor agitation or retardation
- Fatigue, loss of energy
- Worthlessness, excessive guilt
- Diminished concentration span, indecisiveness
- Thoughts of death, suicidal ideation, or attempted suicide

Depression vs. grief



Depression

- Focus: inability to anticipate joy
- More persistent
- Tied to preoccupations (e.g. self-criticism)
- Lack of self-esteem; feelings of worthlessness
- Thoughts about death: feeling of worthlessness or inability to cope with the pain

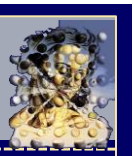
Grief

- Focus: loss, emptiness
- Decrease in intensity with pangs of grief
- Preoccupation with deceased
- Accompanied with positive emotions and humor
- Self esteem preserved
- Thoughts about death: "joining the deceased"

Dysthymia

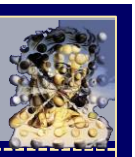
- Milder version of depression
- Depressed mood present most of the day for more days than not at least for 2 years
- At least two of the following symptoms:
  - Poor appetite and overeating
  - Insomnia or hypersomnia
  - Low energy or fatigue
  - Low self-esteem
  - Poor concentration or difficulty making decisions
  - Feelings of hopelessness

Depression - Statistics



- Prevalence
  - Point: 1.5-4.9%
  - Life-time: 4.4-18% (men 12%, women 26%)
  - One-month P. China: 6% (Phillips et al., 2009)
- Course
  - Peak period: age 18-25 years; China: evtl. later!
  - 25% last < 1 month, 50% < 3 months, 75% < 6 months
  - Highly recurrent: 50% with one episode and 80% of those with two episodes will have another one
  - 77% show comorbidity (some articles claim 90-93% comorbidity!)

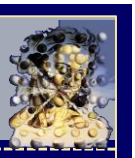
Country	Mood
Americas	
Colombia	6.8 (6.0-7.7)
Mexico	4.8 (4.0-5.6)
United States	9.6 (8.8-10.4)
Europe	
Belgium	6.2 (4.8-7.6)§
France	8.5 (6.4-10.6)§
Germany	3.6 (2.8-4.3)§
Italy	3.8 (3.1-4.5)§
Netherlands	6.9 (4.1-9.7)§
Spain	4.9 (4.0-5.8)§
Ukraine	9.1 (7.3-10.9)§
Middle East and Africa	
Lebanon	6.6 (4.9-8.2)
Nigeria	0.8 (0.5-1.0)
Asia	
Japan	3.1 (2.2-4.1)
People's Republic of China	
Beijing	2.5 (1.5-3.4)
Shanghai	1.7 (0.6-2.9)



WHO study
(2001-2003)
12-month prevalence rates across countries

WHO study (2001-2003)

Beijing & Shanghai



Life-time prevalence

MDD: 3.5%

	Prevalence, % (S.E.)				
		Age (yr)			
	Total	18–34	35–49	50–64	⩾65
Mood disorders					
Major depressive disorder	3·5 (0·4)	4·1 (0·8)	2·9 (0·4)	3·9 (0·7)	2·6 (0·7)
Dysthymia	0·1 (0)	0 (0)	0·2 (0·1)	0·3 (0·2)	0 (0)
Bipolar I–II disorders	0·1 (0)	0·1 (0·1)	0·1 (0·1)	0 (0)	0 (0)
Any mood disorder	3·6 (0·4)	4·2 (0·8)	3·1 (0·4)	4·0 (0·7)	2·7 (0·7)

Twelve-month prevalence and severity of DSM-IV disorders

	Any severity			Serious		Moderate		Mild	
Diagnosis	%	(S.E.)	χ^{2a}	%	(S.E.)	%	(S.E.)	%	(S.E.)
Mood disorder									
Major depressive disorder	2·0	(0·3)	1·0	16·5	(5·4)	51·1	(7·9)	32·4	(7·7)
Dysthymia	0·1	(0·1)	0·0	46·4	(17·7)	53·6	(17·7)	0·0	(0·0)
Bipolar I–II disorders	0·1	(0·1)	0·3	100·0	(0·0)	0·0	(0·0)	0·0	(0·0)
Any mood disorder	2·2	(0·4)	0·7	21·4	(6·7)	48·6	(7·6)	29·9	(7·3)

Odds ratios (OR) (1)

predicting the 12 months prevalence

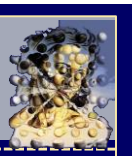
Shanghai and Beijing(Shen et al., 2006)

	Mood	
	OR	(95% CI)
Sex		
Male	1·0	—
Female	0·8	(0·4–1·4)
χ^2	0·8	
Age (yr)		
18–34	2·0	(0·8–4·8)
35–49	0·9	(0·4–1·9)
50–64	—	—
65+	1·0	—
χ^2	3·5	
Income		
Low	1·8	(0·7–4·6)
Low-average	2·8*	(1·1–7·1)
High-average	1·0	(0·4–2·3)
High	1·0	—
χ^2	8·0*	
Marital status		
Married/cohabiting	1·0	—
Separated/widowed/ divorced	2·8*	(1·0–7·6)
Never married	0·4	(0·1–1·2)
χ^2	7·7*	

- Low-average income (vs. high): 2.8
- Separated (vs. married): 2.8

Correlate	OR	*P*-value
Demographics		
Sex	0.89	0.55
Age	1.16	0.27
Grade	0.85	0.37
Only child	0.77	0.16
Left-behind/controls		
Controls	1.00	
Migrant fathers	3.42	< 0.01
Migrant mothers	2.62	< 0.05
Migrant parents	2.73	< 0.01
SES		
Middle	1.00	
Low	2.64	< 0.01
High	1.14	0.54
Social support		
Middle	1.00	
Low	5.86	< 0.01
High	0.50	< 0.05

Odds ratios (OR) (2)



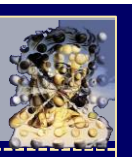
He et al. (2012)

Risk for depression in "left-behind children" in rural China vs. children in a common family situation (controls)

- $n_{(left\text{-}behind)}$ = 590
- $n_{(control)}$ = 285
- Age group: 9-14 years
- Hebei Province

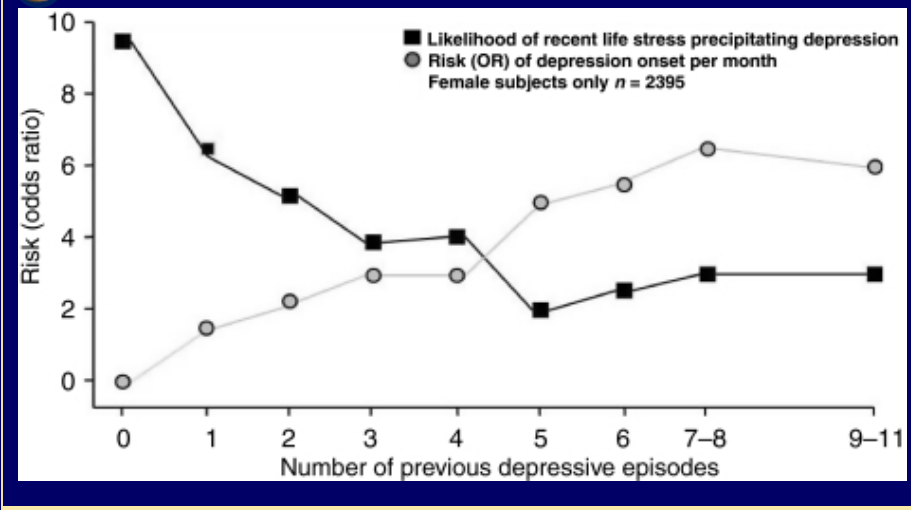
Age-of-onset percentiles for LTP(75)

Beijing and Shanghai (Lee et al., 2007)



	Age at selected age-of-onset percentiles, yr							
	5	10	25	50	75	90	95	99
Anxiety disorders								
Panic disorder	—	—	—	—	—	—	—	—
Specific phobia	5	5	5	13	17	36	41	59
Generalized anxiety disorder	18	23	34	44	54	57	58	61
Post-traumatic stress disorder	—	—	—	—	—	—	—	—
Separation anxiety disorder	—	—	—	—	—	—	—	—
Any anxiety disorder[a]	5	5	10	17	36	55	57	60
MDD	18	21	28	43	54	67	68	68
Bipolar I–II disorders	—	—	—	—	—	—	—	—
Any mood disorder	18	21	28	43	53	67	68	68

Recurrence of depressive episodes
(Maletic et al., 2007)



Beck's Cognitive Model of Depression

Beck, 1974

Dysfunctional beliefs
Rigid schemata
Negative cognitive styles

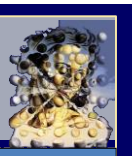
Events
External and internal triggers

Automatic thoughts
Absolutistic
Over-generalizing
Personalizing
Illogic
Biased
Arbitrarily inferring
Selectively abstracting

Depression
- Emotional
- Somatic
- Motoric
- Motivational

symptoms

Hautzinger's Integrative Model



Context, environment

(social, material, etc.)

Situation triggers

Person's cognitions
unrealistic, biased, negative structures, biased self-evaluation

Person's social behavior
behavior deficits, lack of coping strategies

Possible level of activation
lack of pos/neg reinforcers and potentially rewarding events and activities

Depression

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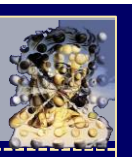
Homework



Apply Hautzinger's model to the case example. Follow the following questions:

1.) What is the situational context of Mrs. S.?

2.) What are events with negative consequences ("punishment") for Mrs. S.?

3.) What events could be potential positive/negative reinforcers in Mrs. S.'s life that are missing now?

4.) What beliefs might be unrealistic and biased?

5.) What do we know about Mrs. S.'s social behavior?

Hautzinger's Integrative Model Example Mrs. S.

- „I do not work enough."
- „I cannot leave my husband/the business."
- „My parents/ parents-in-law will not support me."
- „My husband's alcohol consumption is reasonable."
- „The company is most important."
- „I have no future."

Cognitions
unrealistic, biased, negative structures, biased self-assessment

Social behavior
Behavior deficits, lack of coping strategies

Level of activation
Lack of reinforcers and potentially rewarding events and activities

- Married (23 years)
- Children left home
- Successful business/financial security (?)
- Alcohol co-dependency

-„Inner separation"
- Work (distraction)

Potentially rewarding events:
- Sports
- Games
- Garden

Lack of reinforcers:
- Meeting friends (P)
- Playing games (P)
- Blame by husband

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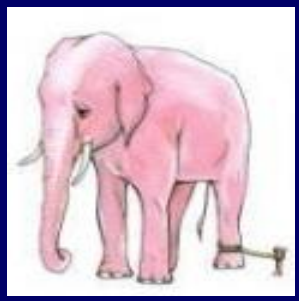
Further etiological explanations (1)

- *Aversive events/stressors*
- *Socio-cultural factors*
  - Low SES
  - Lack of social support system (recursive)
- *Personality factors*
  - Perfectionism
  - Neuroticism
  - Interpersonal dependence
- *Psychological explanations*
  - Learned helplessness
  - Attribution style (Weiner, 1986)
    - internal (vs. external) – locus of control
    - stable (vs. unstable) – across time periods
    - global (vs. specific) – across contexts/situations



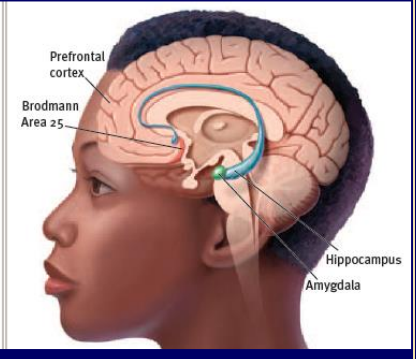
Further etiological explanations (2)

- *Biological factors*
  - Imbalance of multiple transmitters (serotonin, norepinephrine, dopamine, acetylcholine), serotonin as a neuromodulator
  - Hormone imbalance (↑ cortisol, ↑ melatonin)
  - Brain peculiarities: prefrontal cortex, Brodman area 25 (↑ activity or smaller size; „depression switch"?) – It's a network issue!
  - Dysregulated immune system
- *Psychodynamic explanations*
  - Loss ⇒ Regression to the oral stage (defence against grief)
  - Too much or too little gratification during childhood
- *Realism-thesis (refuted)*
  Depressed people are more realistic people than others.
- *Scar-theories for recurrences*
  A depressive episode leaves scars which makes people more sensitive to have depression again.

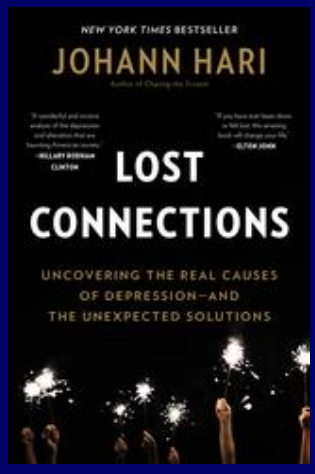
Biological findings

Comer, 2015, p. 225

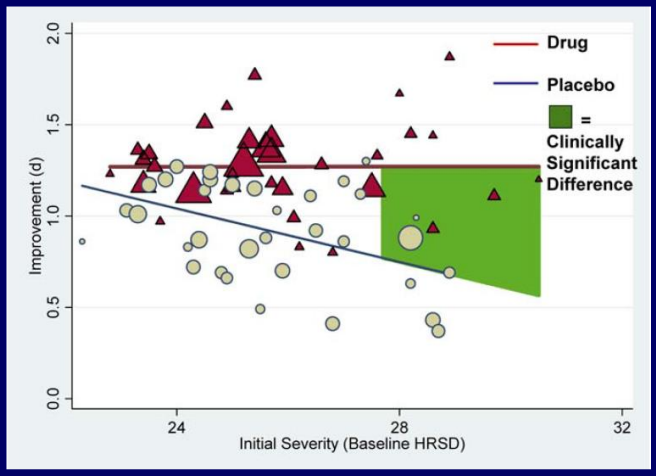
The *prefrontal cortex* is located within the frontal cortex of the brain. Because it receives information from a number of other brain areas, the prefrontal cortex is involved in many important functions, including mood, attention, and immune functioning. Several imaging studies have found lower activity and blood flow in the prefrontal cortex of depressed research participants than in the prefrontal cortex of nondepressed people (Vialou et al., 2014). However, other studies, focusing on select areas of the prefrontal cortex, have found increases in activity during depression (Lemogne et al., 2010; Drevets, 2001, 2000). Correspondingly, research finds that the prefrontal cortex activity of depressed individuals increases after successful treatment by some antidepressant drugs, but decreases after successful treatment by other kinds of antidepressant drugs (Cook & Leuchter, 2001). Given these varied findings, researchers currently believe that the prefrontal cortex plays a critical role in depression but that the specific nature of this role has yet to be clearly defined (Treadway & Pizzagalli, 2014; Goldstein et al., 2011).



Johann Hari



Dysfunction of the brain?
Placebo effect of antidepressants



Kirsch et al. (2008) doi:10.1371/journal.pmed.0050045.sd001

Disconnection from meaningful work

- Whitehall study (Marmot et al. 1991; 10.1016/0140-6736(91)93068-K)
  The lower the social status the higher the mortality among civil servants.
  https://unhealthywork.org/classic-studies/the-whitehall-study/
  Key factor: lack of balance between efforts and reward

Disconnection from people

John Caccioppo (1951-2018)
"Social neuroscience"

Loneliness is contagious, heritable, precedes depression, affects one in four people – and increases the chances of early death by 20%.
Social media cannot compensate us psychologically for what we have lost—social life.

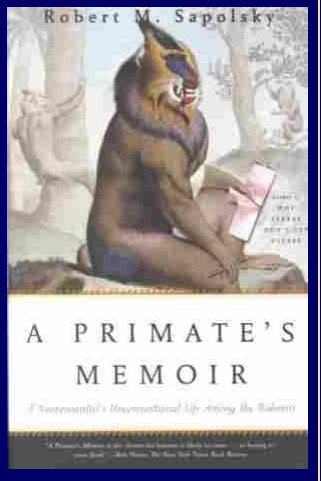
Disconnection from meaningful values

Disconnection from childhood trauma

- Chapman et al. (2004) 10.1016/j.jad.2003.12.013

"If you had six categories of traumatic events in your childhood, you were five times more likely to become depressed as an adult than somebody who didn't have any. If you had seven categories of traumatic event as a child, you were 3100 percent more likely to attempt to commit suicide as an adult." (Hari, 2018, p. 114)

Disconnection from status and respect



Disconnection from the natural world

- Alcock et al. (2013), doi:10.1021/es403688w
- http://www.jayhanson.us/_Biology/BiophiliaBeyondToxicity.pdf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Abnormal Psychology – Spring Semester 2018
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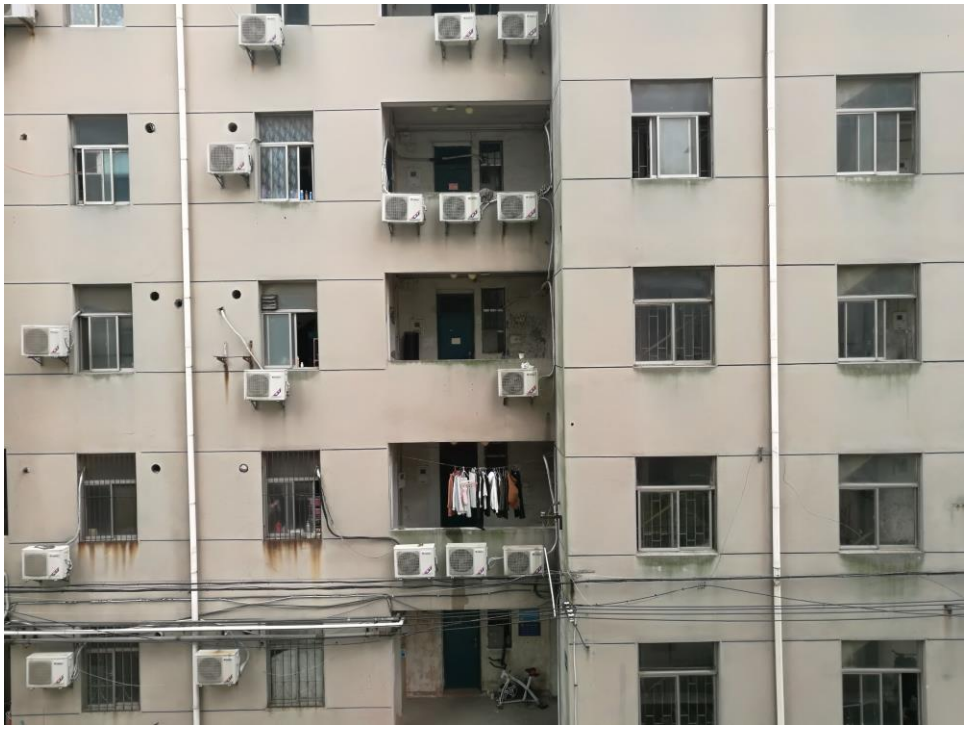

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Disconnection from a hopeful and secure future

The Town with No Poverty: The Health Effects of a Canadian Guaranteed Annual Income Field Experiment (1974-1979)

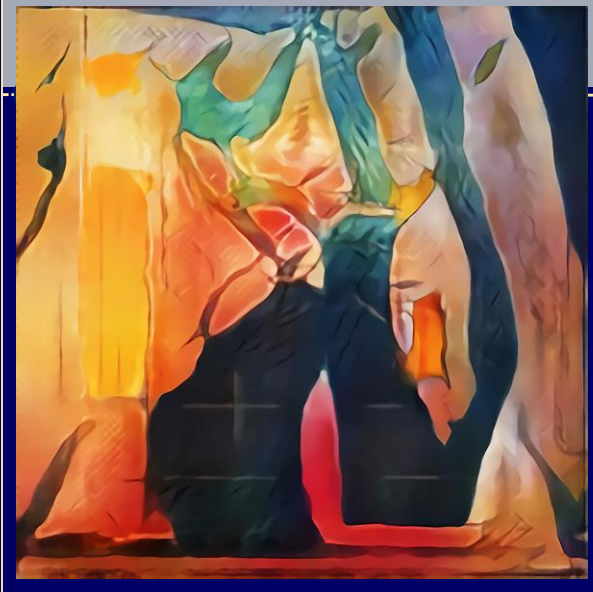
http://sociology.uwo.ca/cluster/en/documents/Research%20Briefs/PolicyBrief10.pdf

"Considerable decrease in hospitalization and physician contact for mental health diagnoses, as well as a decrease in hospitalization for accidents and injuries."

Remedies

- Reconnection with other people (real)
- Meaningful work
- Meaningful values (i.e., less materialism)
  Kasser et al., 2013, doi:10.1007/s11031-013-9371-4
- Overcoming childhood trauma
- Restoring the future

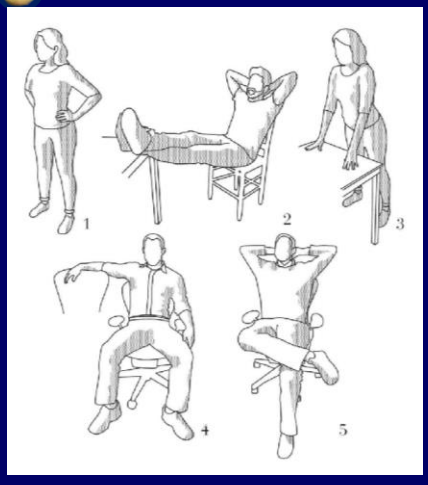
Et al.

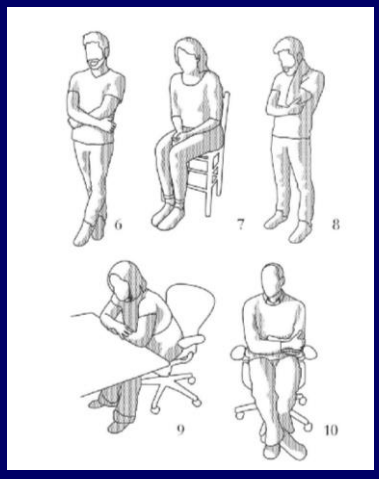


What makes us human?

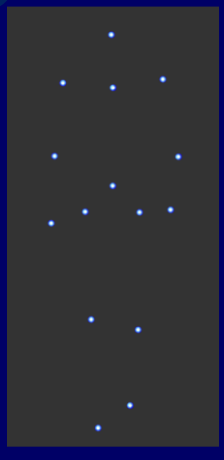
Relationship with the body

"powerful vs. powerless poses" (Cuddy, 2015)





Relationship with the body (2) Walking style



In-patients with severe MDD

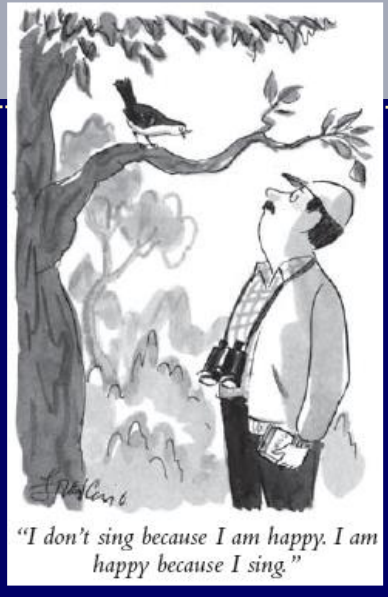
- Less arm swing
- Less head movement
- Slumped posture

That was related to their memory of positive/negative emotional terms. (experimental setup!)

Michalak, 2014

Check yourselves: http://www.biomotionlab.ca/Demos/BMLgender.html

Facial muscles



"I don't sing because I am happy. I am happy because I sing."

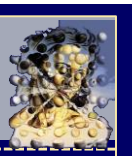
Why so many women?

- More responsibilities = stressors
  - Earn less
  - Double function: job and family
- Conformity pressure (outward appearance, career woman etc.)
- Different coping styles
  - Men: distracting (outside)
  - Women: focusing (inside)
- Hormone imbalances
- Artifact? (less diagnosed in men)
- Yet: Results far from conclusive !

Why so rarely (?) diagnosed in China? (1)

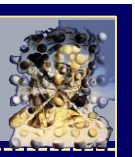
- Different ways of reporting symptoms/different display rules due to cultural sanctions:
  - Preference for reporting somatic symptoms (but: psychological symptoms used if directly asked)
  - Local expressions: 思想混乱，心痛
  - Cues indicating pre-verbal pain : 辛苦
  - Sleeplessness as cause instead of symptom
  - Word “depression” lacks appeal
- Different ways of classification: neurasthenia (depression usually used if much functional impairment)

Why so rarely (?) diagnosed in China? (2)



- Protective cultural factors
  - Tradition of withstanding hardship
  - Tolerance for distressing circumstances
  - Sense of interdependence with family
  - Common traditional beliefs: 风水，缘，忍
- Protective personality: stoicism (depression simply "accepted")
- Mental illness as a stigma ("collective loss of face") => less reported

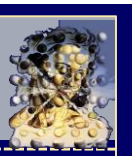
However:



Criteria for depression converging between Western samples and Chinese samples when using DSM-IV as a standard.

Kendler, K. S., Aggen, S. H., Li, Y., Lewis, C. M., Breen, G., Boomsma, D. I., & ... Flint, J. (2015). The similarity of the structure of DSM-IV criteria for major depression in depressed women from China, the United States and Europe. *Psychological Medicine*, doi:10.1017/S0033291714003067

Treatment (1)



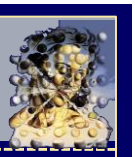
- ***Drug therapy*** - most important drugs
  - Monoamine oxidase ihibitors (MAOIs) success rate 50%, but severe side effects such as sudden increase in blood pressure
  - Tricyclics

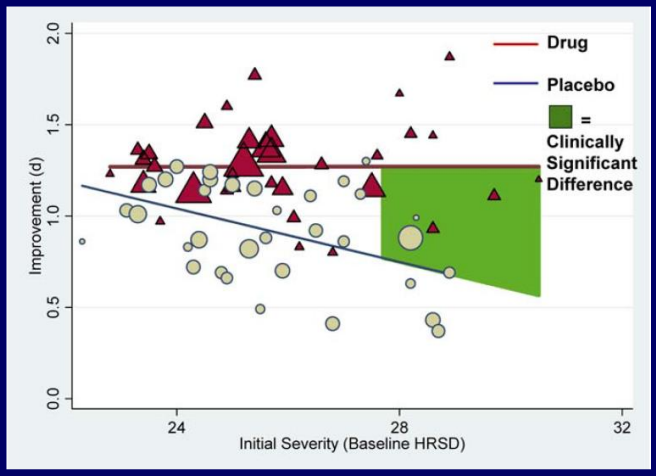
    60% success, but severe side effects such as constipation, dry mouth
  - Selective serotonin reuptake inhibitors (SSRIs)

    often treatment of choice, but also side effects
  - St John's wort – only for mild depressions, mechanisms unknown
- Electroconvulsive therapy/transcranial magnetic/vagus nerve/deep brain stimulation – only for severe cases

  cf. http://www.ted.com/talks/sherwin_nuland_on_electroshock_therapy

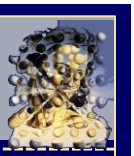
Dysfunction of the brain? Placebo effect of antidepressants





Kirsch et al. (2008) doi:10.1371/journal.pmed.0050045.sd001

Treatment (2)



Cognitive behavioral Therapy

Ingredients

- Psychoeducation
- Behavioral activation, pleasant event scheduling
- Cognitive rehearsal, challenging automatic thoughts
- Behavioral hypothesis testing

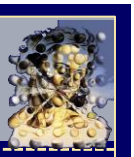
Try it out yourself: https://moodgym.anu.edu.au/welcome

MoodGYM TRAINING PROGRAM

Interpersonal therapy

- Focus on the improvement of interpersonal relationships
- Teaching and training social skills
- Uncovering role changes

Behavior activation examples (via checklists)



- Daydreaming
- Take a nap in the sun
- Meeting someone new
- Wearing elegant clothes
- Visit a library and skim through books
- Reading the newspaper
- Drinking good wine
- Taking a bath
- Working for Amnesty International

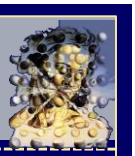
Treatment (3)

Conclusions

- Cognitive, cognitive-behavioral, interpersonal, and biological, treatments are equally effective (more than 50-60% of clients improve)
- For severe depression, pharmacotherapy has proven more effective; ECT most effective, but chosen with care
- Psychological treatments seem to have better long-term effects (especially: high relapse rate with pharmacotherapy)
- Most beneficial: combined approaches

Example: Mary (II)

Bipolar Disorders (1)



- Two main types
  - **Bipolar I:** alternating episodes of depression and mania, sometimes separated by periods of normality
  - **Bipolar II:** no mania, depressive episodes dominate, at maximum hypomanic periods
- *Life-time prevalence:* 1-2% (China: 0.1%, 20% of those diagnosed with depression actually have non-detected bipolar disorder)
- *Course*
  - First episode at age 20-30
  - Severity: first increases, then decreases again after ca. 10 years
  - 80% with one episode of mania will have further episodes
  - Average: 4 episodes of mania in 10 years
- *Rapid cycling:* ≥ 4 different episodes per year (5-10% of patients with bipolar disorder)

Bipolar Disorders (2): Etiology

2.2 Ursachen und Pathogenese

Die Frage nach den Ursachen für die Entstehung Bipolarer Störungen kann derzeit nicht abschließend beantwortet werden. Wahrscheinlich ist eine multifaktorielle Genese. Neben einer relativ starken genetischen Komponente, welche wahrscheinlich Grundlage einer erhöhten Suszeptibilität (d. h. Sensibilität) für die Erkrankung ist, spielen Umwelteinflüsse (u. a. stress-vermittelt) und Persönlichkeitscharakteristika sicherlich eine entscheidende Rolle. Auch wenn zum Teil detaillierte Befunde einzelner Mechanismen bekannt sind, lässt sich ein die verschiedenen Forschungsergebnisse integrierendes ätiopathogenetisches Modell der Bipolaren Störungen nicht ableiten (für einen aktuellen Überblick siehe Haack et al. 2010).

"The question about the causes for the development of bipolar disorders cannot be answered conclusively by now….
Although certain detailed results about mechanisms exist, we cannot deduce an etiopathological model of bipolar disorders that may integrate all those research results."

Guidelines for bipolar disorders by the *German Association for Bipolar Disorders* (2012)

Bipolar Disorders (3)

Etiology

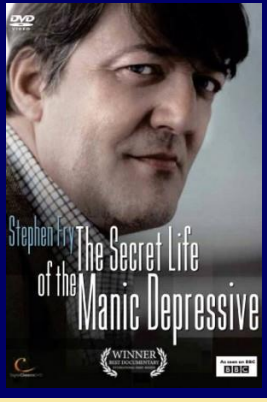
- High amount of genetic influence
  - Concordance rates: MZ 40-72% vs. DZ 5-14%
  - Definitely: Multiple genes involved, but still unclear how
- Neuronal damage in the amygdala and hippocampus
- Related to ions within the neuron
- Main cognitive explanation:
  mania as defence against depression

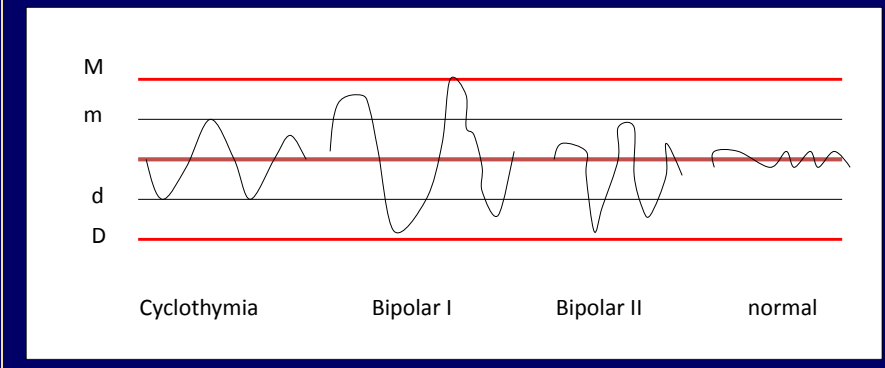
Treatment

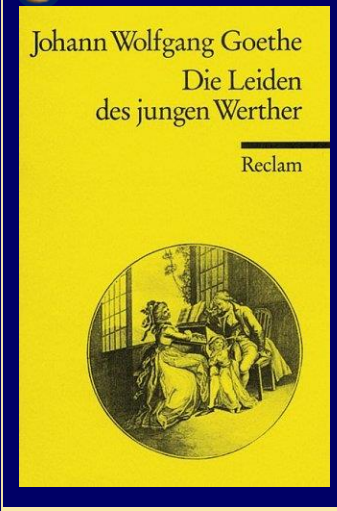
- Lithium (treatment of choice though mechanism unclear; dosage important!)
- Accompanying: cognitive behavior therapy including family members

Movie recommendation

Stephen Fry (2006)
"The secret life of the manic-depressive"

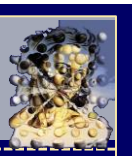



M
m
d
D
Cyclothymia
Bipolar I
Bipolar II
normal


Johann Wolfgang Goethe
Die Leiden
des jungen Werther
Reclam

Suicide

Motivation



- Choose a partner you trust.
- Exchange on the following questions:
  - What is your personal attitude toward suicide?
  - Have you ever thought about killing yourself?
  - Do you know a person who killed him- or herself?
  - Why do you believe would people choose suicide as an option?
  - Do you think suicide is a larger problem in China than in Western countries?