MEASURING THE BUILDING BLOCKS OF MENTALIZING PERFORMANCE ACROSS MENTAL DISORDERS

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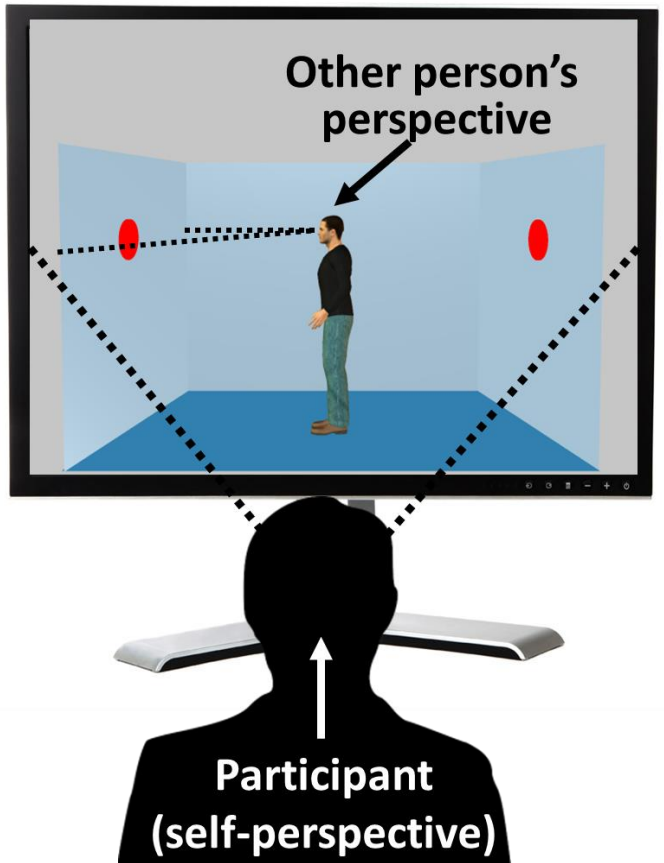
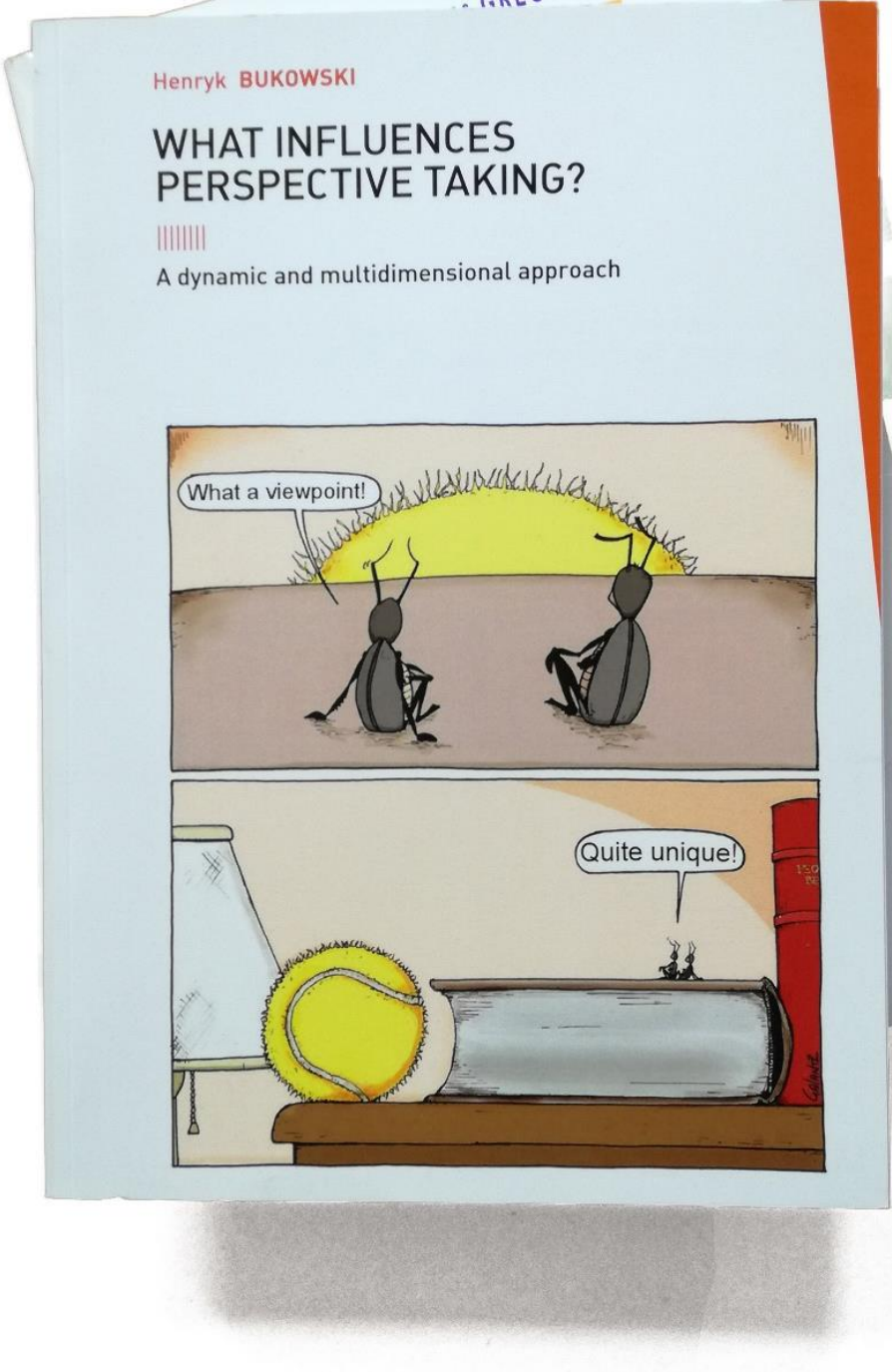
LEVEL-1 VISUAL PERSPECTIVE TAKING

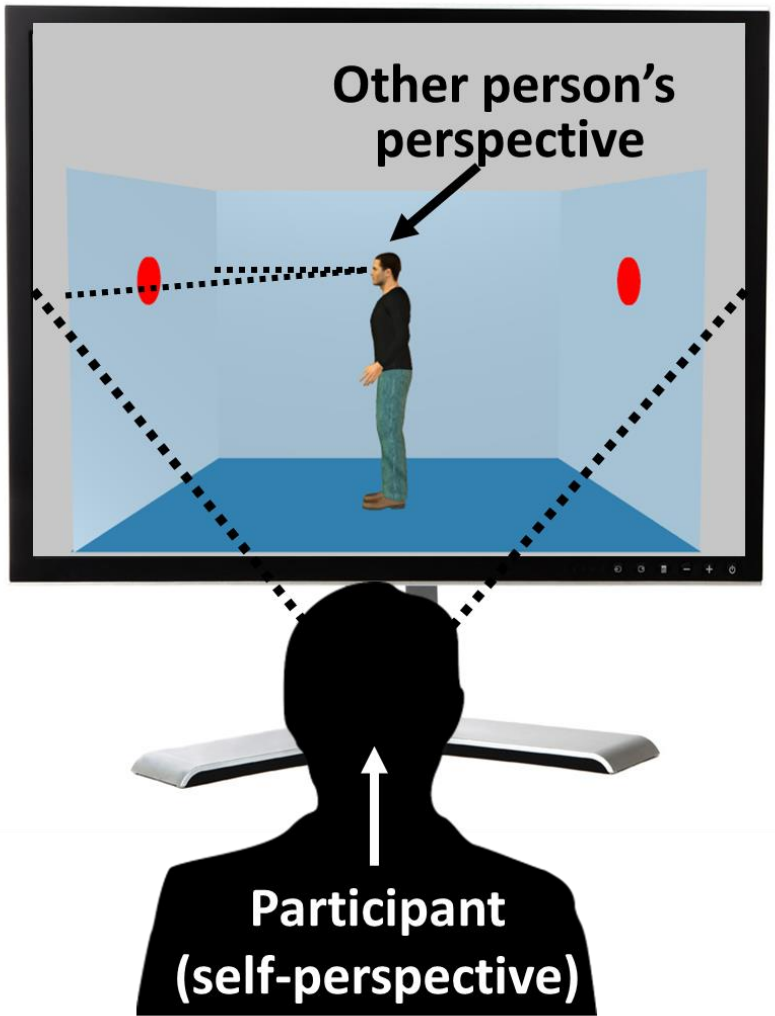
= eye gaze being processed into knowledge about whether a person sees an object" :



- Guilt
- Shame
- Anger
- Sadness
- Joy
- Sleep deprivation
- Self-awareness
- Stimuli salience, task difficulty, SOA, …
- Narcissism



LEVEL-1 VISUAL PERSPECTIVE TAKING



Guilt

Shame

Anger

Sadness

Joy

Sleep deprivation

Self-awareness

Stimuli salience, task difficulty, SOA, …

Narcissism

Related to something social ?
To real-life social cognition ?

Submentalizing ?
(recruit domain-general processes)

How other researchers are measuring mentalizing ?

MENTALIZING UNDERSTOOD AND MEASURED ACROSS DISCIPLINES (HISTORICALLY)

- **Theory of Mind** (cognitive & develop psych) : mainly about imputing mental states to others
  - About representational capacities

  → 1 dimension, 1 score : error rate at inferring the right mental state (most often conflicting with reality/self-perspective)

  → 2 levels of representation : implicit inference (spontaneous, efficient but limited) versus explicit inference (instructed, effortful but rich)
- **Perspective taking** (psycholinguistics & social psych) : mainly about effortfully putting aside our egocentric view
  - About heuristic processing being adjusted by system 2 (effortful, controlled)
  - → 1 dimension, 1 score : error rate of egocentric error (not putting aside conflicting self-perspective)
- **Empathy** (comparative & clinical psych) : mainly about sharing the emotion of another person
  - About sensitivity and perceptual social cues processing

  → 1 dimension, 1 score : extent of sharing/sensitivity to other person's emotion

  → 2 levels : affective empathy (described above) versus (cognitive empathy → affective ToM)

➔ Mentalizing is examined via 1-dimensional focus, 1 score (despite dual models)… and each field's focus is *different* !

NEWER ACCOUNTS OF MENTALIZING

- **Theory of Mind :**
  - Not all about representational capacities

    → account for conflict between perspectives (E. Deschrijver)

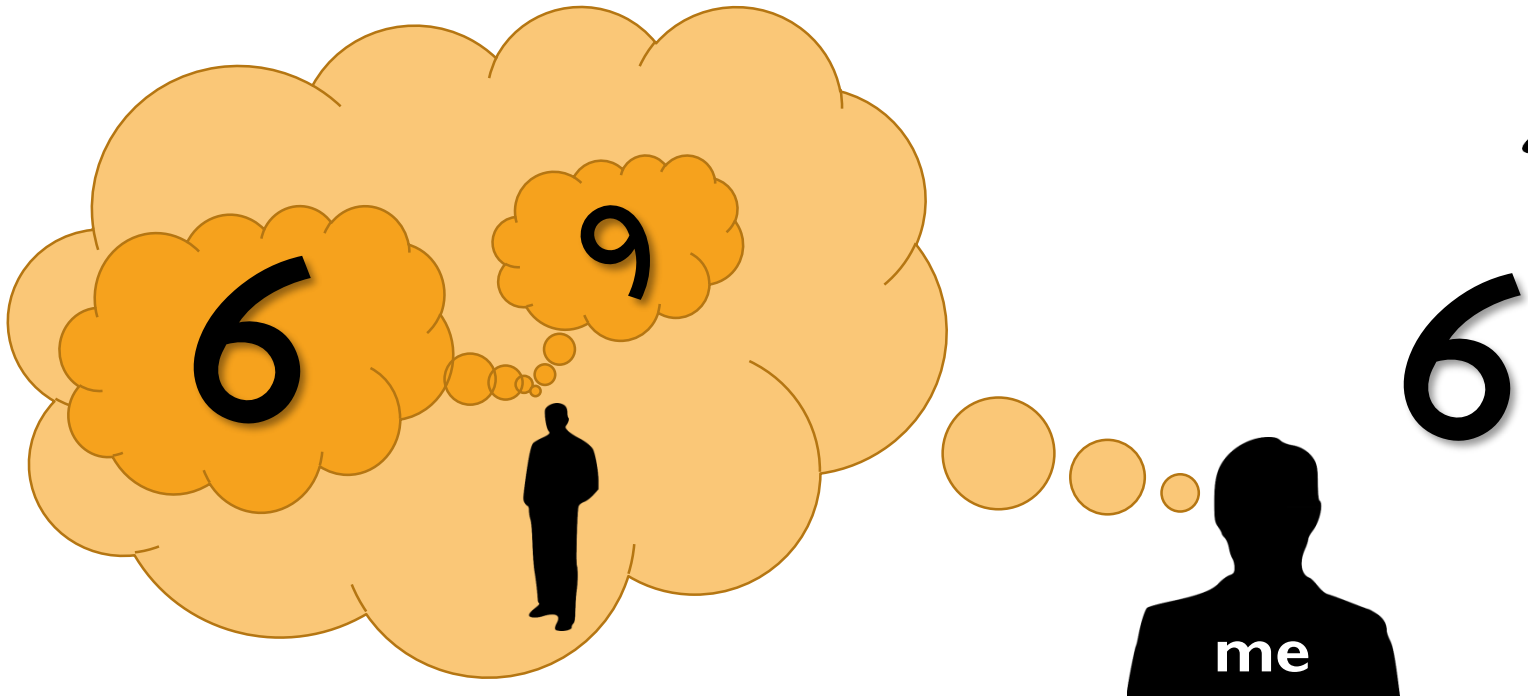
    → account for individuation and accuracy in mental states description (J. Conway)
- **Perspective taking** :
  - Egocentricity is not the baseline → focused on other in some contexts (D. Samson ; A. Bezuidenhout)
- **Empathy :**
  - Not all about self-other sharing → need of self-other distinction (especially if self-other conflict) (C. Lamm)

➔ **Two mentalizing dimensions** (at least) :

- Self-other distinction (or perspective **conflict handling**) : cost of handling (monitoring & inhibition)
- Self-other priority : **processing advantage for self- vs. other**-perspective

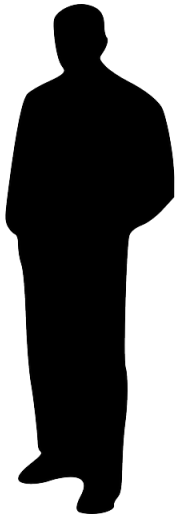
MY NEW ACCOUNT OF INDIVIDUAL DIFFERENCES IN MENTALIZING

- Failure to infer a mental state (mental rotation of "6") → inferential process
- Low capacity to inhibit self-perspective (put aside "6") → self-other distinction dimension
- Excessively focussed on self-perspective → self-other priority dimension



NEW ACCOUNT OF INDIVIDUAL DIFFERENCES IN MENTALIZING

- Failure to infer a mental state (mental rotation of "6") → inferential process / representation capacity
- Low capacity to inhibit self-perspective (put aside "6") → self-other distinction dimension
- Excessively focussed on self-perspective → self-other priority dimension

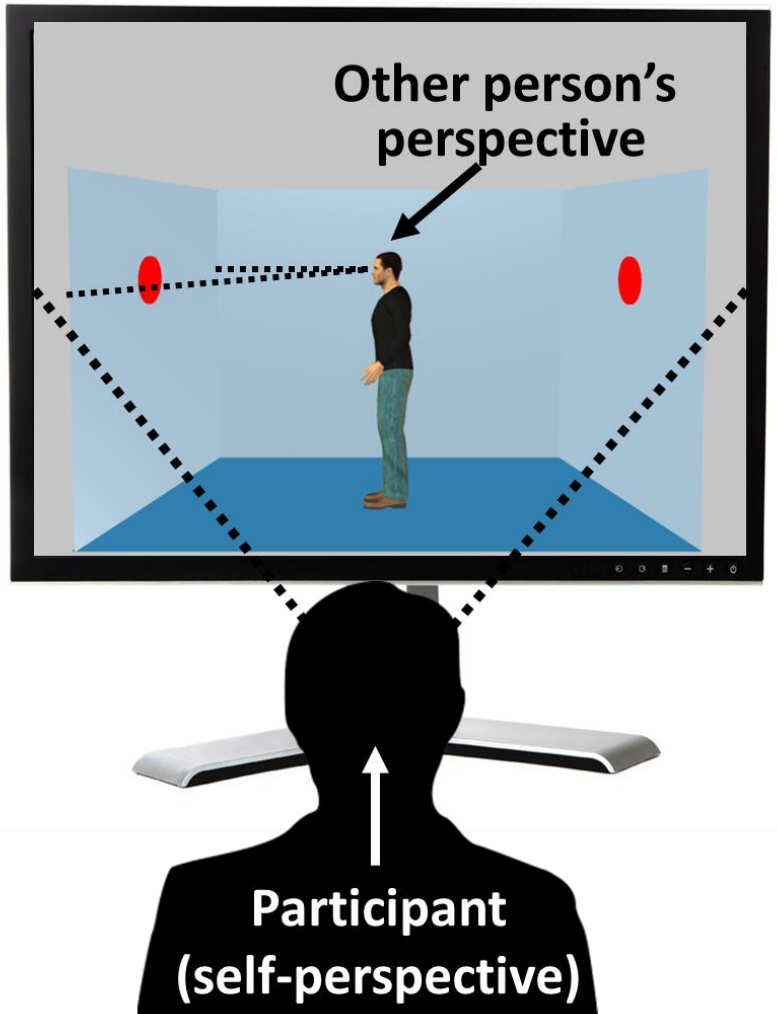


- Advantages of self-other distinction & self-other priority :
  - Assumed to be the same processes irrespective of the mental state
  - Measures individual differences expected to generalize to other type of mentalizing

- Problem with the inferential process / representational capacities :
  - Many distinct processes : understanding others' beliefs, desires, sarcasm, humor, faux-pas, …
  - Risk of inconsistent findings because measuring individual differences on different processes !
  - → let's minimize individual difference in the inferential process → most basic inferential process !

6

LEVEL-1 VISUAL PERSPECTIVE TAKING



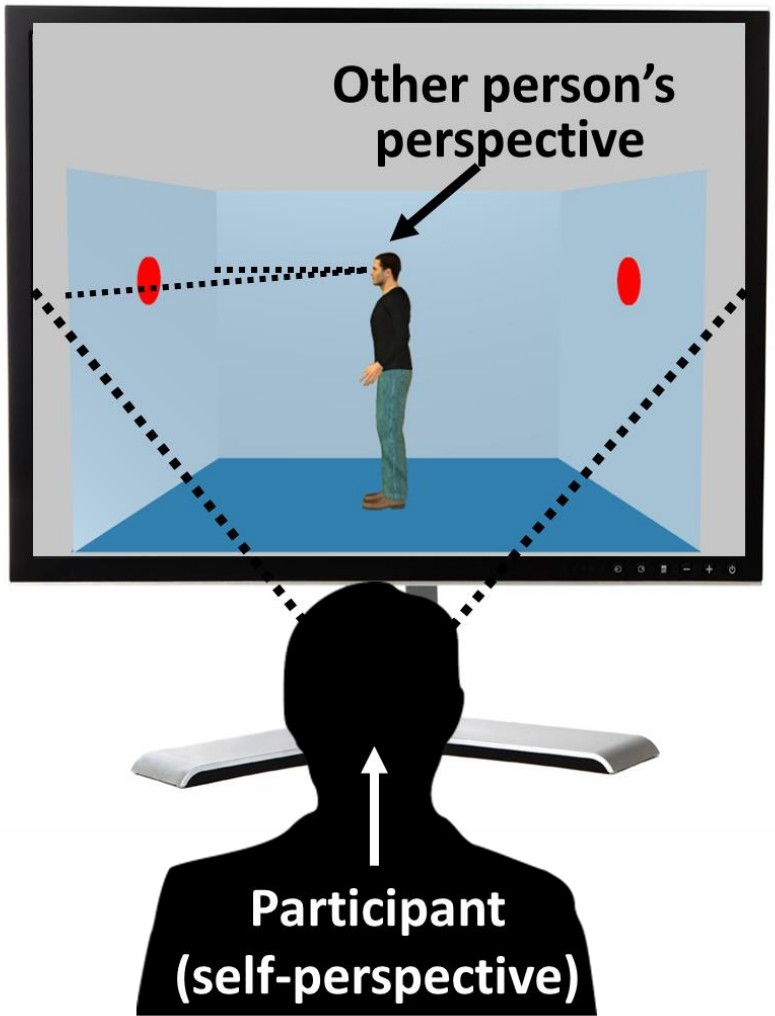
- **level-1 visual perspective taking :**
  - = eye gaze being processed into knowledge about whether a person sees an object" :
  - Year 1: start to follow where others' eyes are looking (Hood, Willen, & Driver, 1998)
  - Year 2: follow less when the person cannot see the object (Brooks & Meltzoff, 2002; Butler, Caron, & Brooks, 2000)
  - Present in non-human animals (Moll & Tomasello, 2006 ; e.g., dogs, marmosets, goats, some birds species)

→ considered as the most basic, modular, first-developed mentalizing process (Flavell, 2004; Baron-Cohen, 1995)

→ **Most basic inferential process**

→ **Lowest individual differences expected**

2-DIMENSIONAL MENTALIZING PERFORMANCE



Self-other priority

PERSPECTIVE

Self **vs.** Other

Self-other distinction

CONGRUENCY

Consistent **vs.** Inconsistent

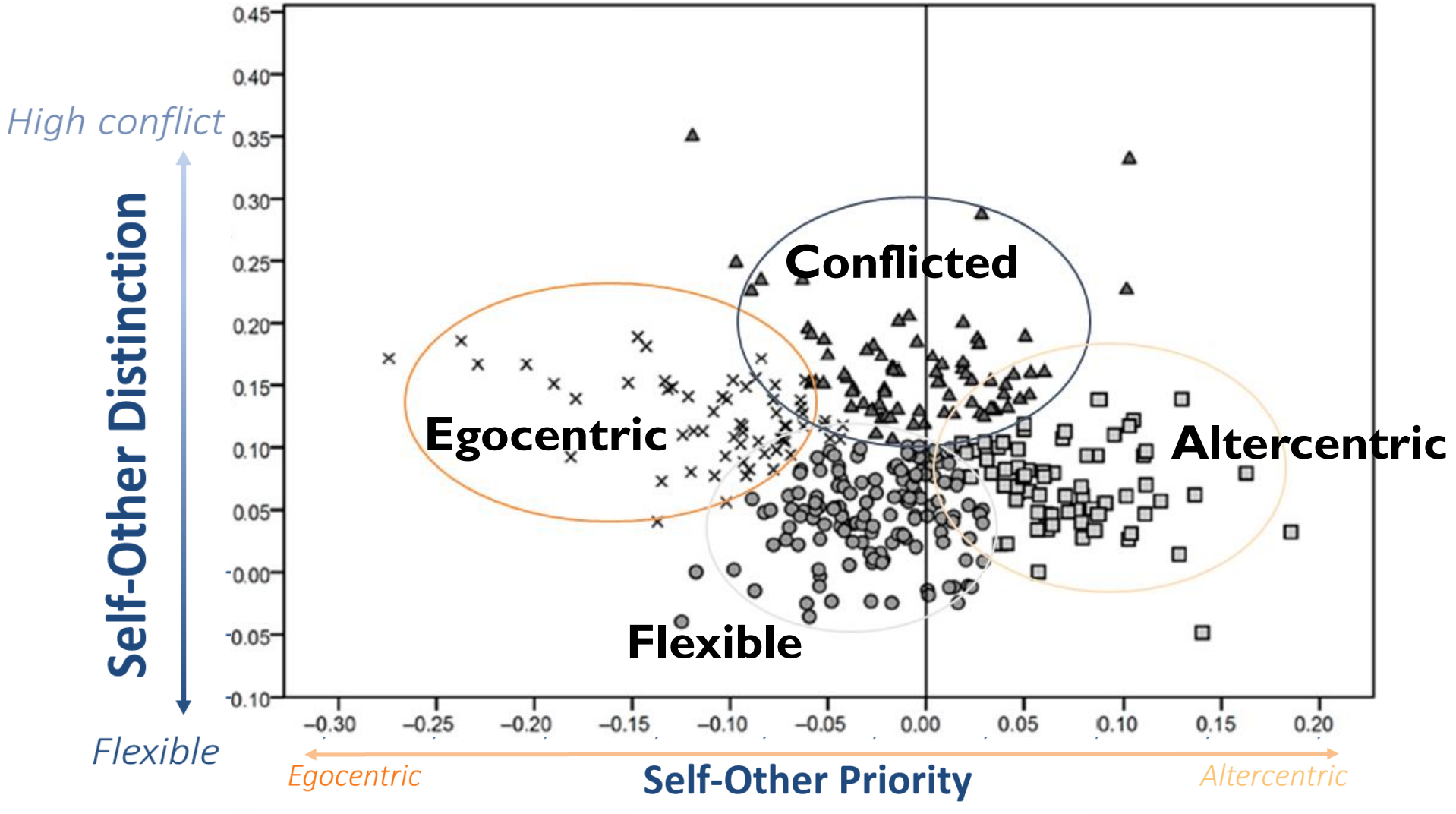
*Do **YOU** see 2 discs ?*

*Does **SHE** see 2 discs ?*

*Do **YOU** see 2 discs ?*

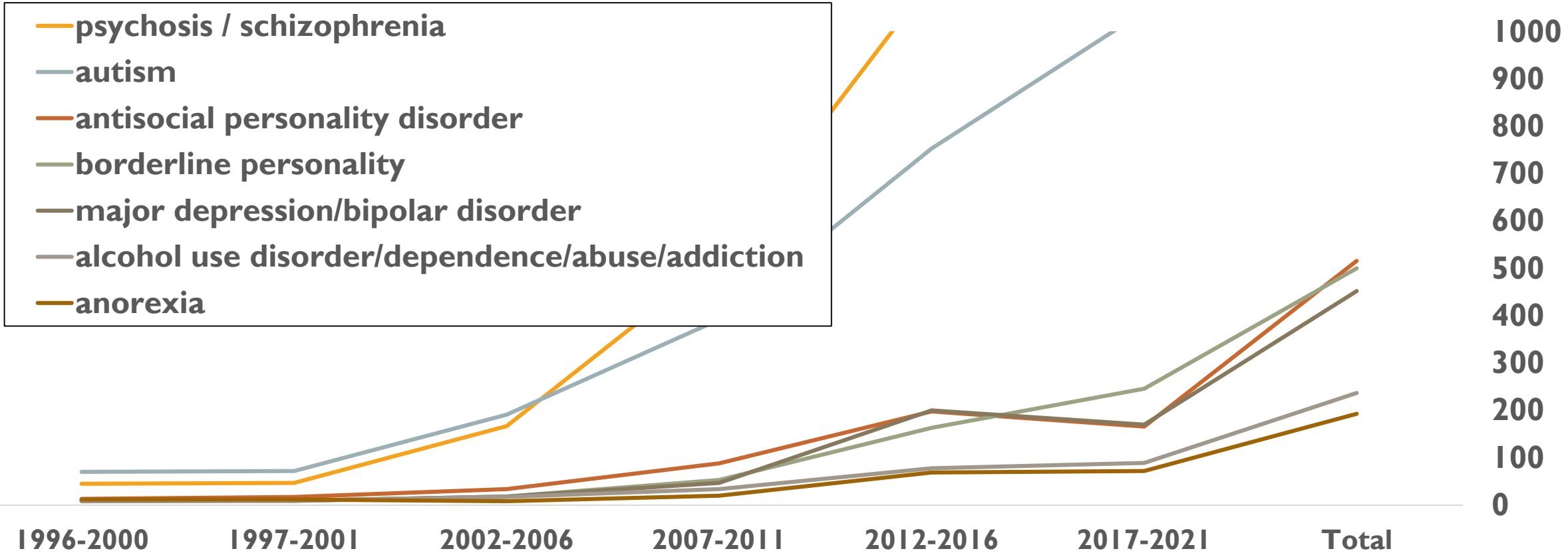
*Does **SHE** see 2 discs ?*

MAPPING MENTALIZING INDIVIDUAL DIFFERENCES ACROSS 2 DIMENSIONS



MENTALIZING PERFORMANCE ACROSS MENTAL DISORDERS

Number of articles with « *social cognition / mentalizing / Theory of Mind / empathy* »
(Pubmed 26/5/22)



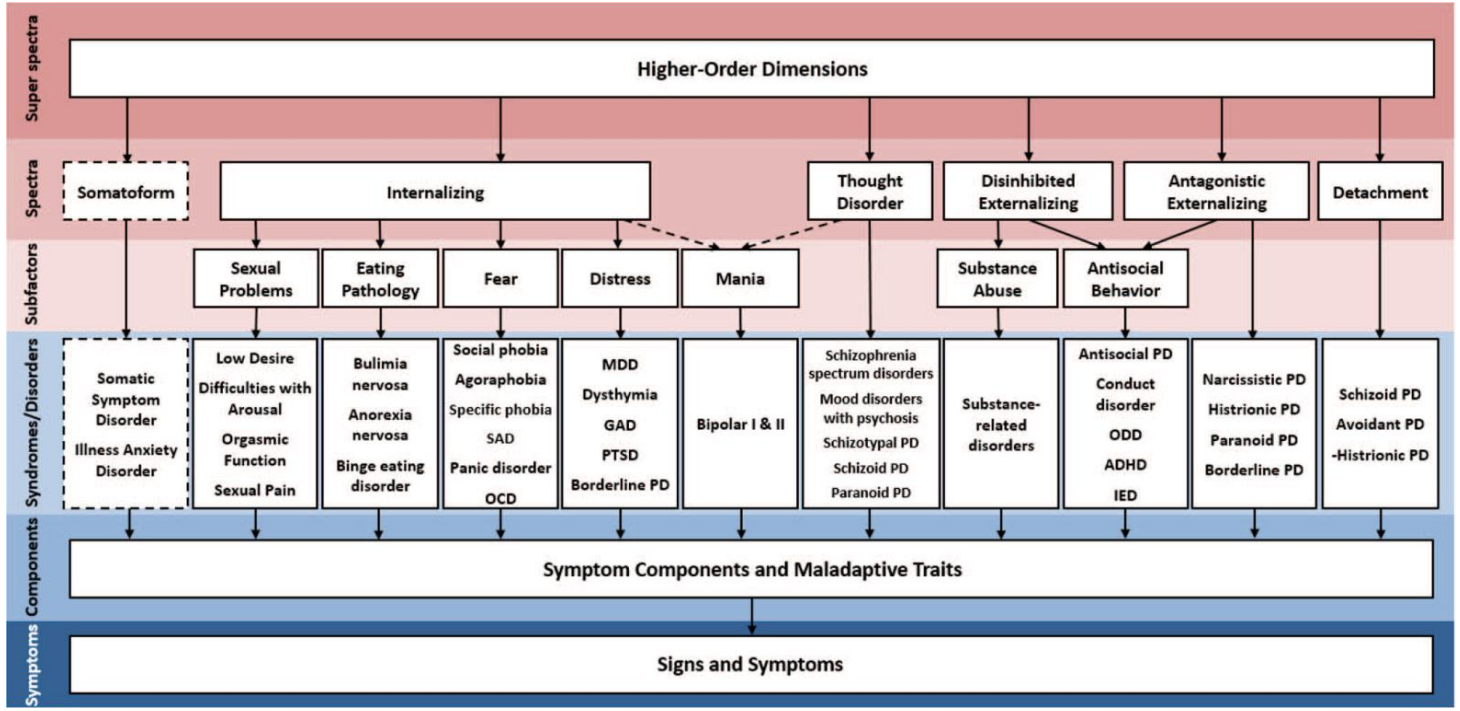
WHY *BUILDING BLOCKS OF MENTALIZING PERFORMANCE ACROSS MENTAL DISORDERS ?*

- Socio-cognitive research can help transdiagnostic research by finding transdiagnostic dimensions

The Hierarchical Taxonomy of Psychopathology (HiTOP): A Dimensional Alternative to Traditional Nosologies

Roman Kotov
Stony Brook University

Robert F. Krueger
University of Minnesota

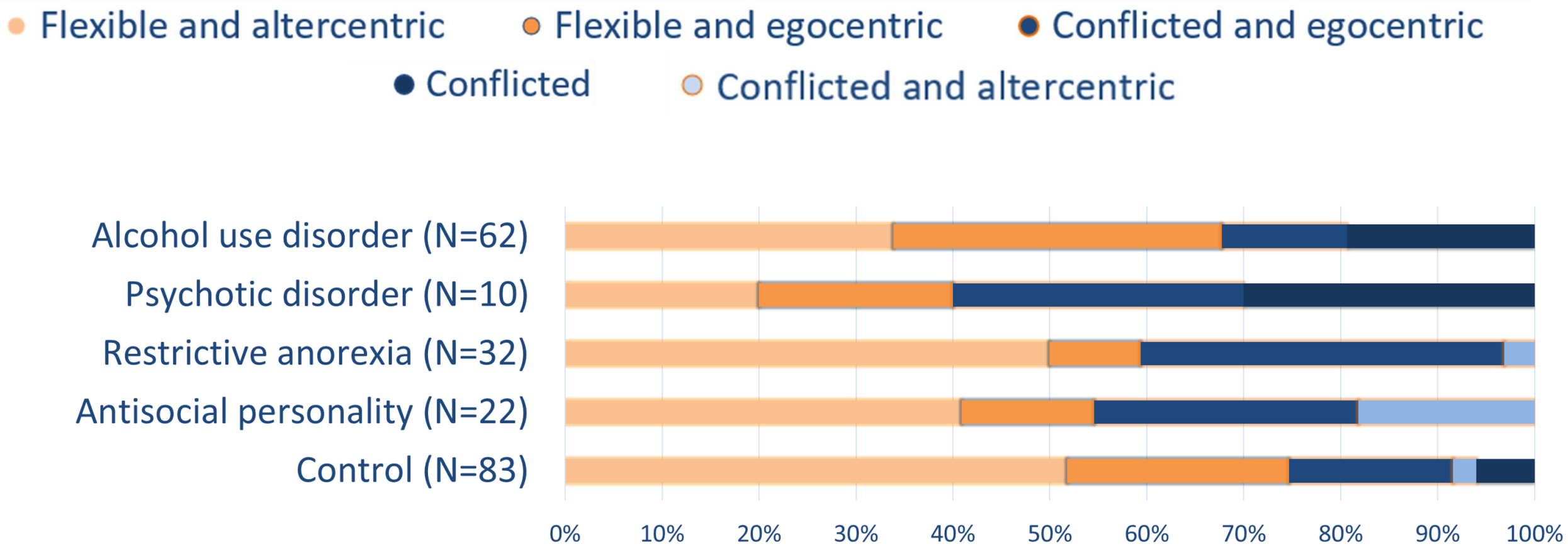


Clashing Diagnostic Approaches: *DSM-ICD versus RDoC*

Scott O. Lilienfeld, Ph.D. and **Michael T. Treadway, Ph.D.**
Emory University

	UNITS OF ANALYSIS							
DOMAINS/CONSTRUCTS	Genes	Molecules	Cells	Circuits	Physiology	Behavior	Self-Reports	Paradigms
Negative Valence Systems								
Acute threat ("fear")								
Potential threat ("anxiety")								
Sustained threat								
Loss								
Frustrative nonreward								
Positive Valence Systems								
Approach motivation								
Initial responsiveness to reward								
Sustained responsiveness to reward								
Reward learning								
Habit								
Cognitive Systems								
Attention								
Perception								
Working memory								
Declarative memory								
Language behavior								
Cognitive (effortful) control								
Systems for Social Processes								
Affiliation/attachment								
Social communication								
Perception/understanding of self								
Perception/understanding of others								
Arousal/Modulatory Systems								
Arousal								
Biological rhythms								
Sleep-wake								

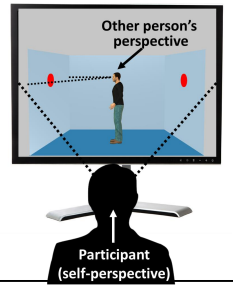
MENTALIZING PROFILES ACROSS MENTAL DISORDERS

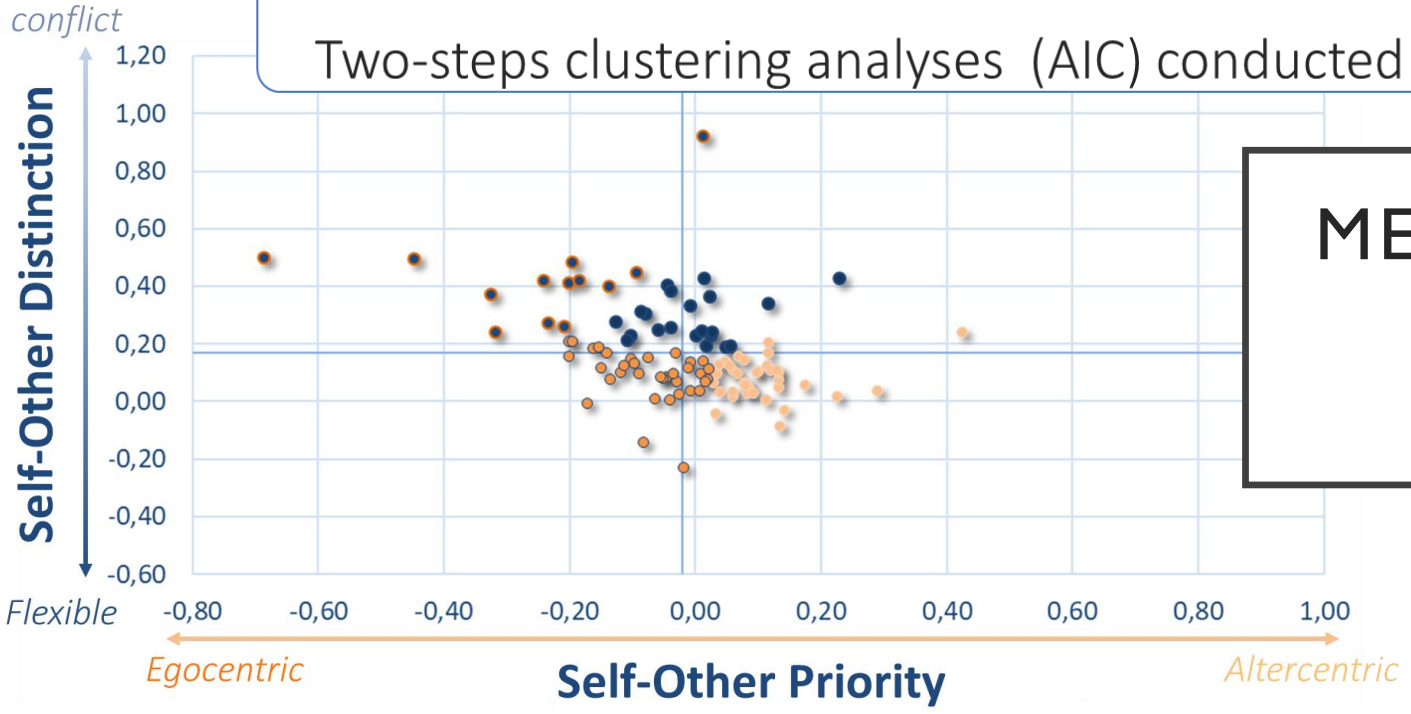


Two-steps clustering analyses (AIC) conducted on VPT1 and VPT2 samples

MENTALIZING PROFILES ACROSS MENTAL DISORDERS

VPT1
N=105





- Flexible and altercentric
- Flexible and egocentric
- Conflicted and egocentric
- Conflicted
- Conflicted and altercentric

VPT2
N=129

CONCLUSION

(1) Transdiagnostic socio-cognitive profiles via 2-dimensional assessment : Self-Other Priority and Self-Other Distinction.

(2) Document heterogeneity of profiles despite same diagnosis across 4 clinical populations

(3) Three socio-cognitive profiles irrespective of PT task

→ **Self-Other Priority and Self-Other Distinction as building blocks underlying individual differences.**

(4) Subtypes of 'mentalizing deficit' (instead of present/absent) : Excessively egocentric, excessively altercentric, conflicted, or a combination of deficits…

LIMITS: preliminary data, unmatchted controls, different VPT tasks for different populations

PERSPECTIVES: **collaborations wanted** (13 min online/offline task; soon up to 8 sub-dimensions)

THANK YOU

- **Visit Alix Bigot's poster (session 3) for more info**

- Flexible and altercentric
- Flexible and egocentric
- Conflicted and egocentric
- Conflicted
- Conflicted and altercentric