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# Identifying transdiagnostic socio-cognitive profiles across 4 clinical populations

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

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Introduction

o Distinct profiles of *perspective-takers* found in healthy participants[1,2].

o Socio-cognitive impairments and interpersonal difficulties are frequently observed in various mental disorders[4-5].

o 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*[1,6].

➡ We examined socio-cognitive performance across **two dimensions**[6] posited to underpin mentalizing skills across all populations

- <u>Self-Other Priority:</u> the tendency to *focus* more (or attentionally prioritize) on one perspective compared to the other.

- <u>Self-Other Distinction:</u> the ability to handle *conflicting* perspectives and inhibit the interference.
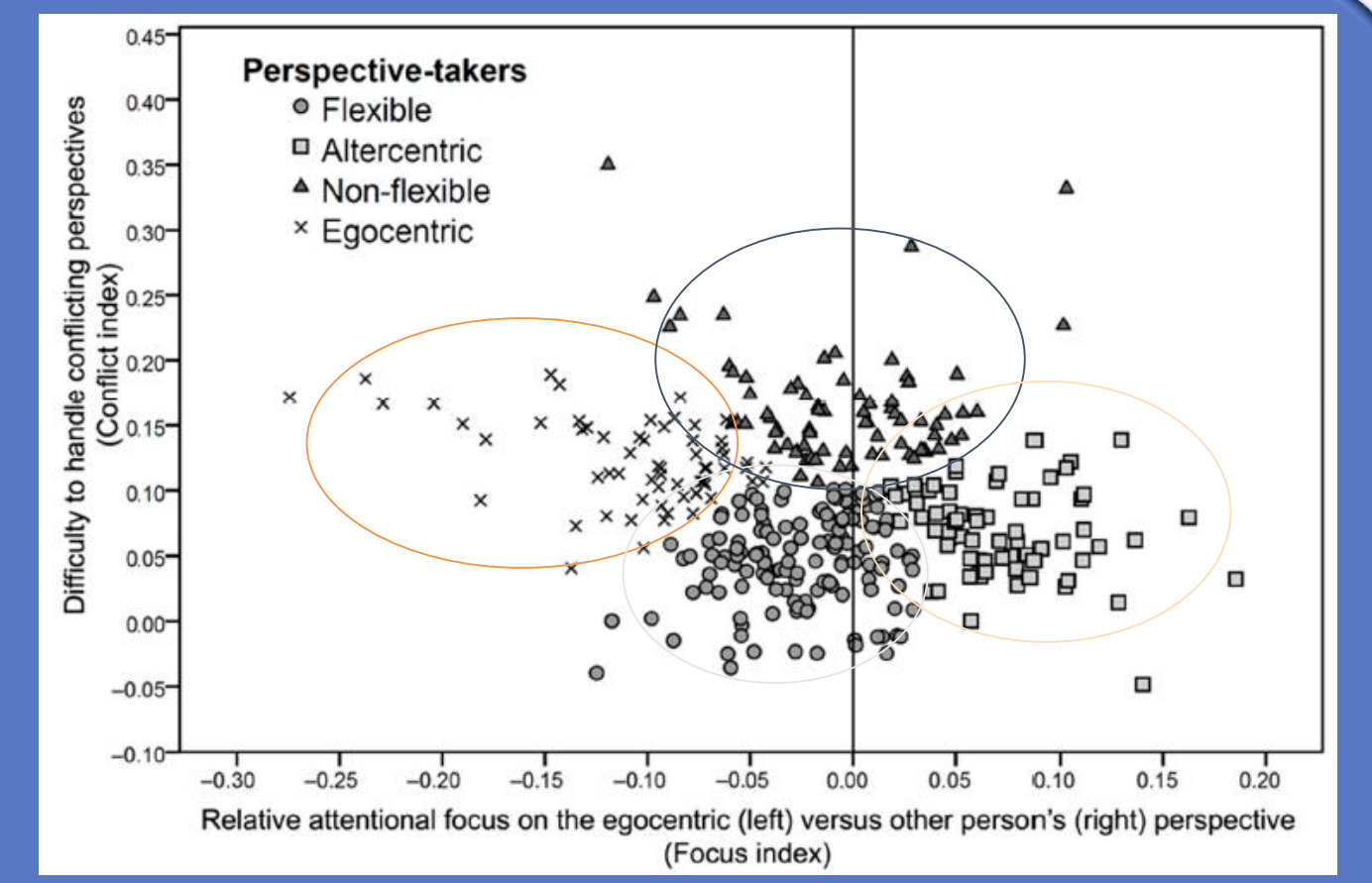
4 social-cognitive profiles in healthy adults[1]

VPT1[7]

Method

- Previous studies[9-11] had 1 condition vs. ➡ **4 conditions**
- 96 trials : Response time / accuracy rate ➡ **IES** (inverse efficiency score)

<u>Self-Other priority</u>:
(IES Other-persp. - IES Self-persp.) / (IES Other-persp. + IES Self-persp.)
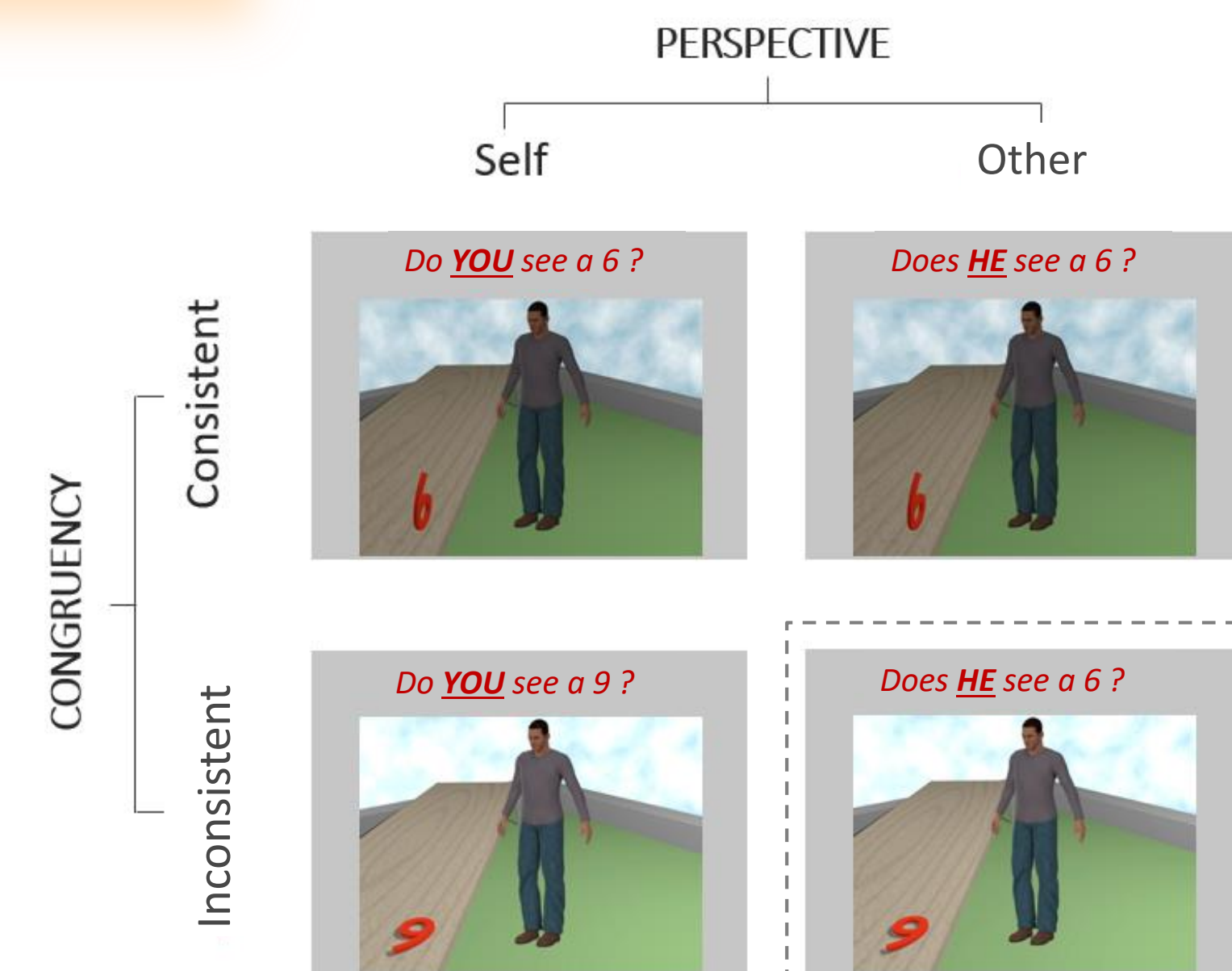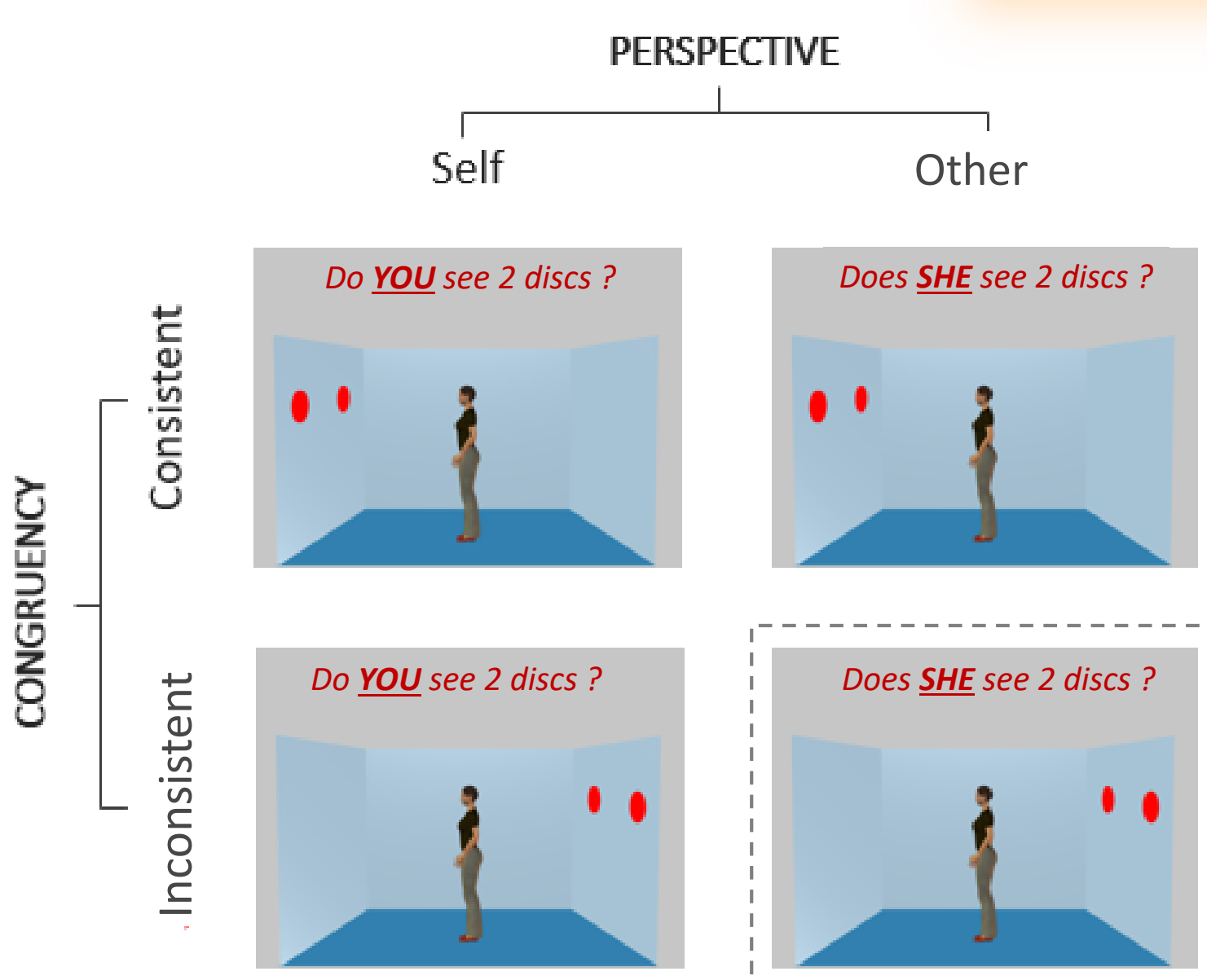
<u>Self-Other distinction</u>:
(IES Incongruent-persp. - IES Congruent-persp.) / (IES Incongruent-persp. + IES Congruent-persp.)

- *WHETHER* (s)he can see
  → *Evidence of construct and convergent validity with more ecological measures*[1,10-13]
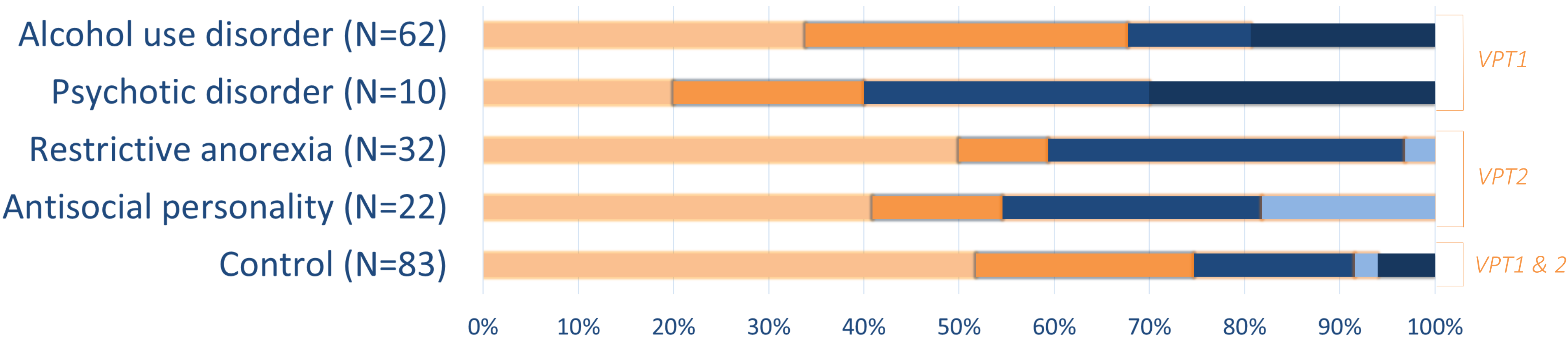
- *WHAT* (s)he can see

VPT2[8]

Analyses and results

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

VPT1 N=105

VPT2 N=129

Transdiagnostic socio-cognitive profiles:

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

Alcohol use disorder (N=62) — VPT1
Psychotic disorder (N=10)
Restrictive anorexia (N=32) — VPT2
Antisocial personality (N=22)
Control (N=83) — VPT1 & 2

<u>3 main results:</u>
- 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[1,2].

(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[1,5].

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