

# LEARNING THEORY, COGNITIVE MODELS AND CLUSTER C

Personality and Personality Disorders Lecture 4  
10/06/2022

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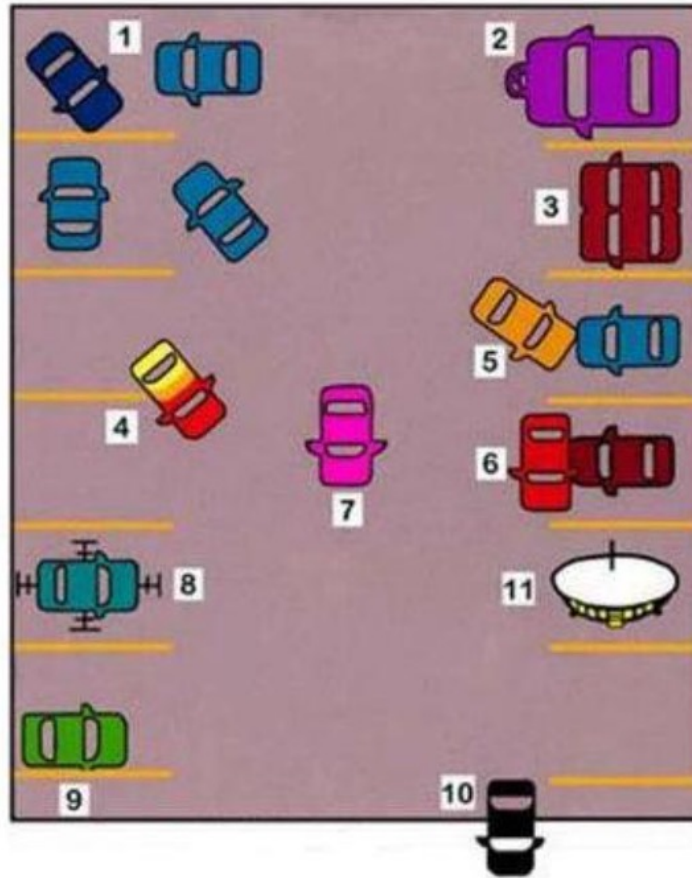
& Prof. Dr. Arnoud Arntz



# AGENDA

- Learning theory
- Cognitive models
- Cluster C PDs
- Treatment of Cluster C PDs

## Parking Lot of the Personality Disordered



1. **PARANOID** - Cornered again!!
2. **NARCISSIST** - Largest car; prominent hood ornament
3. **DEPENDENT** - Needs other cars to feel sheltered
4. **PASSIVE-AGGRESSIVE** - Angles car to take 2 spaces
5. **BORDERLINE** - Rams into car of ex-lover
6. **ANTISOCIAL** - Blocks other cars
7. **HISTRIONIC** - Parks in center of lot for dramatic effect
8. **OBSESSIVE** - Perfect alignment in parking space
9. **AVOIDANT** - Hides in corner
10. **SCHIZOID** - Can't tolerate closeness to other cars
11. **SCHIZOTYPAL** - Intergalactic parking

A close-up photograph of a wooden surface covered with various colorful geometric blocks, including L-shaped and T-shaped pieces in shades of blue, green, red, yellow, and purple. Several dark wooden chess pawns are also visible, some standing upright and others lying down. The text "LEARNING THEORY" is overlaid in white, bold, sans-serif capital letters, centered horizontally and partially obscured by a vertical white line on the right side.

# LEARNING THEORY

# LEARNING THEORIES – PD

- In early development, psychological needs are very important
- What type of stimuli?
  - Intrinsic value
- Food, warmth, touch, pain, abandonment
- Attachment (safety, protection, stress regulation)
- Social inclusion
  - Social exclusion is very painful/distressing

## Signal Learning

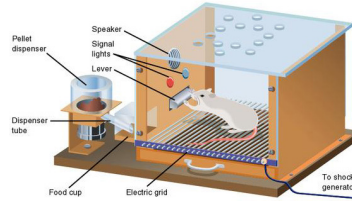
- $CS \rightarrow US \rightarrow UR$
- $CS \rightarrow CR$
- Emotions are scary/lead to panic
- Status grants appreciation



## Evaluative Learning

- $S_1 - S_2 \rightarrow S_1 \approx S_2$  (in valence)
- Conflict is bad (connection between conflict and avoidance/removal)
- Candy gives comfort (Candy and comforting are connected systematically)





## Operant conditioning – Law of Effect

- Punishment of certain behaviours
- Not reinforcing some behaviours sufficiently, such as: vulnerability, frustration tolerance, assertiveness, try new things (independence, selfconfidence)



## Observational learning

- Observing dysfunctional behaviour:  
Substance use, Conflict, Avoidance, acting inferior or superior, behaving submissive in case of abuse
- Not observing functional behaviour:  
Assertiveness, frustration tolerance, etc.

# LEARNING THEORIES - CONCLUSION

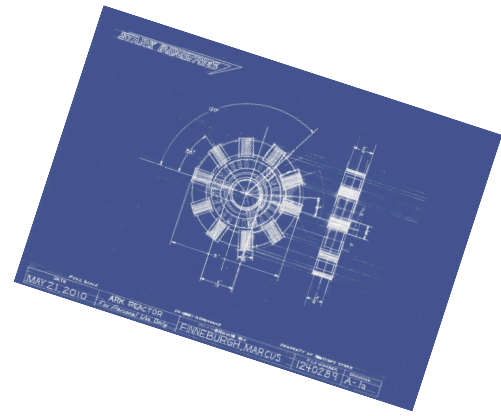
- Once learned, the association will always exist and is difficult to change
- Conditioning in (early) childhood
- Analyze each case individually! Search for learning experiences.
- **Experimental neurosis (Pavlov)**
  - Approach-avoidance conflict





# COGNITIVE MODELS

# SCHEMAS



**Schema** = knowledge representation of the self, others, the world (and relationships)

Schemas consist of explicit and implicit beliefs (unaware)

- Explicit beliefs – can be verbalized
- Non-verbal knowledge, such as attachment representations

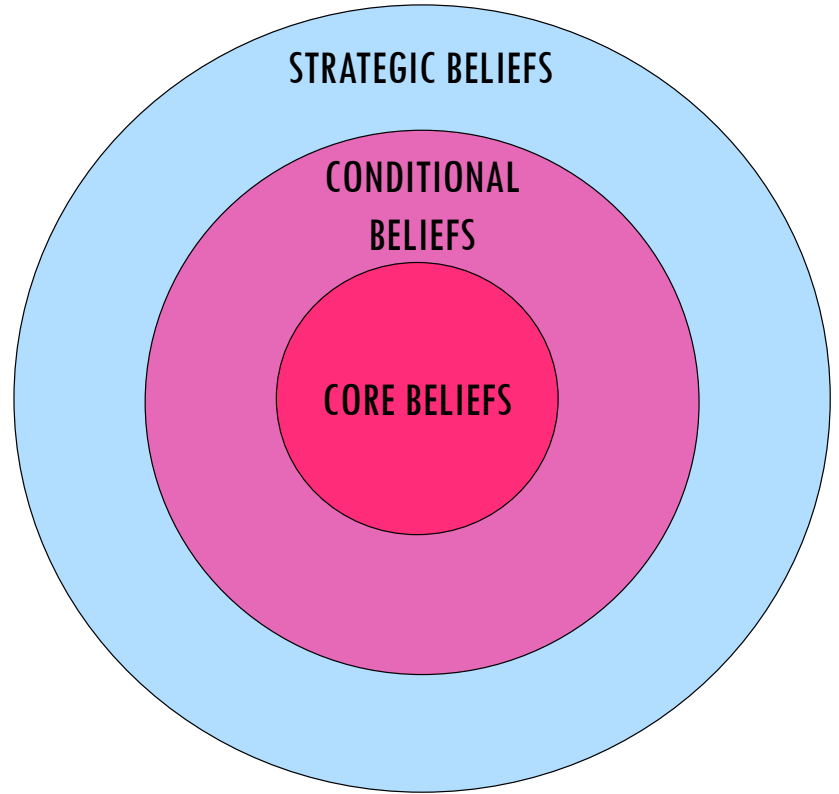
Schemas originate in childhood – Early Maladaptive Schemas (EMS)

- The world of a child is limited
  - Childish interpretations
- 
- **So, early experiences** are the foundation for our general view of ourself, others and the world

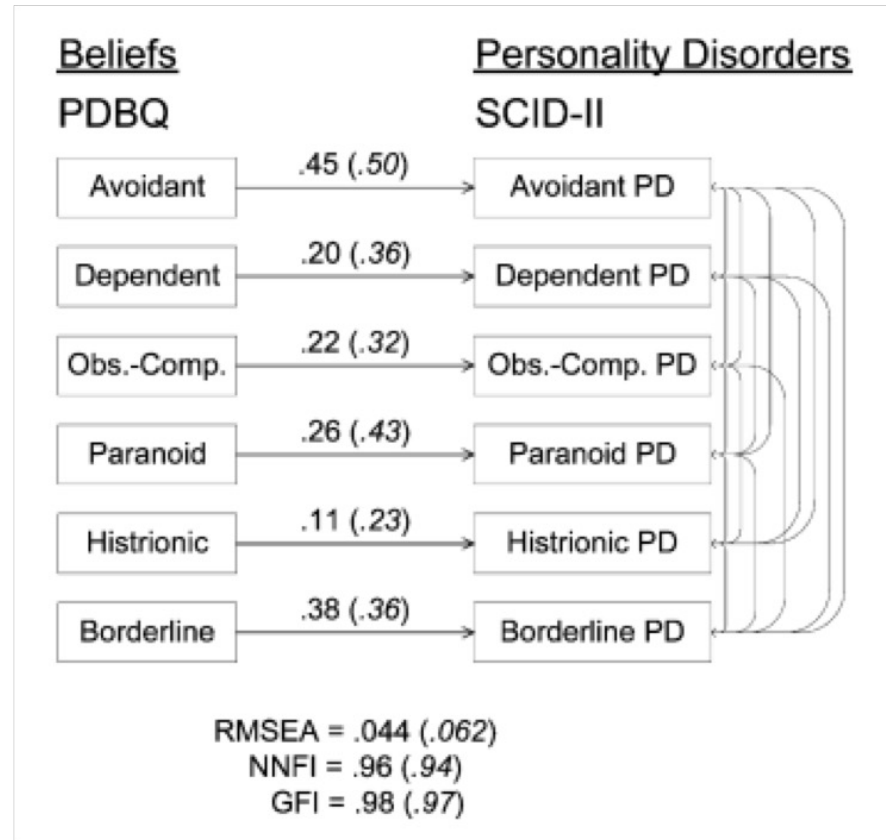
# SCHEMAS AND BELIEFS

## **Beliefs**

- Core beliefs (I am...; Others are...)
- Conditional beliefs (If x, than y)
- Strategic beliefs (do A to get B)



## SPECIFIC BELIEFS CHARACTERIZE PDS!



# AVOIDANT PD

- Core beliefs: *I am unwanted and unskilled; Others are critical and reject me*
- Conditional beliefs: *If others get to know you, they will consider you inferior*
- Strategic beliefs: *Hide, avoid difficult matters*

# DEPENDENT PD

- Core beliefs: *I am weak and ignorant; Others are strong, have knowledge, and can help me*
- Conditional beliefs: *If I turn to someone else for help, he or she will solve it for me*
- Strategic beliefs: *Let others decide; cling to others*

# PARANOID PD

- Core beliefs: *I am a target, I am righteous; Others are out to abuse me.*
- Conditional beliefs: *If you let others know too much about you, they will use it against you.*
- Strategic beliefs: *Keep an eye on others; look for hidden intentions.*

# BORDERLINE PD

- Core beliefs: *I am evil, victim, helpless, lost; Others abuse or abandon you, or reject you.*
- Conditional beliefs: *If you let others get too close, they will abandon, abuse or reject you.*
- Strategic beliefs: *I need to find someone who will help me and will never leave me*



# INFORMATION AND SCHEMAS

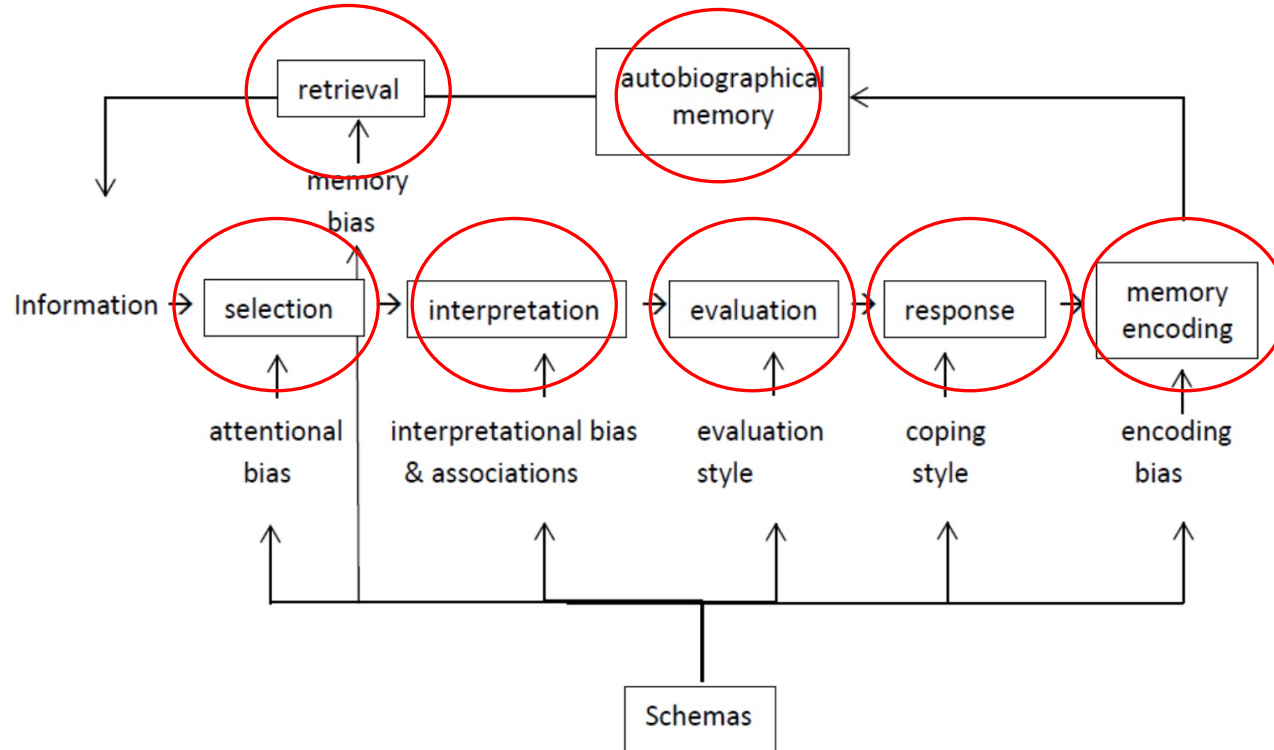
## New information schema

- **Assimilation:** Inclusion in already existing schema, sometimes adjusted (Dominant process)
- **Accommodation:** Adjustment of schema according to new information (Difficult)

## Schemas influence information processing by:

- Attention and selection of information
- Interpretation of information
- Memory

Arntz, A. & Lobbestael, J. (2018). In: Livesley, W.J. & Larstone, R. (Eds.). Handbook of Personality Disorders, Second Edition: Theory, Research, and Treatment, pp. 141-154. New York: Guilford Press.





IS THERE SUPPORT FOR THE COGNITIVE  
MODEL?

# ATTENTION BIAS

- **Attention bias** for stimuli important for the schema
- Emotional Stroop task
  - Some words are specific for BPDs (Kaiser, Arntz & Jacob, 2016)

purple	brown	green	blue	red	green	blue
purple	red	blue	purple	brown	brown	green
brown	purple	purple	green	blue	blue	blue
purple	red	red	brown	blue	red	purple
purple	blue	brown	purple	green	green	blue
green	purple	purple	red	green	purple	red
blue	brown	brown	red	brown	brown	green
purple	blue	brown	brown	green	green	purple
brown	brown	red	blue	blue	blue	purple
purple	purple	brown	green	blue	red	green
green	purple	red	blue	purple	brown	brown
purple	brown	purple	purple	green	blue	blue
red	purple	red	red	brown	blue	red
red	purple	blue	brown	purple	green	green
brown	green	purple	purple	red	green	purple

# ATTENTION BIAS

- **Attention bias** for stimuli important for the schema
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**ABUSE**

# ATTENTION BIAS

- **Attention bias** for stimuli important for the schema
- Emotional Stroop task
  - Some words are specific for BPDs (Kaiser, Arntz & Jacob, 2016)

**GREETINGS**

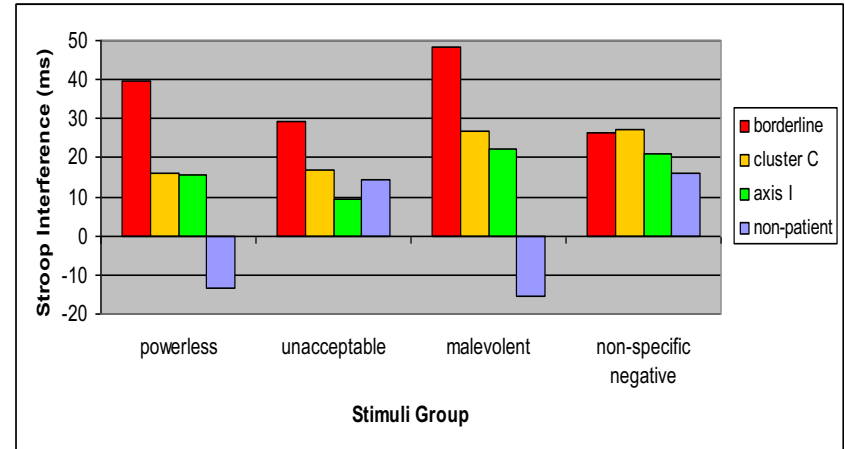
# ATTENTION BIAS

- **Attention bias** for stimuli important for the schema
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**POWERLESS**

# ATTENTION BIAS

- **Attention bias** for stimuli important for the schema
- Emotional Stroop task
  - Some words are specific for BPDs (Kaiser, Arntz & Jacob, 2016)



Sieswerda, S., Arntz, A., Mertens, I., & Vertommen, S. (2007). Hypervigilance in patients with borderline personality disorder: specificity, automaticity, and predictors. *Behaviour Research and Therapy*, 45(5), 1011-1024.



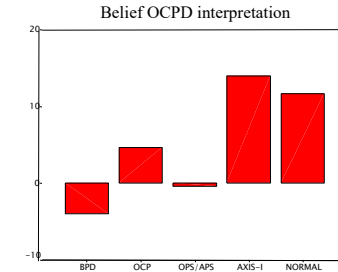
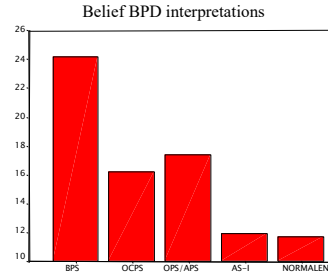
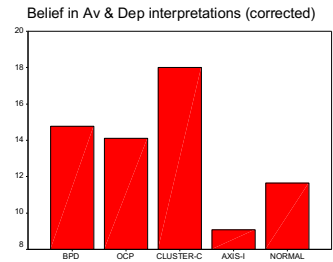
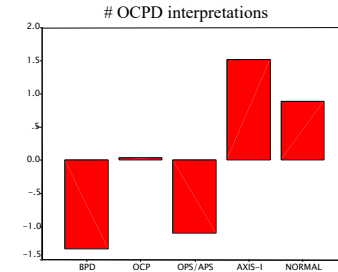
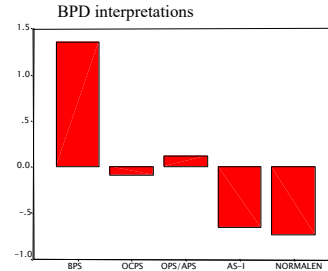
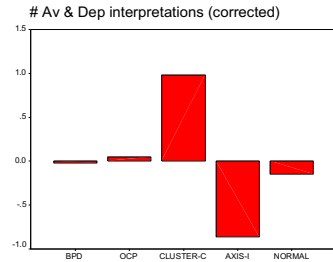
# INTERPRETATION BIAS

ARNTZ, A., WEERTMAN, A. & SALET, S. (2011). INTERPRETATION BIAS IN CLUSTER-C AND BORDERLINE PERSONALITY DISORDERS. BEHAVIOUR RESEARCH AND THERAPY, 49, 472-481.

- 10 Short stories
- Forced response:
  - (1) There is nobody to comfort me (BPD)
  - (2) I need help, I cannot solve this on my own (DEP)
  - (3) I need to control my thoughts and feelings, otherwise it will go wrong (OCP)
- Open response
- Ratings of believability/credibility

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# CONCLUSIONS COGNITIVE MODELS

- Personality disorders can be explained from different conditioning models of learning.
- Personality disorders are characterized by:
  - Specific sets of 'beliefs'
  - Specific cognitive biases (also implicit)

The idea is that schemas **cause** cognitive processes of personality disorders and that they **maintain** personality disorders

- But, no direct causal evidence yet

# CLUSTER C

Avoidant personality disorder

Dependent personality disorder

Obsessive-compulsive personality disorder

## AVOIDANT PERSONALITY DISORDER

1. Avoiding occupational activities involving significant interpersonal contact
2. Unwilling to get involved with people unless certain of acceptance
3. Restraint within intimate relationships
4. Preoccupied with fears of receiving criticism or rejection in social situations
5. Social inhibition new interpersonal situations
6. Feelings of inferiority
7. Reluctant to take personal risks or to engage in any new activities

## AVPD– ETIOLOGY & COMORBIDITY

### **Etiology**

- Low degree of (healthy) emotional expression in family
- Conflict avoidance in family
- Avoidant modeling by parents
- (preoccupied)-Avoidant attachment

### **Comorbidity**

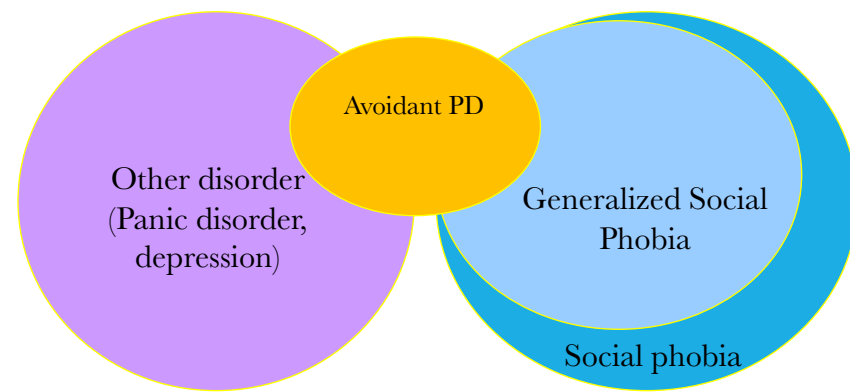
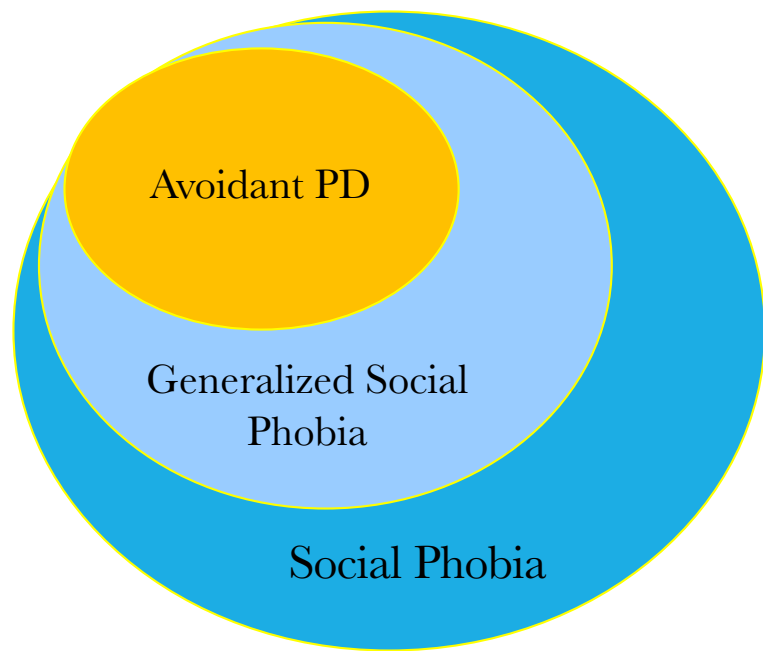
- Mood & anxiety (PTSD, Panic and GAD), Alcohol use
- PD: BPD, OCPD

## AVOIDANT PD & SOCIAL PHOBIA (SPECIFIC AND GENERALIZED)

- Between 40 and 88% of also have SP (Weinbrecht et al., 2016)
- 46% individuals also diagnosed with AVPD (Friborg et al., 2013).

### **Two types of research**

1. Within samples with social phobia
2. Mixed samples (control groups with or without social phobia, or a different anxiety disorder)





# AVOIDANT PD AND SOCIAL PHOBIA

## **Within samples with social phobia:**

- Evidence for 1 dimension
- Although also for 2 separate dimensions!

## **Findings mixed samples:**

- Avoidant PD is also present in samples without social phobia
- Avoidant PD is also prevalent without SP diagnosis
  - Patients do not recognise the situational fear response of SP
- Similar change rates in treatment
- Some support for qualitative differences in traits

# AVPD & SP CONCLUSIONS

- Error in studies only including social phobia
- Correlation between SP and APD, but lower than expected
- Too many patients with APD, but not SP
- SP in general many personality comorbidity/pathology
- **Findings are still inconclusive!**

## DEPENDENT PERSONALITY DISORDER

1. Difficulty making daily decisions advice and reassurance
2. Needs someone else to take over major life areas
3. Difficulty disagreeing with others
4. Difficulty starting projects on their own
5. Go to great lengths to obtain support from others
6. Feeling uncomfortable when alone
7. Always searches for new relationships
8. Fears abandonment

# DEPENDENT PERSONALITY DISORDER

## Etiology

- Authoritarian upbringing (unique)
- Overprotection (less specific)
- Lack of stimulation autonomy
- Gender-stereotypical views women
- Culturally dependent. Disappearing.

## Comorbidity

Anxiety disorders, Eating disorders, Somatoform disorders, SUD

- PD: AVPD, OCPD high but non-specific

## Two types of dependency

- Functional dependency
  - Although can be active in certain situations, risk losing relationships
- Emotional dependency
  - Mainly seen in separation anxiety, BPD, depression
- **Dependency also in treatment!**

# OBSESSIVE- COMPULSIVE PERSONALITY DISORDER

1. Preoccupation with details, rules, schedules, organization
2. Controlling and perfectionism
3. Devotion to work and productivity to the exclusion of leisure activities and friendships
4. High moral standards
5. Unable to discard worn-out or worthless objects
6. Reluctant to delegate tasks
7. A miserly spending style
8. Rigidity and stubbornness.

# LIVING MACHINES?

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# OCPD

- *Extremely* rational
  - see emotions are useless
- **Workaholics!**
  - Compulsiveness is related to increased wealth and higher status
- Traits are valued by society
- Relatively few patients seek help for OCPD



# OCPD – ETIOLOGY & COMORBIDITY

## Etiology

- Lack of emotional expression
- Lack of relaxation, fun, playtime
- Rigid rules
- Punitive parenting style
- Overprotection
- Emphasis on achievements, rules, production
- **Too much responsibility early in life**
- Parentification

## Comorbidity

- Depression related to relapse
- Mood & anxiety, Eating disorders
- PD: AVPD, DPD, relatively low in comorbidity



# OCPD – OVERLAP OTHER DISORDERS

## OCD

Symptom overlap makes correlation analyses difficult

- OCPD is not (causally) related to OCD (25%)!
- OCD = egodystonic vs. Egosyntonic OCPD
- Both are heritable

## Hoarding disorder



# CLUSTER C PREVALENCES

TORGERSEN, S. (2012). EPIDEMIOLOGY. IN: WIDIGER, T.A. (ED.), THE OXFORD HANDBOOK OF PERSONALITY DISORDERS, PP. 186-205. NEW YORK: OXFORD UNIVERSITY PRESS.

## Avoidant PD:

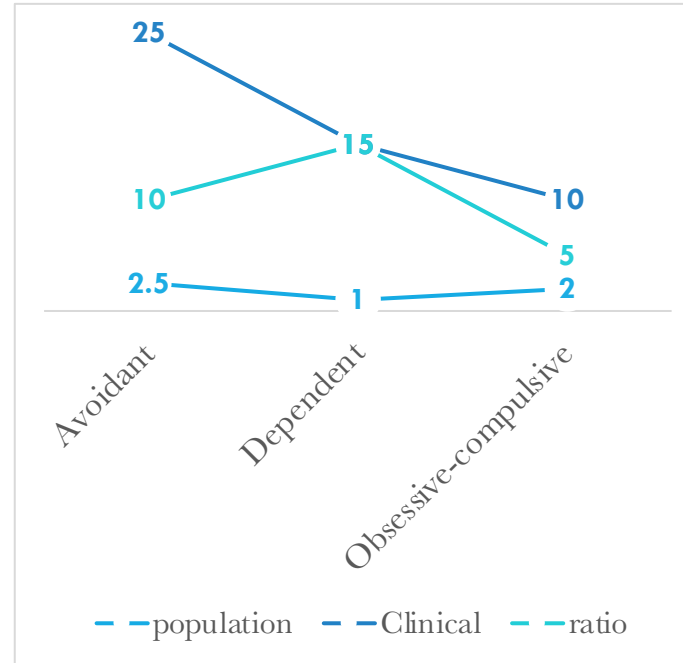
- Around 2.5% healthy population
- 25% clinical population
- More in women and **low** SES

## Dependent PD:

- Around 1% healthy population
- 15% clinical population
- More in women and **low** SES

## Obsessive-compulsive PD:

- Around 2% healthy population
- 10% clinical population (low ratio 5:1)
- Probably more in women and **higher** SES



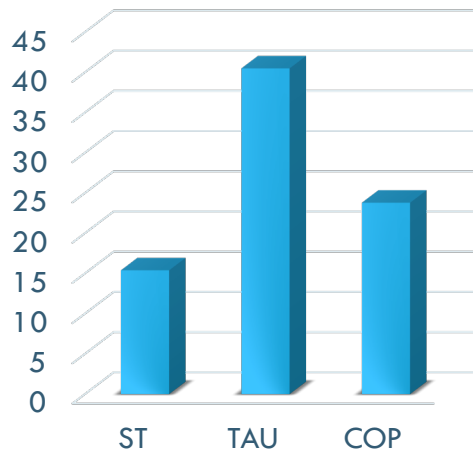
# TREATMENT OF CLUSTER C

- Psychodynamic, CBT or ST
- Mixed findings regarding relative effectiveness
- Not many studies (or meta-analyses) have been conducted
- ST is relatively new. Effective?

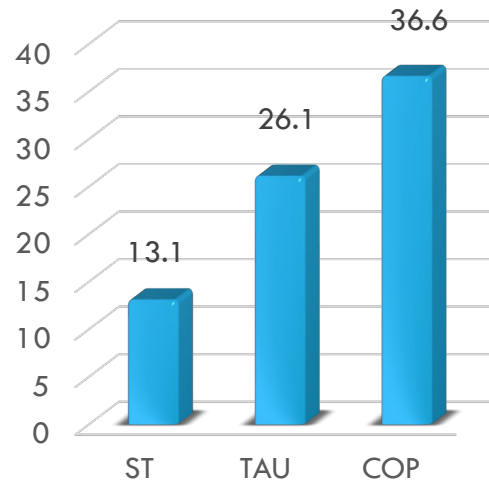
# SCHEMA THERAPY FOR CLUSTER-C, PARANOID, HYSTRIONIC, NARCISSISTIC PD BAMELIS ET AL., (2014) AM J PSYCHIATRY

- 3 treatment conditions (Individual therapy) (N = 320)
  - ST ( $n = 147$ )
  - CCT (client-centered therapy) ( $n = 41$ )
  - TAU (mostly psychodynamic) ( $n = 135$ )
- 92% Cluster C diagnosis
- 12 treatment centres (NL)
- Primary outcome: recovery of PD 3 years after start of treatment

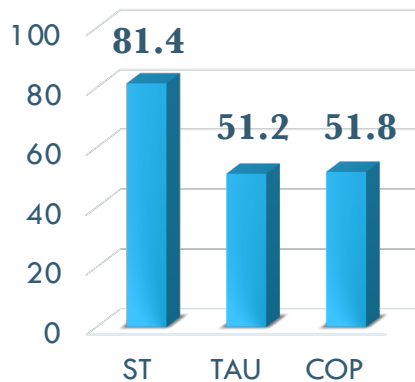
## DROPOUT



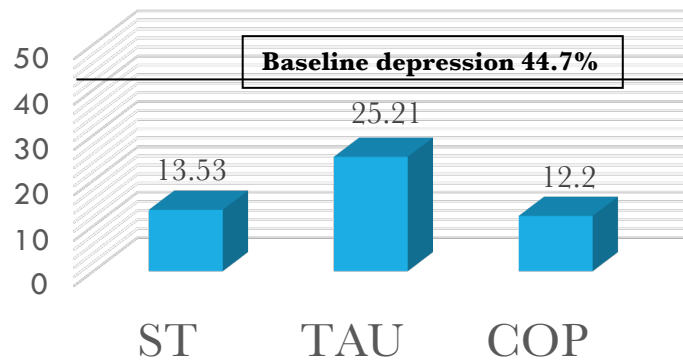
## % STILL IN TREATMENT



## % RECOVERY FROM PD



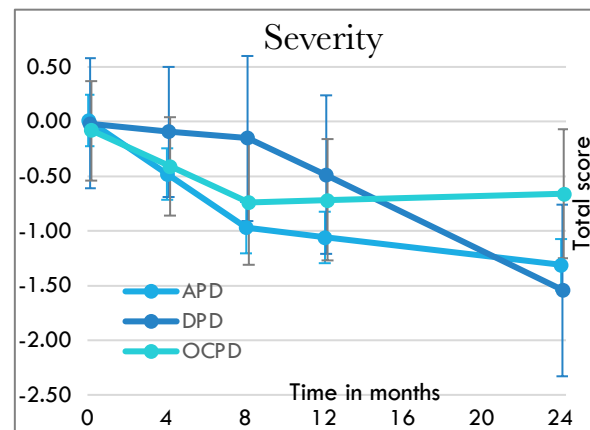
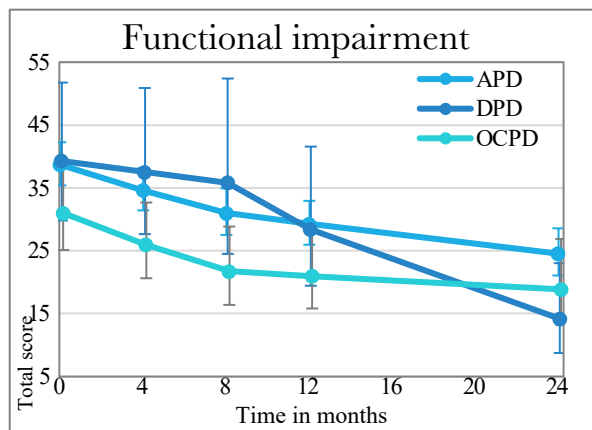
## % HAVING DEPRESSION AT 3-YR FOLLOW-UP



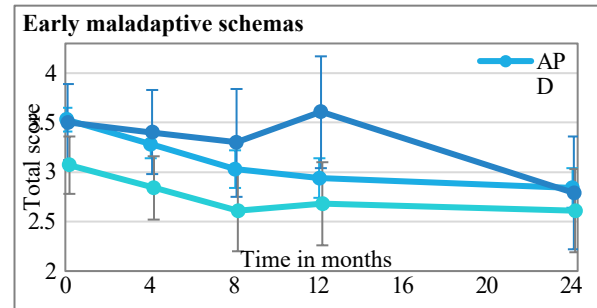
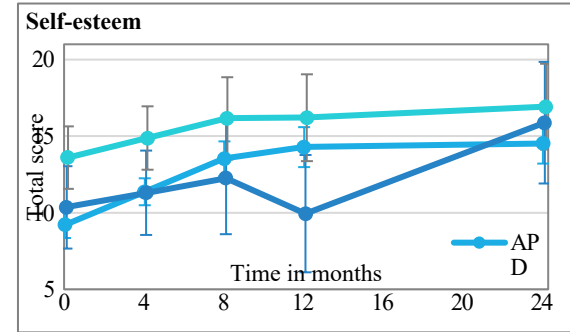
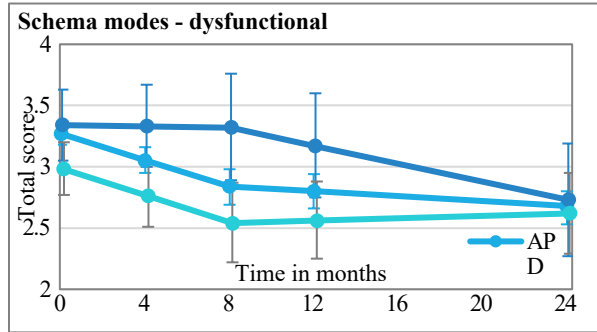
# CLUSTER C PILOT STUDY – UVA

- Treatment Group-schema Therapy
- Primary disorder ( $N = 137$ ):
  - AVPD  $n = 107$
  - DPD  $n = 11$
  - OCPD  $n = 19$
- Main outcome: General severity PD assessed with clinical interview
- Secondary outcomes: Functional impairment, QoL, Happiness, self-esteem, schema functioning/modes.

# OUTCOMES



# CHANGE TRAJECTORIES





# CONCLUSIONS PILOT STUDY

- OCPD generally score higher at the start of treatment
  - With the exception of Functional impairment, QoL and Happiness!
  - This could bias the results. However, sample size was small
- In general, effect sizes for OCPD were smaller. Less room for improvement or more difficult to change?
- In general, GST effective treatment!

# CONCLUSIONS

- Learning theories and cognitive theories explain the development and maintenance of personality pathology
- Biases play a big part
- There is overlap/similarities between cluster C and syndrome disorders
- Not many treatment effectiveness studies
- ST is a promising new treatment