

*Language Council of Saarland (Sprachenrat Saar) /
ICC-the International Language Association*

European Day of Languages
25 September 2025

**Why our brains and our world need languages
to cross borders**

Thomas H. Bak
University of Edinburgh
@thbaketal

Language learning: two diverging narratives

Narrative 1:

- Socio-cultural insight
- Metalinguistic insight
- Cognition beyond language
 - Across the lifespan...
 - Incl. stroke & dementia

=> *Healthy Linguistic Diet*

Narrative 2:

- Difficult / hard
 - Superfluous (AI)
- => *Decrease in language learning*
- => *Language death*



I fear the answer why children are abandoning languages is worryingly simple: learning a language is hard. It requires significant time, consistent practice, problem-solving, confidence, commitment, self-discipline, and, of course, sharp memory. There's no doubt that the rigorous cognitive load involved is good for the brain: it builds curiosity, teaches humility, slows down mental decline, makes you better at multitasking and decision-making, and improves your understanding of your native tongue by drawing your focus to the mechanics of language.

Yet, sadly, I am just not sure today's pupils or schools are up for the challenge. Languages have a reputation for being risky,

Healthy Linguistic Diet - 2017

Healthy diet metaphor

Education & Healthy ageing

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



Bak & Mehmedbegovic 2017, Language, Society & Policy
Mehmedbegovic & Bak, 2017, Eur J of Language Policy

Language learning as an essential part of education

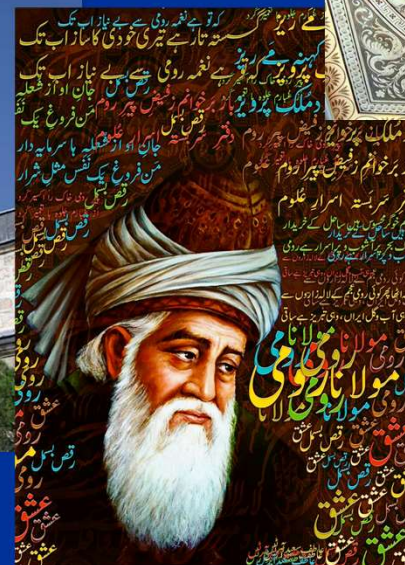
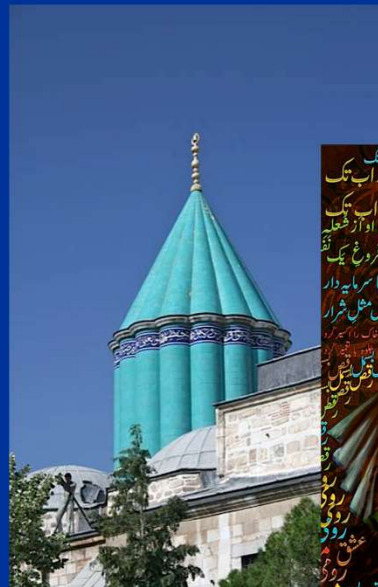
■ Europe:

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



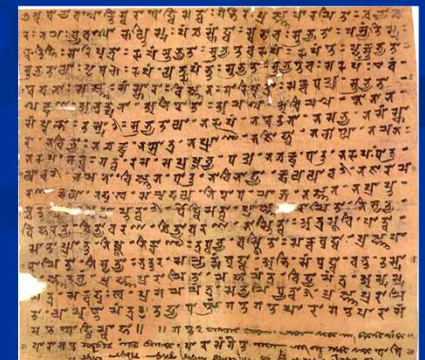
■ Islamic World:

- Arabic & Persian



■ India:

- Sanskrit & Pali
- Persian & English



Language learning: a dangerous waste of time

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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

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

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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

Instrumental approach to language learning

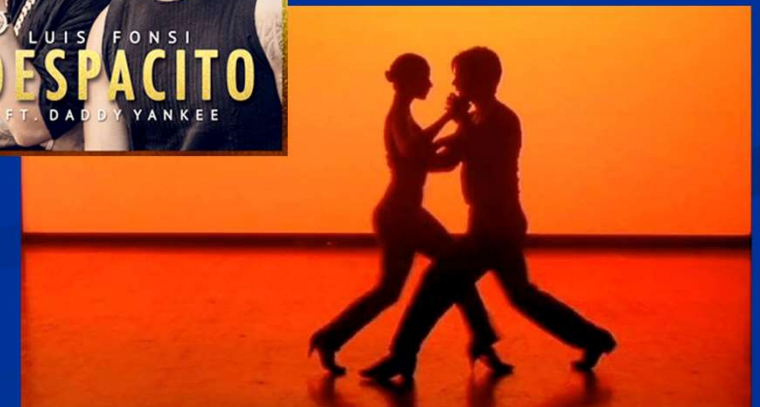
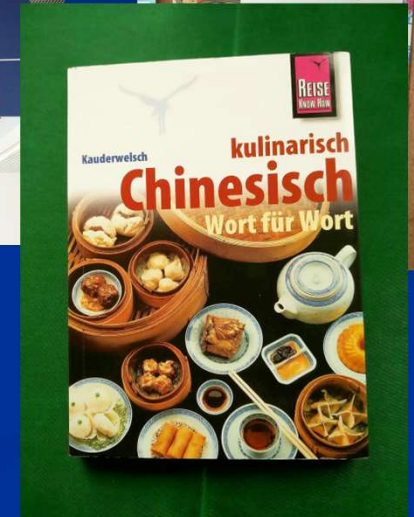
- English is enough

If unavoidable:

- Business: Chinese
- Leisure: Spanish

Low status of:

- Small & minority languages
- Immigrant languages



From instrumental to existential approach to language learning

Away from:

- Languages as lists of words
- The ideal of ease & speed
- The ideal of the native speaker



Languages as worlds & perspectives

Towards the vision of languages as:

- Mental exercise & transferable skills
- Shared experience
- Discovery & adventure



Different perspectives - same events?

English: “I missed the train”

German: “Ich habe den Zug verpasst”

Vs.

Polish: “Pociąg mi uciekł”

Spanish: “Se me ha huido el tren”



Polish: “Zmarła mu matka”

Spanish: “Se le ha muerto la madre”

Vs.

English: “His mother died”

French: “Aujourd’hui maman est morte”



English: “How are you?”

Vs.

Polish: “Jak się masz?” vs. “Co słychać?”



The best things in life are not fast, easy & effortless..



“Is fheàrr Gàidhlig bhriste na Gàidhlig sa chiste”



Monolingualism in action



What's that?

■ Dog

■ Hund

■ Pies

■ Perro

■ Chien

■ Gos



PIES



Turku: Kauppa Tori



Kauppa & Tori across Europe



København - Nyhavn

© 2007 Zhebo Chen



iha
HOLBACH ASS



Neuroscience of language in 1980's

The modular vision of brain & language:

■ Fodor 1983

- “*informationally encapsulated*” modules

■ Deterministic, static, with limited resources

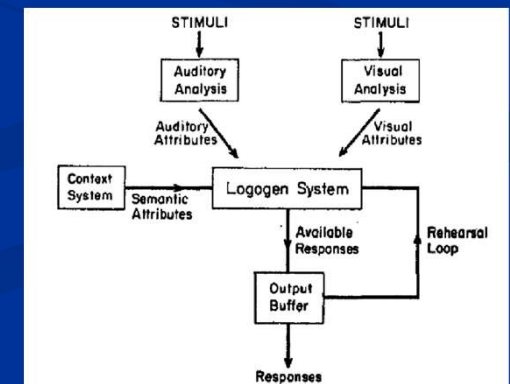
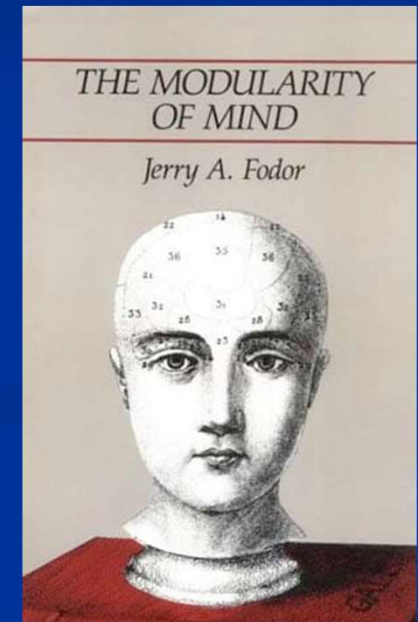
⇒ *Difficulty explaining change (incl. recovery)*

⇒ *Questioned by compensation theories*

⇒ *The topic of my PhD*

⇒ *Difficulty accommodating multilingualism:*

⇒ *Same or New modules? One module with submodules?*



From modules to networks

Bilingualism: Language and Cognition: page 1 of 13 © Cambridge University Press 2018. This is an Open Access article, distributed under the terms of the Creative Commons Attribution licence (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted re-use, distribution, and reproduction in any medium, provided the original work is properly cited. doi:10.1017/S1366728918000020

From Bilingualism to Bilingualisms: Bilingual experience in Edinburgh and Singapore affects attentional control differently

SEOK HUI OOI
School of Philosophy, Psychology & Language Sciences, The University of Edinburgh
Department of Psychology, National University of Singapore
WINSTON D. GOH
Department of Psychology, National University of Singapore
ANTONELLA SORACE
School of Philosophy, Psychology & Language Sciences, The University of Edinburgh
THOMAS H. BAK
School of Philosophy, Psychology & Language Sciences, The University of Edinburgh

■ Technology:

- Machine learning, pathology & neuroimaging

■ The rise of social cognition

■ Re-contextualising Linguistics

- *From Green 1998 to Green & Abutalebi 2013*

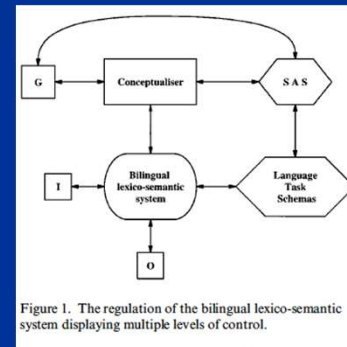


Figure 1. The regulation of the bilingual lexico-semantic system displaying multiple levels of control.

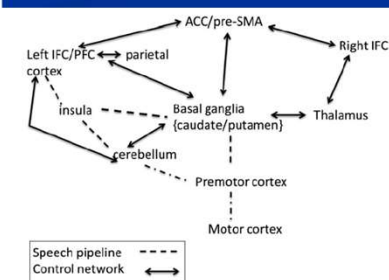


Figure 2. Simplified language control network and speech production regions (see main text for explanation).

■ Increasing role of linguistic environment

- => Sociolinguistic variables relevant for cognition:
- Proficiency, AoA, **changing patterns of use, code-switching**

Monolingualism & cognitive processes

Metalinguistic knowledge

- Metalinguistic knowledge
 - Different words mapping the world
 - Different ways of interpreting the world
 - Regular correspondences between languages
 - The arbitrariness of written language
- “Wer fremde Sprachen nicht kennt, weiss nichts von seiner eignen” *Goethe 1833*
- Lev Semyonovich Vygotsky (5 Nov 1896 – 11 June 1934)



выражением понятия. Можно сказать, что усвоение иностранного языка так же подымает на высшую ступень родную речь ребенка, как усвоение алгебры подымает на высшую ступень арифметическое мышление, позволяя понять всякую арифметическую операцию, как частный случай алгебраической, давая более свободный, абстрактный и обобщенный, а тем самым более глубокий и богатый взгляд на операции с конкретными количествами. Так же как алгебра освобождает мысль ребенка из плена конкретных числовых зависимостей и подымает его до уровня наиболее обобщенной мысли, так точно усвоение иностранного языка другими совершенно путями освобождает речевую мысль ребенка из плена конкретных языковых форм и явлений.

expressing ideas. Learning a foreign language raises the level of the child's native speech in much the same way that learning algebra raises the level of his arithmetic thinking. By learning algebra, the child comes to understand arithmetic operations as particular instantiations of algebraic operations. This gives the child a freer, more abstract and generalized view of his operations with concrete quantities. Just as algebra frees the child's thought from the grasp of concrete numerical relations and raises it to the level of more abstract thought, learning a foreign language frees the child's verbal thought from the grasp of concrete linguistic forms and phenomena.

Vygotsky 1934

From handicap to benefit

- Early 20th Century: bilingualism considered as a burden

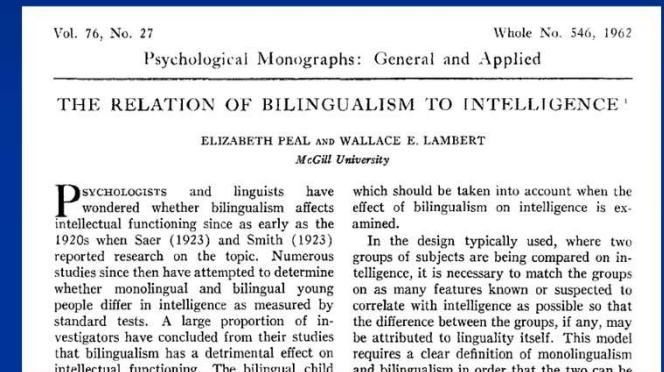
- Peal & Lambert 1962 (Montreal)

- 1980-90's: Bilingualism in children:

- Metalinguistic skills
- Social cognition
- Executive functions

- 2004 Older participants

- 2007 Dementia: "*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!, $n > 150$)
- $FTD > AD/VascD > DLB$



■ 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

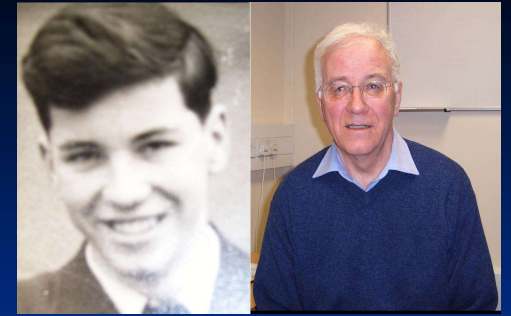


- 608 stroke patients (58% bilingual)
- Difference in **lifestyle/risk factors** => later age of stroke
- Difference in **cognitive reserve** => different outcome

■ 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





Language Learning & Cognition

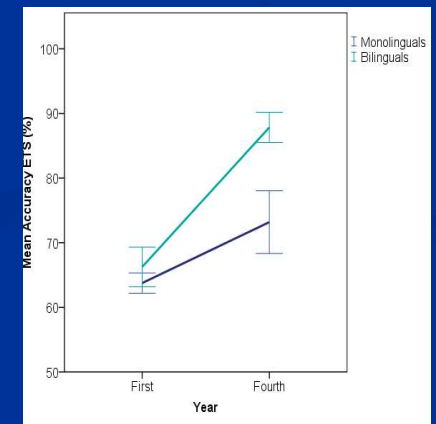


- Test of Everyday Attention (TEA):
 - Clinically valid, auditory, non-verbal, no ceiling/practice effects

- Attention switching in Edinburgh students:

- Languages vs humanities
- Year 1 (initial) vs. Year 4 (final)

Vega-Mendoza et al, *Cognition*, 2015



- Intensive Gaelic Course (one week), Sabhal Mor Ostaig:
 - Improvement in attention switching in all age groups (18-85y.)
 - Persisting in those who practice >5 hrs/week

Bak et al, *PLoS* 2016, Long et al, *Bilingualism: Language & Cognition*, 2019

The dynamics of language across the lifespan

- Language familiarity noticeable already before birth

- Language use dependent on:

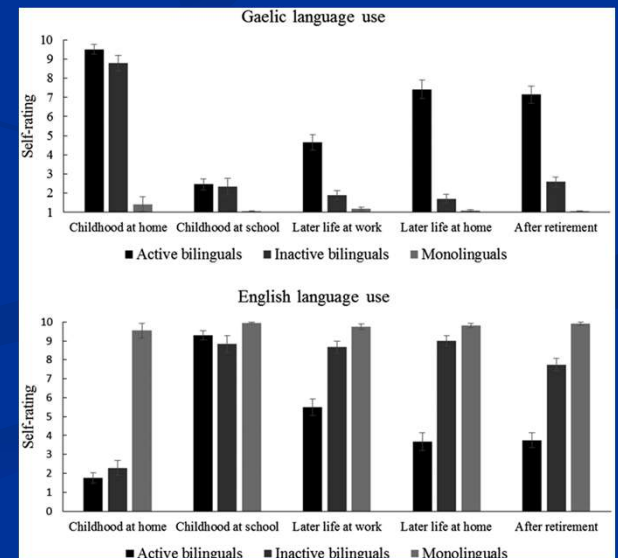
- Interlocutors, topics, context
- Switching/mixing
- Mobility & migration



- Language needs cultivation

- Changing dominance & patterns of use

De Bruin et al 2016



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**



The dominance of English as colonial legacy

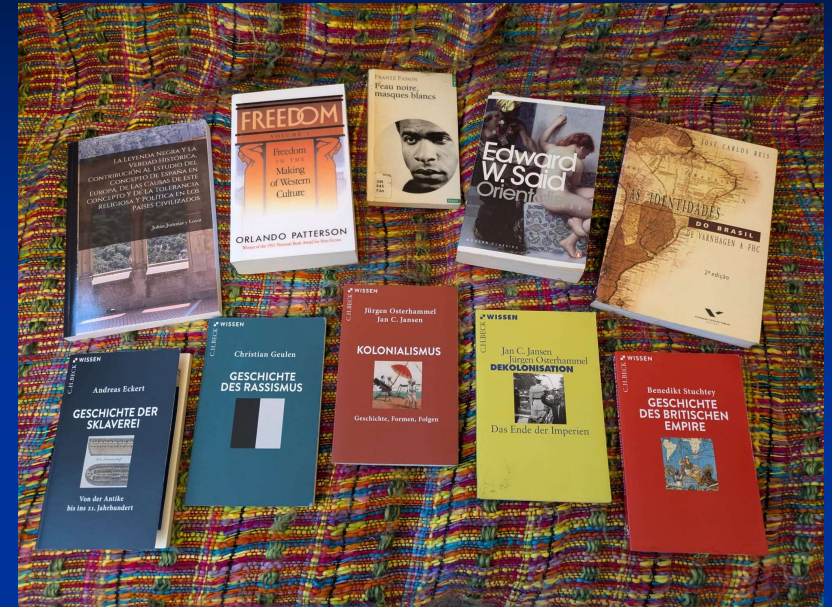
■ The paradox of decolonisation

- Rising interest in the topic
- Movement to English only



■ The importance of the default

- Multilingualism as lip service
- Monolingual pride

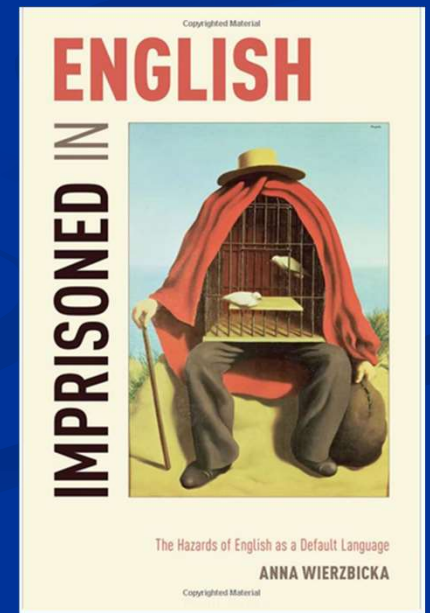


■ Translation as solution?

- What gets translated?
- (biased filtering)
- How is it translated?



■ Language as world interpretation



Individual choice & environment

■ Individual choice

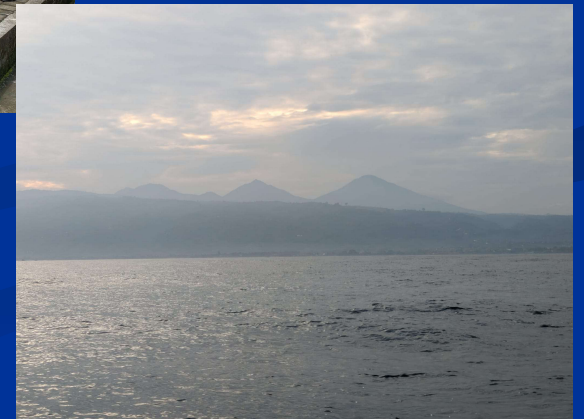
- Never too late!

■ Presence of languages

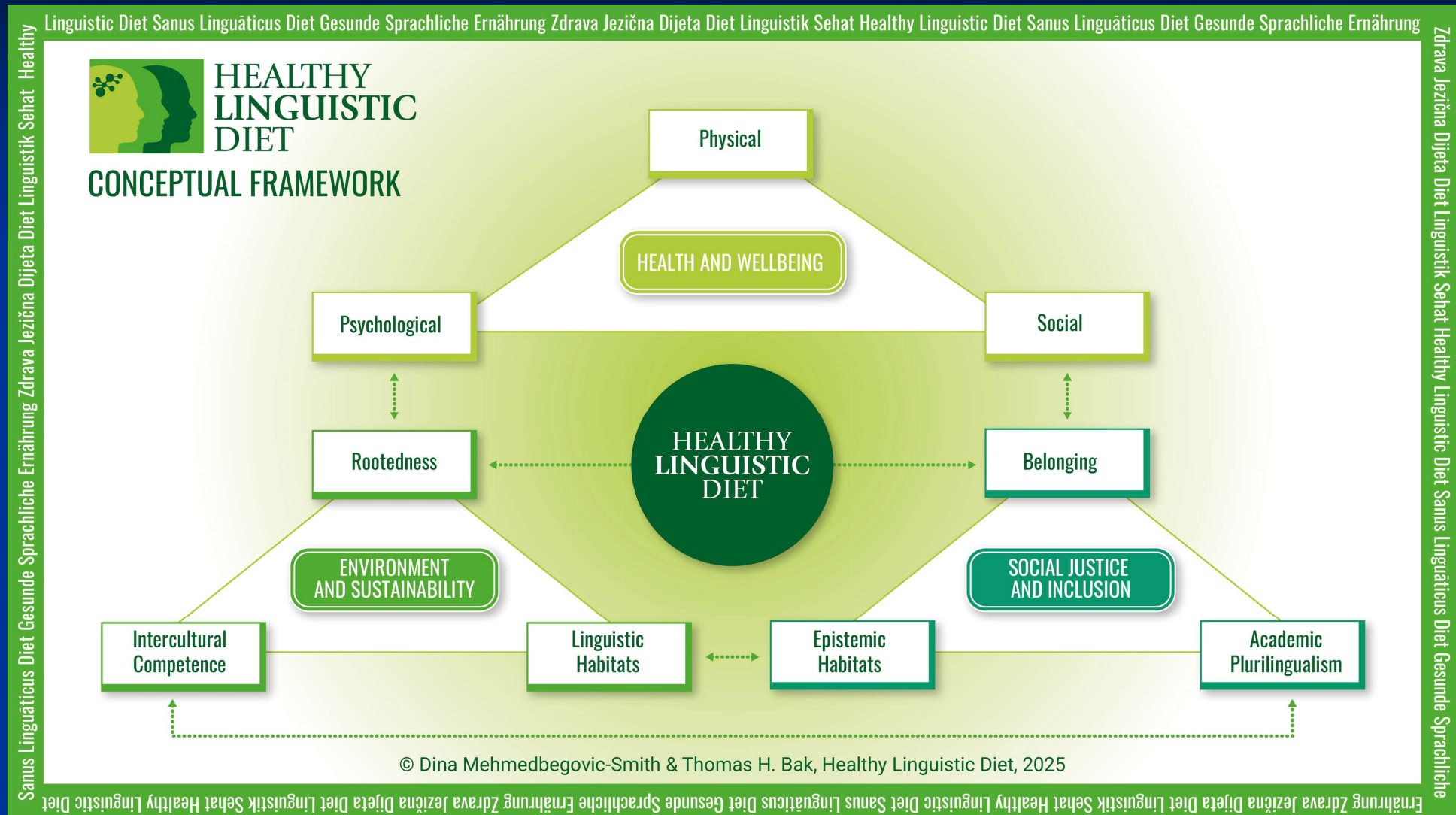
- Linguistic landscapes
- Resources (book, internet)
- Communities

■ Attitudes & believes

- Perceived value of languages
- Encouragement



Healthy Linguistic Diet – Extended Model 2025



<https://healthylinguisticdiet.com/bali-hld-model-launching-on-the-international-day-of-multilingualism-27-3-2025/>

European Journal of Language Policy (in press) & *Language, Society & Policy* (under review)