

Creativity with Languages in Schools
AHRC OWRI Creative Multilingualism
SOAS, London, 2020

Multilingualism & language learning

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Roots & Routes



A strange medical condition...

- Epidemiology: originally really, moving to an epidemic
- **Bad news:**
 - Causes cognitive deficits (e.g. executive functions)
 - Accelerates cognitive ageing and the onset of dementia
 - Leads to more severe cognitive deficits after stroke
- **Good news:**
 - It is reversible if recognised & properly treated
- => **Monolingualism**

בְּרֹאשִׁית בָּרָא אֱלֹהִים אֶת הַשָּׁמַיִם וְאֶת הָאָרֶץ:
וְהָאָרֶץ הִיְתָה תֵהוֹ וְבָהּ וְחֹשֶׁךְ עַל־פְּנֵי תְהוֹם וְרוּחַ
אֱלֹהִים מְרַחֶפֶת עַל־פְּנֵי הַמַּיִם: וַיֹּאמֶר אֱלֹהִים יְהי־

*And the whole earth was of
one language and one speech*

Genesis 11, 1-9

(Kings James Bible)



Multilingual creation myths



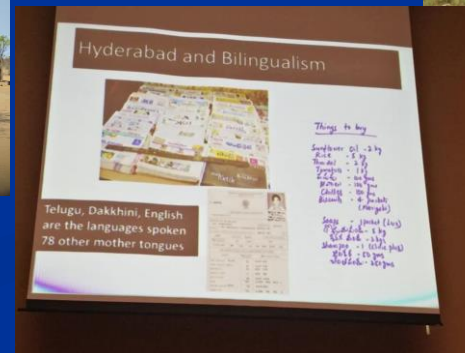
North-West Arnhem Land (Northern Australia)

The ancestress **Warramurrungunji** after travelling under sea from Macassar, Indonesia, comes on shore and sets groups of people with their distinct **land, food & language**

Evans 2006

Has human language developed in a multilingual context?

- Multilingualism among hunter/gatherers
- “Linguistic exogamy”
- Growing up with different languages
- **AND** Learning new languages across lifetime
- Multilingualism as natural form of **mental exercise**



Language learning as part of education

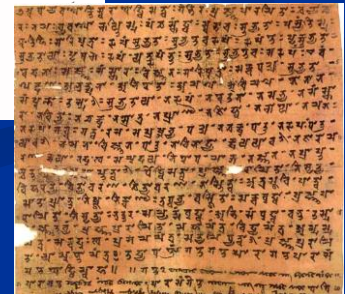
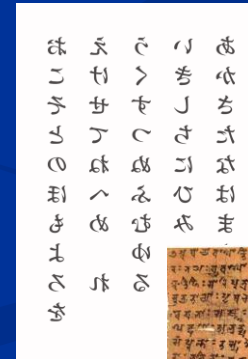
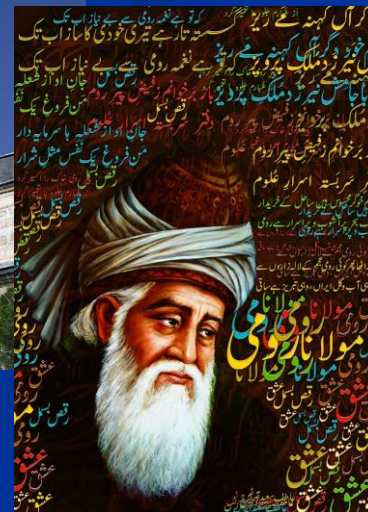
■ Europe:

- Latin & Greek (+ Hebrew)
- *Alfonso El Sabio: Spanish & Portuguese*
- French, German & English



■ Islamic World:

- Arabic & Persian

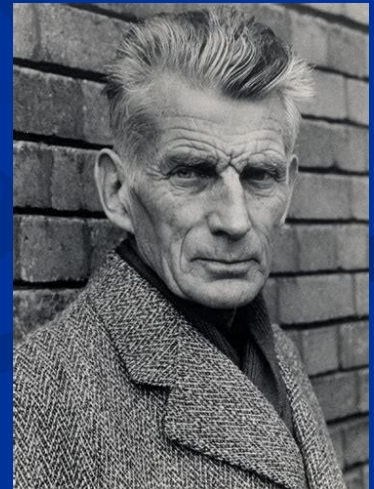
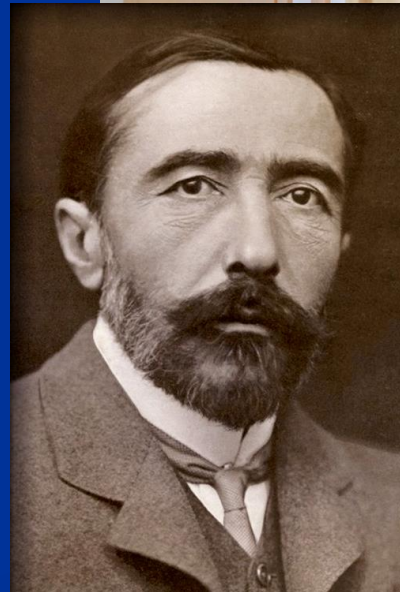


■ India:

- Sanskrit & Pali
- Persian & English

Living & working in different languages

- Mental exercise
- Transferable skills
- Shared experience



Language learning: a dangerous waste of time

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Vos courses où vous voulez
quand vous voulez !

JE FONCE

Doctors give pupils sick notes to duck French and German lessons amid fears the stress of learning a second language is harming their mental health

- The school reporting the problem are in 'high achieving' leafy catchment areas
- Pupils are being 'wholesale' signed off because the subjects make them 'unwell'
- Children are being made 'anxious' by compulsory language lessons

The Telegraph

HOME NEWS SPORT

Education

Primary Secondary University League tables Clearing

Home Education

Children find foreign languages so stressful they are being signed off by a GP, headteachers told



Save 140



Instrumental approach to language learning

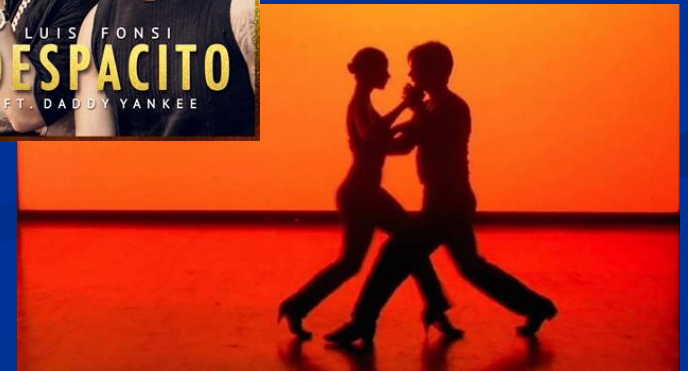
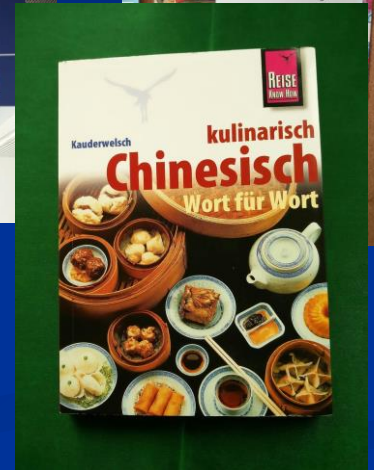
- English is enough

if unavoidable:

- Business: Chinese
- Leisure: Spanish

Low status of:

- Small & minority languages
- Immigrant languages (incl. Polish)



The limited resources metaphor



“Of course it’s nice to have a second language but I don’t believe this science twaddle for one second. The human brain can only contain a finite amount of information and as English speakers we are fortunate not to need a secondary language. That space is much better utilised for science, history and our rich culture.”

Daily Mail, 02/06/2014

“We have only 2GB of memory in our brain”

Lee Kwan Yew, former PM of Singapore

D. J. Saer

The effects of bilingualism on intelligence
British Journal of Psychology, 1923

- “*lack of definiteness in the meaning*”
- “*confusion is carried over from the brain area connected with language to those connected with other functions*”
- “*emotional conflict*”, not relieved by the “*cathartic play*”
reconciling the emotional world with the “*reality principle*”

Lambert & Peal 1962

- Context: “La révolution tranquille”
- Question: are bilinguals really worse?
- Study of intelligence in 10y. old
- Bilinguals outperform monolinguals on verbal & non-verbal intelligence
- Results spread only very slowly



From Montreal to Toronto...

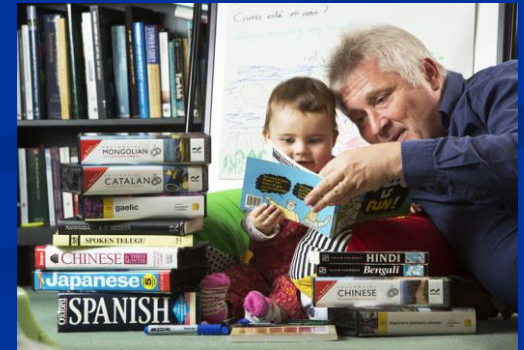
- Context: Canadian multilingual policy towards immigrants
- “Meeting place” & “world’s ethnically most diverse city”
- Ellen Bialystok & her group @ York University
- 1990’s: Bilingualism in children:
 - Metalinguistic skills
 - Social cognition
 - Executive functions



Bilingualism & cognitive processes

- Exposure to different languages
 - => metalinguistic knowledge (spoken & written language)
- Language switching/mixing person/context dependent:
 - => theory of mind, perspective taking, social cognition
- Simultaneous activation of different languages:
 - => executive/attentional control mechanisms, switching

But bilingualism has also its price => slower lexical access



What's that?

- Dog
- Hund
- Pies
- Perro
- Chien
- Gos



PIES



Turku: Kauppa Tori

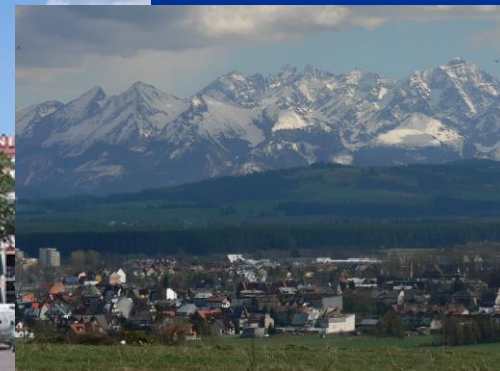


Kauppa & Tori across Europe



København - Nyhavn

© 2007 Zhenao Chen



iha
HOLIDAY AIDS



Multilingualism as confusion

- Multilinguals: all languages activated simultaneously
 - *Moscoso del Prado Martin, Pickering & Branigan, Wu & Thierry*

- Multilinguals: slower lexical access

but

- Increased challenge -> cognitive control & monitoring

De Bruin et al 2015, *JML*

De Bruin et al 2016, *LNC*



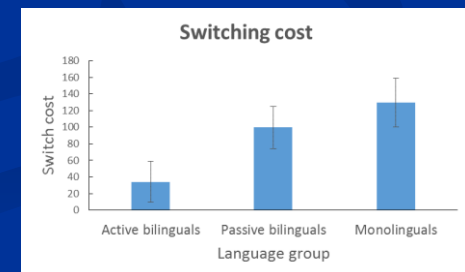
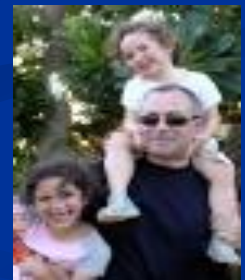
■ People > 65 y:

- Gaelic: home/community, English: school/work
- Later life: some use both, other only English



■ Active bilinguals:

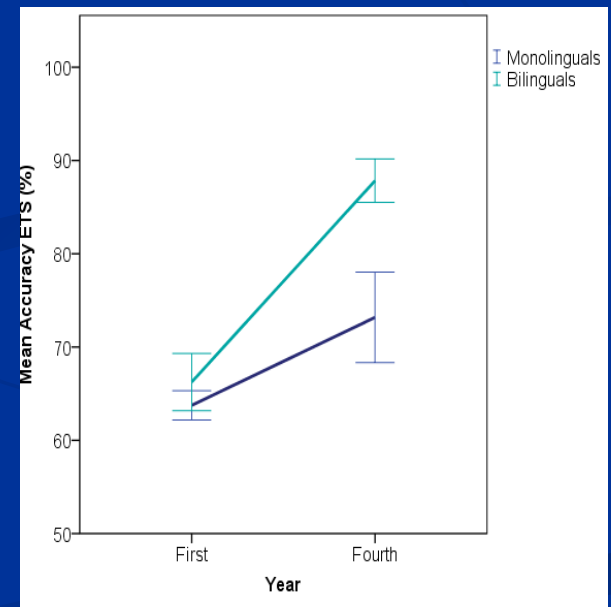
- No difference: ToL & Simon Task, but on switching
- Different baseline performance:
- => different strategy?
- Longer reaction times in lexical access



Vega-Mendoza, Sorace & Bak, *Cognition* 2015



- 197 Edinburgh students:
 - Languages vs. humanities
- Year 1 (initial):
 - No difference in switching
- Year 4 (final) year:
 - Significant difference in switching



Bak, Long et al *PLoS One* 2016



- Similar effects after an intensive language course?
- 33 participants vs. 34 controls (active & passive)
- Improvement in switching after one week
- Participants 18-78 years old
- Lasting 9 month later in those who practice >5hr/week

Bialystok et al 2007, *Neuropsychologia*



- 230 dementia patients, ca. 50% bilingual
- Bilinguals develop dementia 4 years later!
- Related to contemporary research on bilingualism:
 - Bialystok et al 2004
 - Kavé et al 2008
 - Craik et al 2010
- The results interpreted in the light of **cognitive reserve**

Alladi, Bak et al 2013, *Neurology*

Alladi et al 2017, *Neuropsychologia*

Ramakrishnan et al 2017, *Dementia*



■ Why Hyderabad?

- Bilingualism common, old, not associated with migration
- Excellent clinical services, multilingual tests & staff

■ Results in 648 patients (60% bilingual)

- 4 years delay (6y. in illiterates!, $n > 150$)
- $FTD > AD/VascD > DLB$



Dr Suvama Alladi

■ Age of onset of Mild Cognitive Impairment (MCI):

- Bilingualism: 7.4 years
- Education: 3.6 years

Alladi et al, *Stroke* 2016

Paplikar et al, *Aphasiology* 2018



- 608 stroke patients (58% bilingual)
- Difference in **lifestyle/risk factors** => later age of stroke
- Difference in **cognitive reserve** => different outcome

■ Results: age at stroke: 56 vs. 56.5 years

■ Outcome:	<u>Monolingual:</u>	<u>Bilingual:</u>
■ Normal cognition	19.6%	40.4%
■ Vasc Dementia/MCI	68.7%	49.0%
■ Aphasia	11.8%	10.5%
■ Global aphasia:	58.6%	17.9%

Bak et al 2014, *Annals of Neurology*

Cox et al 2016, *Neuropsychologia*



- Addressing the issue of reverse causality...
- ...through the Lothian Birth Cohort 1936
- Comparing performance age 11y. vs. age 70+y.
- 262/853 “able to communicate in L2”
- Specific effects of bilingualism:
 - Reading (NART), verbal fluency, general IQ
 - Simon Test - independent of Ch-IQ
 - Faux pas test (social cognition) - dependent on Ch-IQ



Lingo Flamingo

- A social enterprise founded in Glasgow by Robbie Norval
- Offering language classes
 - To healthy elderly
 - To patients with dementia
- Counteracting loneliness & low self-esteem



What influences success in language learning

- Motivation
- Native tongue
- Knowledge of other languages
- Knowledge of grammar
- Age
- Individual difference



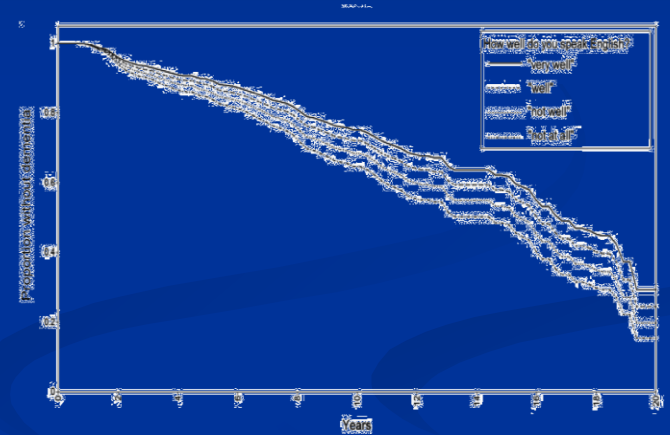
Teaching in a multilingual environment

- Growing % of non-English native speakers in the UK
 - > 50% of pupils in Inner London classified as multilingual
- Many English speakers start with a European language
- 1+2 language policy:
 - EU
 - Scotland
- Multilingualism as a potential for teaching & learning



The “Bilingualism Debates”

- Mainly positive results: Canada, India, Belgium
- Mainly negative results: USA
- Mixed results: Spain, UK



London, Aug 2016: Bialystok vs. Carreiras

Ghent, Sept 2016: Bak vs. Paap

Akaslompolo, Apr 2017: Bak vs. Carreiras

Limited resources vs. added value models

Limited resources models:

“Chest of drawers” analogy

Strict, static localisation

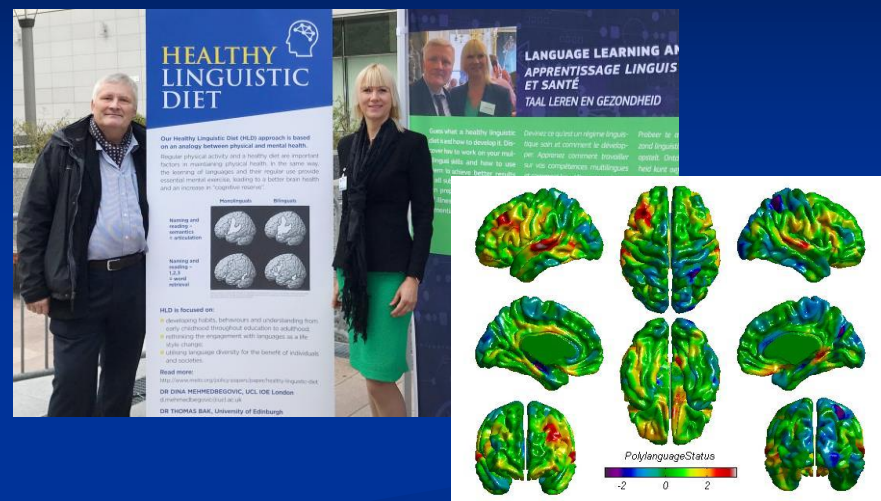
Competition for space

Added value models

Interactive (more than the sum of the ingredients)

Dynamic localisation, neuroplasticity

Emphasis on learning & adaptation



Mehmedbegovic & Bak, 2017, Eur J of Language Policy

What's in a name?

The story of three terms

- Bilingual
- Multilingual
- Plurilingual

Summary



MULTILINGUALISM:

Empowering
Individuals

Transforming
Societies



- Human mind & brain are multilingual:
 - Multilingualism is a natural mental exercise
- Lifelong language learning
- Healthy Linguistic Diet



@thbaket al

<http://healthylinguisticdiet.com>