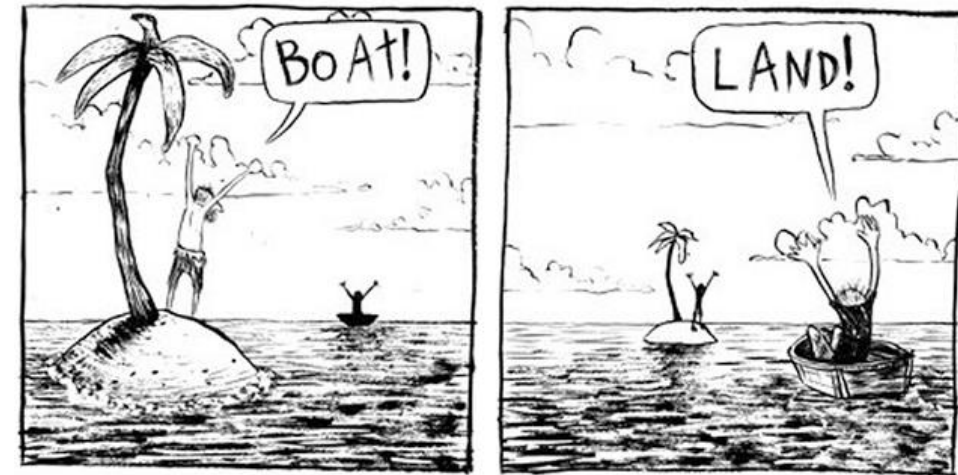


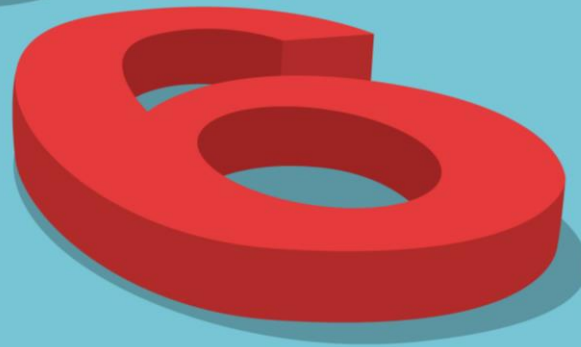
Pr. Henryk Bukowski
IPSY, UCLouvain



SOCIAL COGNITION BROKEN INTO ITS BUILDING BLOCKS AND EXPANDED TO LARGE-SCALE, DEVELOPMENTAL, AND TRANSDIAGNOSTIC SCOPES



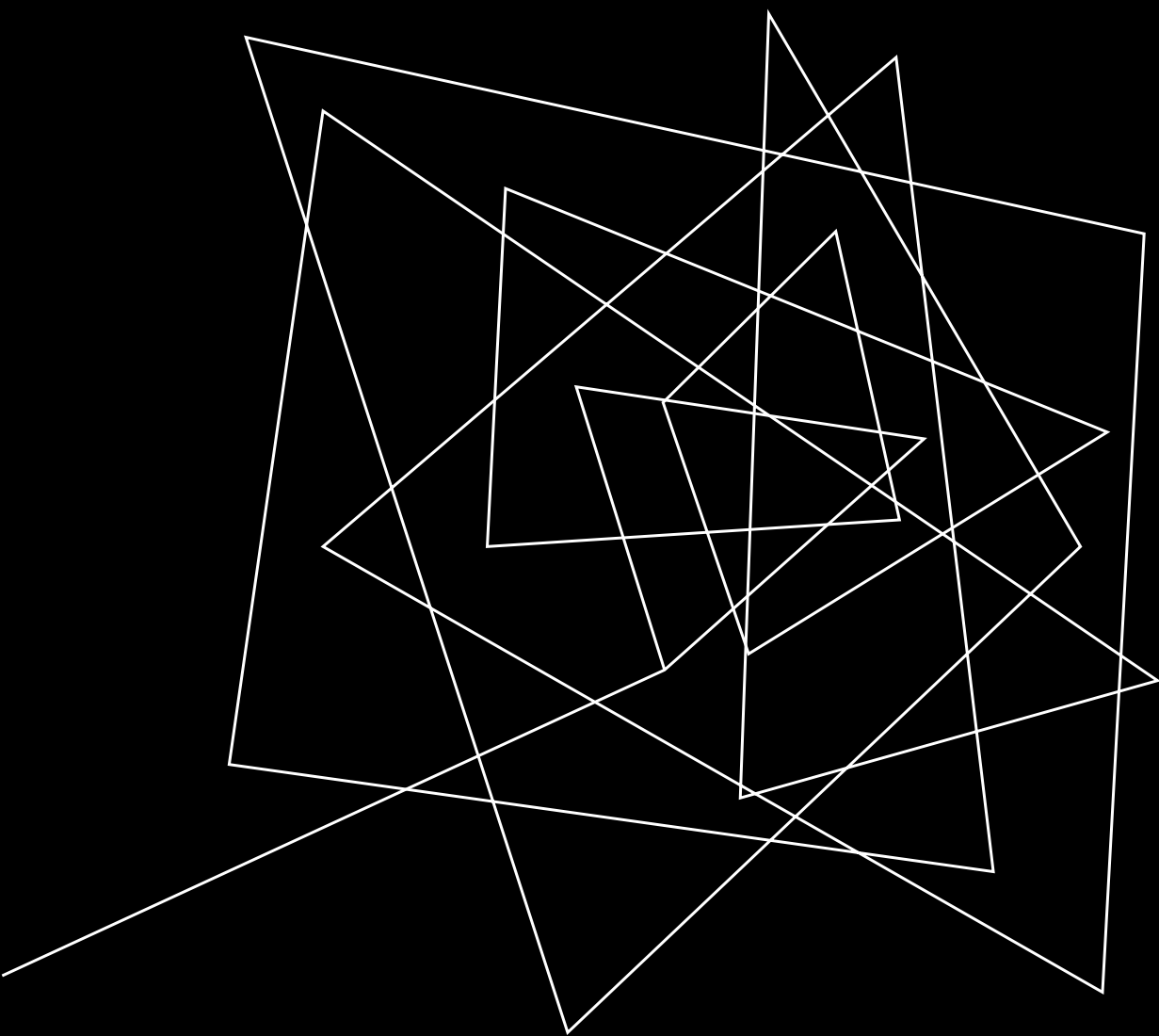
TO UNDERSTAND OTHERS,
TO BE UNDERSTOOD BY THEM,
TO PREDICT THEM,
TO HELP OR DECEIVE THEM



Whether you will succeed at taking his visual perspective depends on ...

- multiple mental processes → cognitive psychology/neuroscience
- individual + situational factors → social & differential psychology
- mental health or contribute to mental health → clinical psychology

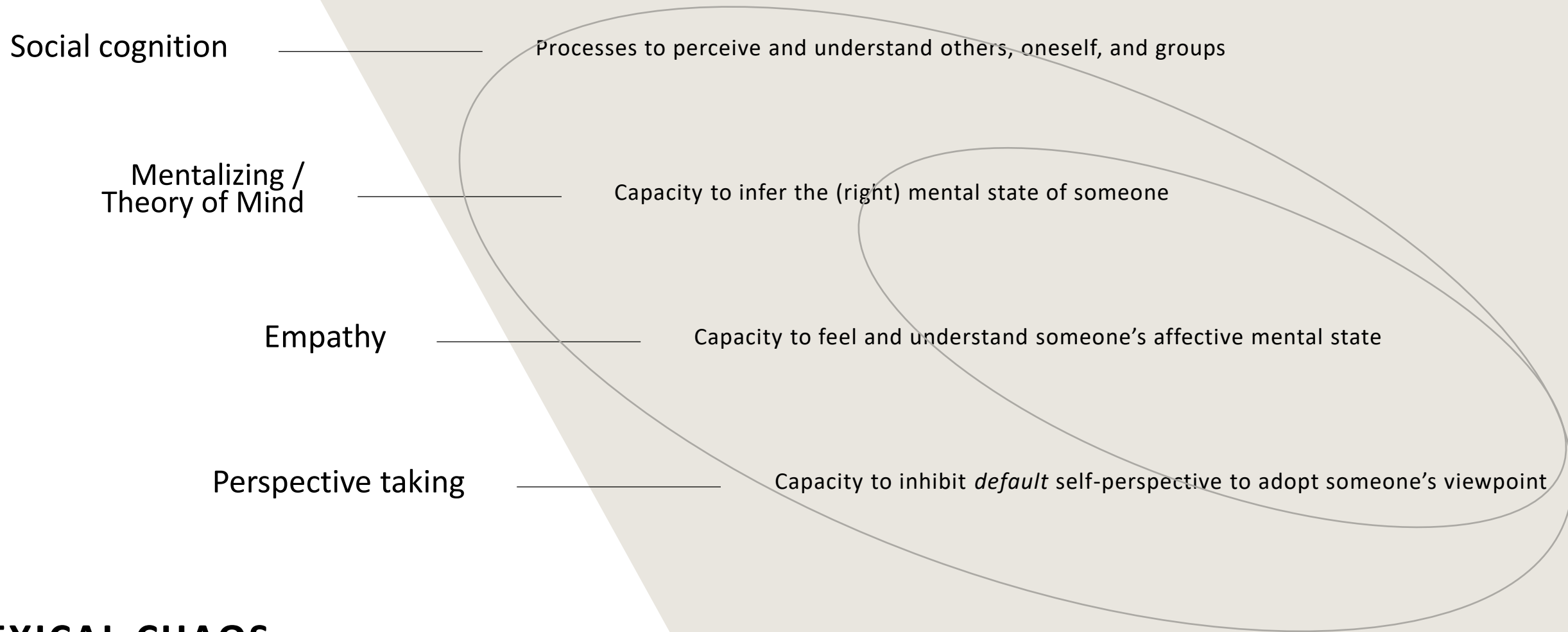




PLAN

- 1 Social cognition broken into its building blocks
- 2 Validity of multidimensional measurement
- 3 Prospects for collaborations

Social cognition broken into its building blocks



LEXICAL CHAOS:
SAME BUT DIFFERENT CONSTRUCTS

Social cognition broken into its building blocks

Social cognition

Processes to perceive and understand others, oneself, and groups

→ Parallel fields : others vs. self vs. groups

Mentalizing /
Theory of Mind

Capacity to infer the (right) mental state of someone

→ Rate of correct response = capacity to infer a mental state

(despite conflict with one's own beliefs, knowledge, desires, visual perspective, ...)

Empathy

Capacity to feel and understand someone's affective mental state

→ Extent of sensitivity to someone's emotion

Perspective taking

Capacity to inhibit *default self-perspective* to adopt someone's viewpoint

→ Rate of correct response = capacity to inhibit *default* self-perspective

PSYCHOMETRIC CHAOS:
CLOSE CONSTRUCTS BUT
DIFFERENT MEASURES

Social cognition broken into its building blocks

Social cognition

Processes to perceive and understand others, oneself, and groups

→ Parallel fields : others vs. self vs. groups

Other + Self

Mentalizing /
Theory of Mind

Capacity to infer the (right) mental state of someone

→ Rate of correct response = capacity to infer a mental state

(despite conflict with one's own beliefs, knowledge, desires, visual perspective, ...)

Inferential capacity

Empathy

Capacity to feel and understand someone's affective mental state

→ Extent of sensitivity to someone's emotion

Self-other priority

Perspective taking

Capacity to inhibit default self-perspective to adopt someone's viewpoint

→ Rate of correct response = capacity to inhibit self-perspective

Self-other distinction

**TWO SOCIO-COGNITIVE
DIMENSIONS:
SELF-OTHER DISTINCTION
SELF-OTHER PRIORITY**

Social cognition broken into its building blocks

DIMENSION 1: SELF-OTHER DISTINCTION

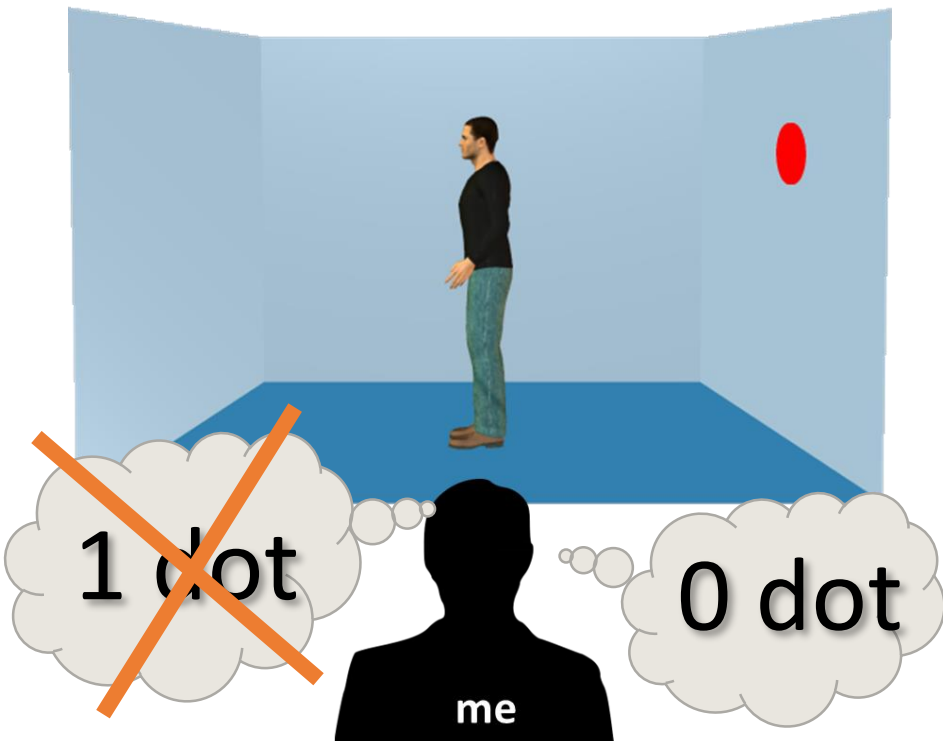
Ability to suppress the irrelevant conflicting perspective

→ monitoring, shifting, inhibition

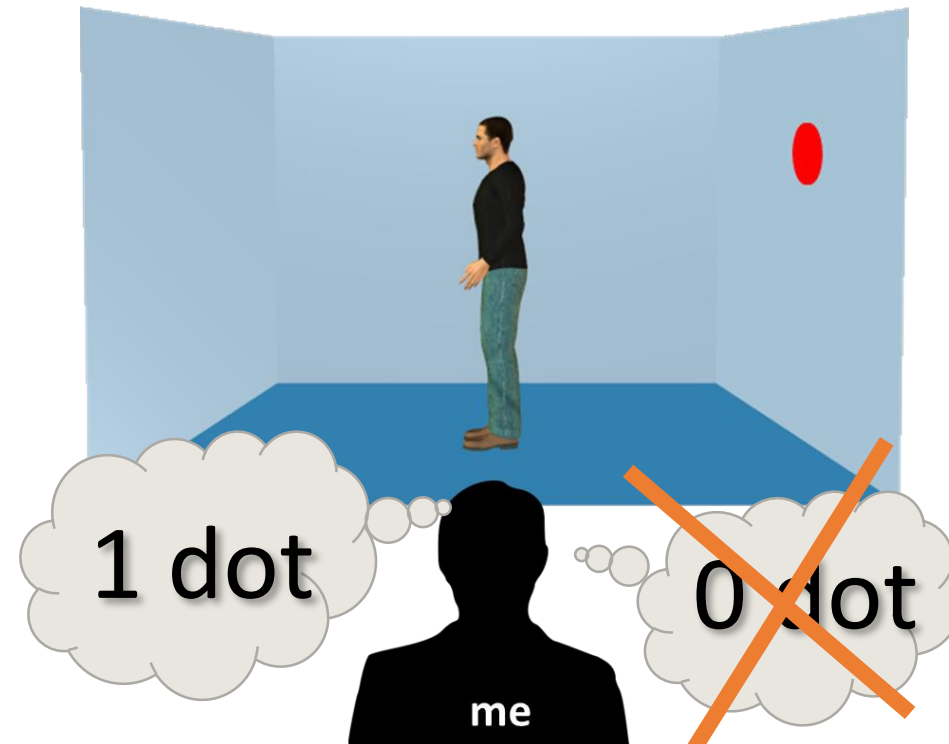
... irrespective of perspective taken (self- or other's)

→ **Conflicted** or **flexible** performance?

“Does HE see 1 red dot?”



“Do YOU see 1 red dot?”



Social cognition broken into its building blocks

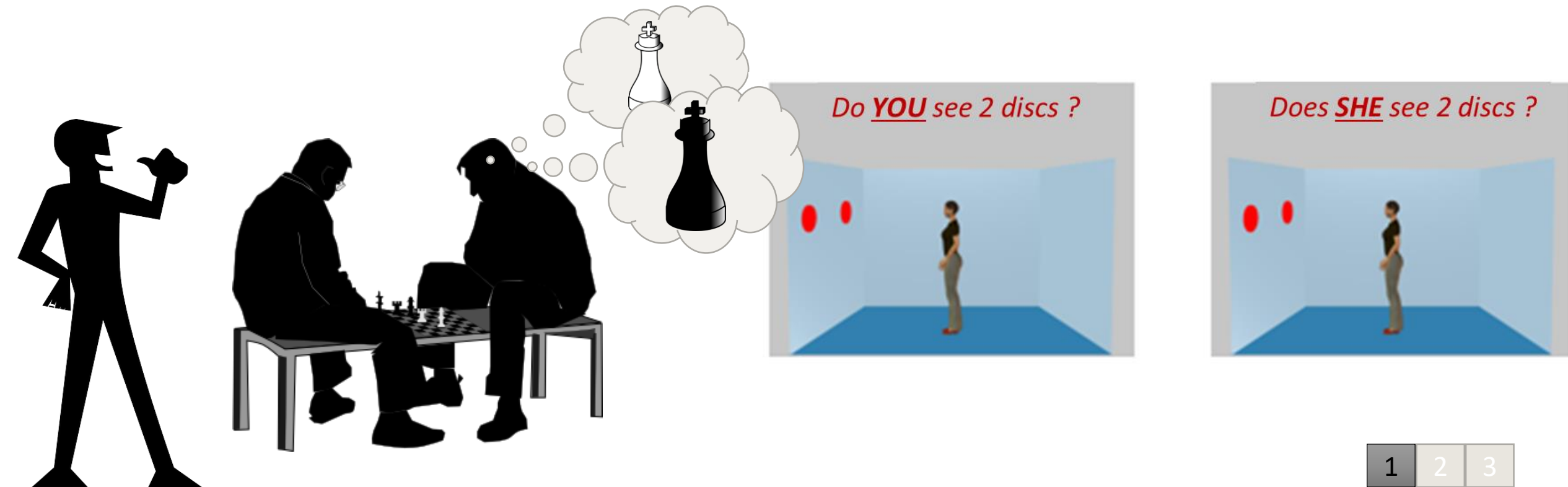
DIMENSION 2: SELF-OTHER PRIORITY

Processing advantage for self-perspective versus other's perspective

→ Attentional priority, social cues processing, access to mental representations

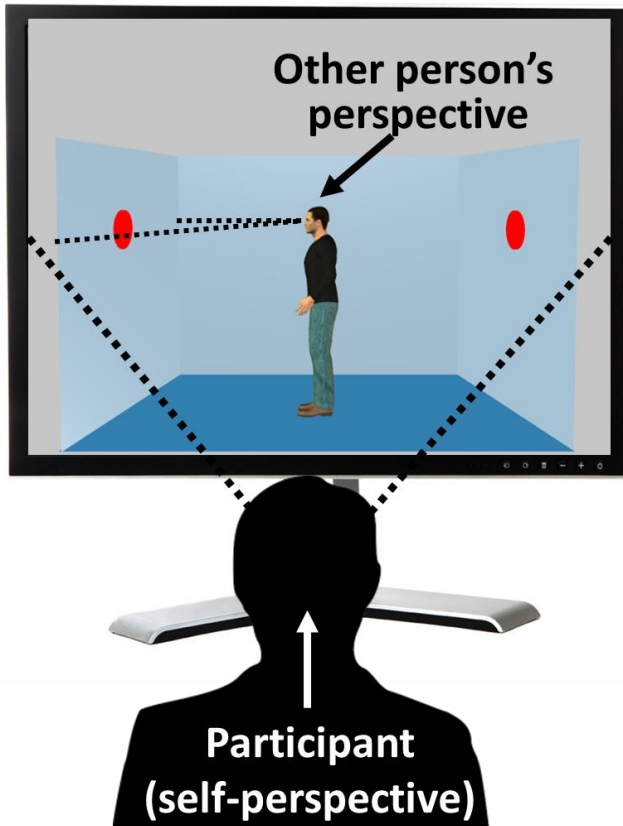
X against assumption of *default* self-perspective

→ **Egocentric** (self-centred) or **altercentric** (other-centred) performance?



Validity of multidimensional measurement

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



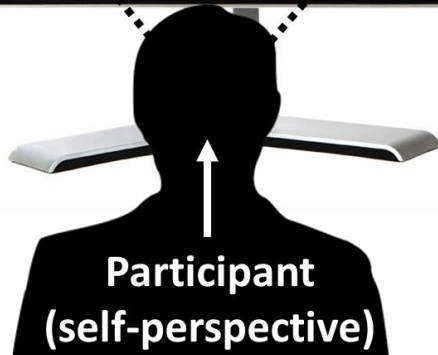
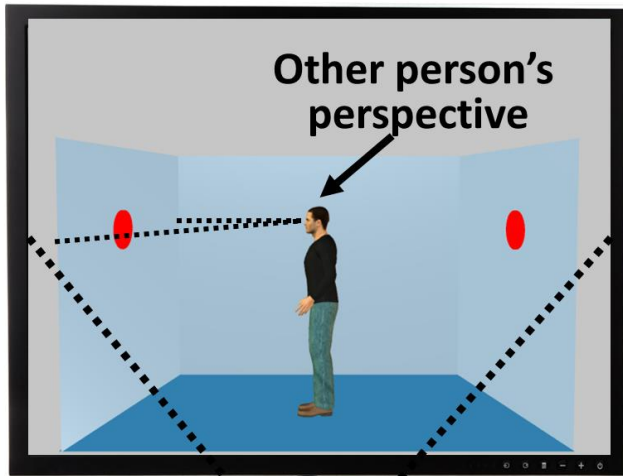
Experimental and correlational findings:

- ← **Guilt → + altercentric¹**
- ← **Shame → + conflicted¹**
- ← **Anger → trend + egocentric¹**
- ← **Joy vs. Sadness → + conflicted²**
- ← **Sleep deprivation → + conflicted³**
- ← **Forced attention on person → + altercentric⁴**
- ↔ **Students' perspective-taking and empathic habits⁵⁻⁷**
- ↔ **Physicians' perspective-taking with patients⁸**
- ↔ **Law school's narcissism → + altercentric²**

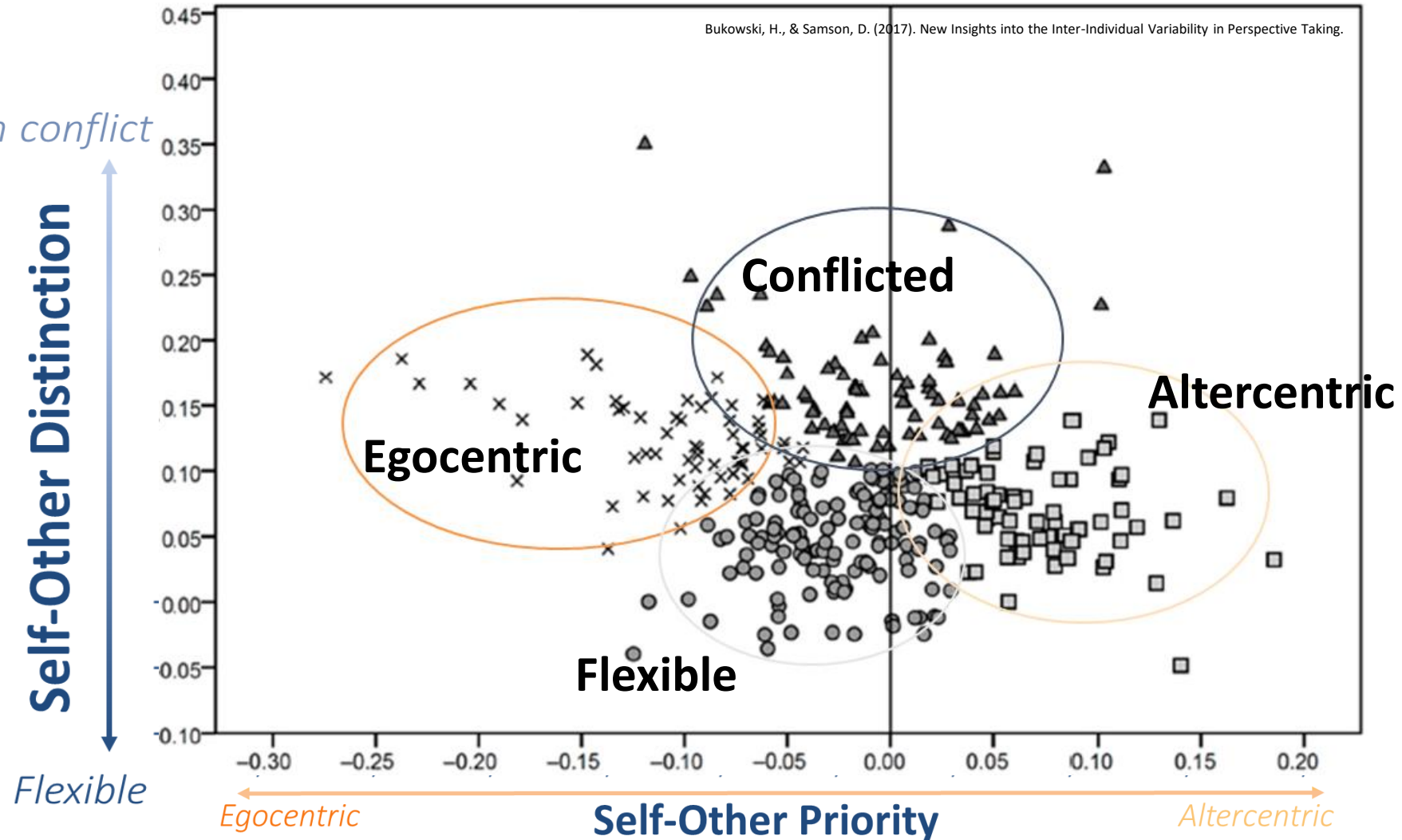
(1) Bukowski, H., & Samson, D. (2016). Can emotions influence level-1 visual perspective taking? (2) Bukowski, H. (2014). What influences perspective taking? A dynamic and multidimensional approach. (3) Deliens, G., Bukowski, H., Slama, H., Surtees, A., Cleeremans, A., Samson, D., & Peigneux, P. (2018). The impact of sleep deprivation on visual perspective taking. (4) Bukowski, H., Hietanen, J. K., & Samson, D. (2015). From gaze cueing to perspective taking: Revisiting the claim that we automatically compute where or what other people are looking at.. (5) Bukowski, H., & Samson, D. (2017). New Insights into the Inter-Individual Variability in Perspective Taking. (6) Mattan, B. D., Rotshtein, P., & Quinn, K. A. (2016). Empathy and visual perspective-taking performance. (7) Nielsen, M. K., Slade, L., Levy, J. P., & Holmes, A. (2015). Inclined to see it your way: Do altercentric intrusion effects in visual perspective taking reflect an intrinsically social process? (8) Bukowski, H., Ahmad Kamal, N. F., Bennett, D., Rizzo, G., & O'Tuathaigh, C. (2021). Association between dispositional empathy and self-other distinction in Irish and Belgian medical students: A cross-sectional analysis.

Validity of multidimensional measurement

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



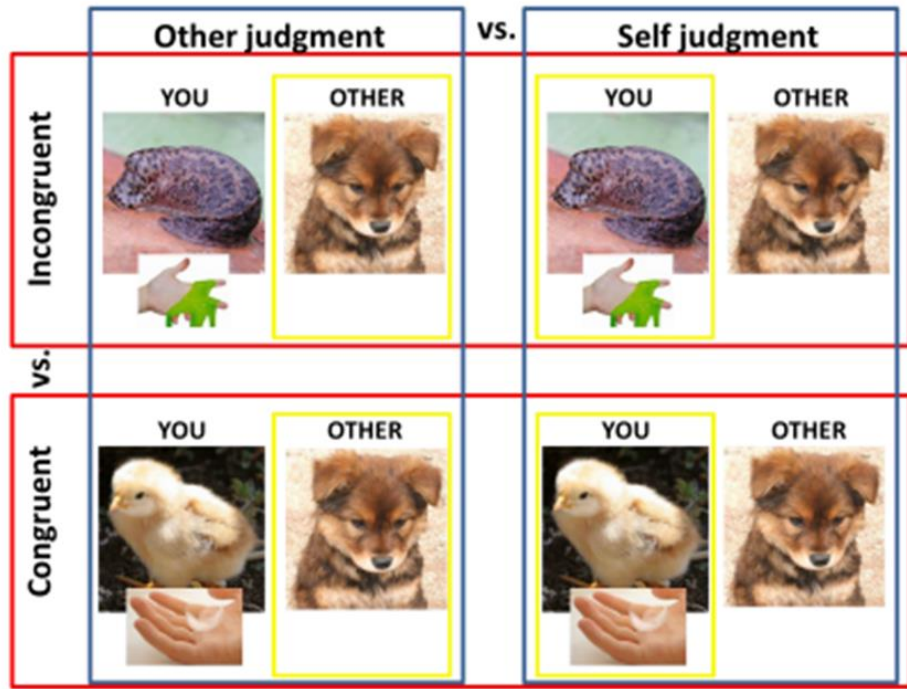
Individual differences among healthy adults:



→ Finer-grained than poor vs. good performance

Self-other priority

Self-Other distinction



PERSPECTIVE

Self

Other

CONGRUENCY

Consistent

Inconsistent



2-DIM INDIVIDUAL DIFFERENCES ON ALTERNATIVE MEASURES

High conflict

Self-Other Distinction

Flexible

High conflict

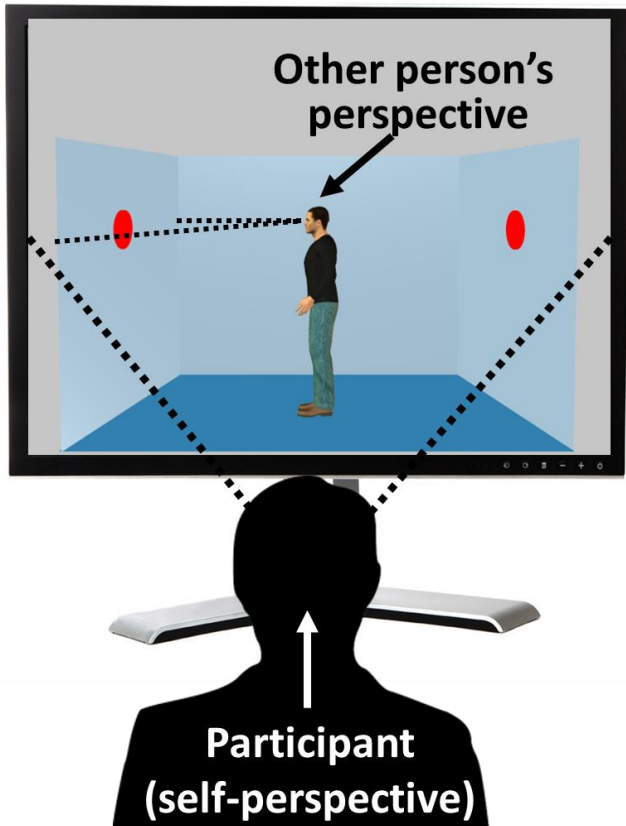
Self-Other Distinction

Flexible



Validity of multidimensional measurement

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



Clinical findings (papers in preparation or prelim data):

- ➔ Alcohol abstinence → - conflicted
- ➔ Antisocial personality → + conflicted
- ➔ Psychopathic personality → + other-centred
- ➔ Schizophrenic population → + egocentric, + conflicted

Prospects for collaborations

[Web-based](#) (nothing to install) or offline (installed before)

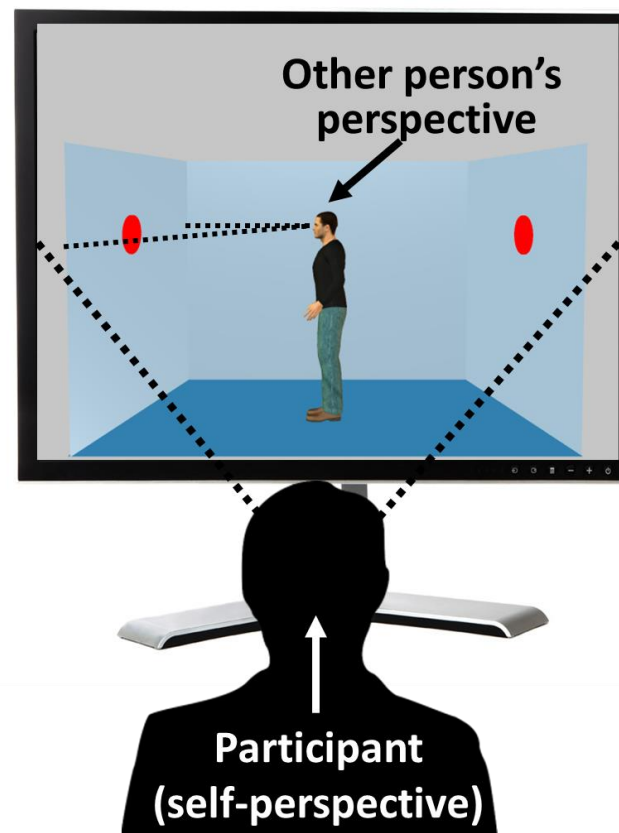
12-14 min duration

4 experimental conditions

Speed (RT) and accuracy (% errors) on 96 trials

Centralized data storage

[Continuous online sharing of results](#)



Xp Online

+

← → ↻

https://sites.udouvain.be/xponline/

140% ☆

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⌵

☰



email

password

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Sign up



Explications?

Expériences🔬

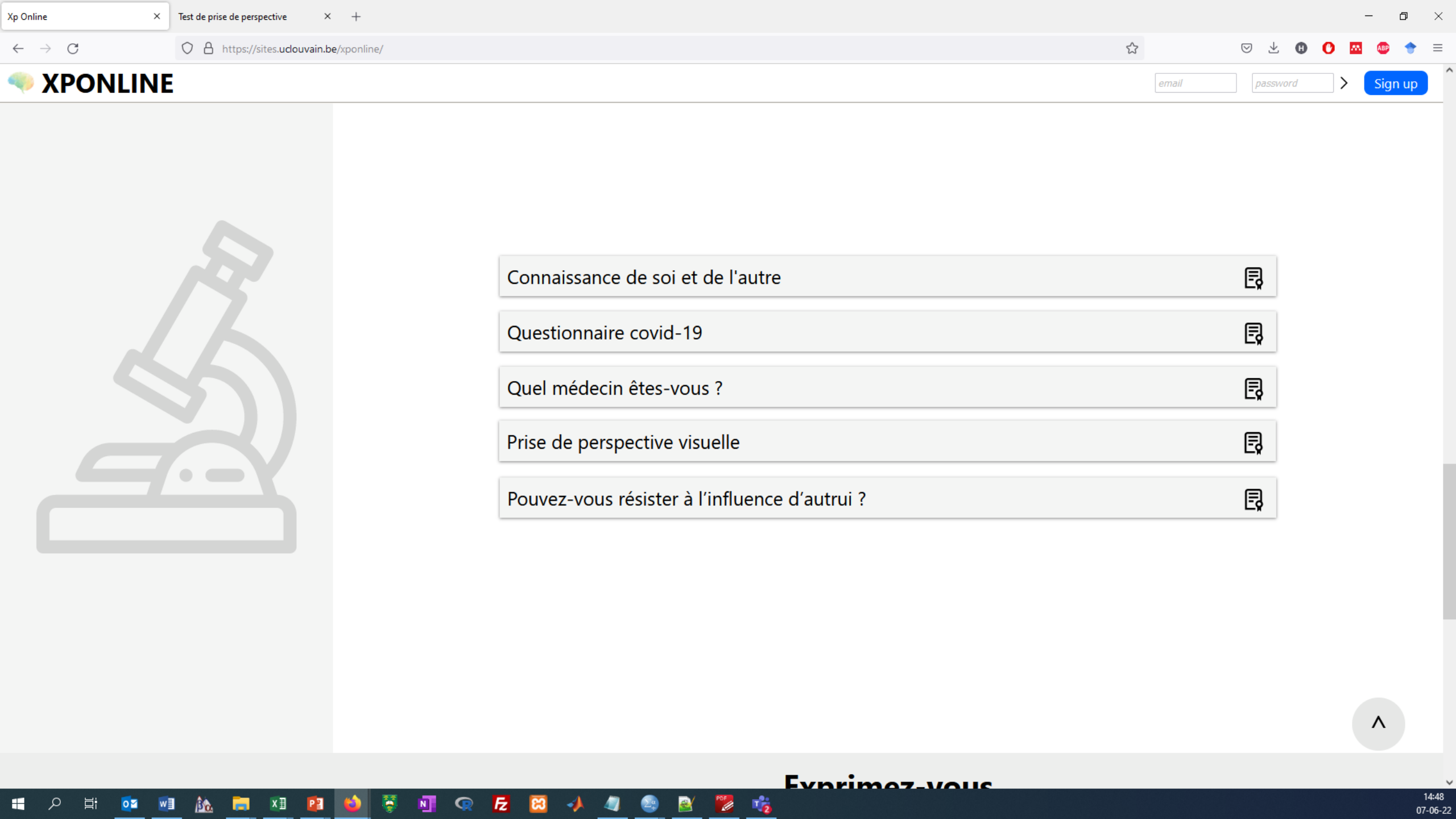
Exprimez-vous✉️

1

2

3

14:46
07-06-22



- Connaissance de soi et de l'autre
- Questionnaire covid-19
- Quel médecin êtes-vous ?
- Prise de perspective visuelle
- Pouvez-vous résister à l'influence d'autrui ?

Exprimez-vous

Prospects for collaborations

**LARGE-SCALE,
DEVELOPMENTAL, AND
TRANSDIAGNOSTIC SCOPES**

LARGE-SCALE SCOPE

Example: replication study in Law students

151 participants in 3 weeks

No enrolment fee:

in return for automated feedback

No advertising fee:

ad on social media group of interest

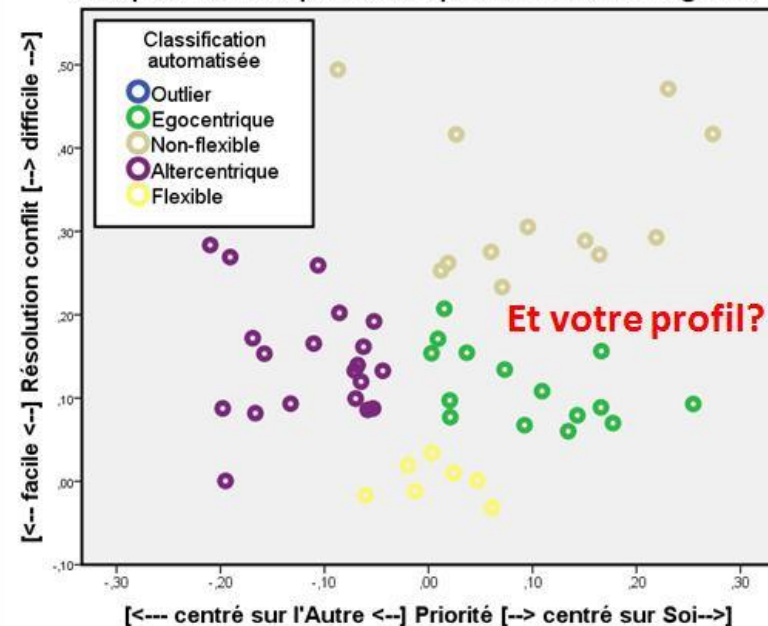
Directly analysed data

Pouvez-vous résister à l'influence d'autrui ?

Aidez la science et découvrez gratuitement **votre profil d'aptitudes sociales*** en participant à notre étude scientifique **via internet** (20 min sur ordinateur).

Une condition: **Etude en droit en cours ou terminée.**

Résultats intermédiaires sur 57 étudiants en Droit: Influences et capacités d'adoptions des points de vue divergents



*Feedback personnalisé sur vos résultats en relation avec des scores moyens. Ce feedback se base sur des outils standardisés à des fins scientifiques, est donné qu'à titre indicatif, et a aucune valeur certificative, diagnostique, ou légale.

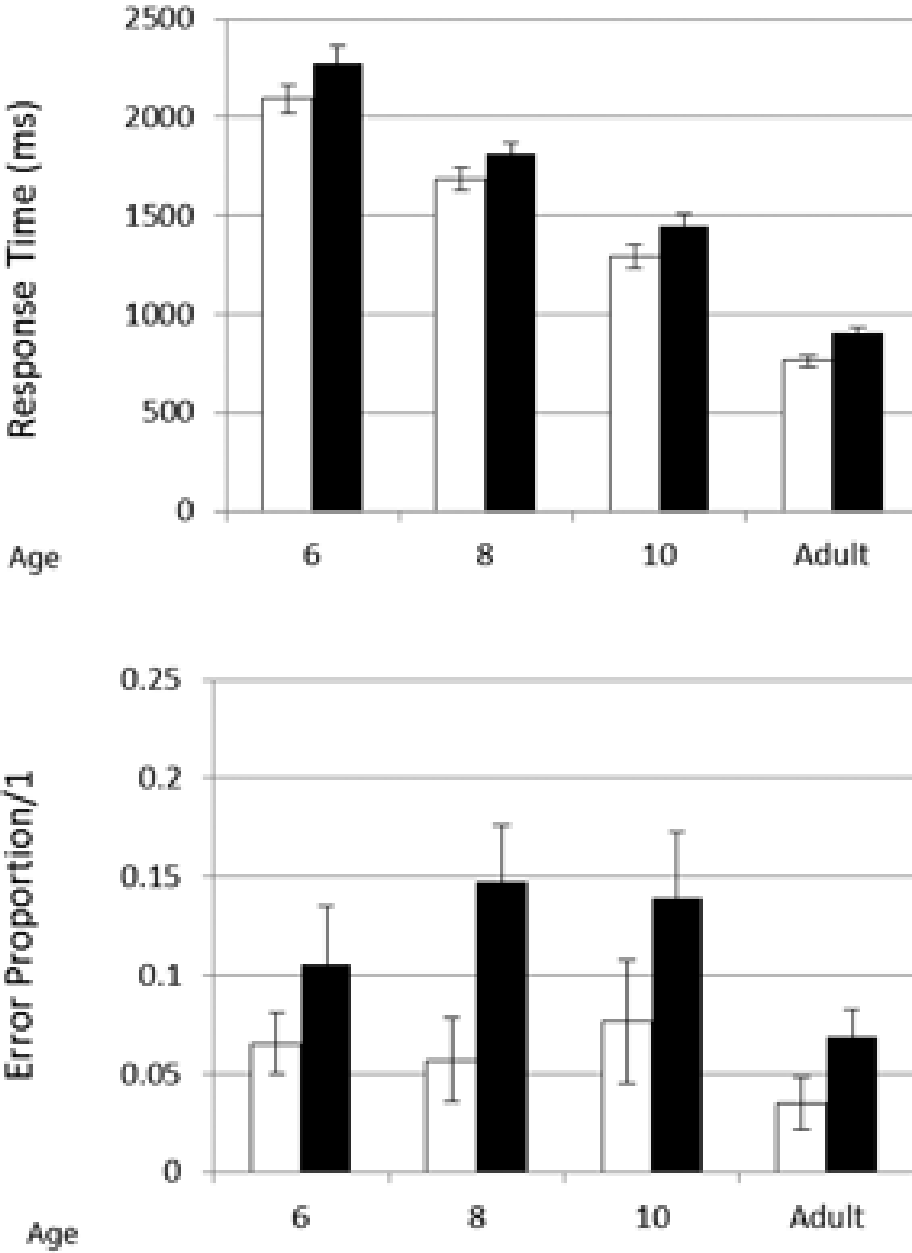
→ Lien pour participer https://bit.ly/droit_influence

henryk.bukowski@uclouvain.be

DEVELOPMENTAL SCOPE

- Repeatability across time:**
No expected task learning
(too many distinct trials, random orders)
- Low face validity** (less sampling bias):
participant has no idea what it measures
- Low social desirability bias:**
Performance under time pressure
- Potential for mobile-phone use**

Other-perspective performance among
6 year old (N=36)
8 year old (N=35)
10 year old (N=24)
Adults (N=11)



TRANSDIAGNOSTIC SCOPE

Portable / easy access:

Web-based (nothing to install)
or offline (installed before)

Short duration : 12-14 min duration

Objective measure (X self-report scale)

+

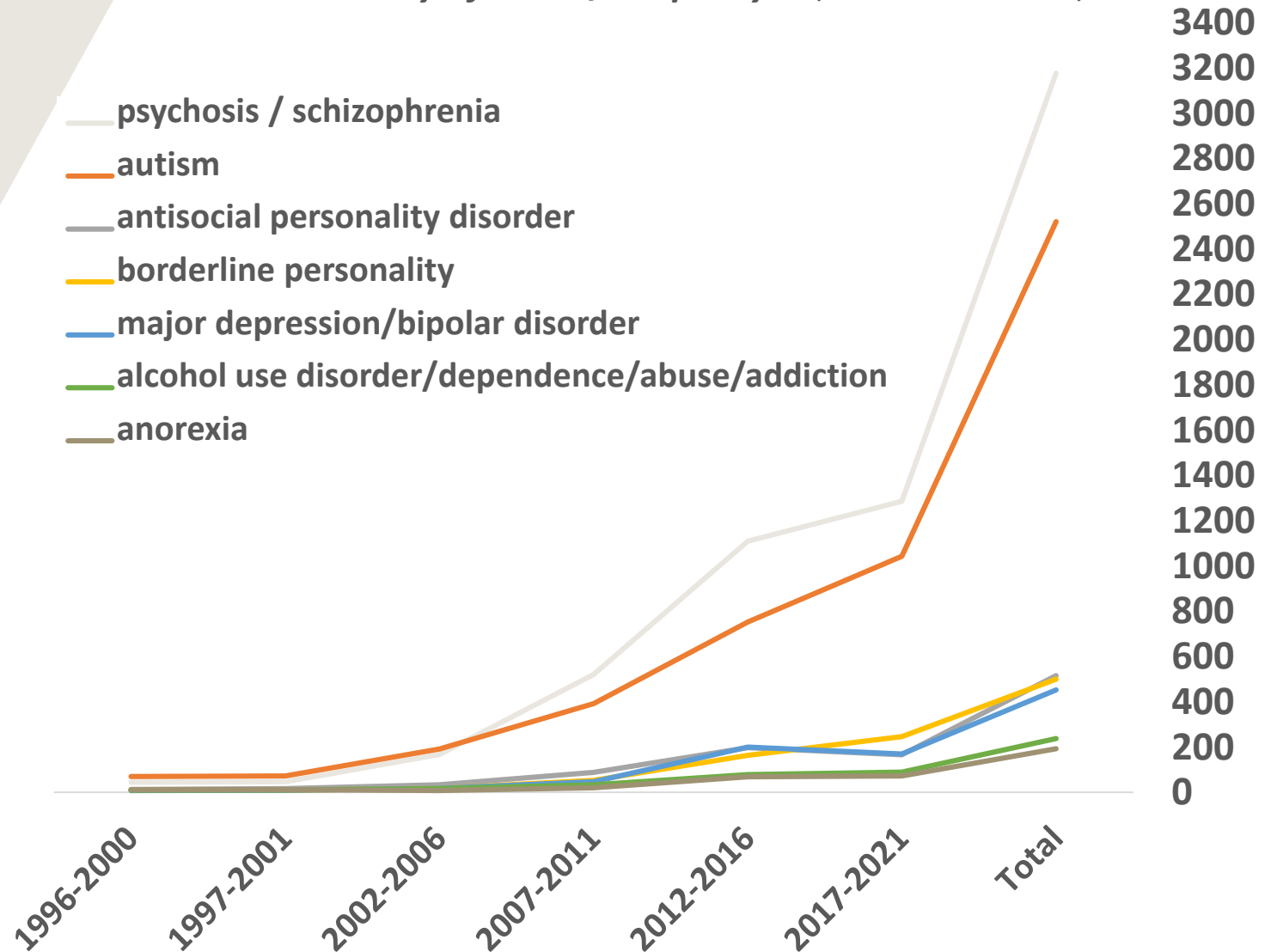
Repeatability across time

Low face-validity

Low social desirability bias

Potential for mobile-phone use

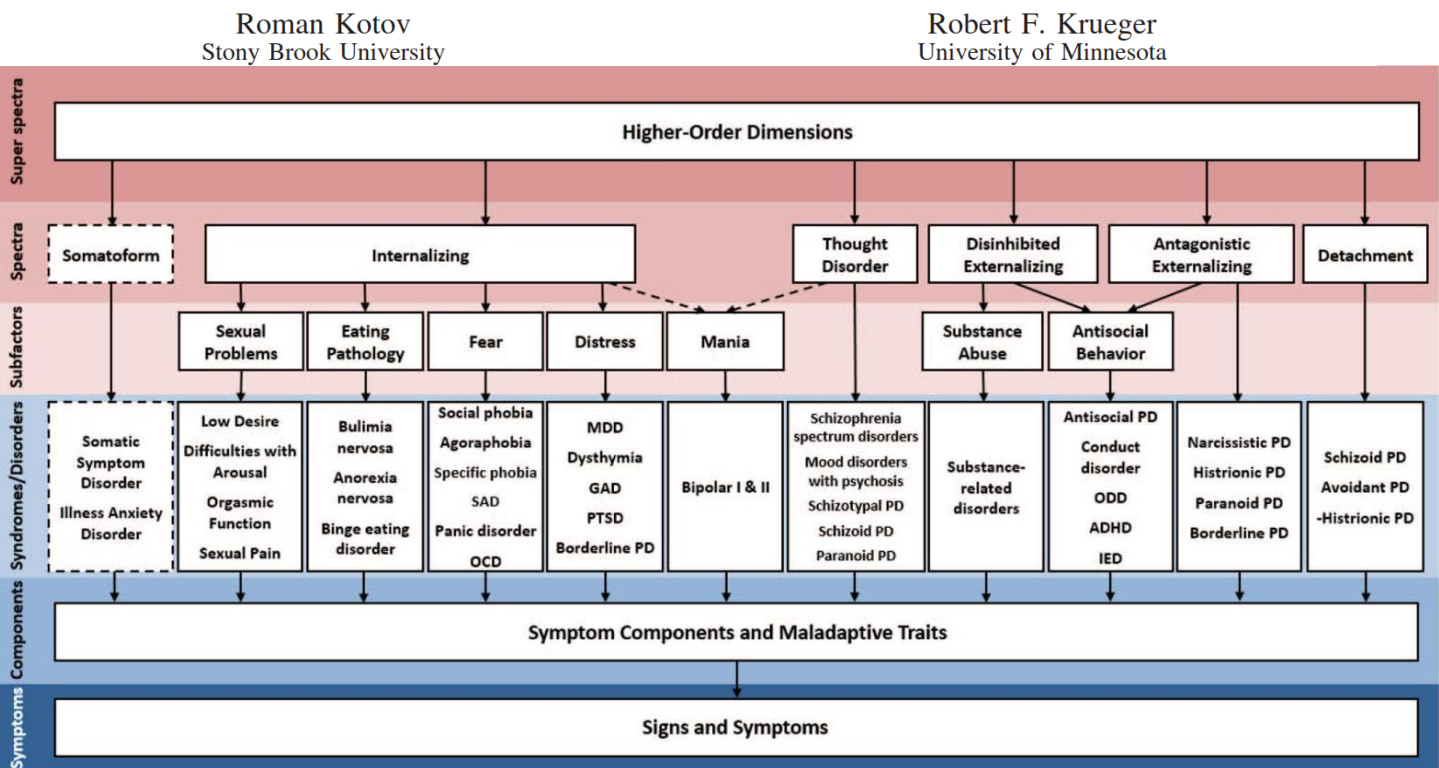
Number of articles with « *social cognition / mentalizing / Theory of Mind / empathy* » (Pubmed 26/5/22)



TRANSDIAGNOSTIC SCOPE

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

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



Clashing Diagnostic Approaches: *DSM-ICD* versus *RDoC*

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

DOMAINS/CONSTRUCTS	UNITS OF ANALYSIS							Paradigms
	Genes	Molecules	Cells	Circuits	Physiology	Behavior	Self-Reports	
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								

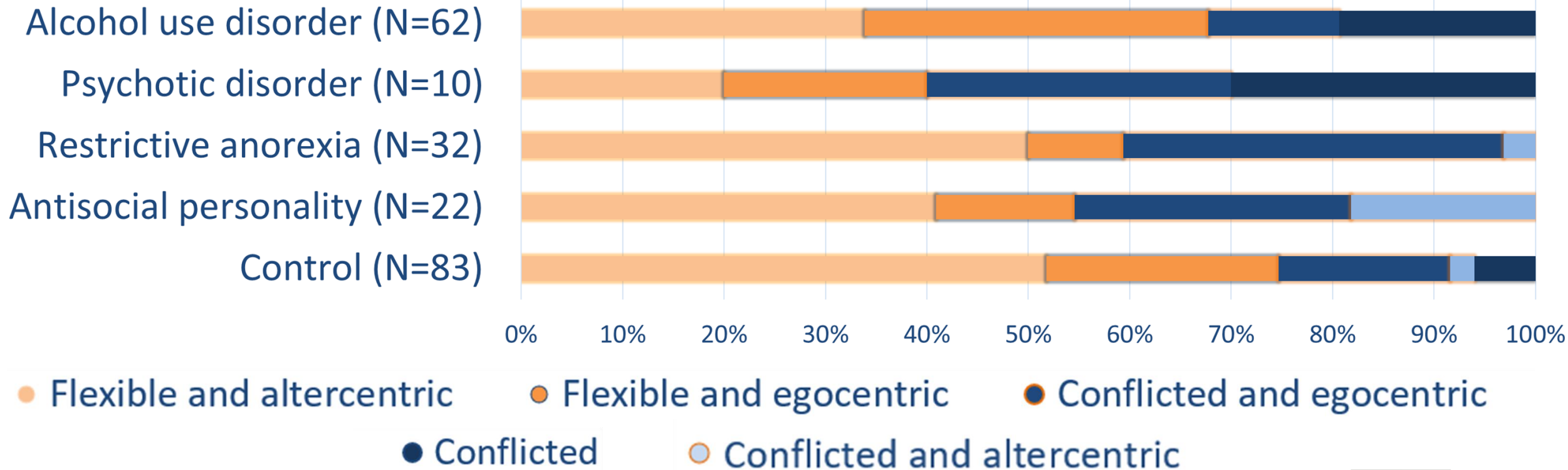
TRANSDIAGNOSTIC SCOPE

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

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



*alix.bigot@uclouvain.be



Prospects for collaborations

Glissez ci-dessus

Ma famille

Poli

Confiant

Obéissant

Gentil

Glissez ci-dessus

Mes amis

Sociable

Enthousiaste

Décontracté

Bavard

Glissez ci-dessus

Au boulot

Audacieux

Productif

Curieux

Responsable

Dynamique

Glissez ci-dessus

En couple

Jaloux

Distrain

Possessif

Fidèle

Colérique

BATTERY OF OTHER- AND SELF-KNOWLEDGE (BOSK)

Web-based (nothing to install) or offline (installed before)
60 min duration, 12 tasks (performance + self-reports)
Self-complexity, autobio memory, self-reference effect, ...
Centralized data storage
Continuous online sharing of results

Ajouter un groupe

Ordonné	Responsable	Conscientieux	Jaloux	Serviable	Méticuleux	Travailleur
Poli	Curieux	Anxieux	Distrain	Enthousiaste	Intelligent	Rebelle
Réservé	Efficace	Affectueux	Paresseux	Naïf	Obéissant	Chaleureux
Dynamique	Imprudent	Productif	Audacieux	Calme	Compréhensif	Fidèle
Compétent	Sociable	Nerveux	Extraverti	Emotif	Imaginatif	Gentil
Décontracté	Exigeant	Confiant	Possessif	Honnête	Bavard	Colérique

Poubelle:

Terminer

Prospects for collaborations

NEW TOOLS DEVELOPMENT OR
ADAPTATIONS AS PSYCHOMETRICIAN

... WORK IN PROGRESS

THANKS FOR YOUR
ATTENTION

