Bilingualism: Definition & Models

Defining Bilingualism
- Grosjean (1989): Speaking two or more languages in daily life.
- Variability according to proficiency level, purpose & domain, age of acquisition an other factors (see Ardila, 1998; Muñoz & Marquardt, 2003)

Code Switching
- Alternating use of one’s languages to add communicative intent, emphasis, or emotional value (Muñoz, Marquardt & Copeland, 1999).

Lexical Organization Models (de Bot, 1992)
- Dual: Revised Hierarchical Model (Kroll & Stewart, 1994)
- Extended: The Bilingual Interactive Activation model (Dijkstra & van Heuven, 1998).
- Tripartite: A single store with links between elements that strength via use.

Language activation
- Possibly three levels of activation (Green, 1998):
  - Active, dormant (rarely used languages), & selected states
- Research supporting active state for all languages:
  - Phonemic interference (Colomé, 2001) & cognate naming (Costa et al., 2000)

Bilingualism & Aphasia

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<tr>
<th>Recovery Pattern</th>
<th>Language Characteristics</th>
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<tr>
<td>Parallel (61%)</td>
<td>Recovery of languages parallels the premorbid relative abilities. If one language was</td>
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<td>stronger premorbidly, it would return to being stronger.</td>
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<td>Differential (18%)</td>
<td>One language is recovered much better than the other compared to premorbid abilities.</td>
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<td>Antagonistic</td>
<td>One language is initially available, and as the other language recovers, the initially</td>
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<td>available language disappears.</td>
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<td>Alternating Antagonism</td>
<td>Repetition of the above pattern with languages alternating in availability. This may</td>
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<td>occur within cycles ranging from 24 hours to several months.</td>
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<td>Blending (7%)</td>
<td>Uncontrollable mixing of words and grammatical constructions of two or more languages</td>
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<td>even when attempting to speak in only one language. This should not be confused with</td>
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<td>the common bilingual practice of code-switching.</td>
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<td>Selective (5%)</td>
<td>Language loss only in one language with no measurable deficit in the other.</td>
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<td>Successive</td>
<td>The recovery of one language before the other(s).</td>
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Adapted from: Adapted from Paradis (2004) and Fabbro (2001a).

Causes of recovery patterns
- Unique combination of factors (Paradis, 1977):
• Language status (i.e., native language or currently most used language), lesion type/site, environments in which the languages were used, aphasia type, manner of acquisition
• Cognitive abilities (Green, 1998):
  • Impaired cognitive control results in differing degrees of inhibition, which might account for the variety of recovery patterns.
• Language differences:
  • Cue Validity (MacWhinney, Bates, & Kiegl, 1984)
  • Where breakdown can occur (Alexiadou, & Stavrakaki, 2006)
  • Which structures can be avoided (Fabbro, 2001).

**Bilingual Aphasia: Clinical Implications**

**Assessment**
• Avoid common false assumptions (Lorenzen & Murray, 2008):
  • Pre-morbid abilities in each language were equivalent & al modalities were used
  • Being bilingual implies a certain level of proficiency for all bilingual speakers
  • Post-morbid differences between the languages are solely due to brain damage
• Identify pre-morbid proficiency:
  • Language use history: Interviewing, self-rating scales, or language use questionnaires (Muñoz & Marquardt, 2003; Muñoz et al., 1999; Roberts & Deslauriers, 1999).
• Formal Assessment:
  • Test all languages across all modalities regardless of reported use (Paradis, 2004).
    • Bilingual Aphasia Test (Paradis & Libben, 1987)
    • Other tests have versions in other languages for classification of aphasia:
      • Multilingual Aphasia Examination-Spanish Version (Benton & Hamsher, 1994; Rey et al., 1991).
      • Western Aphasia Battery-Spanish Version (Kertesz, Pascual-Leone, & Pascual-Leone, 1990)
      • Psycholinguistic Assessments of Language Processing in Aphasia, Spanish (Kay et al., 1992)
      • Boston Diagnostic Aphasia Examination, Spanish (Goodglass & Kaplan, 1986)
      • Aachen Aphasia Test (Huber, Poeck, & Weniger, 1983) available in several languages.

**Treatment**
• Therapy goals
  • Based on pre- and post-morbid language proficiency and use patterns (Roberts, 2001)
  • Take into account specific characteristics of all languages since syntactic impairments may differ across languages (Ardila, 2001; Bastiaanse et al., 2002)
• Traditional treatments found effective with bilingual clients:
  • General stimulation approach (Watamori & Sasnuma, 1976; 1978)
  • Phonemic cueing (Roberts, de la Riva, & Rhéaume, 1997)
• Treatment protocols successful with monolingual speakers of other languages:
  • Melodic Intonation Therapy (Sparks, Helm & Albert, 1974)
  • Cueing hierarchy treatment (Galvez & Hinckley, 2003)
    • Within-language improvements across modalities, but not cross-linguistic
• Treatment protocols that have demonstrated cross-linguistic generalization:
  • Reading and naming treatments that focus on shared aspects of languages (Kiran & Edmonds, 2004; Laganaro & Venet, 2001)
  • Cognate therapy approach (Kiran & Tuchtenhagan 2005; Kohnert, 2004; Lalor & Kirsner, 2001; Roberts & Deslauriers, 1999)
  • Cognitive treatment (Kohnert, 2004)
  • Compensatory strategies capitalizing on dual language abilities (Lorenzen & Murray, 2008)
  • Use of one language to cue another (Goral et al., 2006; Roberts & Deslauriers, 1999)
  • Use of cognates or language mixing to increase communication, particularly for those who live in bilingual communities (Roberts & Deslauriers, 1999).


