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# Identifying transdiagnostic socio-cognitive profiles across 4 clinical populations

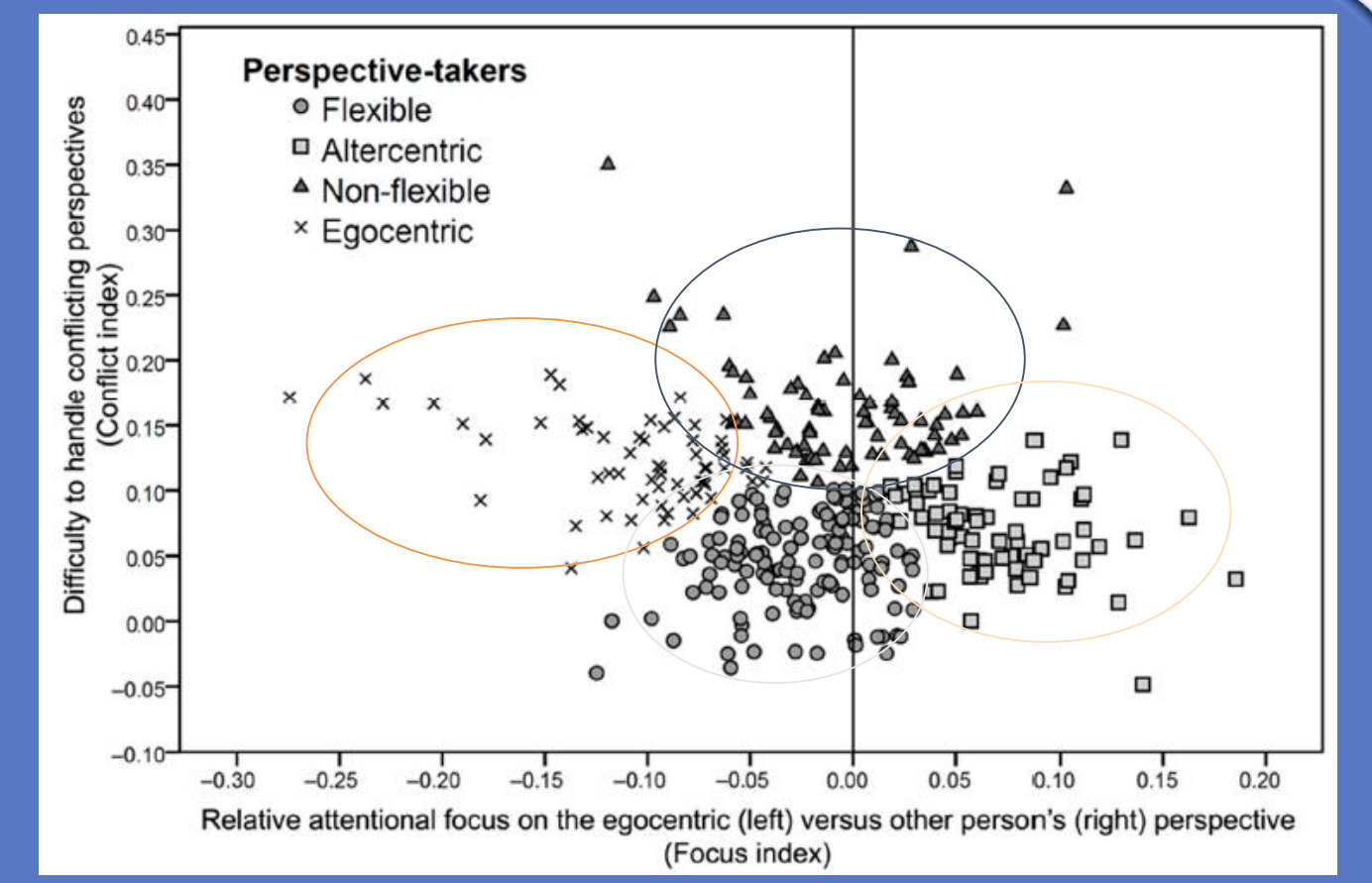
Bigot, A.\*, De Timary, P., Amadiou, C., Leclercq, S., Pham, T., Saloppé, X., Tiberi, L., Nandrino, J.L., Peeters, J.C., Bukowski, H. (2022)



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## Introduction

- Distinct profiles of *perspective-takers* found in healthy participants<sup>1,2</sup>.
- Socio-cognitive impairments and interpersonal difficulties are frequently observed in various mental disorders<sup>4-5</sup>.
- But inconsistent findings: possibly due to overreliance on single-score and self-report measures, and unaccounted heterogeneity within populations sharing the same diagnosis → *Multidimensional and transdiagnostic assessment of social cognition*<sup>1,6</sup>.
- We examined socio-cognitive performance across **two dimensions**<sup>6</sup> posited to underpin mentalizing skills across all populations
  - **Self-Other Priority**: the tendency to *focus* more (or attentionally prioritize) on one perspective compared to the other.
  - **Self-Other Distinction**: the ability to handle *conflicting* perspectives and inhibit the interference.



4 social-cognitive profiles in healthy adults<sup>1</sup>

## VPT1<sup>7</sup>

## Method

## VPT2<sup>8</sup>

- Previous studies<sup>9-11</sup> had 1 condition vs. ⇨ **4 conditions**
- 96 trials : Response time / accuracy rate ⇨ **IES (inverse efficiency score)**

### Self-Other priority:

$$(IES \text{ Other-persp.} - IES \text{ Self-persp.}) / (IES \text{ Other-persp.} + IES \text{ Self-persp.})$$

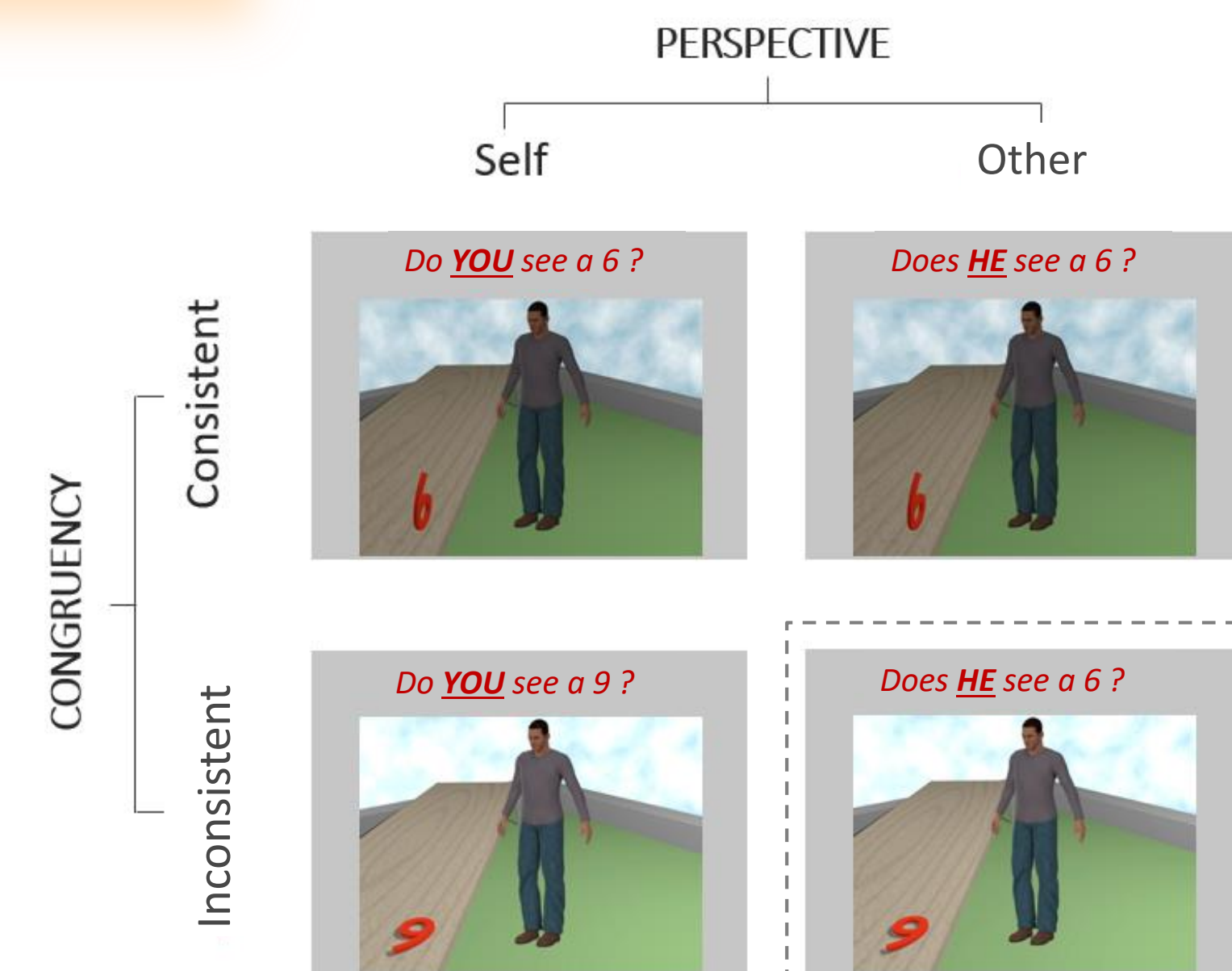
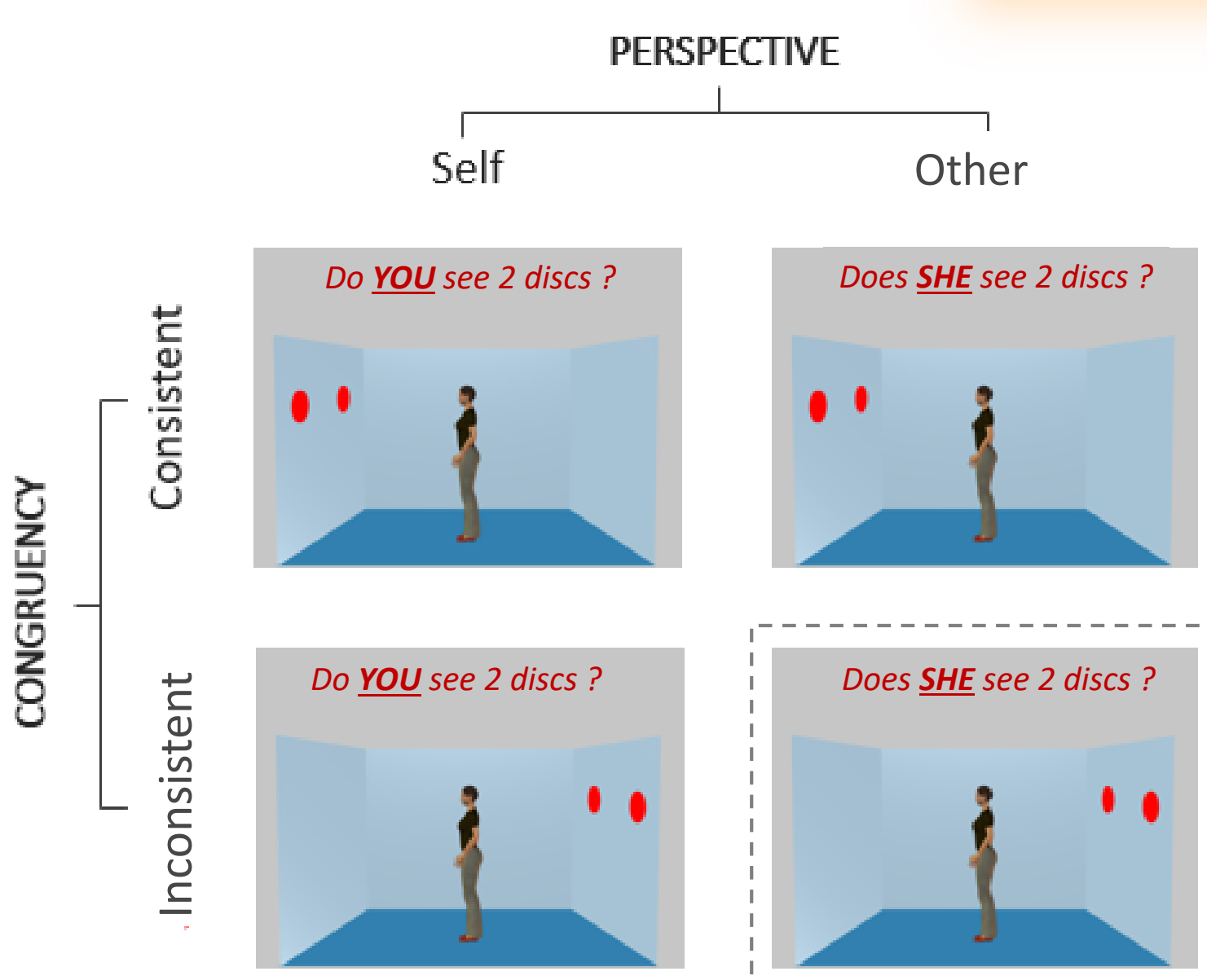
### Self-Other distinction:

$$(IES \text{ Incongruent-persp.} - IES \text{ Congruent-persp.}) / (IES \text{ Incongruent-persp.} + IES \text{ Congruent-persp.})$$

- **WHETHER (s)he can see**

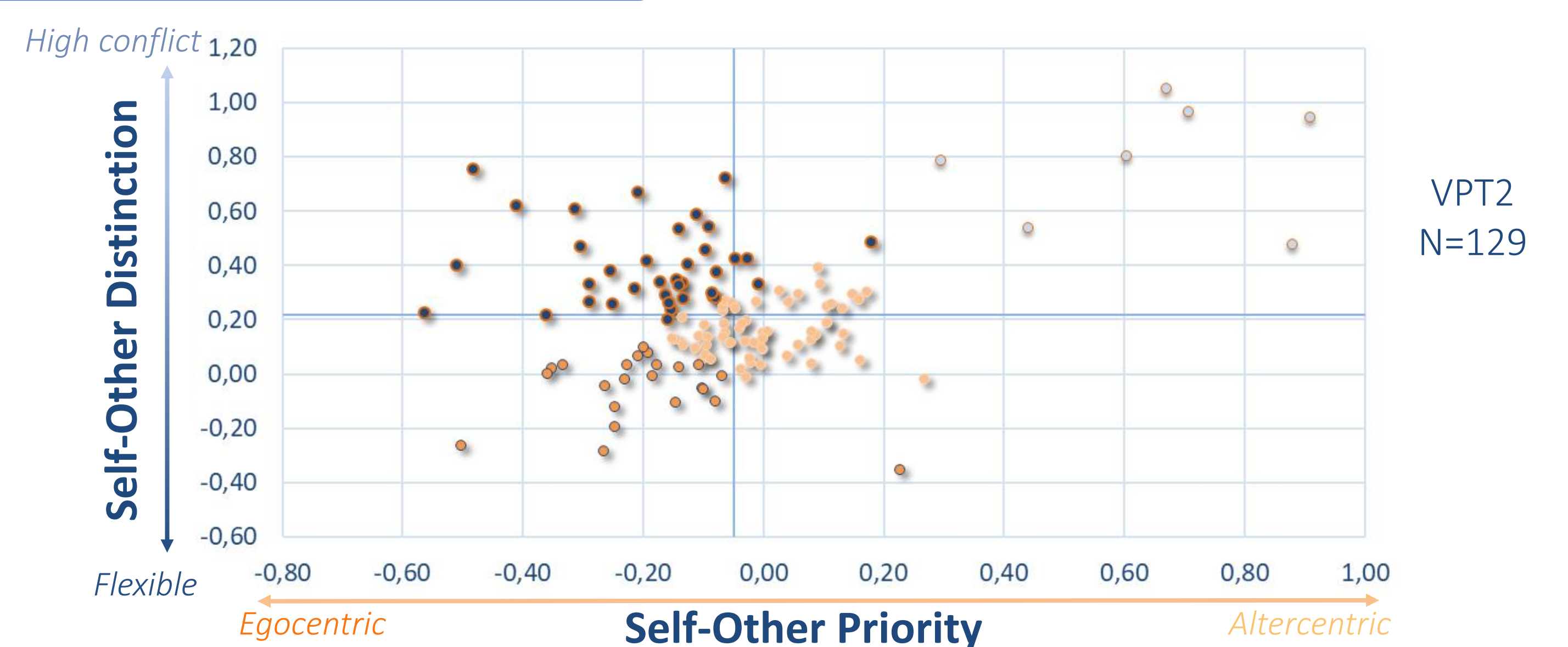
→ Evidence of construct and convergent validity with more ecological measures<sup>1,10-13</sup>

- **WHAT (s)he can see**



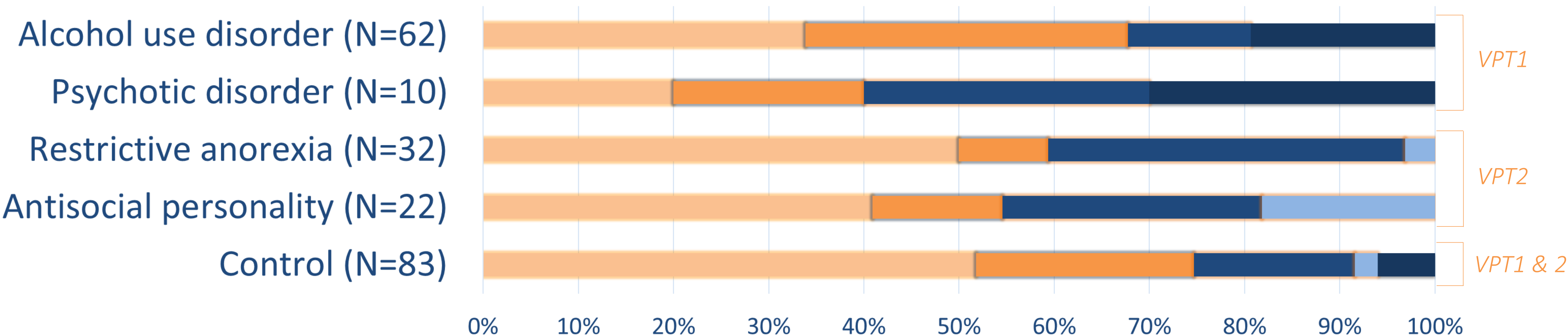
## Analyses and results

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



## Transdiagnostic socio-cognitive profiles:

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



### 3 main results:

- High individual differences along both dimensions
- 3 similar clusters across VPT1 and VPT2
- Heterogeneity of profiles within same-diagnosis populations

## Discussion

- (1) Distinct transdiagnostic socio-cognitive profiles identified via 2-dimensional assessment : Self-Other Priority and Self-Other Distinction.
- (2) Replicates and extends previous studies conducted on healthy students in cognitive and affective PT<sup>1,2</sup>.
- (3) Heterogeneity of profiles despite same diagnosis across 4 clinical populations (alcohol use disorder, psychotic disorder, restrictive anorexia, antisocial personality).
- (4) Three socio-cognitive profiles irrespective of PT task (flexible and altercentric, flexible and egocentric, conflicted and egocentric) → *common basic processes/profiles underlying individual differences*.
- (5) Subtypes of 'mentalizing deficit' (instead of present/absent) : Excessively egocentric, excessively altercentric, conflicted, or a combination of deficits...

## Perspectives and limitations

- (1) Rehabilitation / personalized training programs adapted to specific socio-cognitive profile.
  - (2) Foundation for transdiagnostic collaboration.
  - (3) Extension to other populations (collaborations welcomed ☺)
  - (4) New PT tool with 8 sub-dimensions in development.
- (1) PRELIMINARY DATA → small sample sizes → unrepresentative samples (for now).
  - (2) Unmatched controls, no covariates currently included (demographics, questionnaires, ...).
  - (3) Assessment via distinct tasks for distinct populations.
  - (4) Cluster partitions variation (parameters and indexes), as reported in previous study<sup>1,5</sup>.

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