Lezione n 13 del 17 Novembre 2020

Nps svi e riabil

A tutta dislessia!!!

“Storia” della Dislessia: le Fasi della Ricerca

- **IPOTESI VISIVA** = “CECITA’ PER LE PAROLE”, teoria Magnocellulare con disfunzione dell’attenzione spaziale.

- **IPOTESI UDITIVA** = Difficoltà nell’elaborazione “temporale” degli stimoli uditivi, deficit nell’elaborazione fonologica in presenza di rumore.

SENSORIALE

- IPOTESI FONOLOGICA = Difficoltà ad elaborare i suoni specifici del linguaggio (Fonemi). *LINGUAGGIO*

- IPOTESI MNESTICA = Deficit nel mantenere e/o manipolare i fonemi in un magazzino di memoria.

- IPOTESI DENOMINAZIONE RAPIDA = Deficit nei meccanismi di automatizzazione legati alla mappaggio cross-modale (e.g. conversione grafema-fonema).

- **IPOTESI DEI SOTTOGRUPPI** = deficit visivo vs. uditivo - fonologico tuttavia, tuttavia il problema dei Misti.

- **IPOTESI SOVRAMODALE** = disturbo visivo e uditivo - fonologico.

Dislessia: Ipotesi fonologica

Lancet. 2012 May 26;379(9830):1997-2007. doi: 10.1016/S0140-6736(12)60198-6. Epub 2012 Apr 17.

Developmental dyslexia.

Peterson RL[1], Pennington BF.

⊕ Author information

Abstract

Dyslexia is a neurodevelopmental disorder that is characterised by slow and inaccurate word recognition. Dyslexia has been reported in every culture studied, and mounting evidence draws attention to cross-linguistic similarity in its neurobiological and neurocognitive bases. Much progress has been made across research specialties spanning the behavioural, neuropsychological, neurobiological, and causal levels of analysis in the past 5 years. From a neuropsychological perspective, the phonological theory remains the most compelling, although phonological problems also interact with other cognitive risk factors. Work confirms that, neurobiologically, dyslexia is characterised by

Annu Rev Clin Psychol. 2015;11:283-307. doi: 10.1146/annurev-clinpsy-032814-112842. Epub 2015 Jan 14.

Developmental dyslexia.

Peterson RL[1], Pennington BF.

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Abstract

This review uses a levels-of-analysis framework to summarize the current understanding of developmental dyslexia's etiology, brain bases, neuropsychology, and social context. Dyslexia is caused by multiple genetic and environmental risk factors as well as their interplay. Several candidate genes have been identified in the past decade. At the brain level, dyslexia is associated with aberrant structure and function, particularly in left hemisphere reading/language networks. The neurocognitive influences on dyslexia are also multifactorial and involve phonological processing deficits as well as weaknesses in other oral language skills and processing speed. We address contextual issues

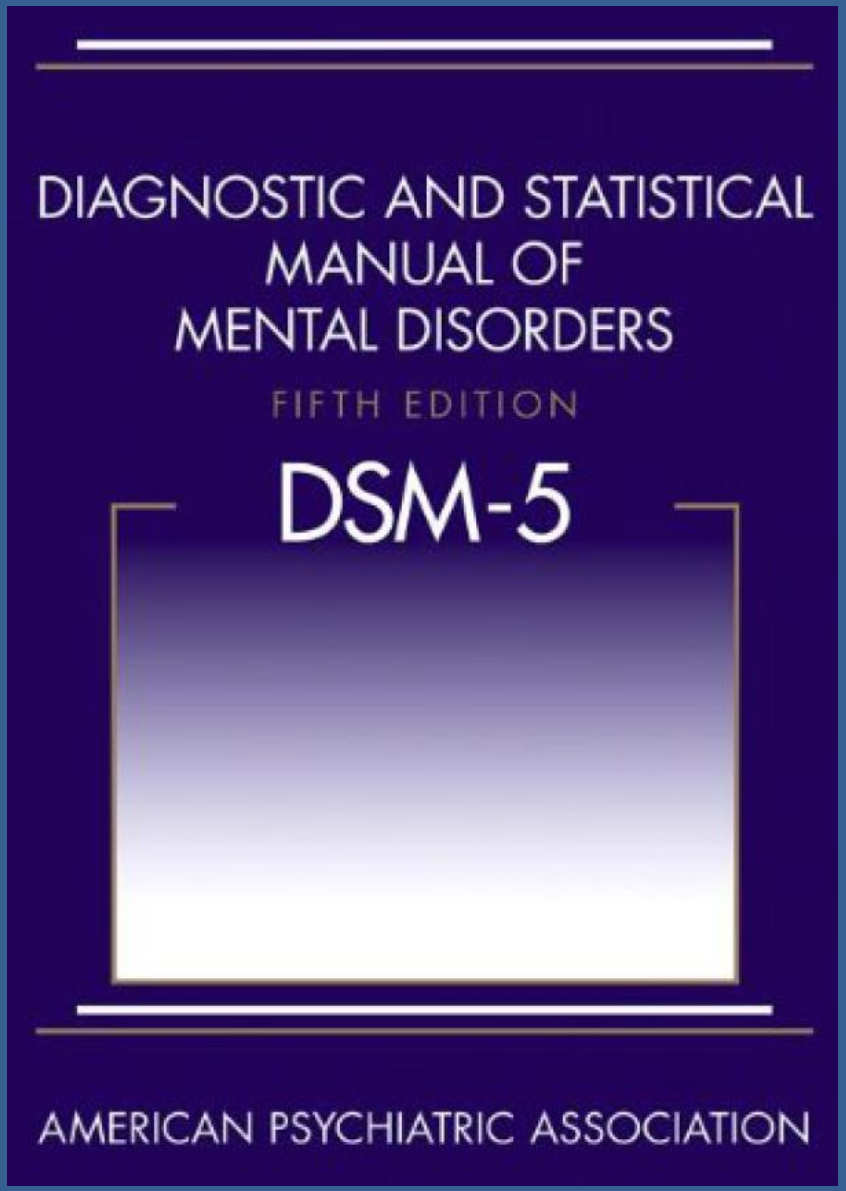
La lettura è cruciale per vivere nella società moderna

Per circa il 5% dei bambini imparare a leggere è estremamente difficile

Questi bambini sono affetti da dislessia che è un complesso disordine neuroevolutivo

La più popolare spiegazione della dislessia individua nel disturbo linguistico-fonologico l'unica causa,
MA
***la dislessia è causata da una combinazione di cause*.**

Che cos'è la dislessia evolutiva?



Ipotesi Fonologica della Dislessia (Ramus, 2003): Sintomi Centrali

Livello Neuro-Biologico

Disfunzione dell'area peri-silviana dell'emisfero sinistro

Livello Cognitivo-Neuropsicologico

Rappresentazioni fonologiche carenti

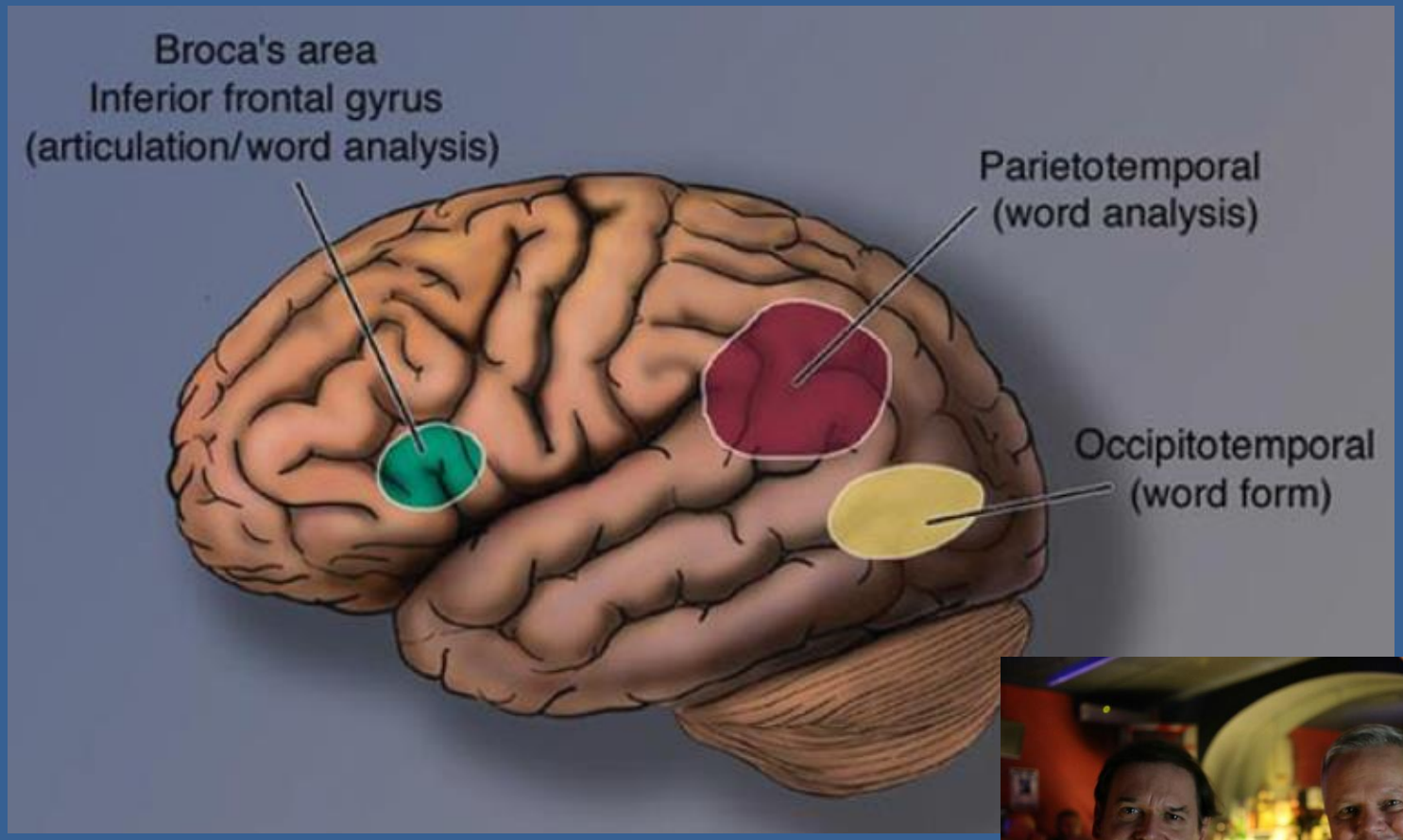
Corrispondenza grafema-fonema alterata

Abilità meta-fonologiche povere

Manifestazione Clinica

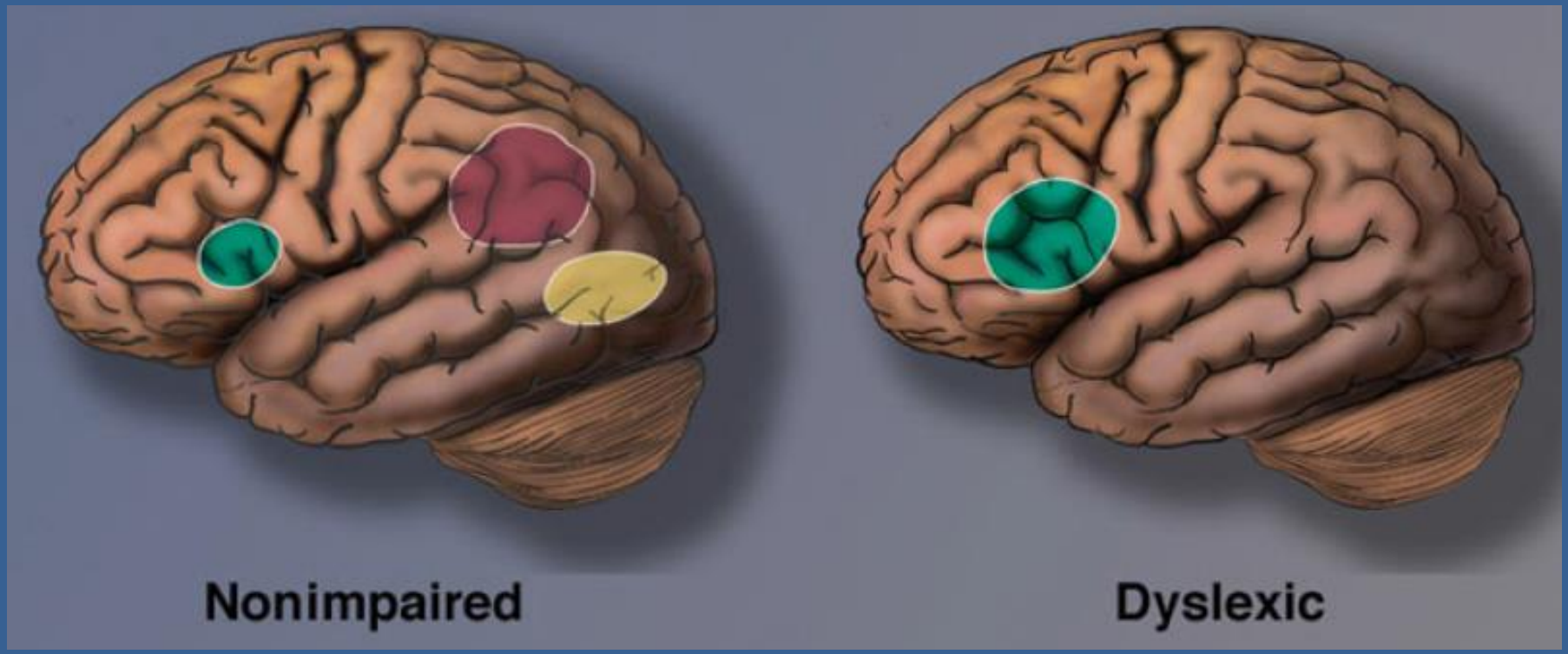
Difficoltà di lettura (i.e., DE)

Neurobiologia della lettura



Una speciale ringraziamento a Kenneth Pugh

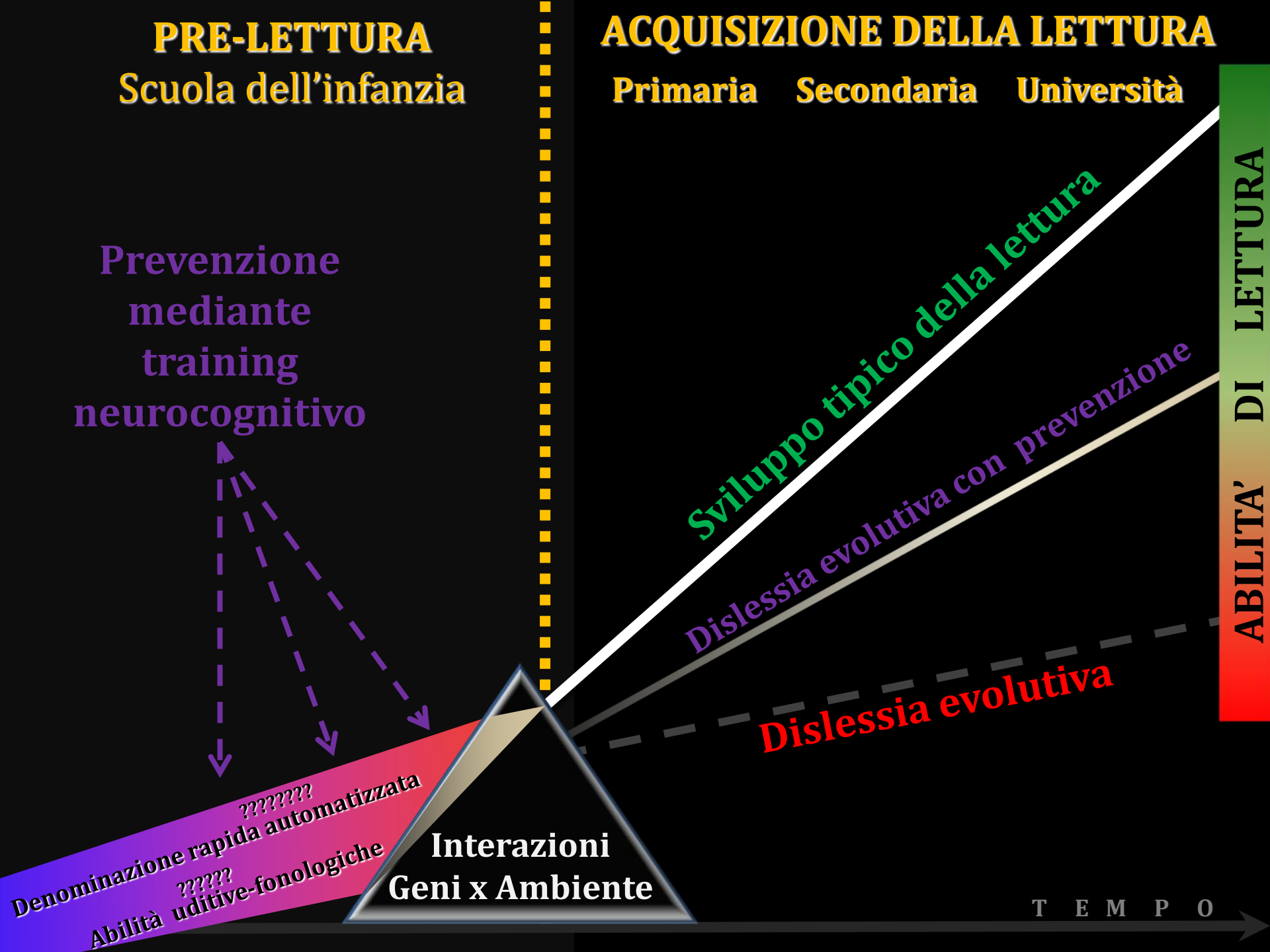
Disordine fonologia e ortografia: cause o effetti della dislessia?



I tradizionali trattamenti della dislessia sono spesso lenti, lunghi, costosi e frustranti per i bambini (e i loro genitori) e spesso neppure troppo efficienti.



Il nostro approccio mira alla prevenzione, piuttosto che al trattamento della dislessia mediante un trattamento preventivo prescolare mediante video giochi



PRE-LETTURA
Scuola dell'infanzia
ACQUISIZIONE DELLA LETTURA
Primaria Secondaria Università
Prevenzione mediante training neurocognitivo
Sviluppo tipico della lettura
Dislessia evolutiva con prevenzione
Dislessia evolutiva
ABILITA' DI LETTURA
Denominazione rapida automatizzata ????????
Abilità uditive-fonologiche ??????
Interazioni Geni x Ambiente
TEMPO

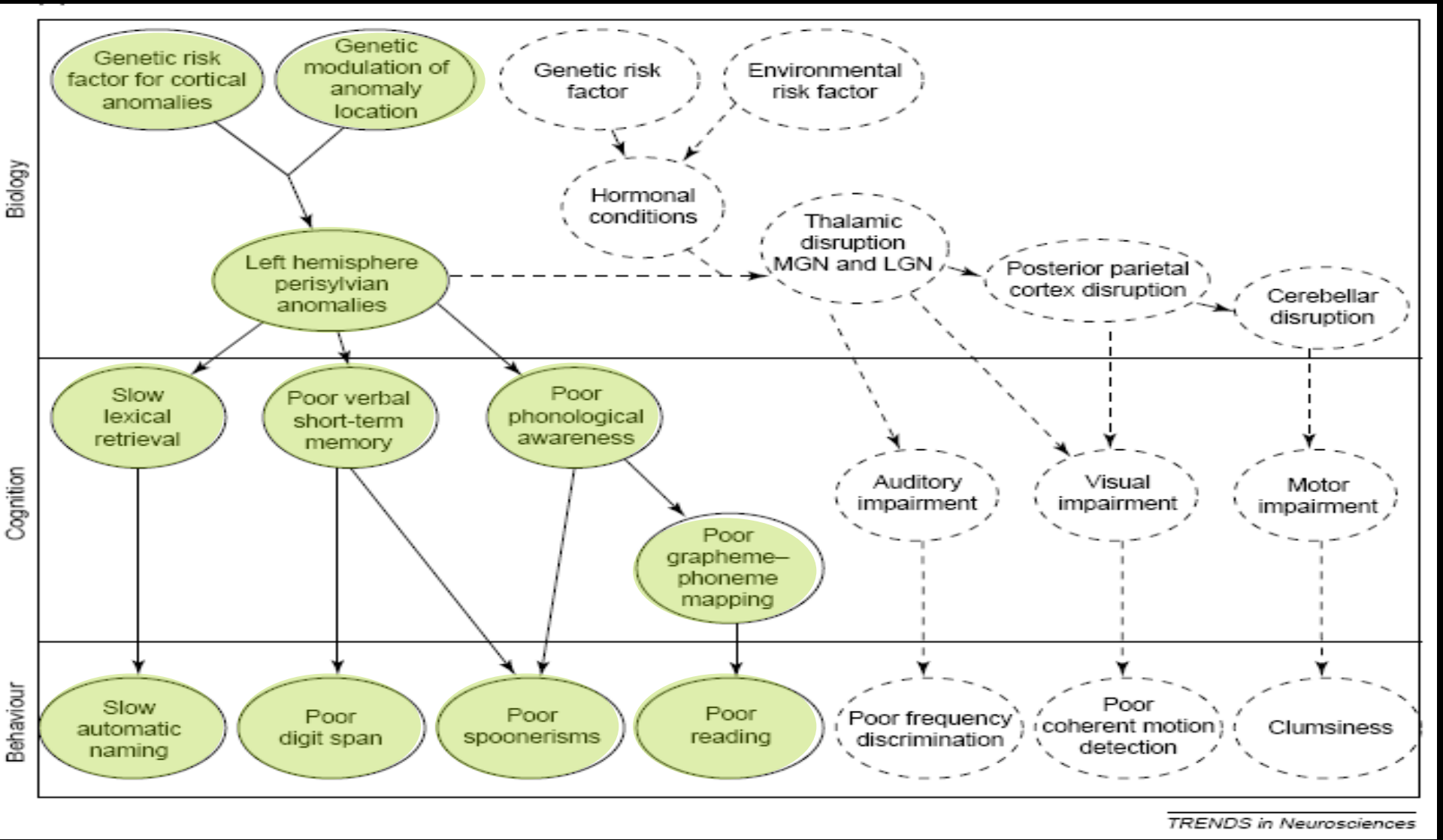
Funzioni cross-modali visive-uditive:

(1) **Apprendimento** della corrispondenza grafema-fonema; ovvero conoscenza (del suono) delle lettere (***accuratezza riconoscimento lettere***);

(2) **Automatizzazzione** (cervelletto?) della corrispondenza grafema-fonema (***rapidità RAN lettere***);

Per una recente rassegna si veda:

Lervag A. & Hulme C. (2009). Rapid Automatized Naming (RAN) Taps a Mechanism That Places Constraints on the Development of Early Reading Fluency. Psychological Science 20, 1040-1049.


Biology
Cognition
Behaviour
Genetic risk factor for cortical anomalies
Genetic modulation of anomaly location
Genetic risk factor
Environmental risk factor
Hormonal conditions
Thalamic disruption MGN and LGN
Posterior parietal cortex disruption
Cerebellar disruption
Left hemisphere perisylvian anomalies
Slow lexical retrieval
Poor verbal short-term memory
Poor phonological awareness
Poor grapheme–phoneme mapping
Auditory impairment
Visual impairment
Motor impairment
Slow automatic naming
Poor digit span
Poor spoonerisms
Poor reading
Poor frequency discrimination
Poor coherent motion detection
Clumsiness
TRENDS in Neurosciences

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Cognition 91 (2004) 77–111
www.elsevier.com/locate/COGNIT

Is there a causal link from phonological awareness to success in learning to read?

Anne Castles[a,b,*], Max Coltheart[a]

[a]*Macquarie Centre for Cognitive Science, Macquarie University, Sydney, Australia*
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Received 10 February 2003; revised 13 May 2003; accepted 6 August 2003

Longitudinal and experimental training studies are examined in detail, as these are considered most appropriate for exploring a causal hypothesis of this nature. A particular focus of our analysis is the degree to which studies to date have controlled for existing literacy skills in their participants and the influence that these skills might have on performance on phonological awareness tasks. We conclude that no study has provided unequivocal evidence that there is a causal link from competence in phonological awareness to success in reading and spelling acquisition. However, we

Categorizing sounds and learning to read—a causal connection

L. Bradley & P. E. Bryant

Department of Experimental Psychology, University of Oxford, Oxford OX1 3UD, UK

Children who are backward in reading are strikingly insensitive to rhyme and alliteration[1]. They are at a disadvantage when categorizing words on the basis of common sounds even in comparison with younger children who read no better than they do. Categorizing words in this way involves attending to their constituent sounds, and so does learning to use the alphabet in reading and spelling. Thus the experiences which a child has with rhyme before he goes to school might have a considerable effect on his success later on in learning to read and to write. We now report the results of a large scale project which support this hypothesis.

Our study combined two different methods. The first was longitudinal. We measured 403 children's skills at sound categorization before they had started to read, and related these to their progress in reading and spelling over the next 4 yr: at the end of this time the size of our group was 368. The second was intensive training in sound categorization or other forms of categorization given to a subsample of our larger group. We used both methods because we reasoned that neither on its own is a sufficient test of a causal hypothesis and that the strengths and weaknesses of the two are complementary.

Anche i più accesi sostenitori dell'ipotesi fonologica suggeriscono che i meccanismi attenzionali siano importanti

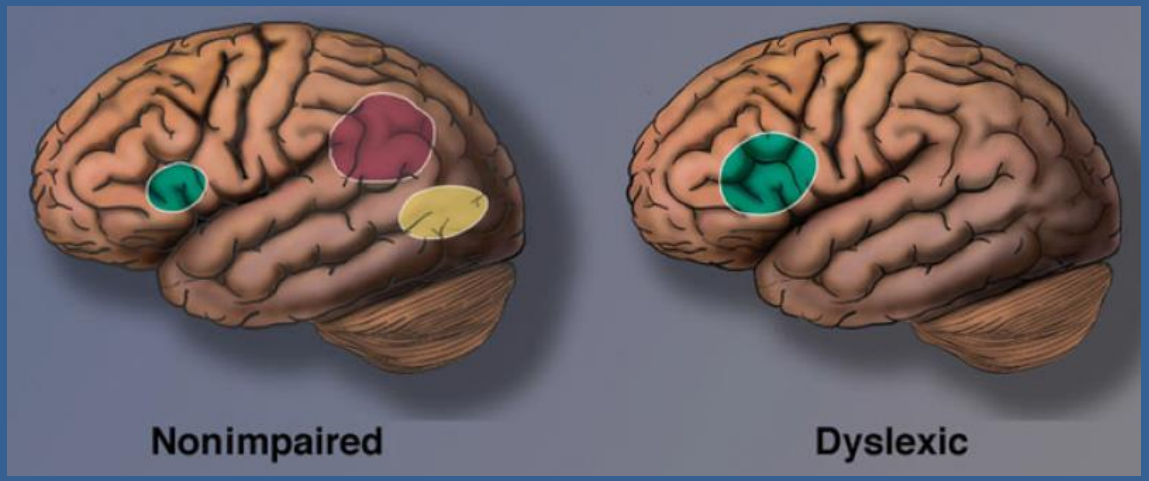
Development and Psychopathology **20** (2008), 1329–1349

doi:10.1017/S0954579408000631

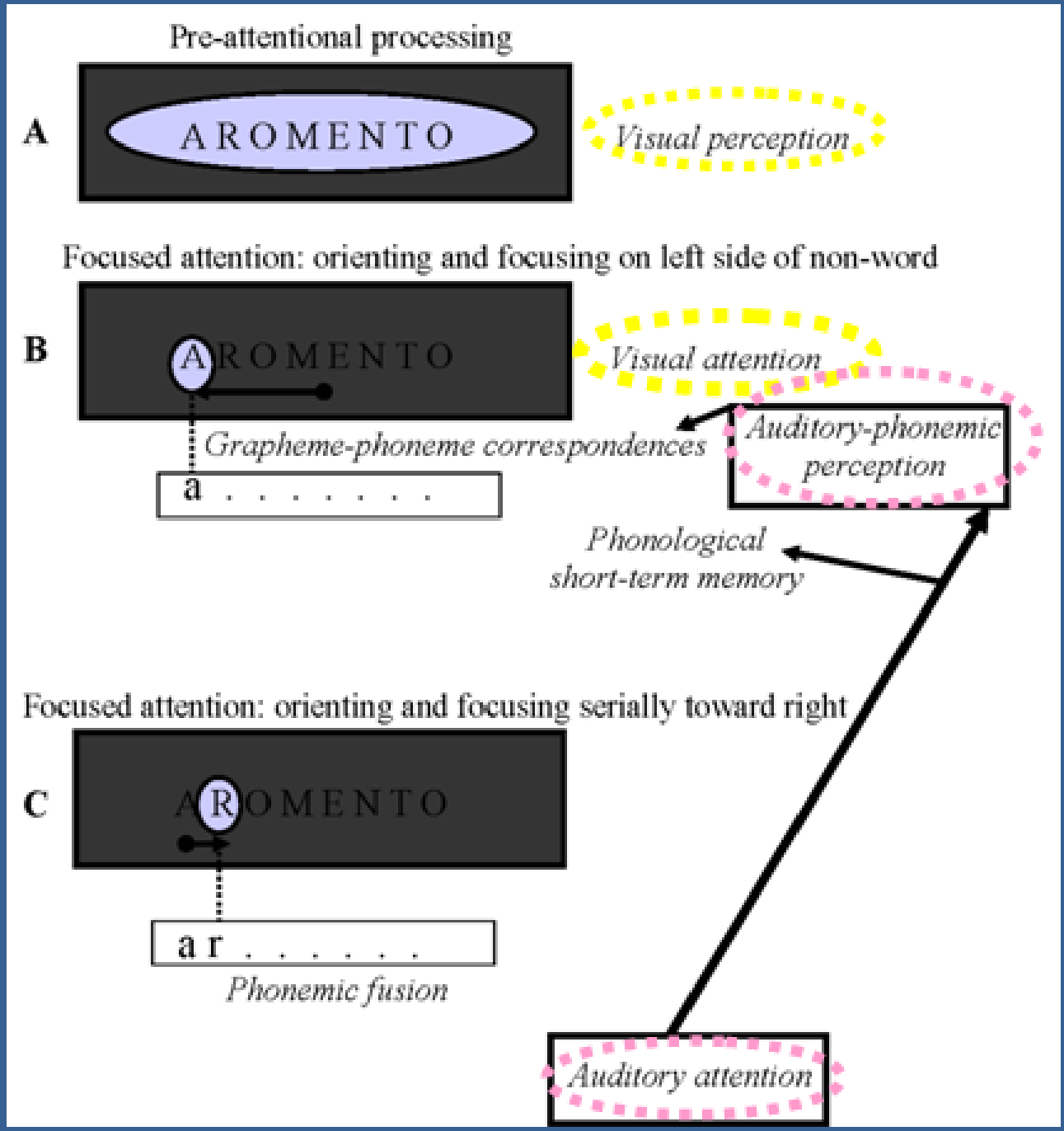
Paying attention to reading: The neurobiology of reading and dyslexia

SALLY E. SHAYWITZ AND BENNETT A. SHAYWITZ
Yale University School of Medicine

on dyslexia. We suggest that to break through this "fluency" barrier, investigators will need to reexamine the more than 20-year-old central dogma in reading research: the generation of the phonological code from print is modular, that is, automatic and not attention demanding, and not requiring any other cognitive process. Recent findings now present a competing view: other cognitive processes are involved in reading, particularly attentional mechanisms, and that disruption of these attentional mechanisms play a causal role in reading difficulties. Recognition of the role of attentional mechanisms in reading now offer potentially new strategies for interventions in dyslexia. In particular, the use of



Perché l'attenzione visiva e uditiva sono importanti x imparare a leggere?



Journal of Vision (2010) 10(10):16, 1–12 http://www.journalofvision.org/content/10/10/16 1

Precueing attention to the target location diminishes crowding and reduces the critical distance

Yaffa Yeshurun
Department of Psychology and Institute of Information Processing and Decision Making, University of Haifa, Haifa, Israel

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CAIRULENI

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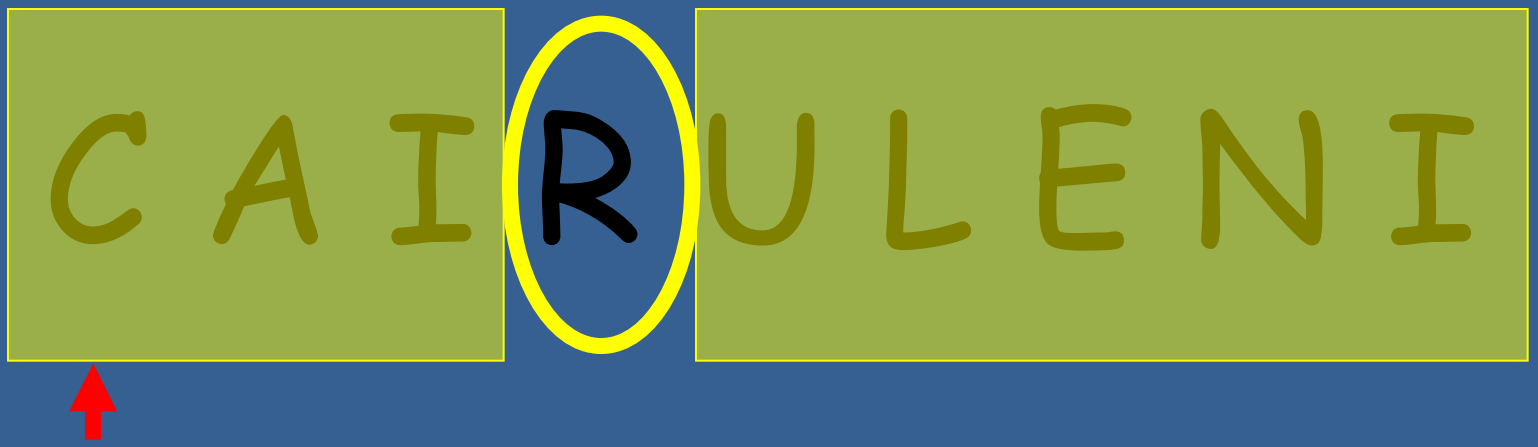

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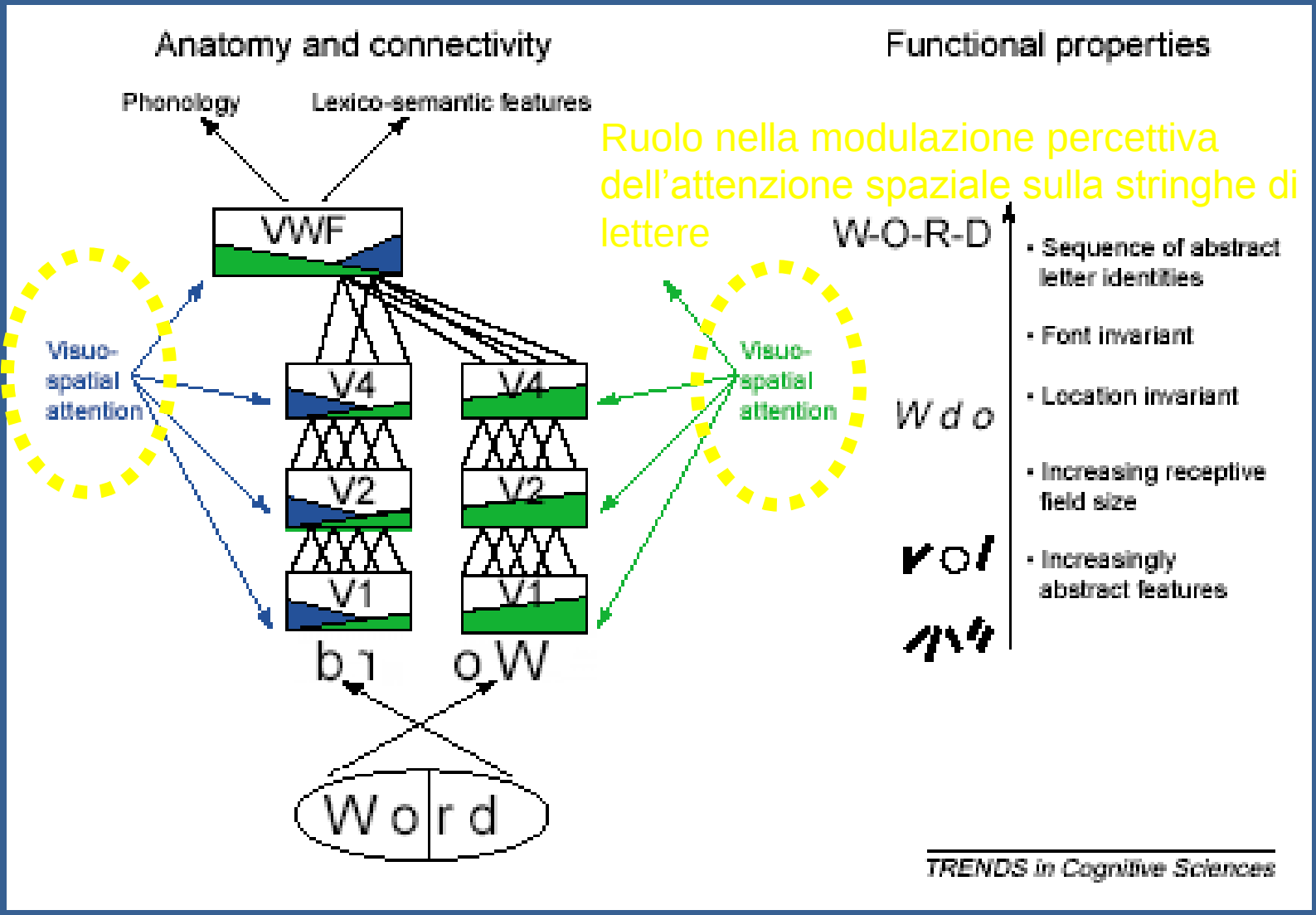
Area della Forma Visiva delle Parole



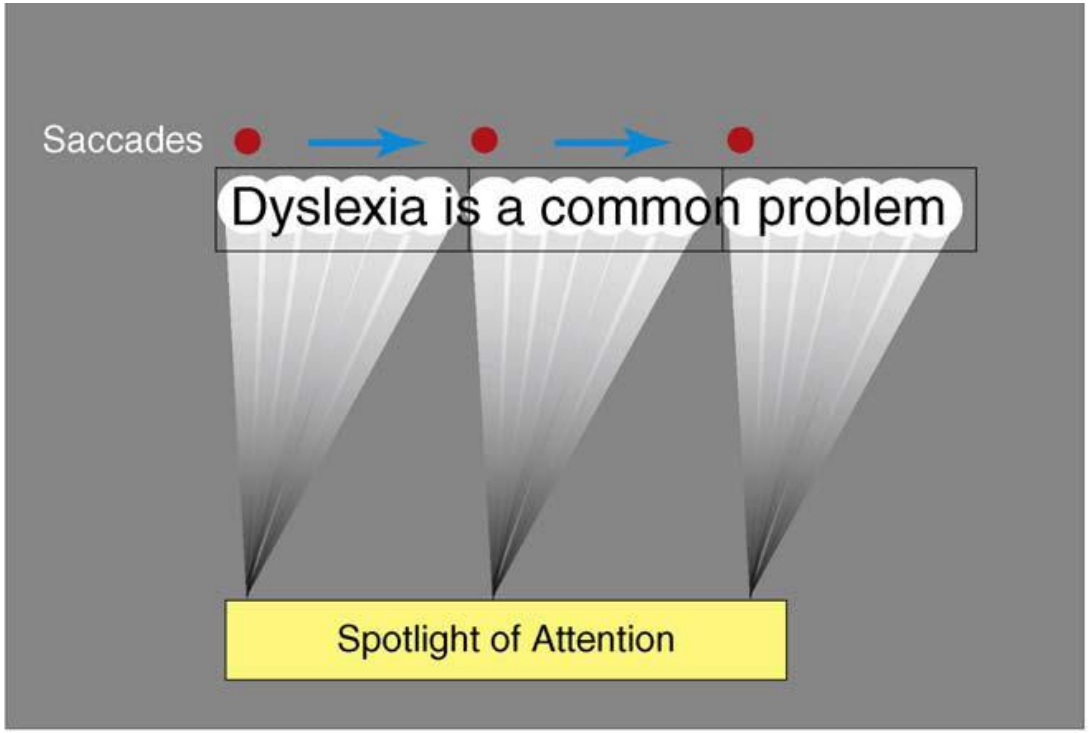
Ruolo nella modulazione percettiva dell'attenzione spaziale sulla stringhe di lettere

Opinion

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

Trichur R. Vidyasagar[1] and Kristen Pammer[2]

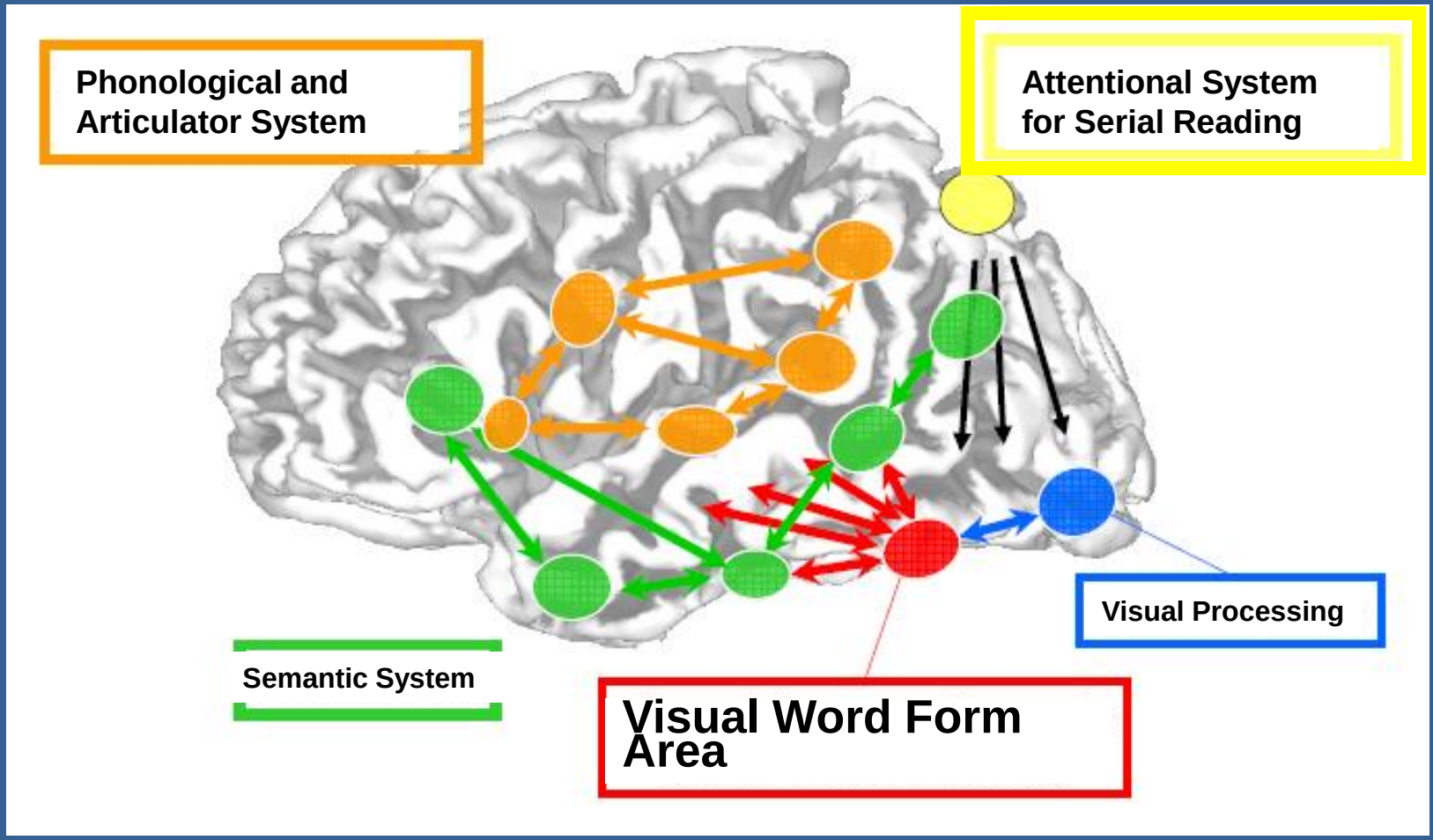
[1] Department of Optometry & Vision Sciences, University of Melbourne, Parkville, Vic 3010, Australia
[2] Department of Psychology, The Australian National University, Canberra A.C.T., Australia



TRENDS in Cognitive Sciences

La visione emergente

The model by Dehaene, Cohen & coll.



A. Prevedere la Dislessia

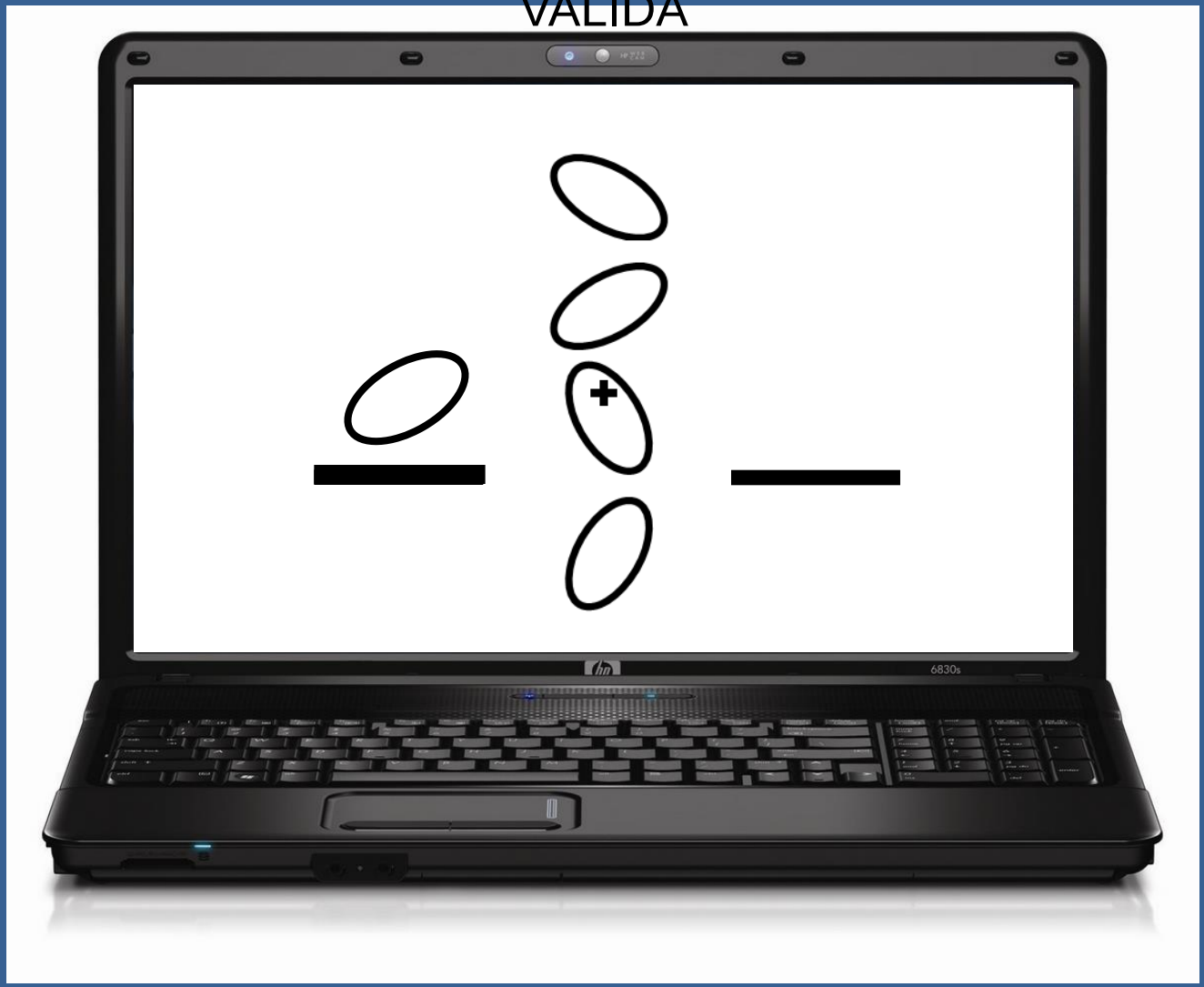
Studi Longitudinali:

-Attenzione Visiva Spaziale (Studio 1)
-Percezione Visiva Globale (Studio 1)
-Percezione Visiva del Movimento (Studio 2)
-Attenzione Uditiva(Studio 2)
-Affollamento Visivo(Studio 3)

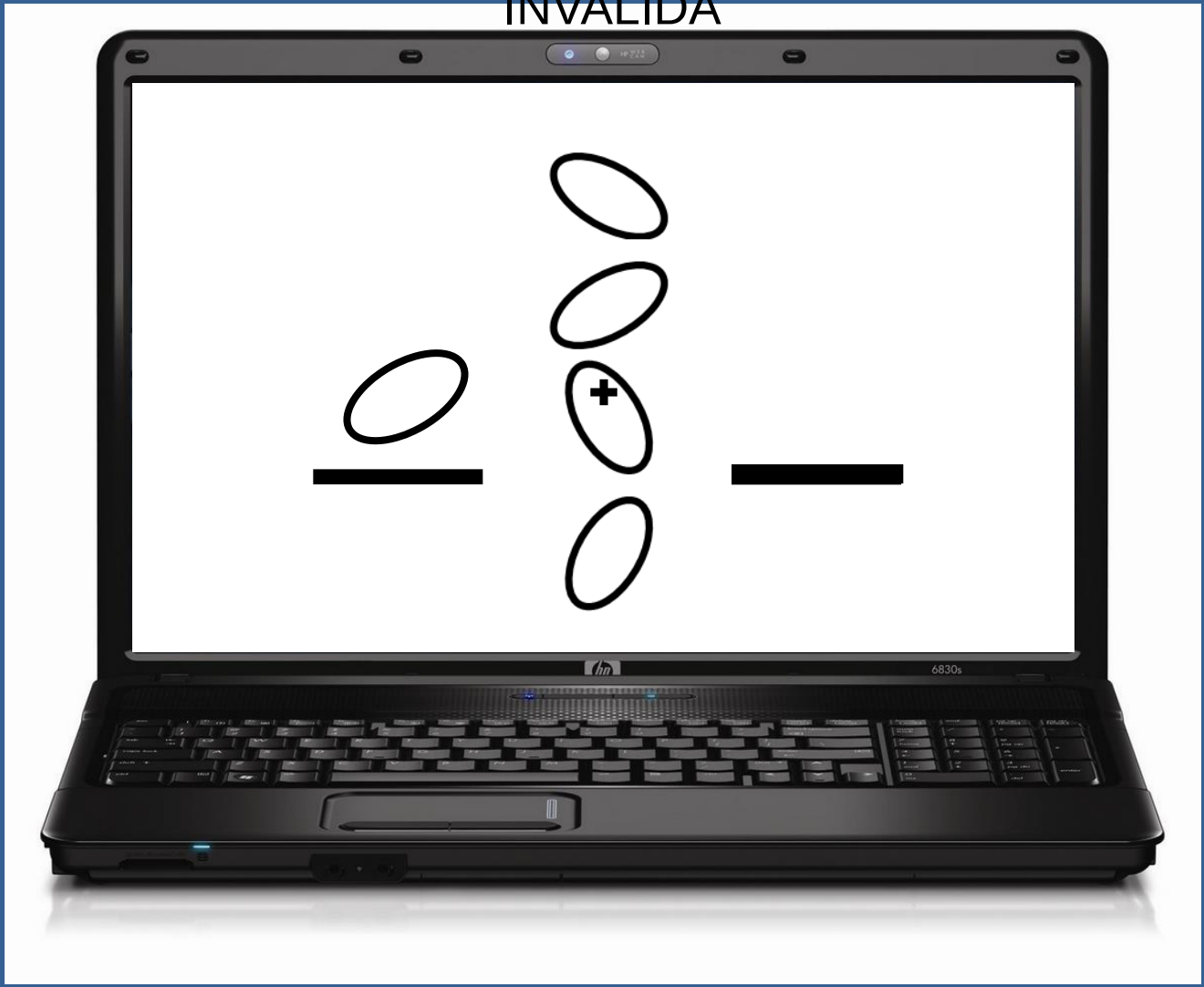
Attenzione visiva spaziale nei bambini prescolari che svilupperanno dislessia

Attenzione Visiva Spaziale

VALIDA



Attenzione Visiva Spaziale



Current Biology 22, 1–6, May 8, 2012 ©2012 Elsevier Ltd All rights reserved DOI 10.1016/j.cub.2012.03.013

Report

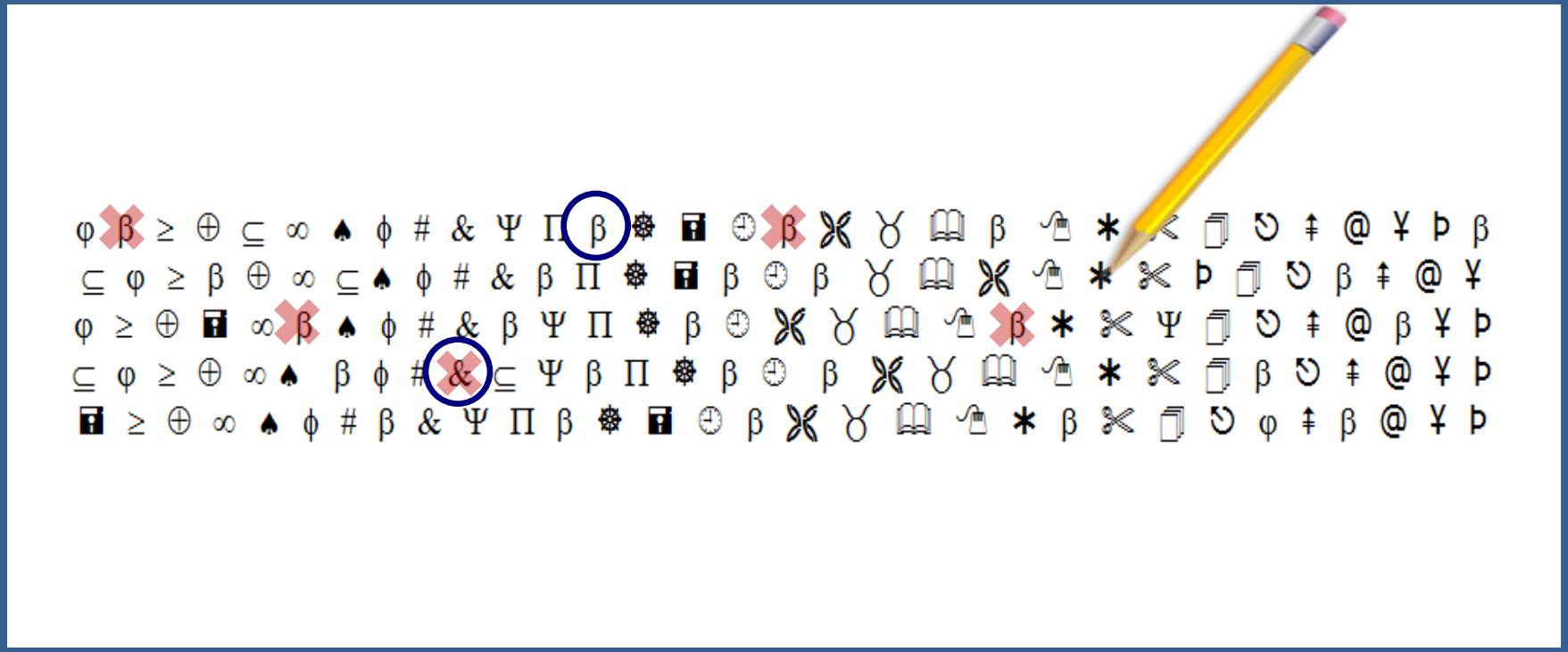
A Causal Link between Visual Spatial Attention and Reading Acquisition

Sandro Franceschini,[1,3] Simone Gori,[1,2] Milena Ruffino,[2] Katia Pedrolli,[1] and Andrea Facoetti[1,2,3,*]
[1]Developmental and Cognitive Neuroscience Lab, Department of General Psychology, University of Padua, Padova 35131, Italy
[2]Developmental Neuropsychology Unit, Scientific Institute "E. Medea," Bosisio Parini, Lecco 23842, Italy

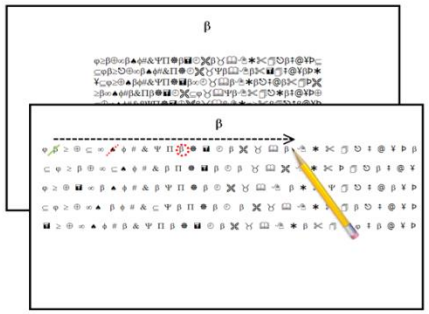
L'efficienza dell'attenzione visiva spaziale alla scuola dell'infanzia predice le future abilità di lettura in II elementare?

Ricerca Visiva

(componente visuo-attentiva di scansione e focalizzazione)



Serial Visual Search Task



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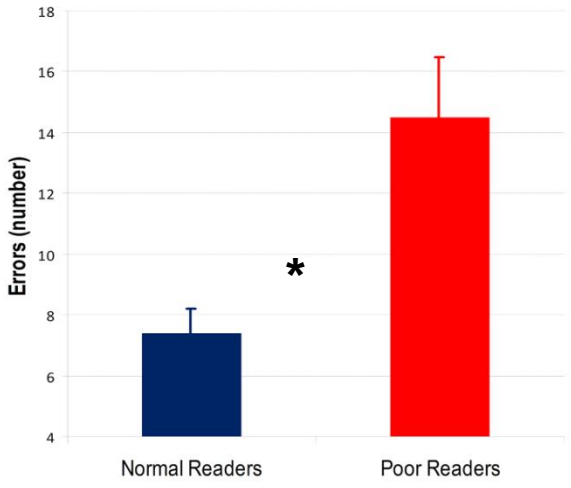
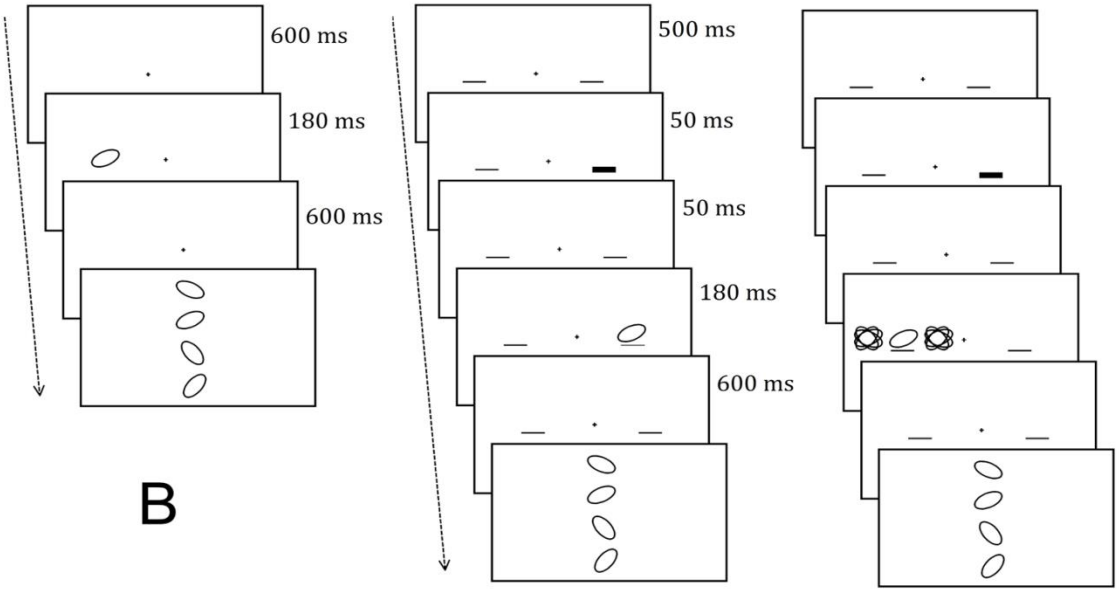


Spatial Cue Facilitation task



B