

# Il potere della lettura

Davide Crepaldi

SISSA – Scuola Internazionale Superiore di Studi Avanzati, Trieste

<https://lrlac.sissa.it>

@CrepaldiDavide on Twitter

Seminario NS Lab

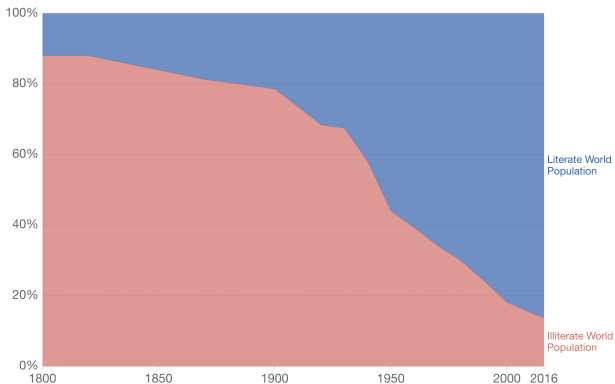
Intesa Sanpaolo Innovation Center

18 aprile 2023



## Literate and illiterate world population

Our World  
in Data



Source: Global literacy since 1800 (OWID based on OECD & UNESCO (2019))

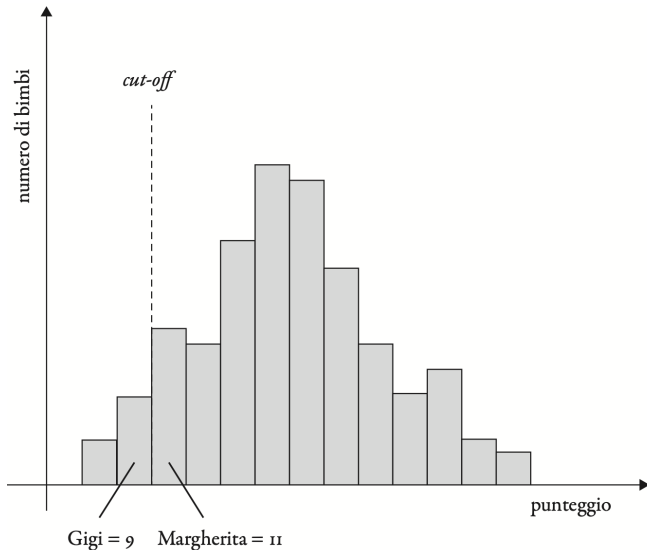
CC BY

- ▶ Circa 7.200 lingue parlate
- ▶ Circa 4.000 hanno una forma scritta
- ▶ Molte sono usate pochissimo (cerimonie religiose, architettura) e/o sono conosciute solo da una piccola parte della popolazione

# Dislessia: il nuovo nemico?

- ▶ Qualcosa di nuovo?
  - ▶ Nuovo fenomeno
  - ▶ Nuova interpretazione

# Qualche numero



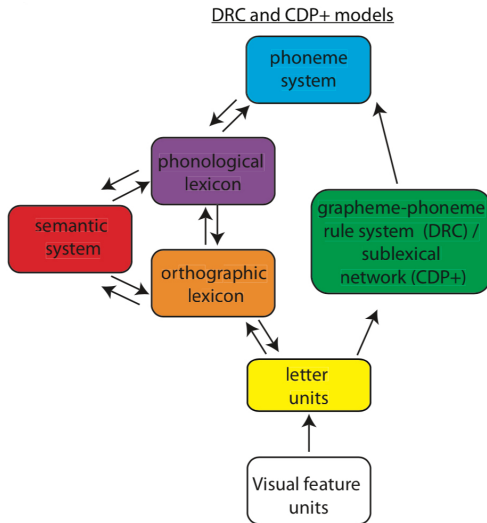
## La definizione

***Specific Learning Disabilities*** are Neurodevelopmental Disorders that impede the ability to learn or use specific academic skills (e.g., reading, writing, or arithmetic), which **are the foundation for other academic learning**.

DSM 5

- ▶ Persistent (6m+)
- ▶ Academic skills substantially below expectation
- ▶ Onset during school-age (although some are diagnosed late)
- ▶ Not due to other difficulties (e.g., neurological conditions, language issues or socio-economic disadvantage)

# Il modello a due vie



# Un nome, molti disturbi diversi

Dislessia fonologica

- ▶ **vimo, petinfo**

Dislessia per migrazione di lettere

- ▶ **masso** per **mosso**, **vane** per **nave**



## Visione e lettura

- ▶ Riconoscimento contemporaneo di lettere
- ▶ Mancanza di un lessico visivo

# Il paradosso della lettura

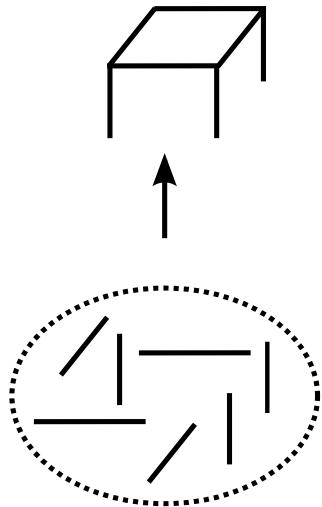
La lettura è fuori dal nostro patrimonio genetico:

- ▶ Non è osservata universalmente
- ▶ È nata “poco” tempo fa
- ▶ Non viene imparata in modo spontaneo

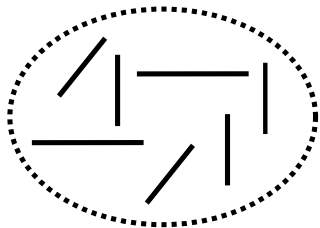
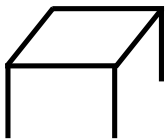
Praticamente tutti i lettori sono straordinariamente capaci:

- ▶ Parole di 8 lettere in ~35ms
- ▶ ~20 lettere ogni ~250ms

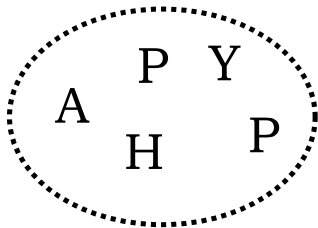
# Apprendimento statistico



# Apprendimento statistico




HAPPY



# Brains at work

YouTube <sup>GB</sup> brains at work crepaldi lab



EUROPEAN  
CITIZEN SCIENCE  
ASSOCIATION  
MEMBER

in fact groups of boys and girls participate, together with scientists,

0:21 / 3:33

Brains at Work

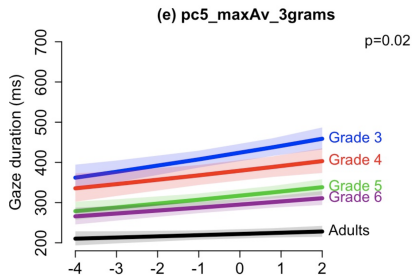
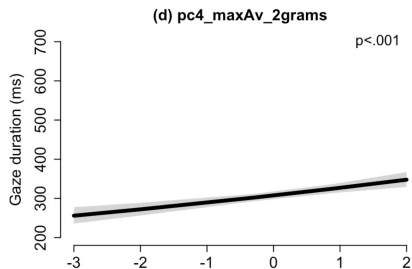
422 views · 28 Aug 2018

7 DISLIKE SHARE SAVE ...

Language, Learning and Reading Lab  
70 subscribers

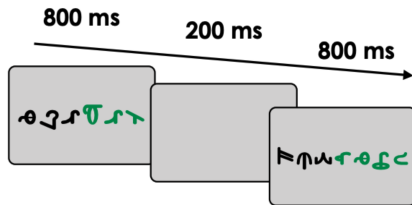
SUBSCRIBED

# Frequenza di co-occorrenza delle lettere

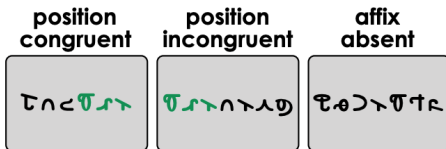


# Linguaggio alieno

## Apprendimento



## Test

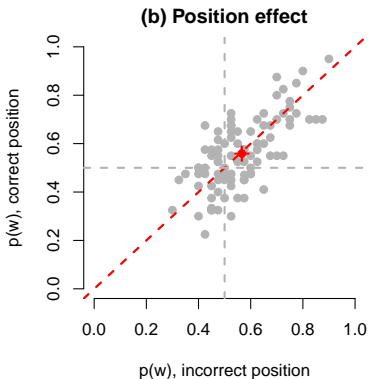
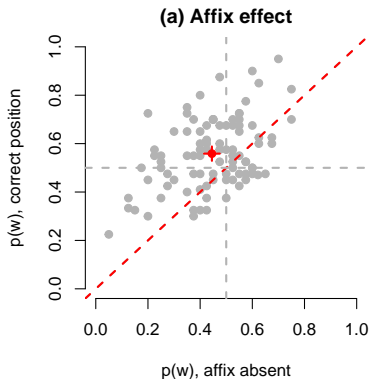


## I nostri piccoli partecipanti

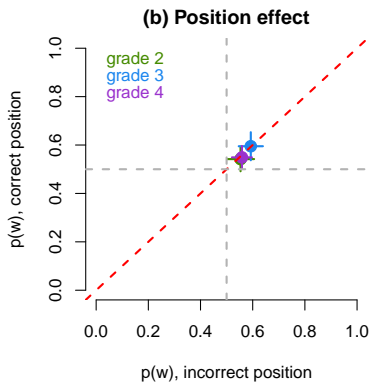
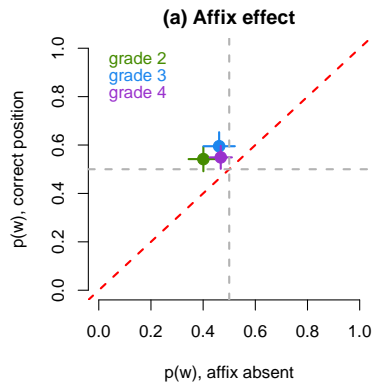
	1st grade	2nd grade	3rd grade	4th grade	5th grade
N	13	29	24	40	14
Age	6.75 (.55)	7.68 (.29)	8.81 (.44)	9.65 (.39)	10.86 (.35)



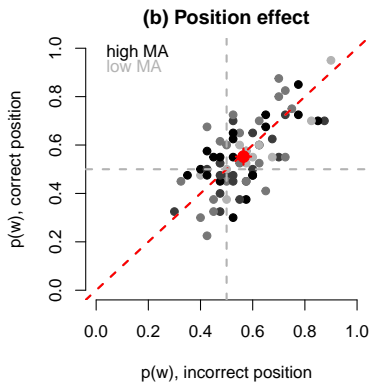
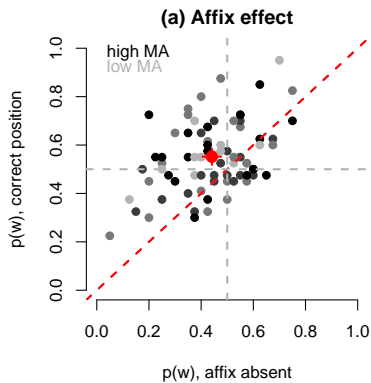
# Apprendimento delle frequenze, non della posizione



# Poco cambiamento evolutivo



# Consapevolezza morfologica?



Grazie!



# Il potere della lettura

Davide Crepaldi

SISSA – Scuola Internazionale Superiore di Studi Avanzati, Trieste

<https://lrlac.sissa.it>

@CrepaldiDavide on Twitter

Seminario NS Lab

Intesa Sanpaolo Innovation Center

18 aprile 2023



## A new approach to reading

- ▶ Scripts can be seen as fully-fledged visual systems
- ▶ They can be studied as such, without language
- ▶ The way we learn to deal with them can be captured through statistical learning
- ▶ The way we learn to map them onto language can be captured through statistical learning

## A new approach to reading

- ▶ Scripts **can** be seen as fully-fledged visual systems
- ▶ They **can** be studied as such, without language
- ▶ The way we learn to deal with them **can** be captured through statistical learning
- ▶ The way we learn to map them onto language **can** be captured through statistical learning