Cross-Cultural Psychology,
Summer Term 2020,
Department of Psychology,
Charles University in Prague

Language

(AND WHAT ROLE DOES IT PLAY IN CULTURE?)

(AND HOW DOES IT AFFECT OUR EXPERIENCE?)

Language relativism

- The notion, that language has effect on our experience of the world

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- Also structural features, not only concepts it carries

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American version – **Franz Boas**, but developed by his pupils **Edward Sapir** and **Benjamin Lee Whorf** (Sapir-Whorf hypothesis)

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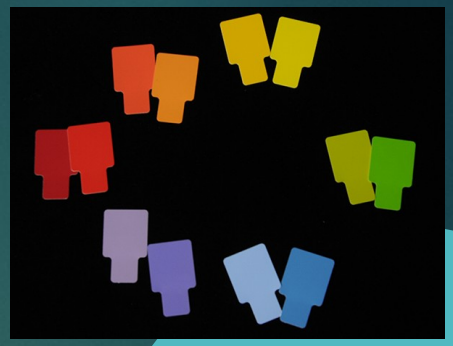
Language relativism

- **Supporters**
- 1930s-1960s
- Boas, Sapir, Whorf
- Lenneberg, Brown (begun to test language relativism experimentally in color perception)
- Joshua Fishman („language is the key to the culture“)
- George Lakoff („we think in culturally specific metaphors)
- Stephen C. Levinson (conceptualization of space)

- **Opponents**
- 1960s-1980s
- Berlin, Kay, Rosch (Heider) (universal conceptualization of colors)
- Noam Chomsky (universal grammar)
- Stephen Pinker

Color conceptualization (past research)



- Munsell color chipset is used
- Coding of inrormation into language affects the its retention in memory (Lenneberg-Brown, 1954)
- Reasoning based on language occurs only if perceptual reasoning is not available (Kay-Kempton, 1984)
- Dani (N. Guinea) performed similarly than Americans in color memory test, in spit of they have only 2 color names in their language (cold/dark, warm/light) (Heider, 1972)
- The number of „focal colors“ may be different in different cultures, but culturally universal is the sequence in which they will appear: black/white, red, yellow, green, blue, brown (Berlin-Kay, 1969)

Sex and gender hypothesis (contemporary research)

- words with the same grammatical gender (in language) would refer to objects (concepts) that would be ascribed the same gender in culture
- if discrepancy would be found, this would refer to cultural models, regardless of language
- If no discrepancy would be found, we could assume that the language does (at least to some extent) determine the cognitive model of an object's gender

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- Gender-ascribing task: subjects speak (with different voices) for different objects.
  - If male voices do refer to objects with mas. GG and female with fem. GG ➡ no discrepancy.
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Germanic languages have 3 genders, Romance languages have 2!

Universal grammar

- Brain follows limited number of rules → all languages has basically same structural basic.
- This idea can be traced back to Roger Bacon (13th century)
- Noam Chomsky showed, that almost every person is capable to learn language, but almost no animal. This potential Chomsky called language acquisition device (LAD).

Universal grammar

- There exists universal innate synthactic thinking, and by acquisition of mother language its potential is filled and shaped by certain principles.
- Argument: Chomsky argues, that children acquire language relatively quickly
- Opponents (relativists) see UG as ethnocentric and unscientific, its supporters study linguistic universals (eg. Joseph Greenberg)
- As an argument (for both, in favor, and against it) are often used creol languages and language acquisition studies

Critical period hypothesis

- Notion that if a child won't acquire language until certain age, it will never be able to develop fully its verbal capabilities (most usually between 7 and 14 y.o.a)
- Hard to test – e.g. In deaf and mute children, feral children (children, which, for whatever reason, grew up without contact with social world, so they didn't acquire any language – social and emotional deprivation almost certainly plays its part)
- Now most of researchers consider „an age factor" – age plays important role in language acquisition, the later, the worse (instead of certain age threshold)

Language in animals

In animals we can speak of language if:

- The sign inventory is large enough
- Signs are arbitrary
- Animals produce these signs deliberately

Gorilla Koko learned to use over a 1000 signs of the American Sign Language and understood aprox. 2000 words. She thought this sign language bonobo Kanzi. Female chimpanzee Washoe learned 350 ASL signs and thought her son Luis. Chimp Nim Chimpsky learned 125 signs.

Language in animals

- Besides apes language has been observed in parrots, dolphins (Alex), dolphins (Akeakamai) and elephants (Batyr managed to use aprox. 20 phrases)

- Language in animals criticism:
  - phrases they use do not have synthactic structure (more of a pidgin),
  - they are more of responses to get a reward more than deliberate language (we do not know if they really understand, or if theyy only search for the mos suitable answer without inference),
  - researchers might be under the Clever Hans Effect (horse with marvelous arithmetic capabilities, who however only reacted to the reactions of the audience) – also called an experimenter effect

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- Social cognition

Advantages of bilingualism

- Better executive functions than monolinguals

(EF are related to problém solving and planning. They enable to start, sustain, modify and end a planned aktivity. In connection with language functioning they are related with generalization and association making.)

Especially cognitive control - explained as a result of regular inhibiting a non-target language and language switching

(CC is a mechanism developed to augment or override reflexive or habitual reactions to orchestrate our behavior in accord with our intentions in complex situations and when our goals are distant.)

Advantages of bilingualism

- Later onset of neurodegenerative diseases

(like Alzheimer's Disease)

- In avarage 4 years later than in monolinguals

- This is possible thanks to the cognitive reserve (some grey matter and white matter regions in bilinguals have higher density than in monolinguals ➡ the decay of brain matter lasts longer before we can detect cognitive impairment)

Limitations of bilingualism

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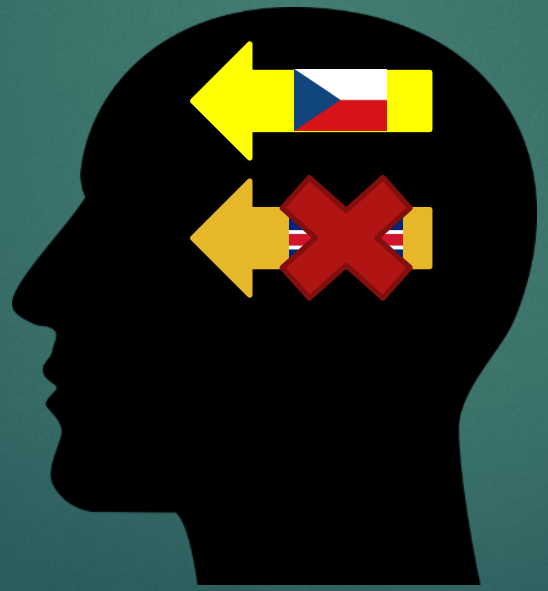

THE SAME RULES APPLIES TO SITUATIONS, WHEN BILINGAL SPEAKS HER/HIS NATIVE LANGUAGE!

Limitations of bilingualism

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- Language interference