

Lezione n 14 del 18 Novembre 2020

Nps svi e riabil

A tutta dislessia!!!

Modello mono-causali



Modello cause cumulative ma indipendenti



Modello Neurocostruttivista



 Fattori di rischio
 Fattori di protezione

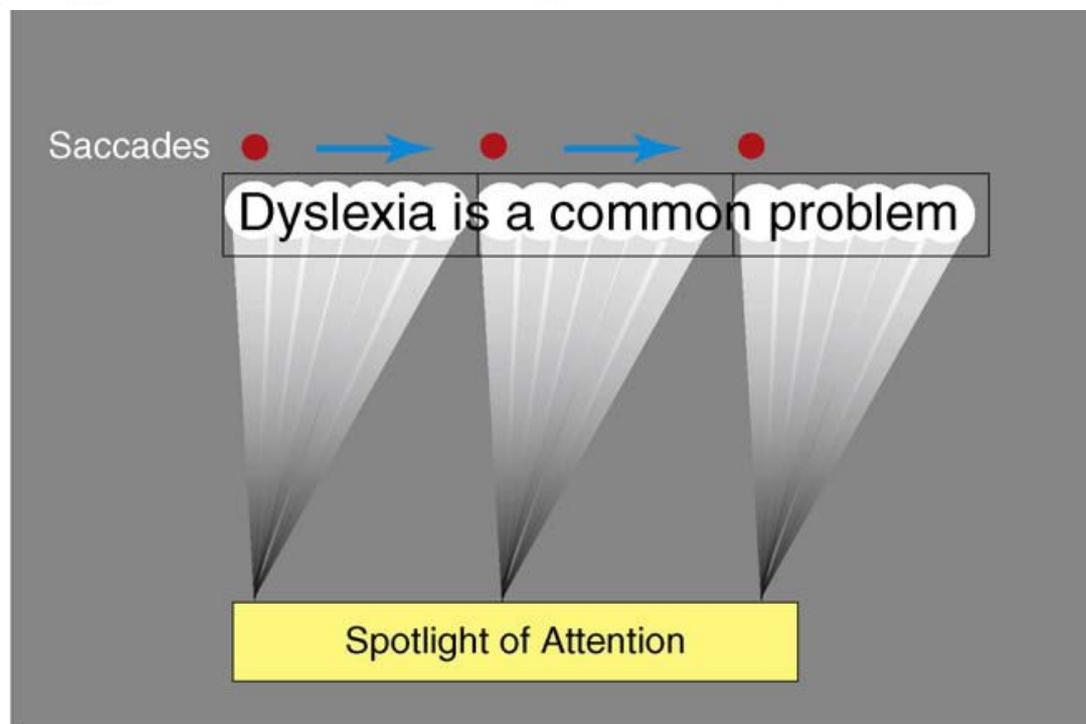
- Gliga, T., Jones, E. J., Bedford, R., Charman, T., & Johnson, M. H. (2014)
- Johnson, M. H., Jones, E. J., & Gliga, T. (2015).

Dyslexia: a deficit in visuo-spatial attention, not in phonological processing

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¹ Department of Optometry & Vision Sciences, University of Melbourne, Parkville, Vic 3010, Australia

² Department of Psychology, The Australian National University, Canberra A.C.T., Australia

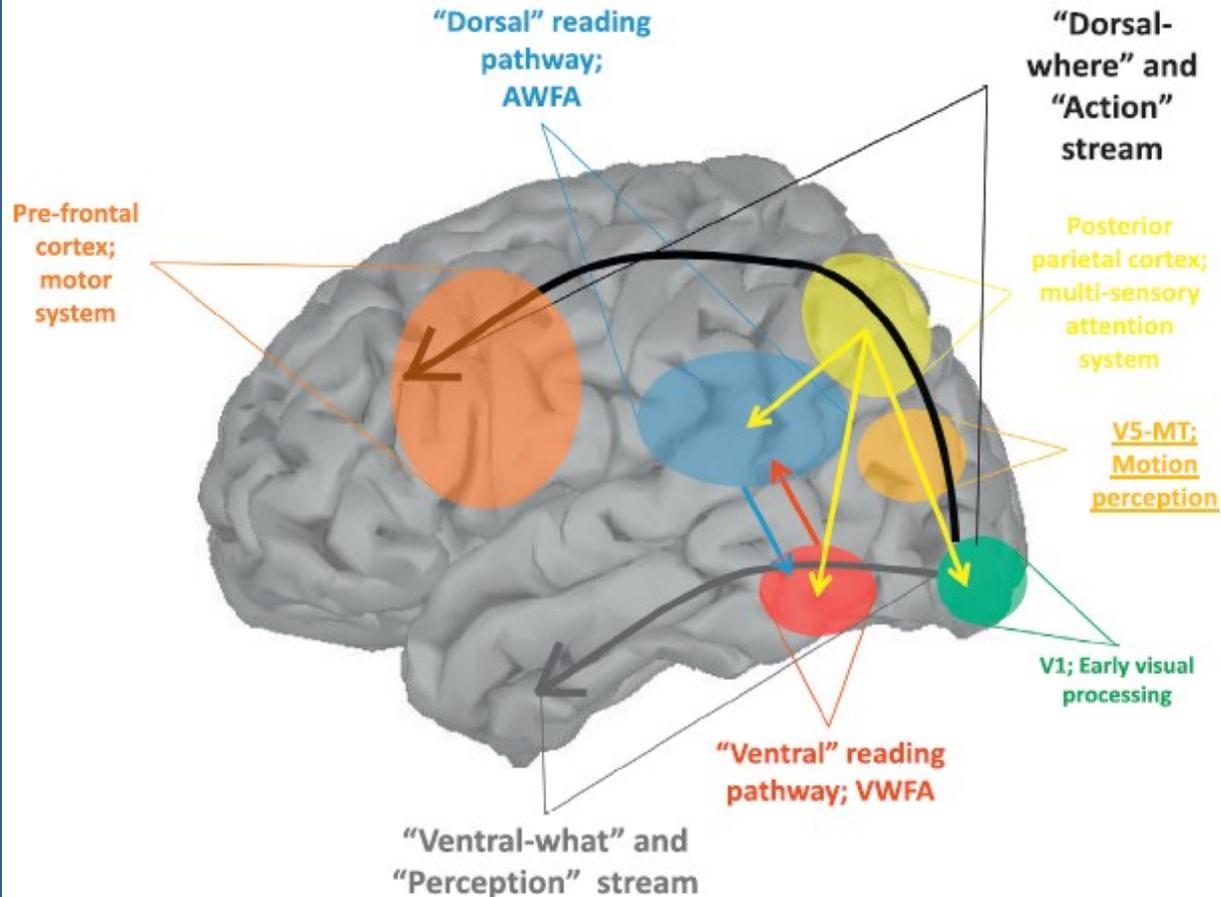




Perceptual learning as a possible new approach for remediation and prevention of developmental dyslexia

Simone Gori*, Andrea Facoetti*

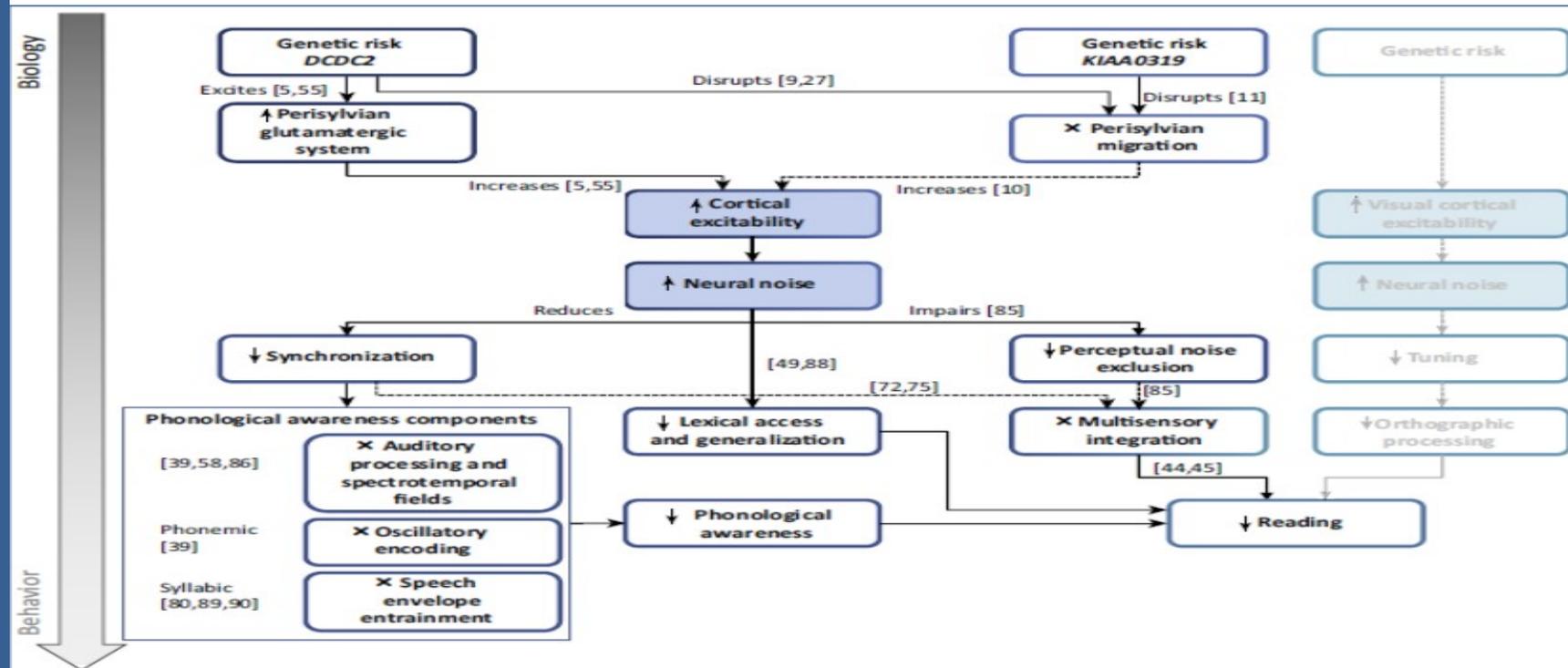
Developmental and Cognitive Neuroscience Lab, Department of General Psychology, University of Padua, Padua 35131, Italy



Opinion

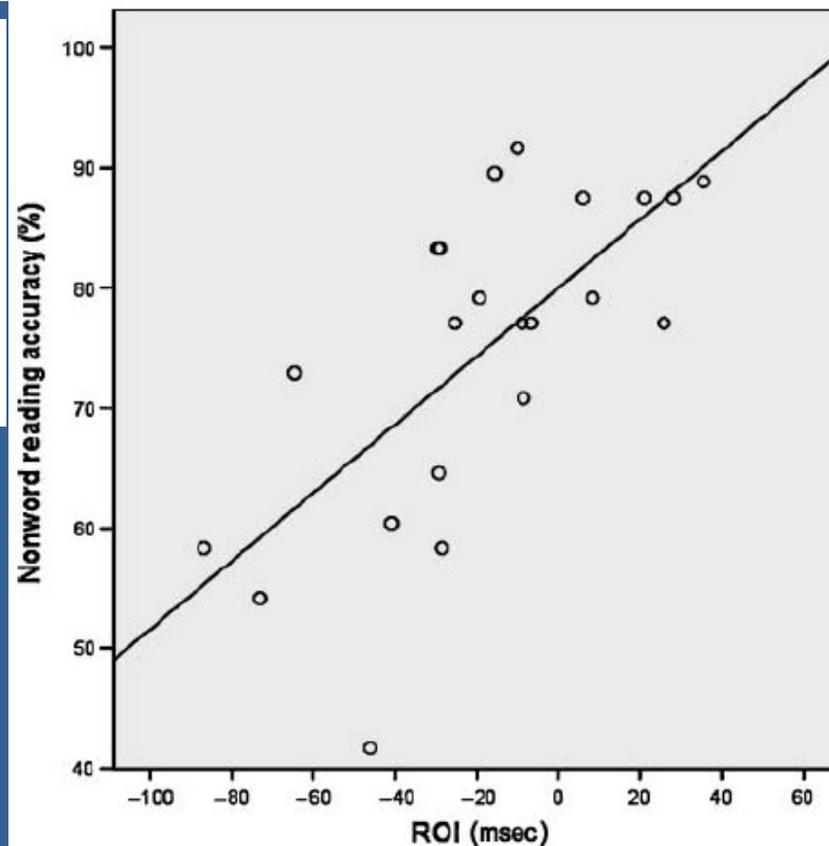
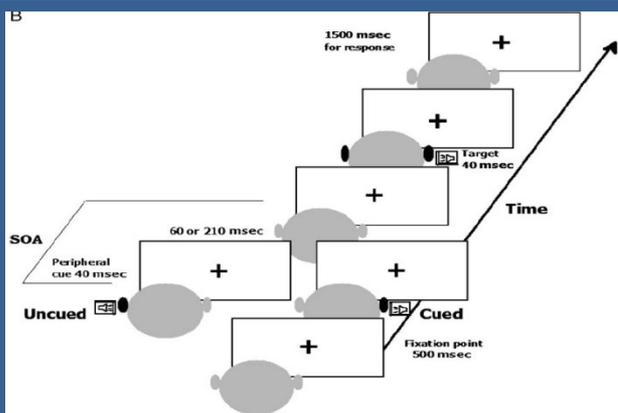
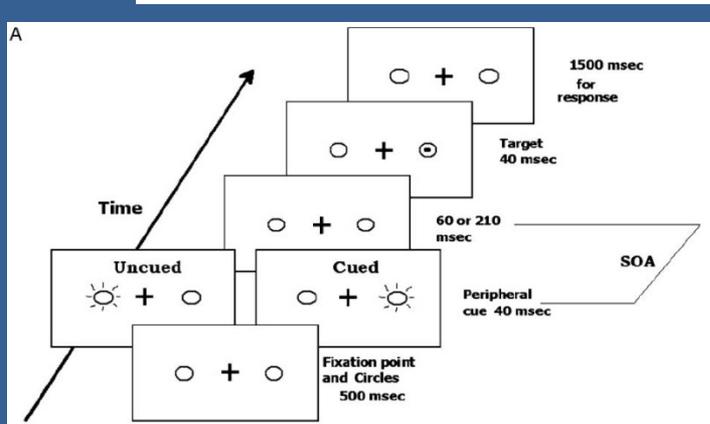
Neural Noise Hypothesis of Developmental Dyslexia

Roeland Hancock,^{1,??,*} Kenneth R. Pugh,^{2,3,4,5} and Fumiko Hoeft^{1,2,6,??,8,*}



Multisensory Spatial Attention Deficits Are Predictive of Phonological Decoding Skills in Developmental Dyslexia

Andrea Facoetti^{1,2}, Anna Noemi Trussardi^{1,3}, Milena Ruffino^{1,2},
Maria Luisa Lorusso², Carmen Cattaneo², Raffaella Galli²,
Massimo Molteni², and Marco Zorzi¹



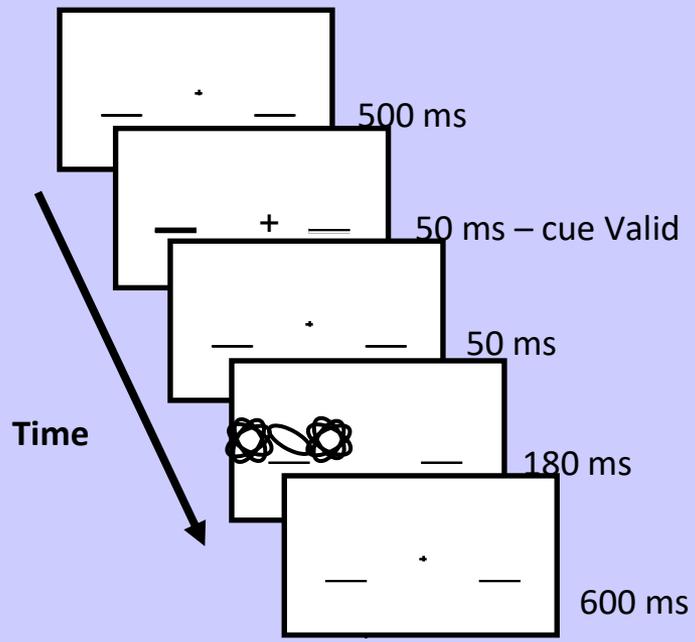
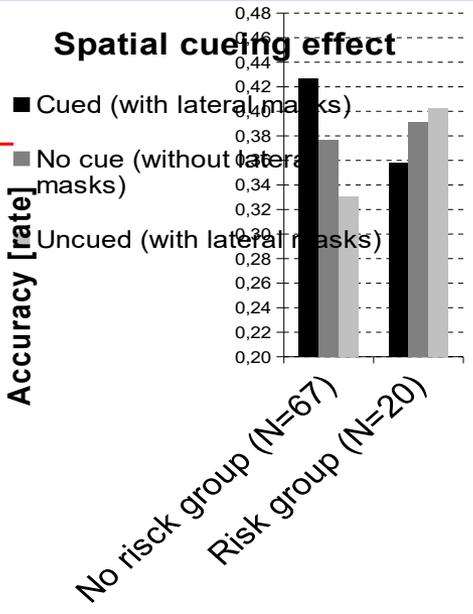
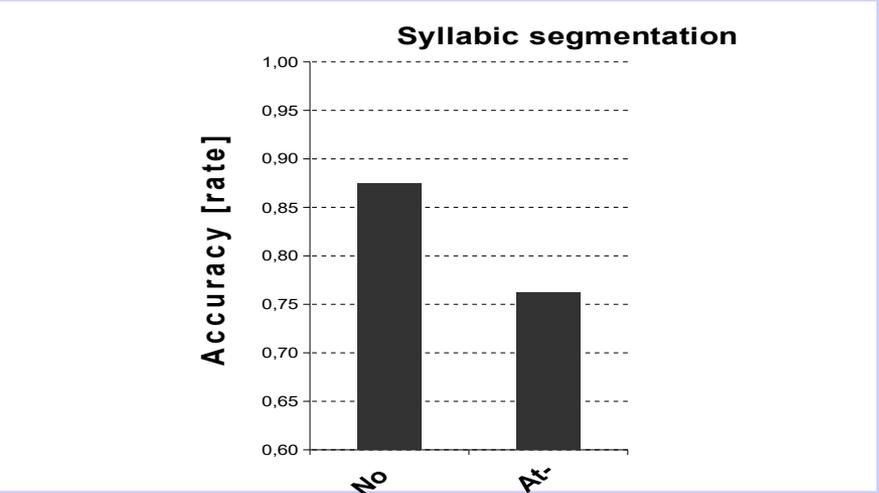
4. Attention Predicts dyslexia

DYSLEXIA
 Published online in Wiley InterScience
 (www.interscience.wiley.com). DOI: 10.1002/dys.413

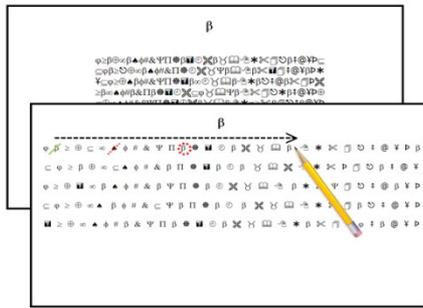
Visual Spatial Attention and Speech Segmentation are both Impaired in Preschoolers at Familial Risk for Developmental Dyslexia

Andrea Facoetti^{1,2,*}, Nicola Corradi¹, Milena Ruffino², Simone Gori¹ and Marco Zorzi¹

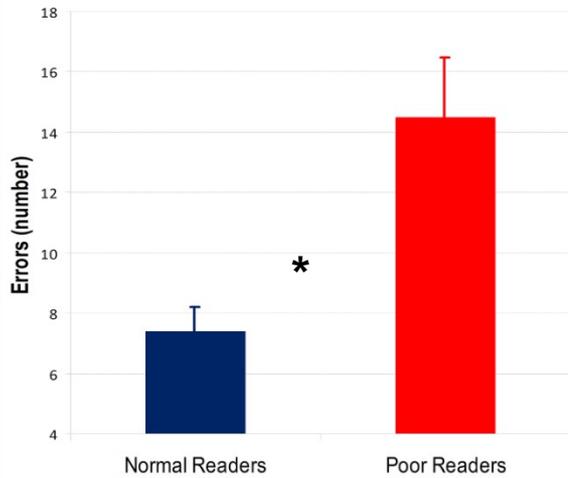
¹Dipartimento di Psicologia Generale e Centro di Scienze Cognitive, Università di Padova, Padova, Italy
²Unità di Neuropsicologia dello Sviluppo, Istituto Scientifico 'E. Medea' di Bosisio Parini, Lecco, Italy



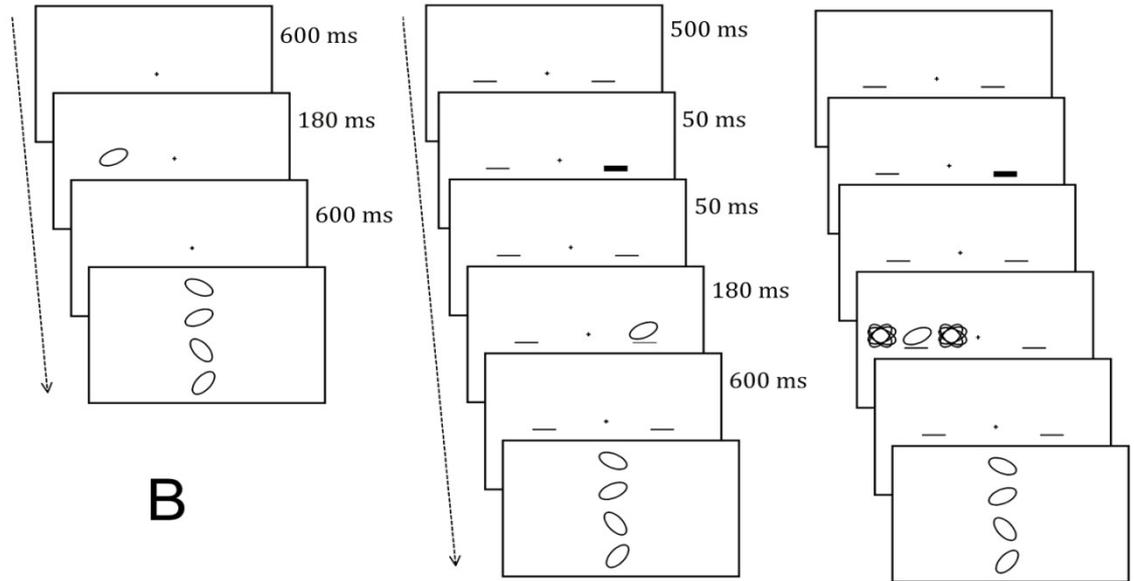
Serial Visual Search Task



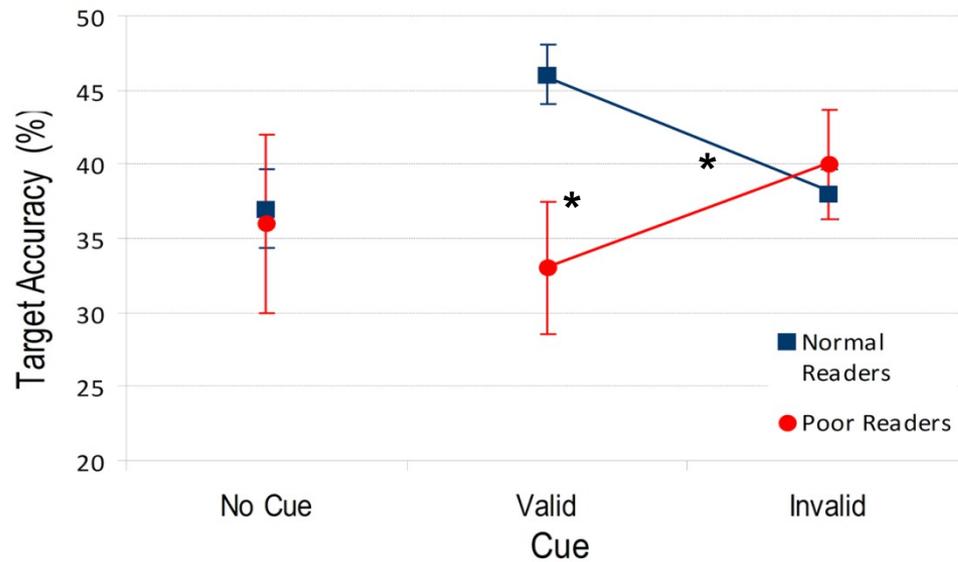
A



Spatial Cue Facilitation task



B



A Causal Link between Visual Spatial Attention and Reading Acquisition

Sandro Franceschini,^{1,3} Simone Gori,^{1,2} Milena Ruffino,²
Katia Pedrolli,¹ and Andrea Facoetti^{1,2,3,*}

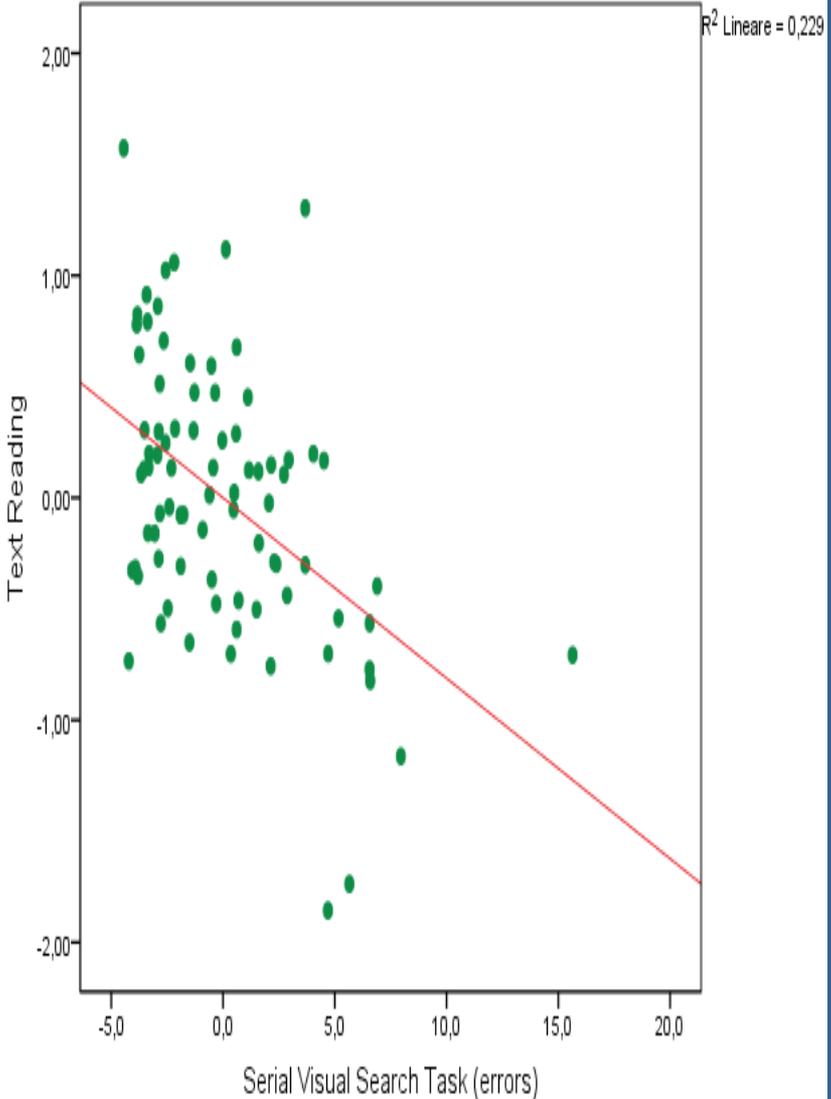
¹Developmental and Cognitive Neuroscience Lab,
Department of General Psychology, University of Padua,
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²Developmental Neuropsychology Unit,
Scientific Institute “E. Medea,” Bosisio Parini,
Lecco 23842, Italy

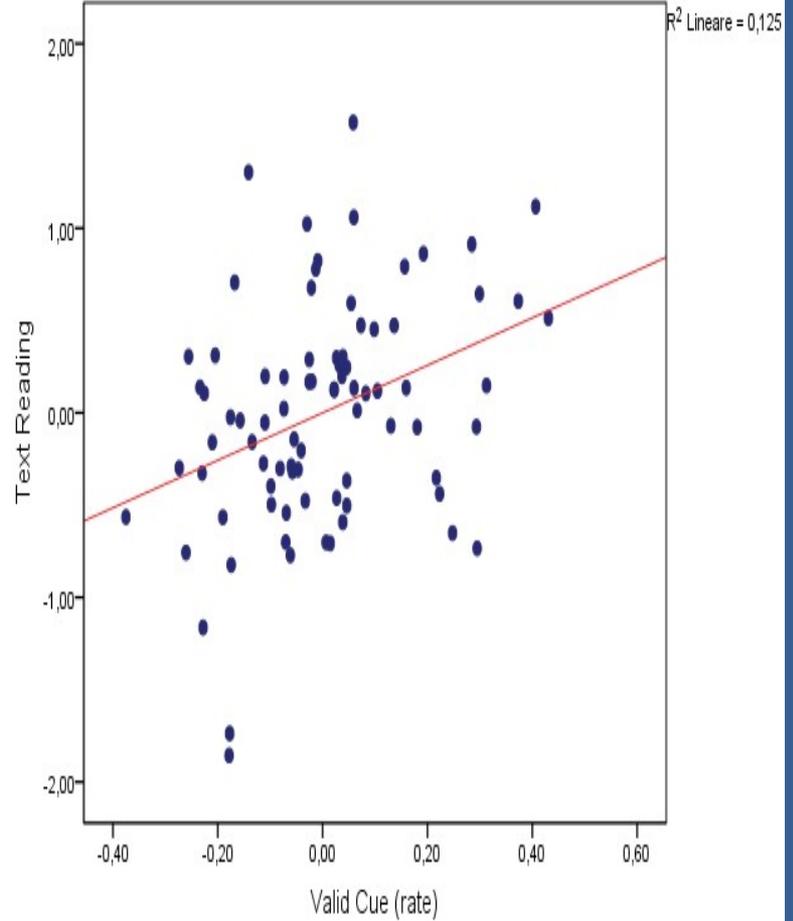
**L'efficienza dell'attenzione
visiva alla scuola
dell'infanzia predice le
future abilità di lettura in
Il elementare?**

3. Attention Predicts dyslexia

T3



YES!



PREVEDERE la Dislessia Misurando la Percezione Globale (Studio 1) i.e., Compito di Navon

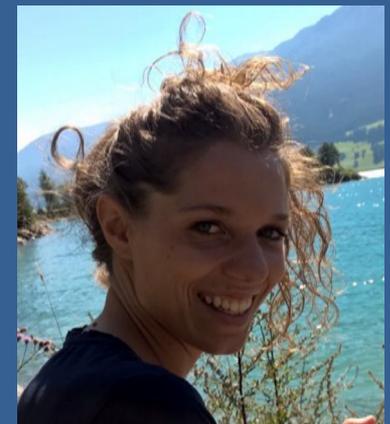
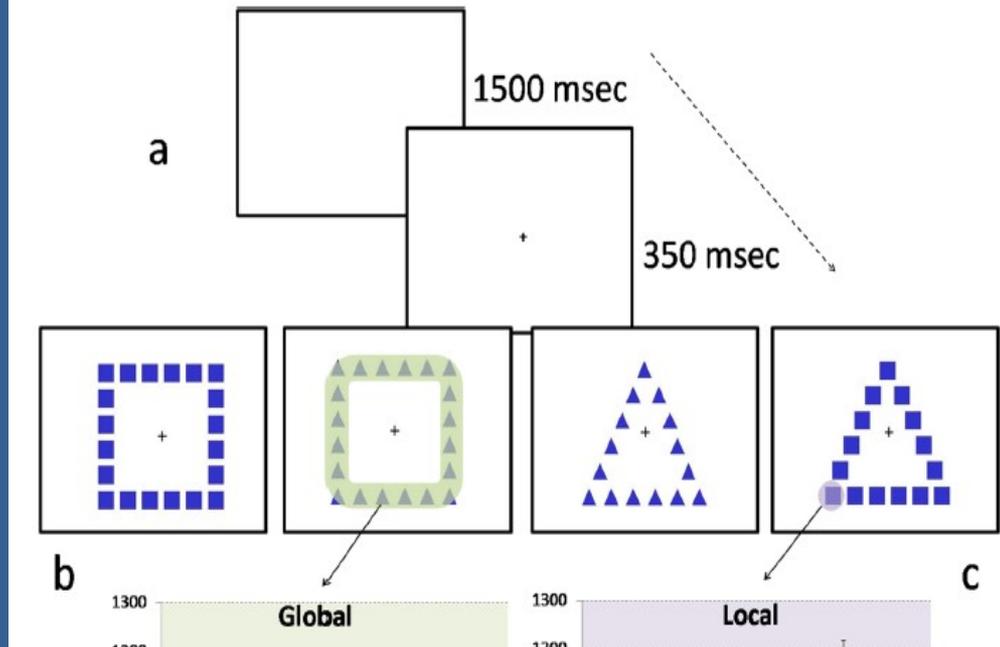
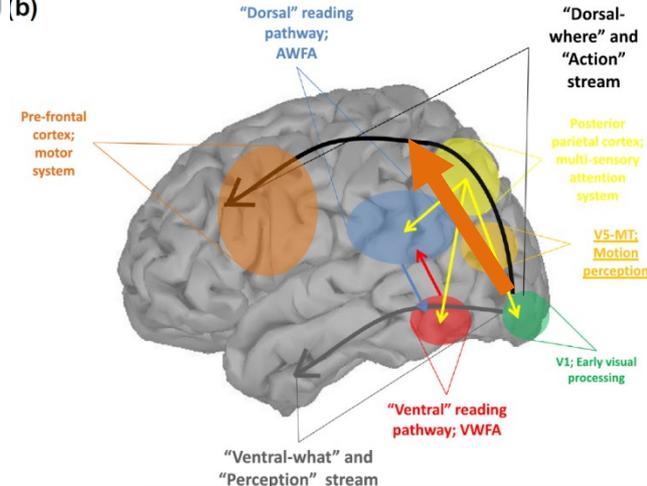
www.nature.com/scientificreports (b)

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A different vision of dyslexia: Local precedence on global perception

Sandro Franceschini^{1,2}, Sara Bertoni¹, Tiziana Giancesini³, Simone Gori⁴ & Andrea Facoetti



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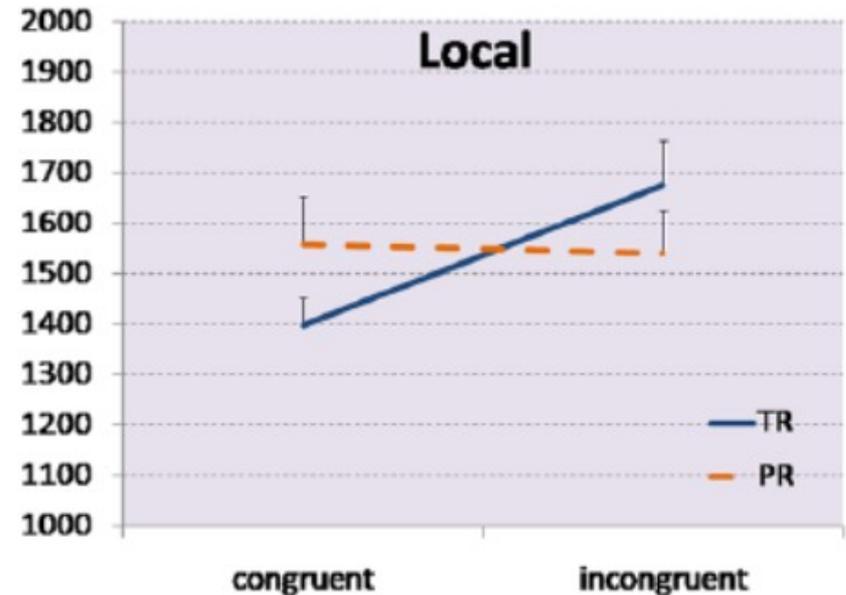
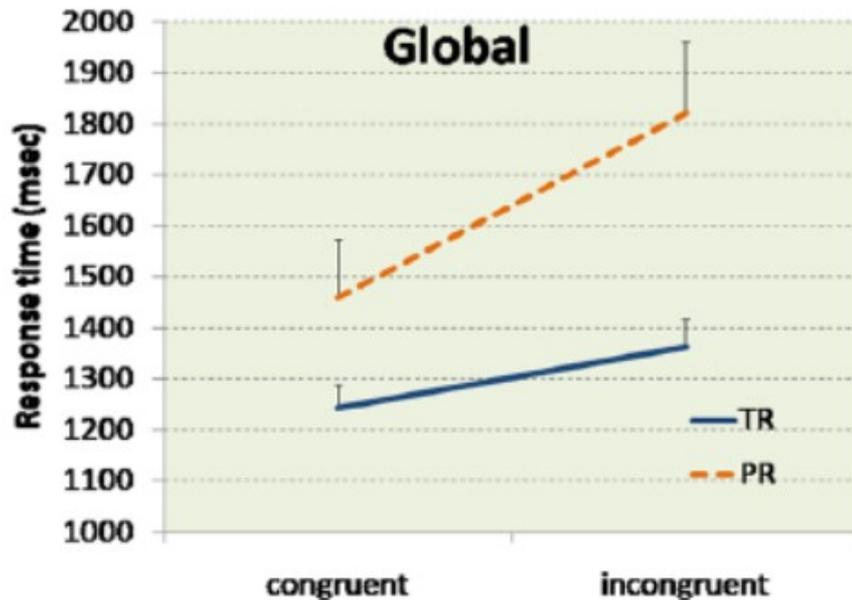
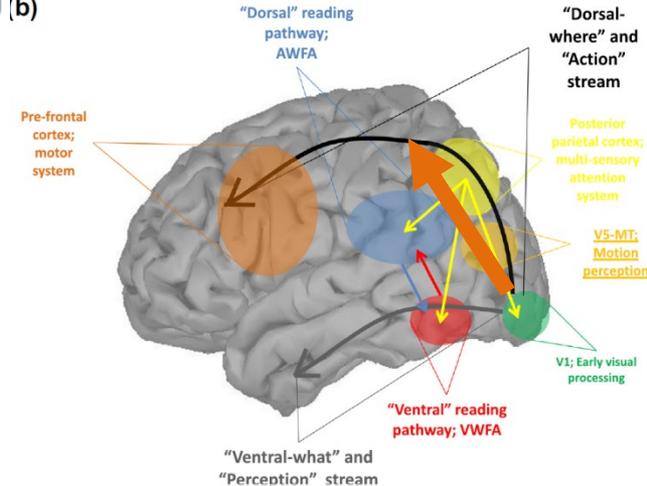
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SCIENTIFIC REPORTS

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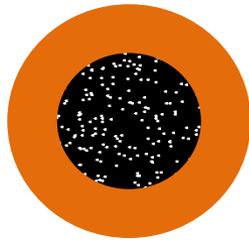
A different vision of dyslexia: Local precedence on global perception

Sandro Franceschini^{1,2}, Sara Bertoni¹, Tiziana Giancesini³, Simone Gori⁴ & Andrea Facoetti



PREVEDERE la Dislessia Misurando la Percezione Visiva del Movimento (Studio 2)

OXFORD



Cerebral Cortex, 2015, 1–14 (b)

doi: 10.1093/cercor/bhv206
Original Article

ORIGINAL ARTICLE

Multiple Causal Links Between Magnocellular–Dorsal Pathway Deficit and Developmental Dyslexia

Simone Gori^{1,2,†}, Aaron R. Seitz³, Luca Ronconi^{2,4}, Sandro Franceschini^{2,4}
and Andrea Facoetti^{2,4,†}

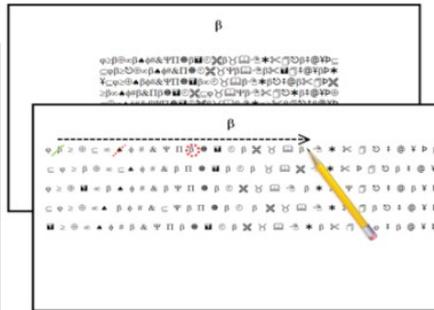
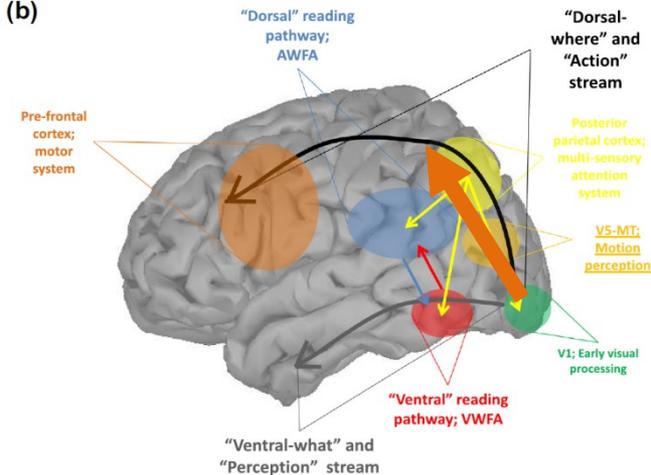


Table 2 Chronological age, verbal IQ, phonological awareness, and serial visual search abilities at pre-reading stage (T1) in future (T2) typical readers and poor readers in Experiment 2

	Typical readers (n = 60) Mean (SD)	Poor readers (n = 12) Mean (SD)	t (and P) value df = 70
Chronological age (months)	71.18 (3.41)	71.17 (3.97)	0.15 (0.99)
Verbal IQ (standard point)	12.63 (2.79)	11.25 (2.7)	1.58 (0.12)
Syllabic segmentation (errors/15 items)	1.02 (1.9)	3.64 (4.99)	-3.09 (0.003)
Visual search (errors/25 targets)	3.27 (3.19)	6 (5.71)	-2.33 (0.02)
Visual search (s)	93.03 (30.37)	122.60 (38.75)	-2.94 (0.004)

PREVEDERE la Dislessia Misurando la Percezione Visiva del Movimento (Studio 2)

Cerebral Cortex Advance Access published October 6, 2015

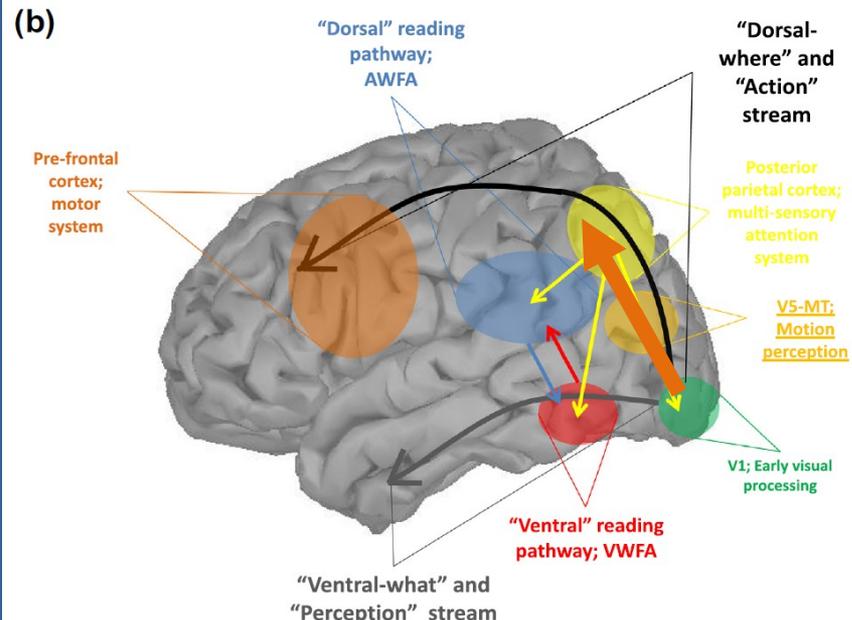
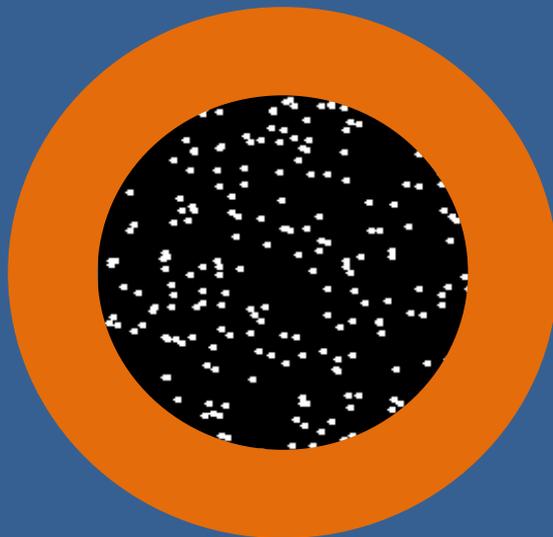


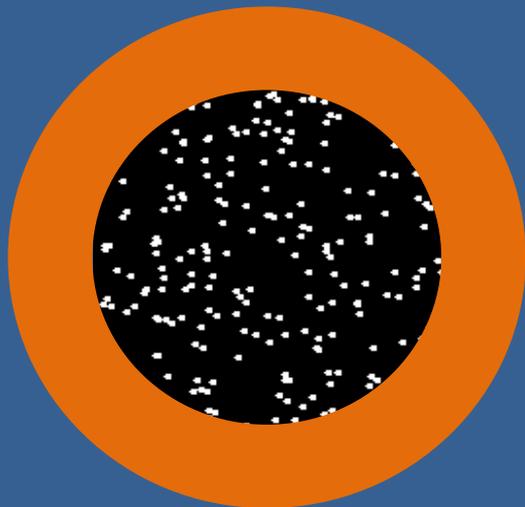
Cerebral Cortex, 2015, 1–14

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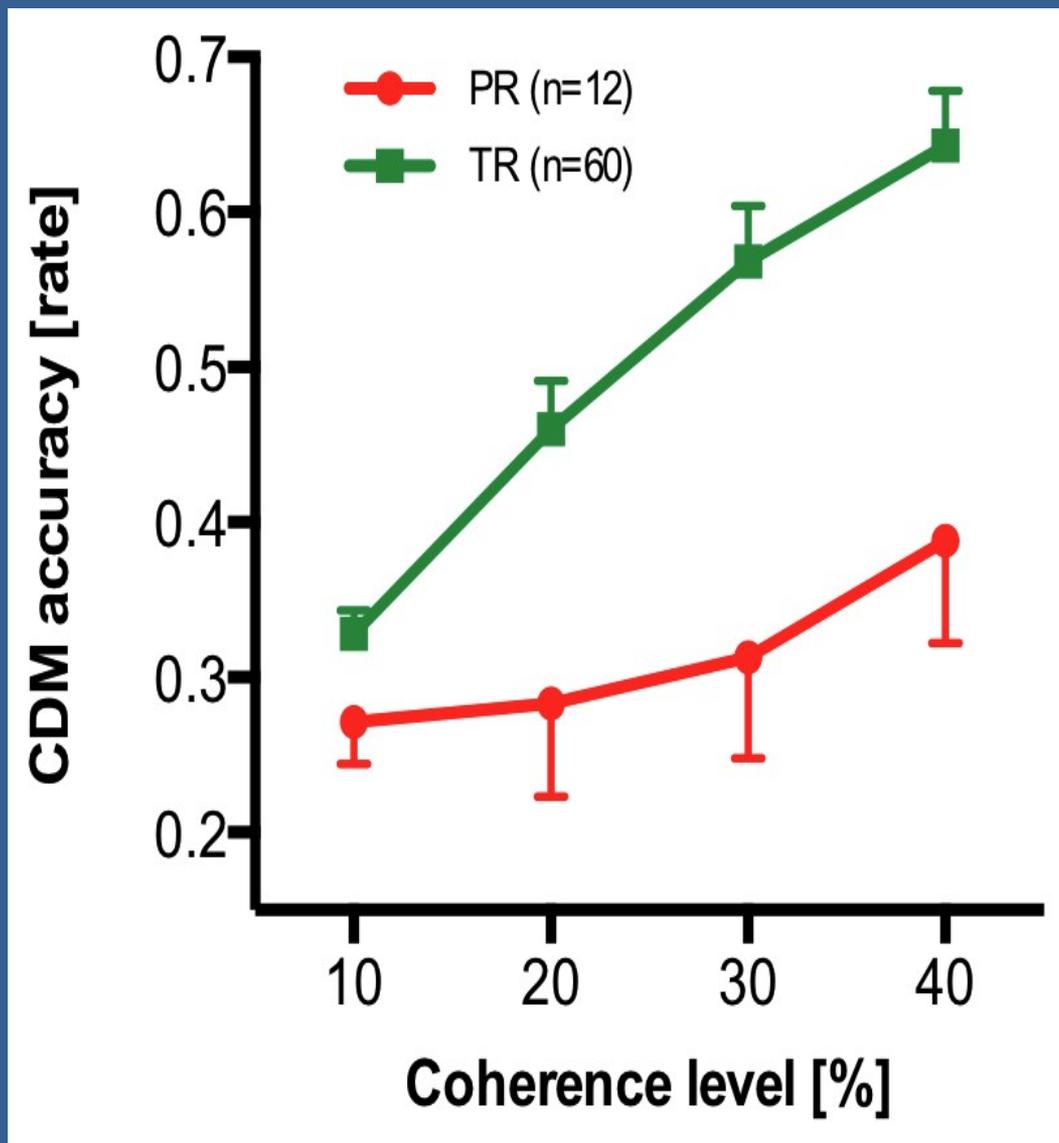
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Multiple Causal Links Between Magnocellular–Dorsal Pathway Deficit and Developmental Dyslexia



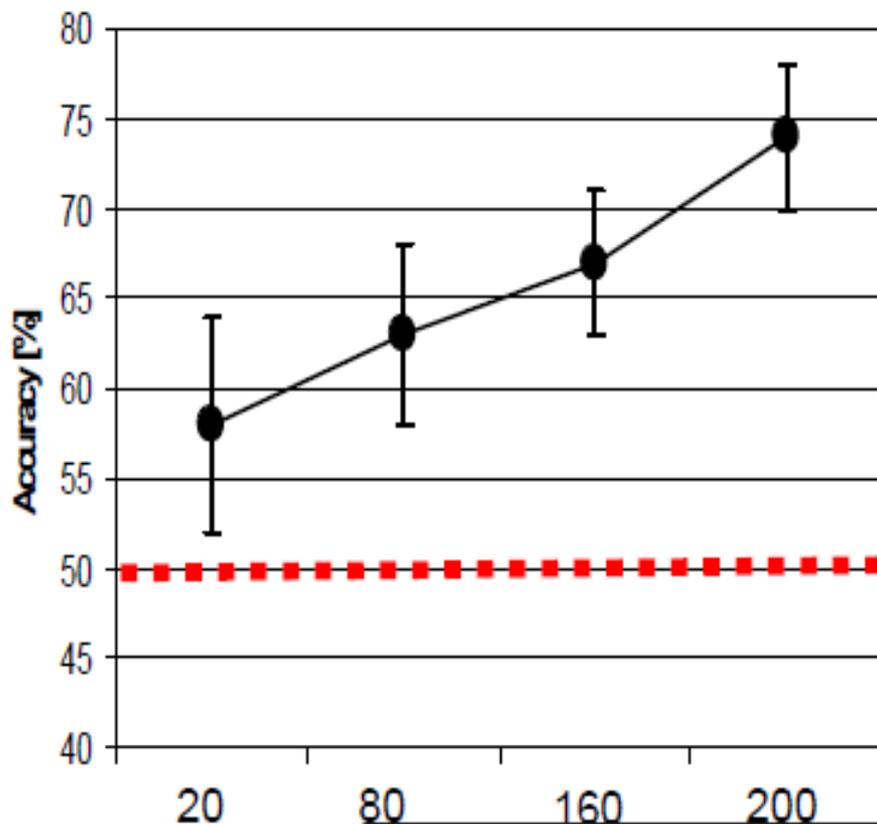


La Percezione Visiva del Movimento è un predittore delle future abilità di lettura (*=studio longitudinale sui bambini pre-scolari*)



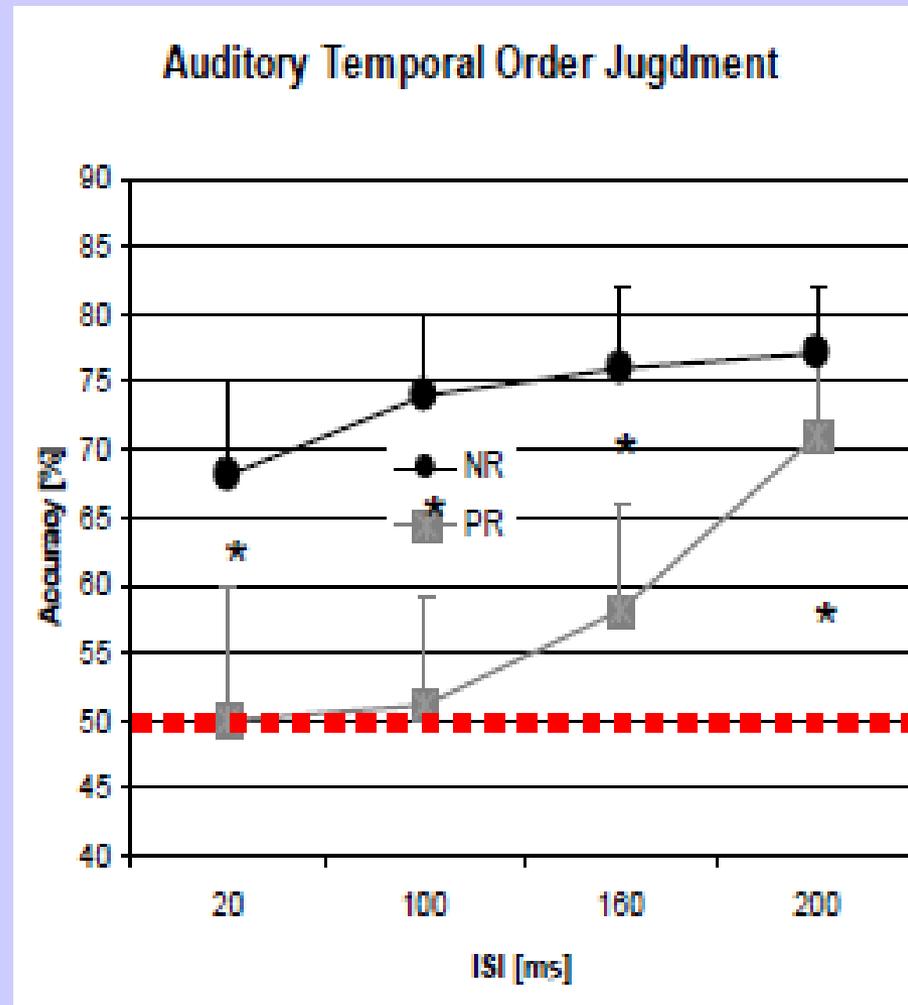
Un studio longitudinale dell'attenzione uditiva: Giudizio dell'ordine temporale (Tallal task)

Auditory Temporal Order Judgment



<u>Task</u>	<u>Mean</u>	<u>SD</u>	<u>P-value</u>
Syllabic Segmentation (errors)	NR 1.07 PR 3.22	2.56 5.47	0.038*
Syllabic Perception (errors)	NR 1.44 PR 2.78	2.05 2.86	0.053

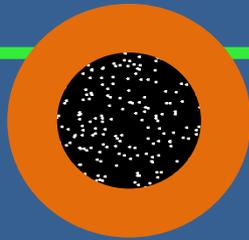
Un studio longitudinale dell'attenzione uditiva: Giudizio dell'ordine temporale



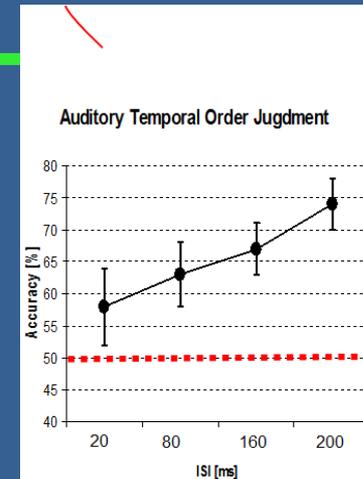
Compito di ricerca visiva



Compito del movimento coerente



Compito della Tallal



Nello stesso campione di bambini pre-lettori (Studio 2), sono stati rilevati disturbi nell'attenzione visiva spaziale, nella percezione visiva del movimento e nel rapido orientamento dell'attenzione uditiva



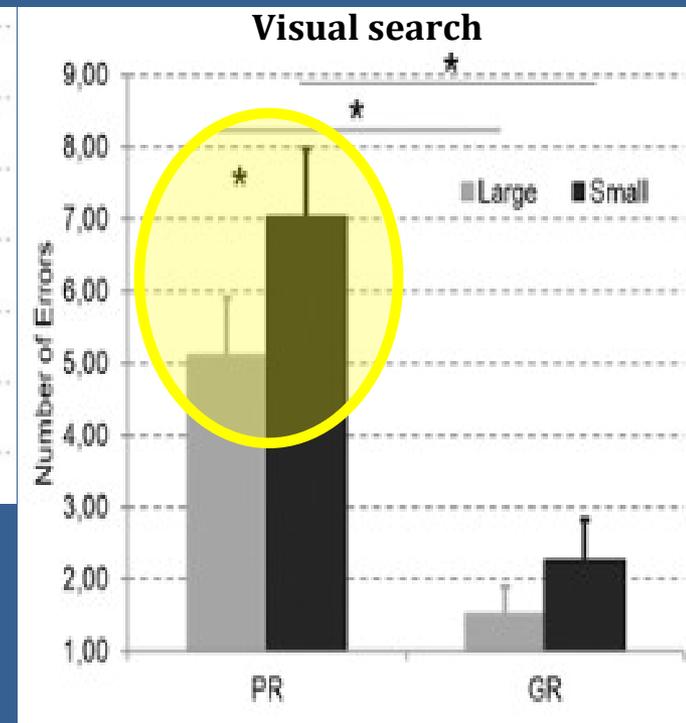
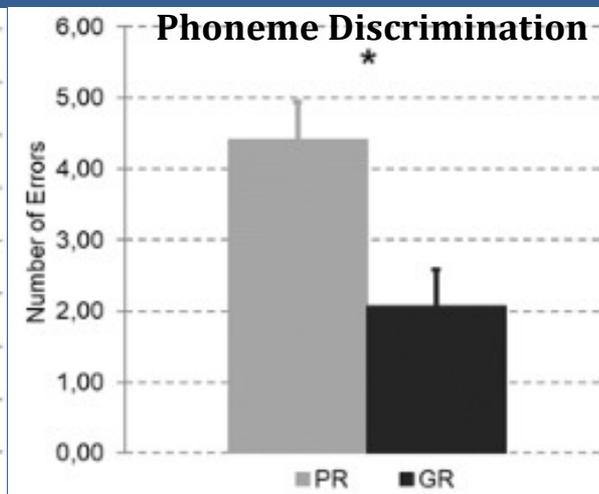
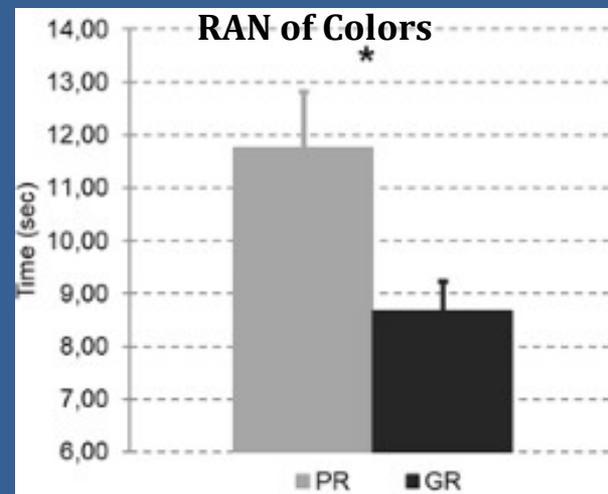
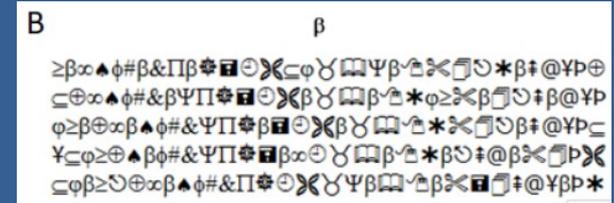
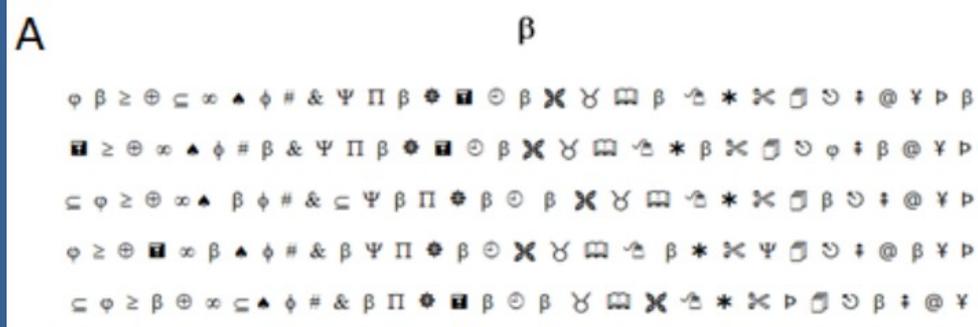
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PREVEDERE la dislessia Misurando l'Affollamento Visivo (Studio 3) i.e., Ricerca Visiva con spaziatura Larga vs. Stretta



Ascoltami bene: ora ti dirò delle parole che non esistono e tu dovrai dirmi se sono uguali o no. Facciamo un esempio: se io ti dico PADE-FADE, sono uguali, sì o no? E se ti dico ZANE-ZANE? Hai capito bene? Iniziamo.

1. PACA	BACA	
2. BATA	PATA	
3. PASE	PASE	
4. FAMI	VAMI	
5. VALA	VALA	
6. LETA	LEDA	
7. TOCO	DOCO	
8. CILA	GILA	
9. GIPI	GIPI	
10. MUNO	NUNO	
11. CANO	CAMO	
12. LACO	RACO	
13. SALU	SALU	
14. SEBA	ZEBA	
15. RAVE	SAVE	



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Visual attention modulates reading acquisition

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ARTICLE INFO

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Visual attention
Longitudinal study
Multi-element parallel processing
Prereaders
Models of reading

ABSTRACT

The processing of letters within strings is challenging for beginning readers. Letter identification is affected by visual similarity, loss of information with eccentricity and interference from nearby letters. In contrast, visual attention enhances letter identification. We here explored whether visual attention resources for multi-element processing, as measured through tasks of visual attention span prior to literacy instruction, predicted reading fluency performance one year later. One hundred and twenty-four mainstream children were assessed in kindergarten on their visual attention span abilities, phonological awareness, letter-name knowledge, early literacy knowledge, verbal short-term memory and non-verbal IQ. The participants' reading performance was measured at the end of grade 1 using tasks of irregular word, pseudo-word and text reading. Results from regression analyses showed that kindergarteners' VA span predicted reading fluency for text, irregular words and pseudo-words one year later, after controlling for age, non-verbal IQ, phonological skills, letter name knowledge and early literacy skills. Path analyses carried out to estimate the differential contribution of VA span to the different reading skills revealed a stronger contribution for pseudo-word reading than irregular word or text reading at the end of Grade 1. These results suggest that pre-reading visual attention resources contribute to later reading fluency, whatever the reading subskills and whatever the reading context (words in isolation or in sentences), with higher involvement to pseudo-word reading. We propose a new conceptual model of the role of visual attention in reading acquisition and argue that many aspects of the models are already supported by available findings.

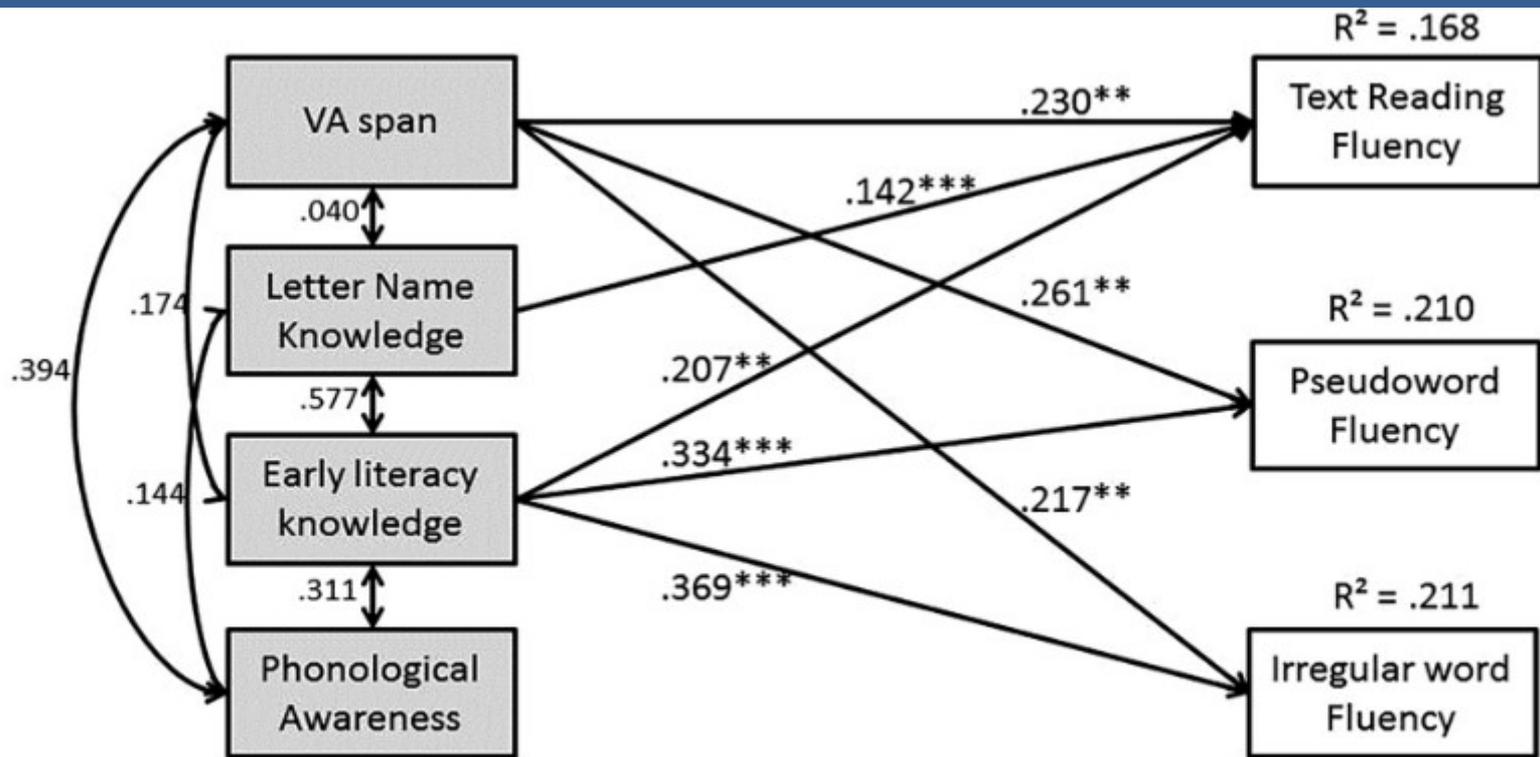


Fig. 1. Path diagram showing the longitudinal predictors of text reading, pseudo-word reading and irregular word reading fluency. Solid lines represent the statistically significant predictive relationships (standardized results). * $p < .05$; ** $p < .01$; *** $p < .001$.