

# One brain, two languages = many advantages

Coralie Hervé  
Florence Myles

LaDeLi  
**CENTRE FOR RESEARCH IN  
LANGUAGE DEVELOPMENT  
THROUGHOUT THE LIFESPAN**



# What is bilingualism?



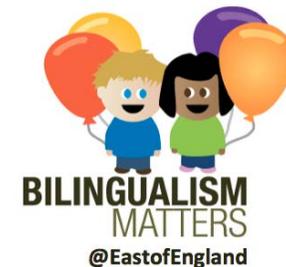
- Bilingual = someone who knows more than one language and uses them on a regular basis.
- Bilingualism doesn't mean perfect knowledge of two languages from birth!

# Bilingualism = a lot more than two languages



- Not only:
  - language skills advantages
  - social advantages
  - cultural advantages
- But also:
  - **many cognitive (mental) advantages**
- So, why are there so many misconceptions about bilingualism?

Many people believe that ...



~~“BILINGUAL CHILDREN ARE CONFUSED”~~





Many people also believe that

~~“BILINGUALISM SLOWS DOWN THE CHILD'S GENERAL DEVELOPMENT”~~

~~“BILINGUALISM IS USEFUL ONLY IF BOTH LANGUAGES ARE WIDELY SPOKEN”~~

**There are no foundations to these ideas!  
Research has shown that the opposite is true**

# Linguistic advantages



- **Language learning abilities**
- **Literacy skills**

# Very early separation of the two languages



- Very young bilingual babies can distinguish the sounds of the two languages they have been exposed to.
- They do this even when the two languages are very similar - e.g. Spanish and Catalan.





# Other cues used by bilingual babies



- Mouth gestures and facial expressions are also used by bilingual babies to separate their languages.
- Bilingual babies at 8 months can distinguish the two languages just by watching silent talking faces.  
(Werker & Byers-Heinlein 2008)



# Do bilingual children mix their languages?



- Children generally don't mix their languages (but they can do so deliberately and for fun!)
- Language mixing – when it occurs - is usually **not a sign of linguistic confusion**:
  - adult bilinguals do it too
  - mixing is not random: it has a “grammar”
  - children mix when they speak with other bilinguals, not when they speak to monolinguals.

# Spontaneous knowledge about language



- Bilingual children **'notice' how language works.**
- Having two different language systems makes the structure of language more salient and direct the child's attention to its features.
- Because of their implicit understanding of language, bilingual children find it easier to pick up other languages.



# Words



- For example, bilingual children have two words for the same object (e.g. *pomme* and *apple* for )
- They understand the conventional relationship between **objects** in the real world and their **labels**.
- They find it easier to learn relations among words, i.e. accept that the same object  can be both a DOG and an ANIMAL.

# Literacy



- Bilingualism affects some key background components to literacy.
- Bilingual children tend to be **more precocious readers**.
- Reading skills transfer across (similar) languages.

# Letter-sound correspondences



- Bilingual children find it easier to identify and recognize the sounds of the spoken language.
- Bilingual children acquiring alphabetic languages have an earlier understanding of the **correspondence between letters and sounds.**
- Which is the longest word?

**TRAIN**



**CATERPILLAR**



# Bilingualism = a lot more than two languages



- **Summary of linguistic advantages:**
  - early awareness of sounds, words, sentences
  - enhanced language learning abilities
  - earlier reading and transfer of reading skills



# Cognitive advantages



- **Awareness of other people's points of view**
- **Attention and executive function**



# Awareness of other points of view



- Bilingual children understand at an earlier age that other people may have a different perspective from their own.
- This advantage comes from children's constant experience of choosing a language on the basis of the person they talk to.



# Awareness of the other: an example



- **Example: adopting another person's perspective**
- Test: *“Bugs Bunny puts his chocolate in a cupboard and then leaves the room; while he's away Daffy Duck comes in, takes Bugs Bunny's chocolate and puts it on top of the fridge. Where will Bugs Bunny look for the chocolate when he comes back to the room?”*
- Three-year-old bilingual children are more likely to give the correct answer ('in the cupboard') than their monolingual peers.



# Attention and executive function



Bilinguals tend to be better than monolinguals at:

- **selective attention** on specific features while ignoring other salient but misleading features
- **switching between tasks** that require attention to different instructions

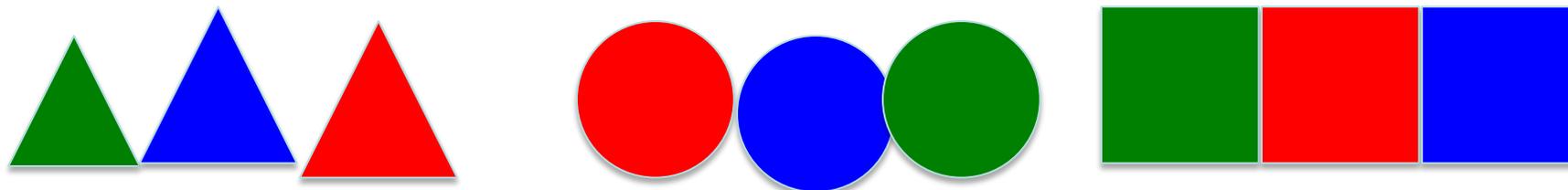
These differences persist throughout life: they are found both in bilingual children and in adults who learned another language in childhood or adolescence.



# Examples: task switching

- Switching between tasks:

Task A: sorting objects by shape



Task B: sorting objects by colour:



- Bilingual children are faster than monolinguals to adapt to Task B.



# Try this: the Stroop Task

First, just read these words as fast as you can.

RED	GREEN	BLUE	YELLOW	PINK
ORANGE	BLUE	GREEN	BLUE	WHITE
GREEN	YELLOW	ORANGE	BLUE	WHITE
BROWN	RED	BLUE	YELLOW	GREEN
PINK	YELLOW	GREEN	BLUE	RED



Now try this:

Say the colour of the word, not what the word says:

RED	GREEN	BLUE	YELLOW	PINK
ORANGE	BLUE	GREEN	BLUE	WHITE
GREEN	YELLOW	ORANGE	BLUE	WHITE
BROWN	RED	BLUE	YELLOW	GREEN
PINK	YELLOW	GREEN	BLUE	RED

# Why was the second part more difficult?



- Because you can't help reading what the words say: reading is very automatic and slows you down when you try to name the colour of the ink.
- Bilinguals are less distracted by automatic tasks like reading.



# What is involved in these tasks?



- Paying sustained attention to the task and monitoring one's behaviour
- Focusing on one dimension
- Ignoring the other dimension
- Switching to the new condition and updating the mental set

# Why these advantages?



- The two languages of bilinguals are always active.
- Bilinguals have to 'filter out' one language when they speak the other.
- The same mechanism used to control language use is extended to other activities that require controlled attention.



# It doesn't matter which languages



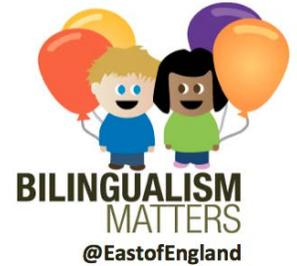
- If the advantages of bilingualism are related to the switching from one language to the other, and blocking one language when the other one is spoken
- It doesn't matter **WHICH** languages bilingual children learn.
- **THERE ARE NO 'MORE USEFUL' OR 'LESS USEFUL' LANGUAGES FROM THIS POINT OF VIEW!**

# A word of warning....



- Are bilingual children more “intelligent”?  
=> NO. They have an ‘extra gear’ that potentially gives them an advantage in many situations
- Are these benefit automatically found in all bilingual children?  
=> NO. There are many other factors that play a role: for example, input and attitudes

# Disadvantages of bilingualism?



- Some bilingual children are ‘late talkers’, but they are still within normal bounds.
- Bilingual children have two vocabularies:
  - all other things being equal, the size of vocabulary in each language is smaller than in monolinguals, especially in the first few years
  - although the global size of their mental vocabulary in the two languages may be in fact larger.

# How children perceive the minority language is important



- Children are very sensitive to people's attitudes towards language: they know whether a language is considered 'unimportant'.
- Children need to realise that
  - both languages and cultures are valued by the family and the community.
  - both languages can be used in all situations and are spoken by many people outside the family.



# The earlier the better, but...



- The best ‘window of opportunity’ for becoming fully bilingual is early childhood.
- But the good news is that....

# Child second language learners



- .....exposure to another language naturistically in the primary school years is more likely to lead to bilingualism than in late adolescent/adult years.
- Many studies have found that child second language learners can also benefit from the cognitive advantages of bilingualism.

(Bak et al. 2010)

# What can be done to encourage bilingualism?



## **ATTITUDES TOWARDS LANGUAGE LEARNING**

## **INFORMATION IS IMPORTANT**

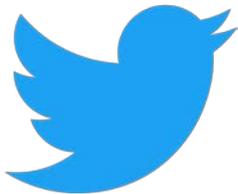
# Bilingualism Matters: contacts



<http://www.bilingualism-matters.org.uk/>



Contact @EastofEngland:  
c.herve@essex.ac.uk  
fmyles@essex.ac.uk



@BM\_EastofEngland



# Bilingualism Matters: areas of engagement



- Language learning exposure in the preschool and primary school years
- Maintenance of home languages in immigrant children
- Maintenance of regional minority languages
- Instructed foreign language learning
- Language attrition



**THANK YOU!**