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# The Bilingual Advantage: Cognition, Character and Culture That Make a Difference

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THANK YOU VERY MUCH!

"I Was Taught Three"

names for the tree facing my window  
almost within reach, elastic

with squirrels, memory banks, homes.  
*Castagno* took itself to heart, its pods

like urchins clung to where they landed  
claiming every bit of shadow

at the hem. *Chassagne*, on windier days,  
nervous in taffeta gowns,

whispering, on the verge of being  
anarchic, though well bred.

And then *chestnut*, whipped pale and clean  
by all the inner reservoirs

called upon to do their even share of work.  
It was not the kind of tree

got at by default—imagine that—not one  
in which the only remaining leaf

was loyal. **No, this  
was all first person, and I**

**was the stem, holding within myself the whole  
bouquet of three**

**at once given and received:** smallest roadmaps  
of coincidence. What is the idea

that governs blossoming? The human tree  
clothed with its nouns, or this one

just outside my window promising more firmly  
than can be named

that it will reach my sill eventually, the leaves  
silent as suppressed desires, and I

a name among them.



# Contents

## The Bilingual Phenomenon

Definitions. Realities. Explanations.

## The Bilingual Brain

Questions. Research. Insights.

## The Bilingual Promise

Creativity. Emotional Intelligence.  
Cross-Cultural Competence.

# Bilingualism?

“The use of two or more languages (or dialects) in everyday life” (Grosjean, 2013)

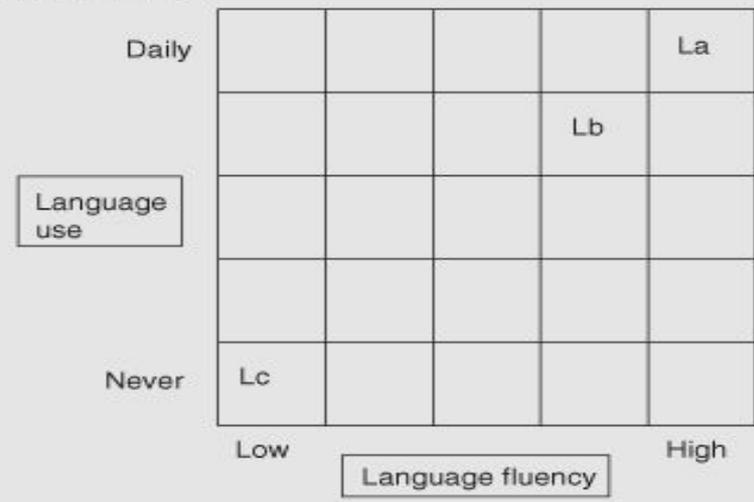


The Phenomenon

Definitions

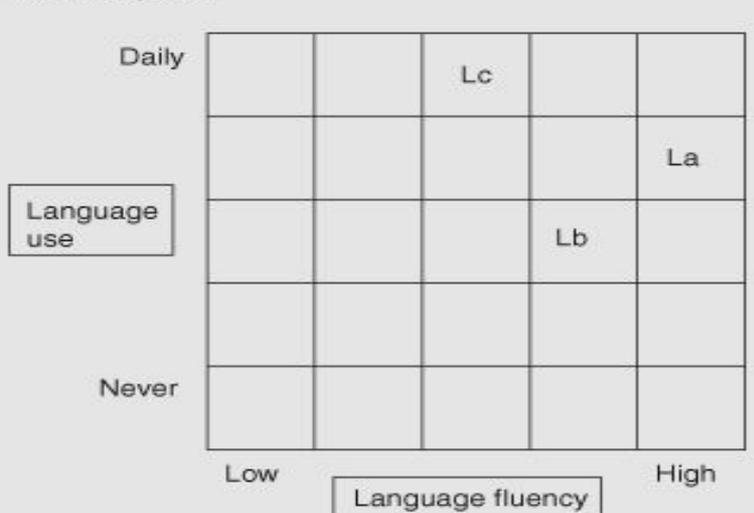
Additional facets:  
DOMINANCE, CONTINUUM,  
COMPLEMENTARITY  
and EVOLUTION

Status at age 26

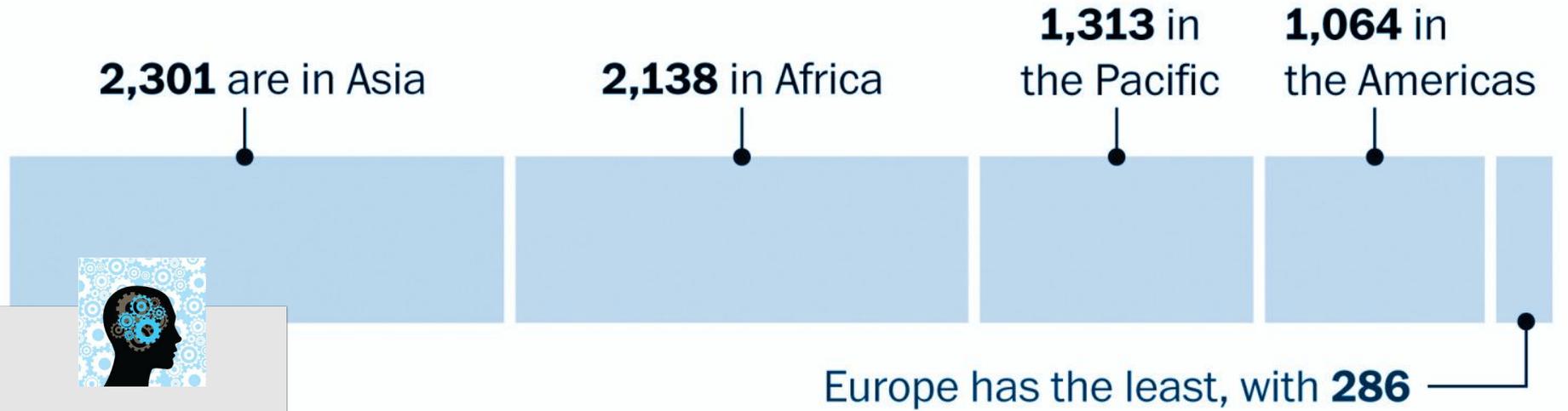


La = English  
Lb = French  
Lc = German

Status at age 36

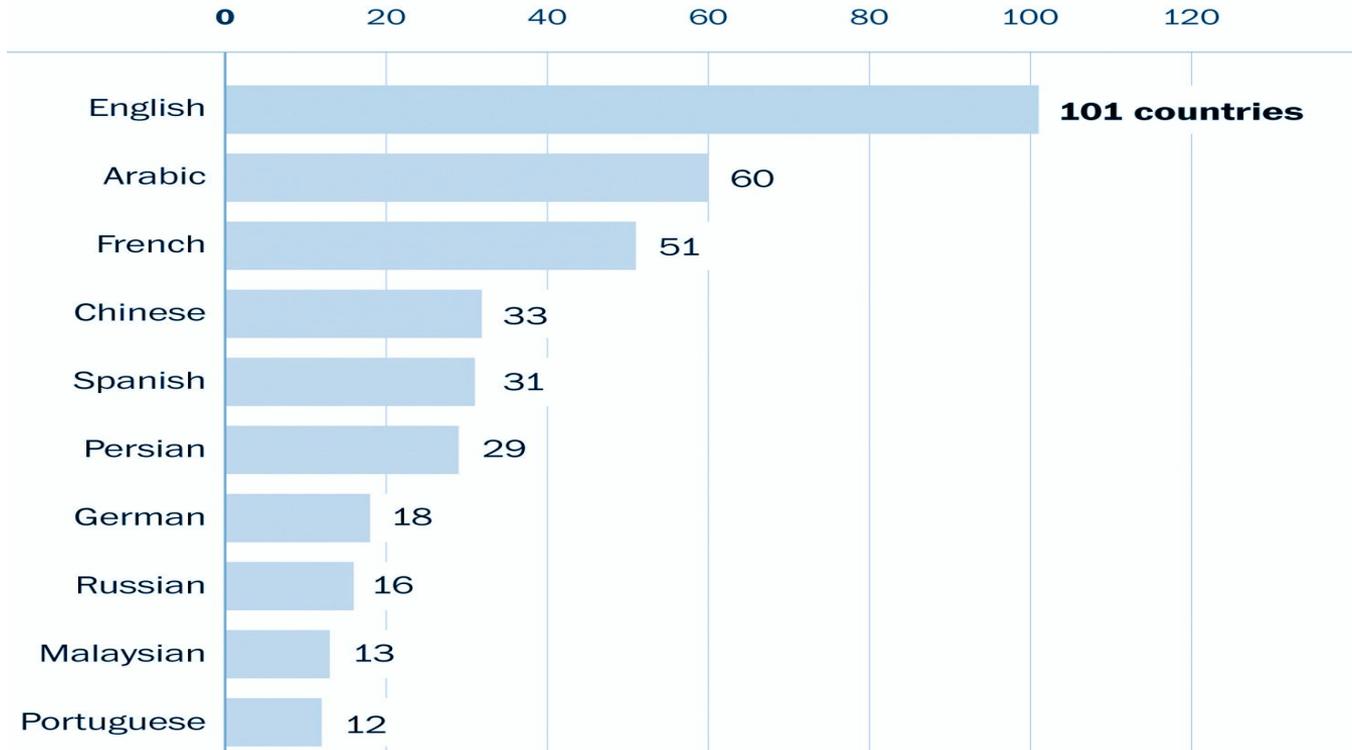


There are at least **7,102** living languages in the world.



The Phenomenon  
Realities

### Number of countries in which this language is spoken



## Greenberg's diversity index

The probability that two randomly selected people in a country speak different mother tongues. The highest value is 100, meaning every person in the country speaks a different mother tongue. Papua New Guinea holds the top spot, with 98.8.

(0) Least diverse



Most diverse (100)



# Why?

Instinct, expression, COMMUNICATION,  
adaptation, collaboration...



The Phenomenon

Explanations

# QUERY #1

How does BILINGUALISM shape our capacity for learning?



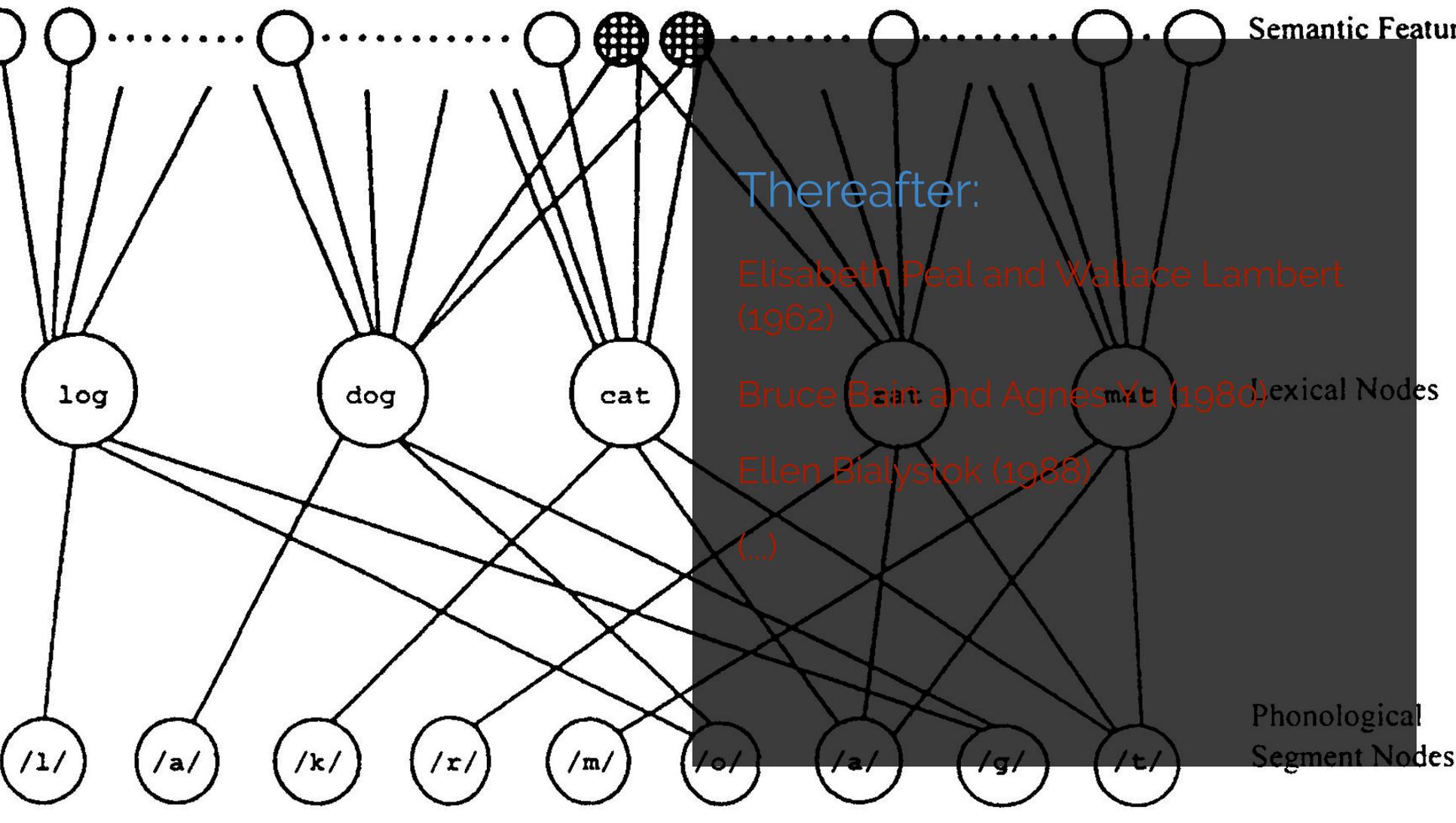
The Brain  
Questions



The Brain  
Research



“If it were possible for a child...to live in two languages at once equally well, so much the worse. His intellectual and spiritual growth would not thereby be doubled but halved. Unity of mind and character would have great difficulty” (Laurie, 1890, quoted in Grosjean, 2010)



# Paradigm Shift

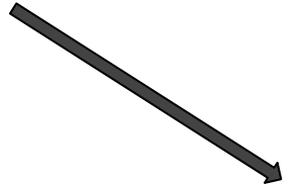
Subjects; methods; our ever-deepening understanding of the HUMAN MIND...

# Psycholinguistics

“The field of science [combining psychology and linguistics] that examines the mental processes and knowledge structures involved in acquiring, understanding, and producing language” (De Groot, 2011)



The Brain  
Insights



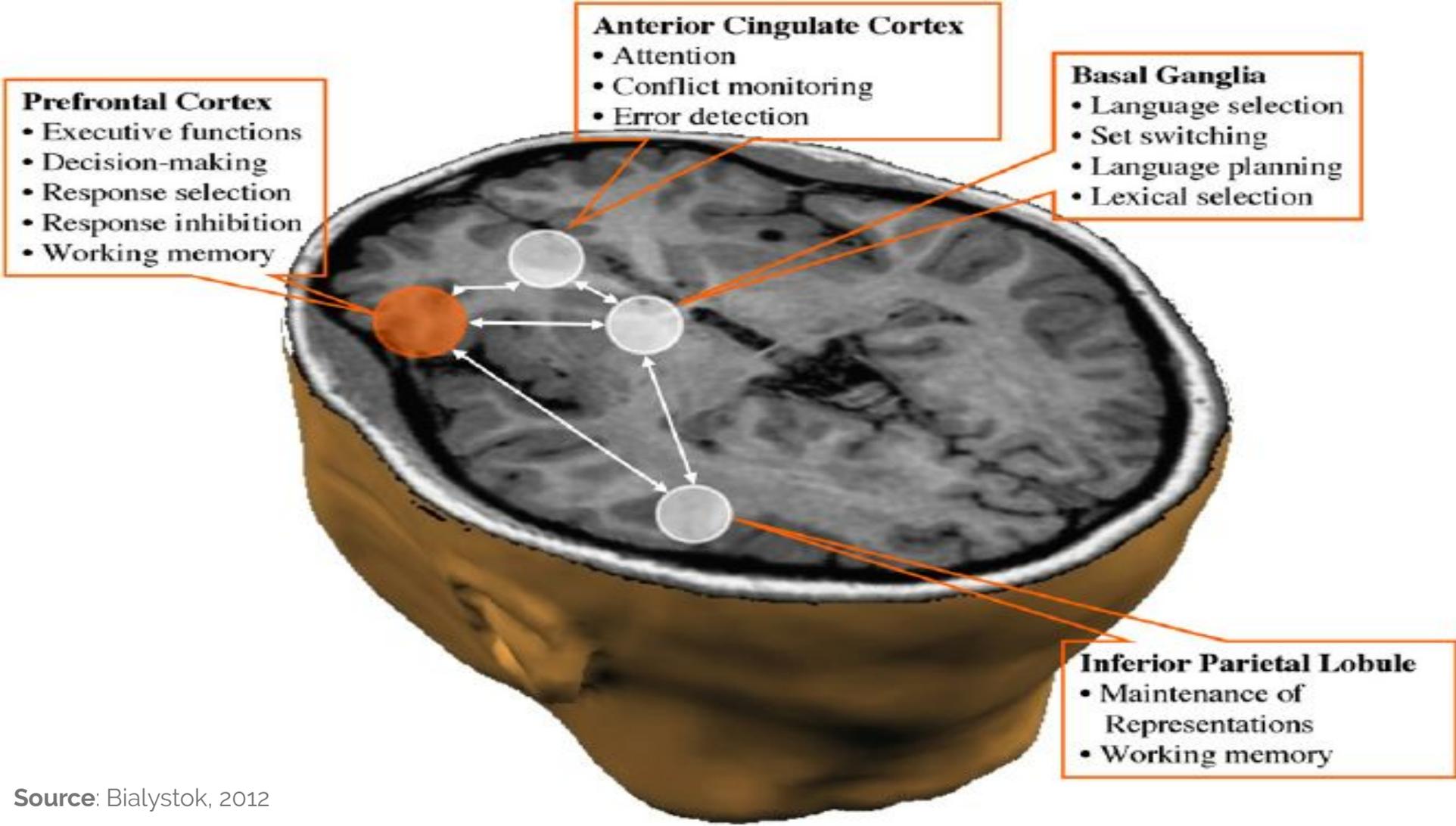
“Dog”

Executive Control System  
(ECS)

“Chien”

# Bilingual Minds

Language structure represented in mind; bilinguals have two interacting systems; there is no language switch; both languages ALWAYS ACTIVE to some degree

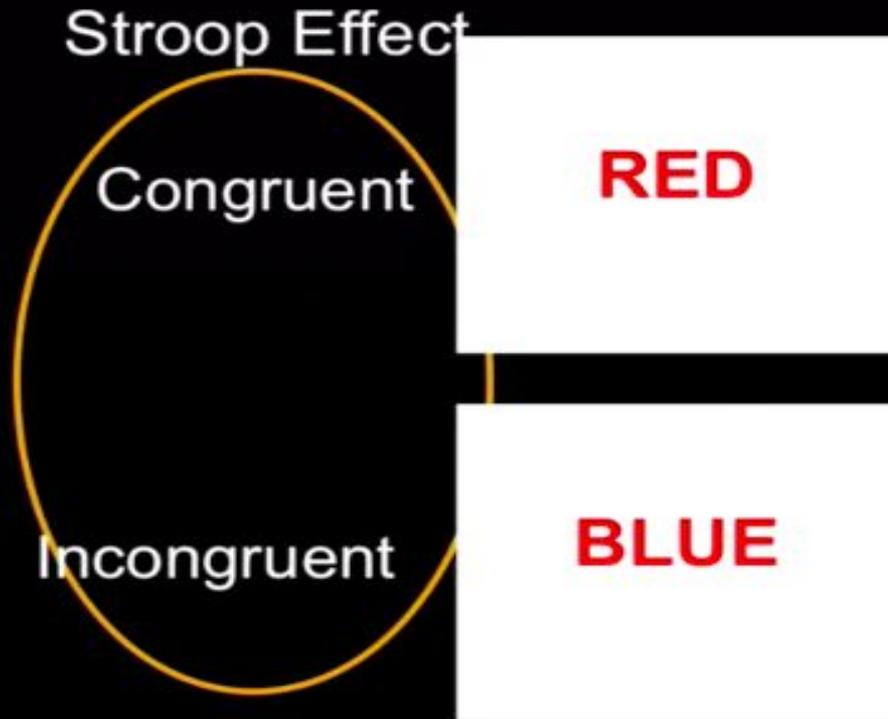


# Components of executive control

Inhibition and SELECTION; shifting and multitasking; working memory

# Stroop Task

Name the colour of the ink



# Why such differences?

Constant need to manage attention in bilingual language processing recruits ECS; use for language selection reorganizes the ECS; the reorganized ECS is more EFFICIENT

# Intervening factors

## LINGUISTIC

Comprehensible input,  
threshold...

## PSYCHOLOGICAL

Affective filter, positive climate,  
cultural purposefulness...

## SOCIAL

Socioeconomic status, age...

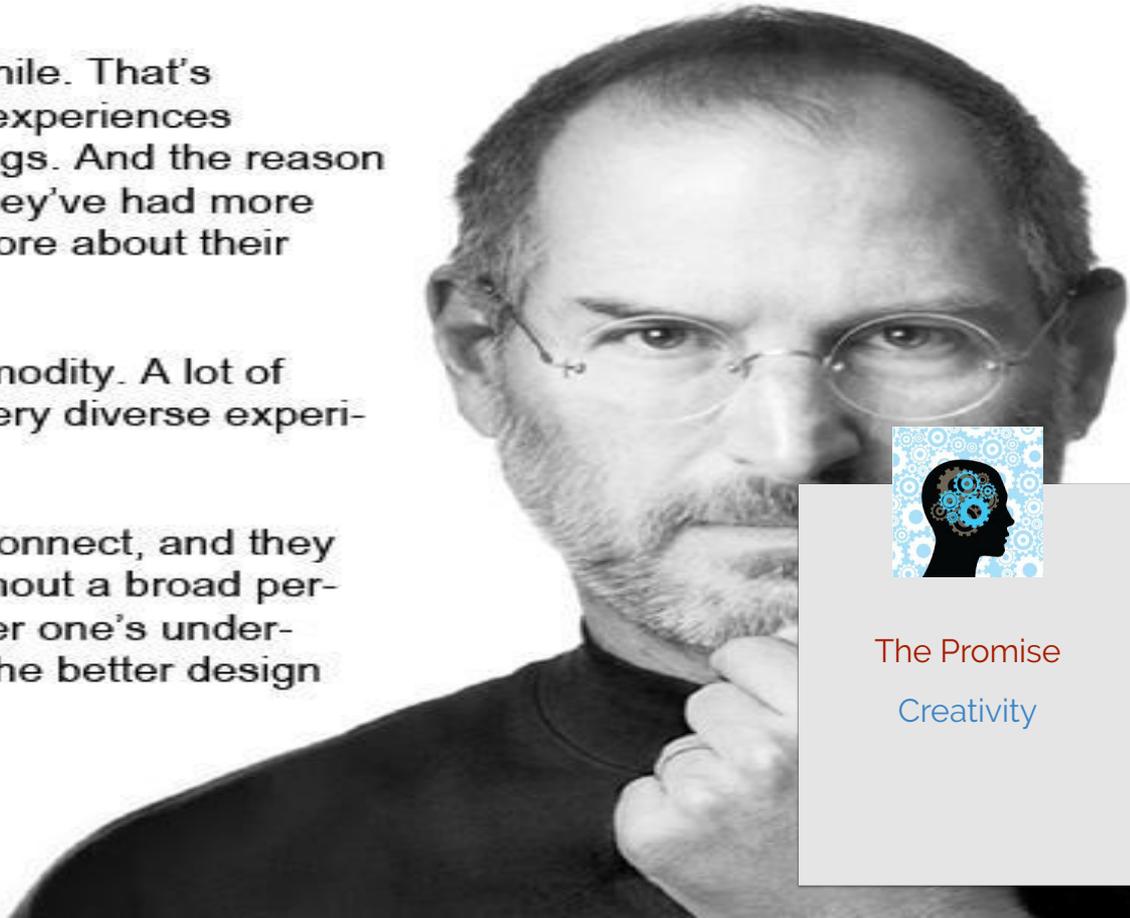
“Creativity is just connecting things. When you ask creative people how they did something, they feel a little guilty because they didn’t really do it, they just saw something.

It seemed obvious to them after a while. That’s because they were able to connect experiences they’ve had and synthesize new things. And the reason they were able to do that was that they’ve had more experiences or they have thought more about their experiences than other people.

Unfortunately, that’s too rare a commodity. A lot of people in our industry haven’t had very diverse experiences.

So they don’t have enough dots to connect, and they end up with very linear solutions without a broad perspective on the problem. The broader one’s understanding of the human experience, the better design we will have.”

Source: *Wired*, 1996



The Promise  
Creativity

# METALINGUISTIC awareness

Using two languages sharpens the ways in which the human mind structures its approach towards phonology, morphology, syntax and other such linguistic features (Grosjean, 2010)

“What is significant about the bilingual advantage...is its persistence across verbal and NONVERBAL domains of problem-solving”

(Bialystok, 2005)

Sample	Low-proficient	High-proficient
N (F:M)	12:9	12:9
Age (in years)	19.6 (3.2)	20.7 (1.1)
IQ	121.8 (4.1)	123.7 (6.0)
English vocabulary score*	3754 (748)	4164 (520)
AUT		
Elaboration	4.2 (3.1)	3.3 (2.3)
Fluency	40.7 (11.6)	32.5 (11.1)
Flexibility	27.2 (7.5)	26.4 (8.3)
Originality	17.4 (16.1)	12.8 (6.7)
RAT*	13.3 (3.1)	15.8 (4.2)

Abbreviated Torrance Test  
(Kharkurin, 2008)

Elaboration

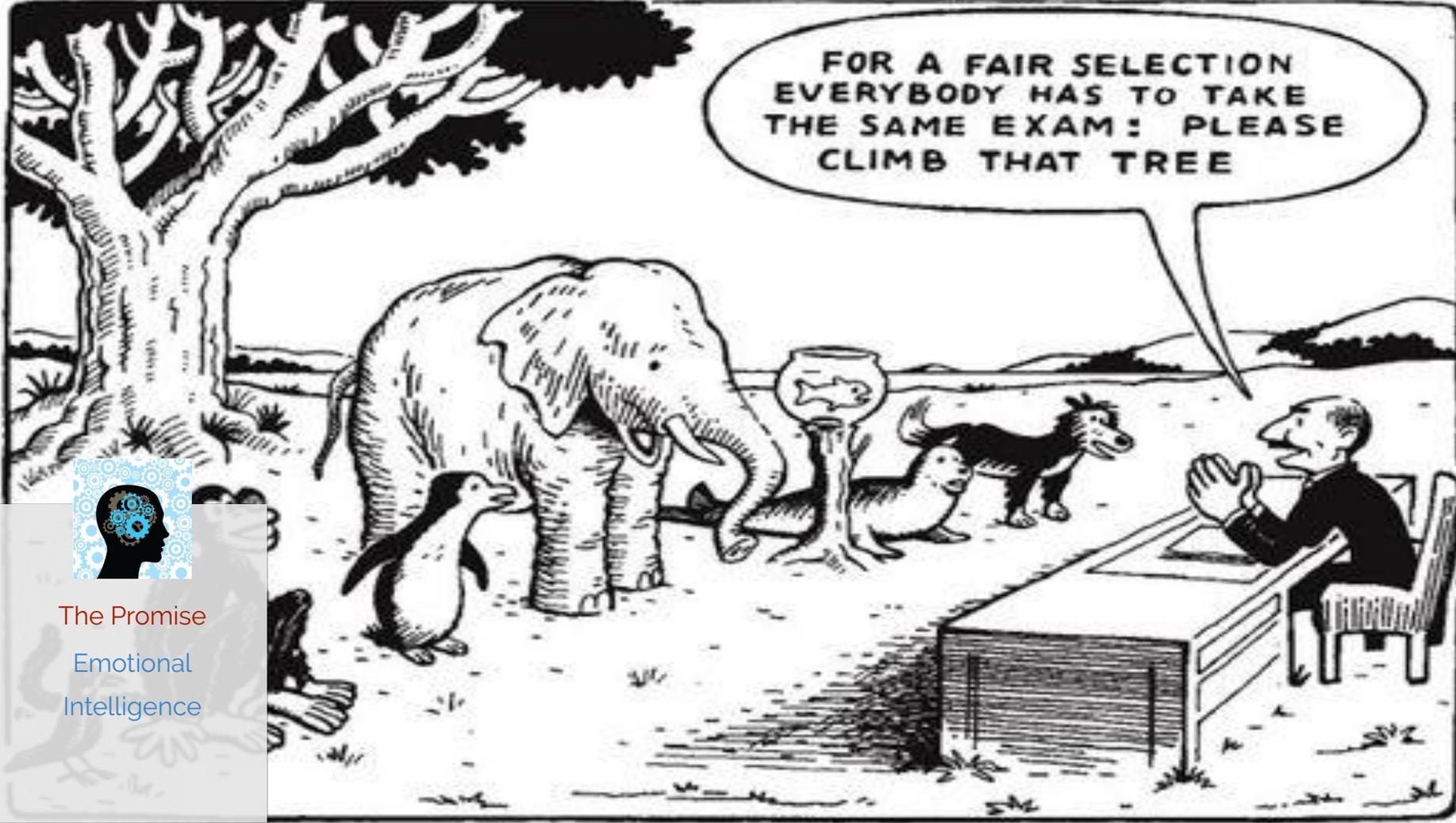
Fluency

Flexibility

Originality? Divergence vis-à-vis  
convergence...

\* $p < 0.05$  (significant group difference).

Vocabulary and pronunciation  
AREN'T everything!



FOR A FAIR SELECTION  
EVERYBODY HAS TO TAKE  
THE SAME EXAM: PLEASE  
CLIMB THAT TREE



The Promise

Emotional  
Intelligence

# Theory of Mind

# Interpersonal communication

For instance, giving instructions for a board and dice game (Genesee, Tucker and Lambert, 1975)

# Emotional Intelligence



Source: adapted from CASEL

KWAME ANTHONY APPIAH

# COSMOPOLITANISM

ETHICS IN A WORLD OF STRANGERS

“The population [of classical Athens when Socrates died,] at the end of the 5th century BC, could have lived in a few skyscrapers...the challenge...is to take minds and hearts formed over the long millennia of living in local troops and equip them with ideas and institutions that will allow us to live together as the global tribe we have BECOME” (Appiah, 2006)

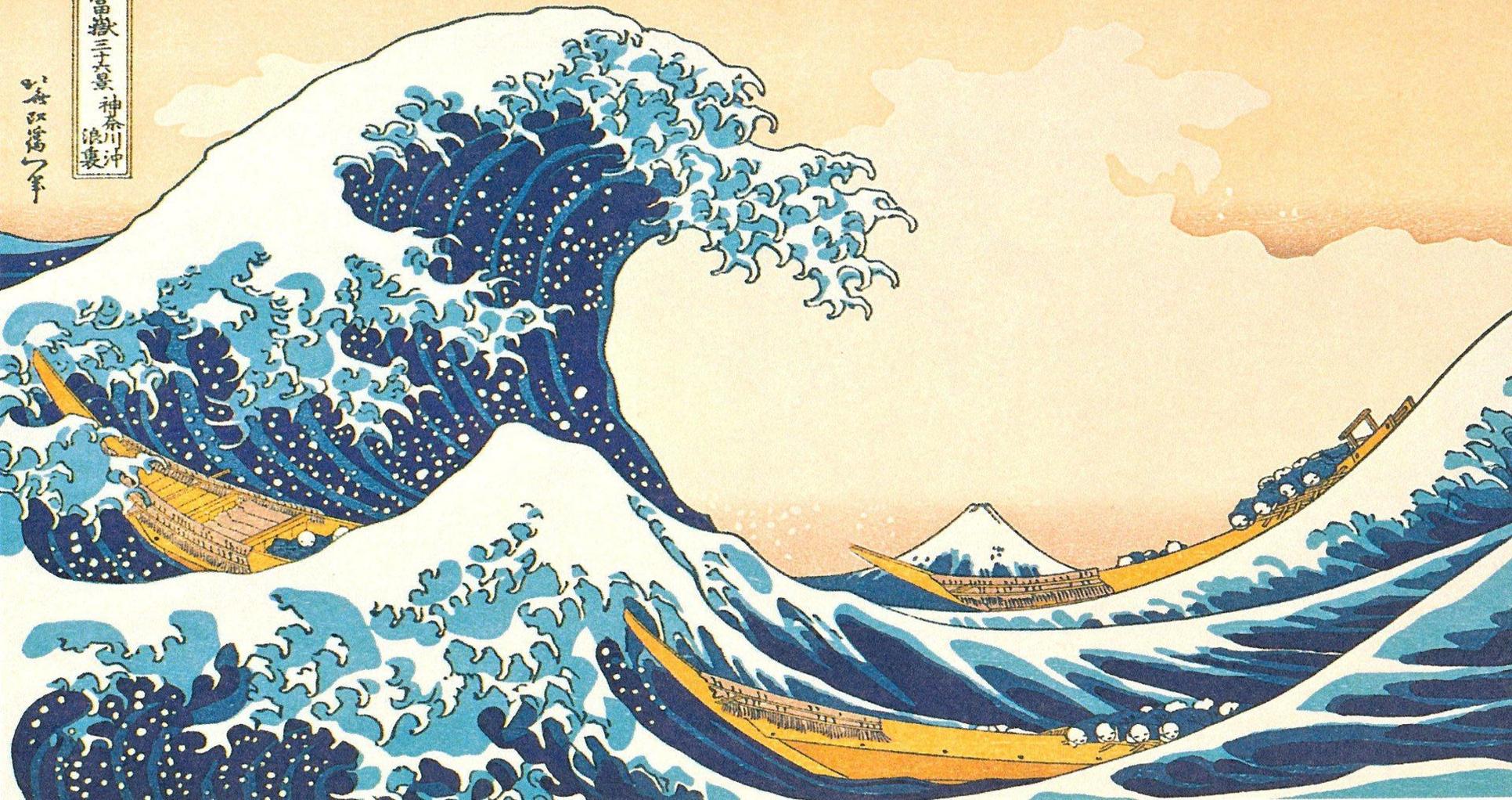


The Promise

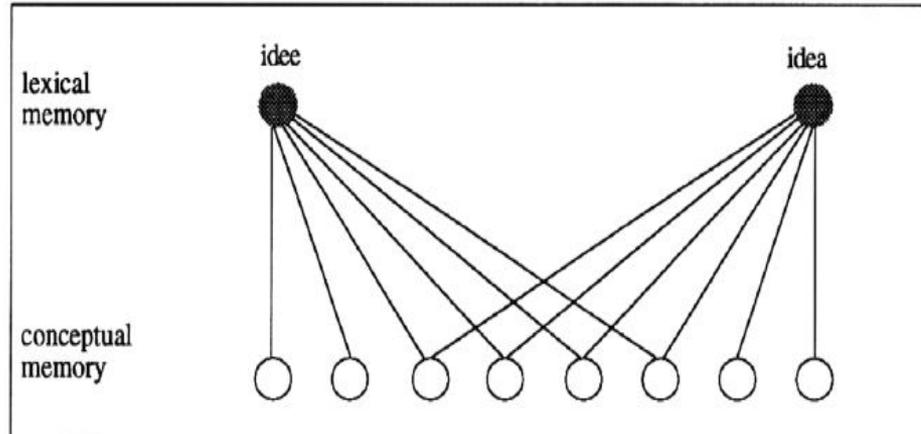
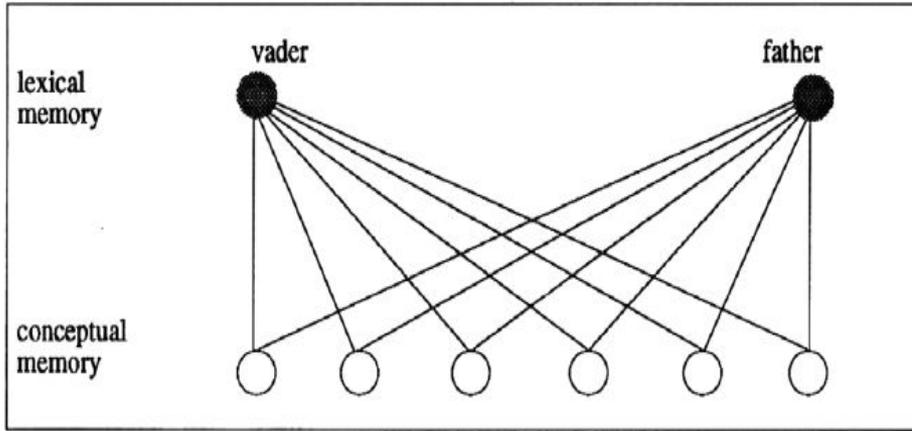
C3

富嶽三十六景 神奈川沖  
浪裏

以  
其  
爲  
一  
年



# Conceptual Feature MODEL



When my wishes conflict with  
those of my family...? Real  
friends SHOULD?

(Ervin-Tripp, 1964)

From diversity, still greater  
UNITY

(Ramírez-Esparza, Gosling,  
Benet-Martínez, Potter and Pennebaker,  
2006)

# Linguistic determinism vs. language RELATIVITY

("Thinking is a matter of LANGUAGE' is an incorrect generalization of the more nearly correct idea that 'thinking is a matter of different tongues,'" Whorf quoted in Athanasopoulos, 2012)

“The limits of my language  
mean the limits of my world”

(Wittgenstein, 1922)

“We are not captives of our tongues, but we are CITIZENS of our languages. And citizenship is a broad concept that includes behavior and rituals. We approach the secret life of another language more intimately on first approach than after we have married into it. Learning a new language is like learning a new city: you see things you’ll never notice, or need, once you go to live there and are habituated by routine”

(Gopnik, 2014)

# Intercultural Development Continuum



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謝謝