



Restricted interests in autism with versus without speech onset delay: The importance of perceptually versus thematically organized interests



2016 ECIDD
LILLE

CHIDO LILIANE^a, EUSÈBE SANDRINE^a,
MAJERUS STEVE^{a,b} & Mottron Laurent^c

^aUniversity of Liège, Liège, Belgium
^bFund for Scientific Research, F.R.S.-FNRS, Belgium
^cCentre d'excellence en Troubles envahissants
du développement de Montréal, Canada

Contact:
lchiodo@ulg.ac.be
University of Liège, Belgium

BACKGROUND AND OBJECTIVES

Recent findings (Bonnell et al., 2010; Barbeau et al., 2013) suggest that autistic people with vs without speech onset delay may differ in the perceptual vs nonperceptual nature of their ability peaks. Similarly, neuroimaging findings show that autistic people with vs without speech onset delay differ in the perceptual vs linguistic nature of cortical areas displaying increased activation during the presentation of visual and auditory material (Samson et al., 2014).

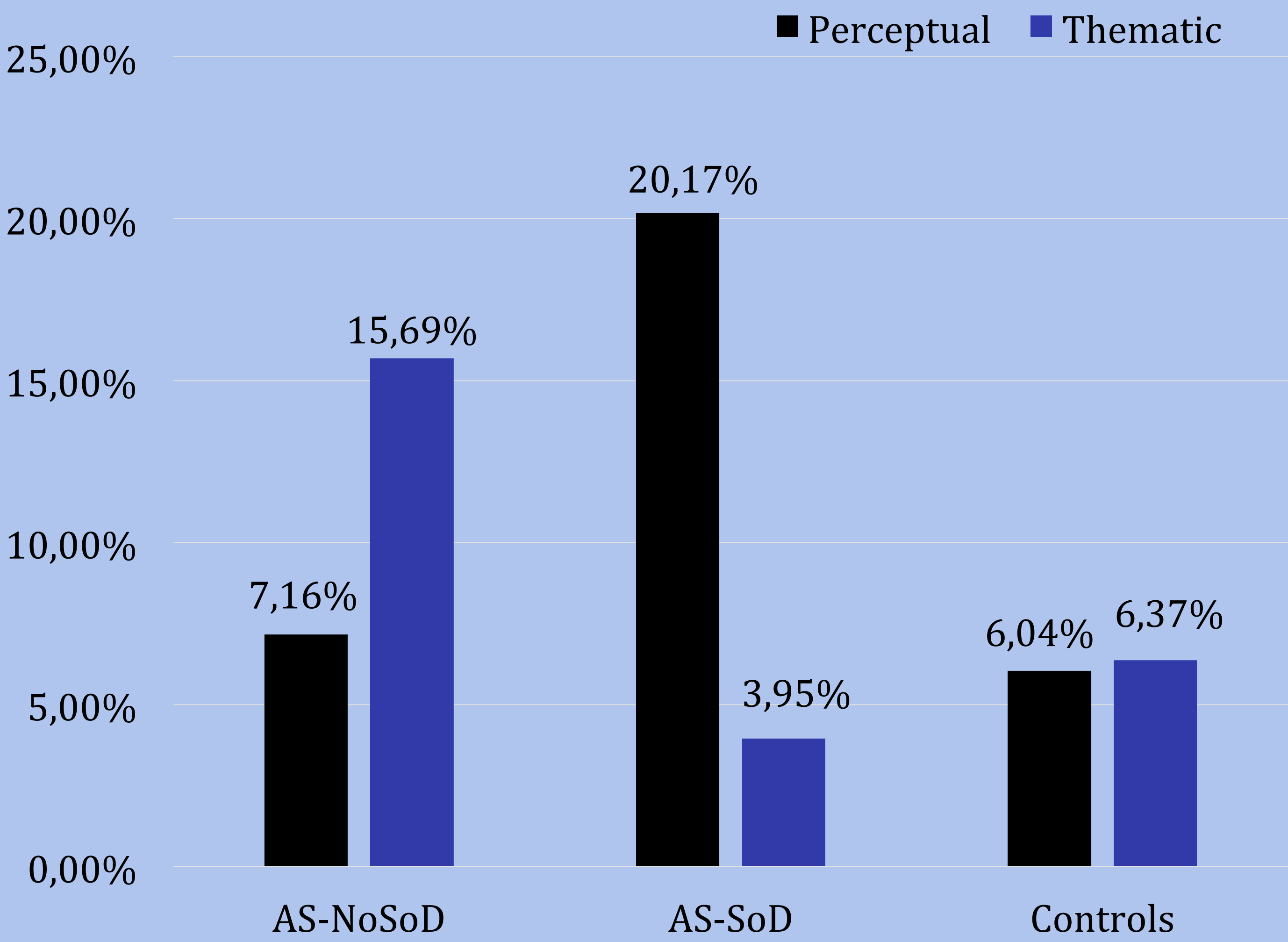
Objectives : To explore whether autistic adults with vs without speech delay differ in the perceptual vs thematic nature of their restricted interests.

METHODS

Participants	AS-NoSOD	AS-SOD	Control
Sample size (sex)	15 (7M, 8F)	15 (13M,2F)	15 (10M, 5F)
Age	32,26 (6,54)	27,53(6,53)	26,73(6,39)
RPM raw score (percentile)	55 (80,66)	51,6 (64,33)	52,6 (67)
WAIS-IV IQ (percentile)			
FSIQ	123,36 (88,02)	91,64(39,81)	118 (75)
VIQ	130,75 (95,04)	95,28(41,71)	119,5(83,06)
PIQ	115 (77,33)	103,07(55,8)	117 (75,7)
ADI-R mean score (cut-off)			
Social	21,4 (10)	20,6 (10)	1,53 (10)
Communication	21,4 (8)	22,33 (8)	1,06 (8)
Repetitive behavior	7,66(3)	8,8 (3)	2,66 (3)

- RPM: Raven’s Progressive Matrices. WAIS: Wechsler Adult Intelligence Scale.
FSIQ: Full-Scale IQ. VIQ: Verbal IQ. PIQ: Performance IQ. ADI-R: Autism Diagnostic Interview-Revised
- 30 adults with autism (ADI & DSM-IV criteria) divided into AS-SOD (speech onset delay; N=15) or AS-NoSOD (no speech onset delay; N=15) subgroups.
 - 15 typical adults presenting with restricted interests but no signs of autism as a control group.
 - All groups matched on age and Raven’s Progressive Matrices
 - Information about restricted interests was obtained via 19 questions based on the Yale survey of special interests (Klin & Volkmar, 1996) and a semi-structured interview by Mercier et al. (2000). Data were analyzed with NVivo 10 textual analysis software to segment and categorize the content of verbal reports provided by participants.

RESULTS



- The proportion of thematically-organized interests (interests with rich semantic organization) was significantly higher in AS-NoSOD vs both AS-SOD & typical controls.
- The proportion of perceptually-organized interests (interests based on accumulation of factual information e.g., historical dates, license plates) was significantly higher in AS-SOD vs both AS-NoSOD & typical controls.

DISCUSSION

Restricted interests in autism differ according to speech development history: thematically-organized interests were increased in AS-NoSOD, while perceptually-organized interests were increased in AS-SOD. These differences raise questions about the nature, causes, and consequences of speech delay in autism.

REFERENCES

Barbeau, E. B., Soulières, I., Dawson, M., Zeffiro, T. A., & Mottron, L. (2013). The Level and Nature of Autistic Intelligence III: Inspection Time. *Journal of Abnormal Psychology*. Bonnell, A., Mc Adams, S., Smith, B., Berthiaume, C., Bertones, A., Ciocca, V., Burack, J., Mottron, L. (2010). Enhanced pure-tone pitch discrimination among persons with autism but not Asperger syndrome. *Journal of Neuropsychologia*, 48, 2465-2475. Klin, A., & Volkmar, E R. (1996). Yale Survey of Special Interests. Unpublished manuscript. Mercier, C., Mottron, L., Belleville, S. (2000). A psychosocial study on restricted intersets in high-functioning persons with pervasive developmental disorders. *Publications and the National Autistic Society*. Vol 4(4), Montréal, 409-428. Raven, J. (1981) *Matrices progressives* Standard de Raven. Paris : Editions du Centre de Psychologie Appliquée. Samson, F., Zeffiro, T.A., Doyon, J., Benali, H., Mottron, L. (2014). Speech acquisition predicts regions of enhanced cortical response to auditory stimulation in autism spectrum individuals. *Journal of psychiatric research*. Montréal. 68, 285-292.