



Academy of Aphasia 2011

Naming and Discourse Production: A Bilingual Case Study

Yi-Ling Dai^{a,*}, Anthony Pak Hin Kong^b, Brendan Stuart Weekes^a

^a University of Hong Kong

^b University of Central Florida

Background

Different psycholinguistic factors predict patterns of recovery in bilingual aphasia: language type, status (first or second language), dominance, and word type, e.g. word class, imageability, frequency, age of acquisition and cognate status (Weekes, 2010). Most studies report speakers of European languages that are similar in language type. We describe a Cantonese-Mandarin bilingual speaker with aphasia who is of interest because of linguistic differences between the two dialects. Although there is overlap in the lexical and morphological structures between Cantonese and Mandarin, syntactic and phonological properties of Cantonese and Mandarin are different. Our aim was to compare performance in each dialect of a Cantonese-Mandarin speaker by examining both lexical retrieval and discourse production, since word retrieval in bilingual aphasia does not always explain the recovery of free speech (Kambanaros, 2010). We expected differential patterns of performance in lexical naming and discourse production.

Case Report

YF is a 52-year-old right-handed Cantonese-Mandarin speaker with mild anomic aphasia. He has a higher degree in social science. YF's native but less dominant language is Cantonese. Mandarin was acquired at age 18 and used extensively for work in Taiwan and Mainland China, and is his language of choice with family members and friends. To test our hypothesis, we compared YF's naming of the same lexical items in Cantonese and Mandarin using an object and action naming battery. There were no differences in performance on object and action naming across dialects ($p > .05$), but there was an effect of word class: object naming (87%) was better than action naming (69%) in Mandarin ($p < .05$). Discourse production was analysed using quantitative and qualitative analytic methods, which are summarized in Table 1. Discourse production was reduced if compared to age-matched bilingual controls. However, there were no differences in the quantity of discourse production in each dialect (all $ps > .05$).

* Corresponding author.

E-mail address: elaine928@gmail.com.

Table 1 *YF's Modified Quantitative Production Analysis in Discourse Production*

Word classes (no of occurrence/min)	News & his comments		Daily agenda		Countries visited	
	L1	L2	L1	L2	L1	L2
Adjective	1.62	1.20	0.18	0.00	0.63	1.59
Adverb	2.16	2.31	1.62	0.51	1.71	1.96
Auxiliary verb	0.99	1.20	0.27	0.26	0.41	1.18
Classifier	0.72	0.46	2.52	1.79	1.13	1.21
Conjunction	0.99	0.65	0.18	1.28	0.41	0.48
Copula	3.15	1.94	1.35	1.03	2.97	2.02
Determiner	0.27	0.19	0.36	0.00	0.41	0.35
Exclamation	1.98	2.59	4.05	3.85	2.97	2.04
Filler	9.73	6.85	7.12	6.41	5.86	8.52
Modal verb	0.00	0.28	0.27	0.26	0.09	0.05
Noun	7.03	5.46	6.58	3.08	3.51	5.40
Negation	2.43	0.83	0.99	0.77	1.04	0.91
Numeral	0.27	1.39	1.80	2.05	0.95	1.08
Particle	3.69	4.72	2.88	2.05	2.16	3.23
Pause	1.53	0.65	0.72	0.26	1.04	0.75
Prefix	0.00	0.09	0.00	0.00	0.05	0.05
Preposition	0.63	0.00	0.45	0.26	0.18	0.46
Pronoun	2.07	1.20	1.26	0.51	1.22	1.72
Proper noun	1.62	1.57	1.35	2.31	3.20	3.90
Resultative suffix	0.54	0.00	0.90	0.00	0.23	0.54
Verb	5.86	3.89	7.57	5.13	3.11	3.74
Verb suffix	0.27	0.09	0.99	0.51	0.32	0.38
Error	0.18	0.00	0.09	0.00	0.27	0.16
QPA indices						
Total no of narrative words	403	325	395	125	592	1425
Average no of narrative words/min	36.31	30.09	35.59	32.05	26.67	38.31
Average no of utterances/min	9.55	7.96	10.72	10.51	7.97	9.52
Average no of narrative words/ utterance	0.34	0.35	0.30	0.78	0.15	0.11
Closed class words/narrative words	0.05	0.05	0.04	0.09	0.02	0.02
Pronoun/(noun+pronoun)	0.02	0.01	0.01	0.02	0.01	0.00
Verb/(noun+verb)	0.04	0.03	0.04	0.13	0.01	0.01

Note. L1 = Cantonese, L2 = Mandarin. QPA = Quantitative Production Analysis.

Discussion

YF is the first report of a bilingual Cantonese-Mandarin speaker with aphasia. Contrary to our expectations, there was little evidence of differential recovery in the two dialects. Object naming was better than action naming in Mandarin – the later acquired but more dominant dialect – a pattern that has been reported in other studies of bilingual aphasia (Poncellet et al., 2007; Weekes, 2010). Interestingly, there were few occurrences of word-finding difficulties in discourse production. Instead, YF's word retrieval problems were limited to confrontation naming tasks. Outside the context of constrained word retrieval, as in naming tasks, YF could successfully avoid using items that he could not name spontaneously. Moreover, when it is not mandatory to use one particular dialect, he could code-switch to convey a message. It was therefore not clear whether word retrieval was ever functionally reduced for YF. According to Kambanaros (2010), performance on object and action naming tests in bilingual aphasia can overestimate the functional word retrieval of nouns and verbs in connected speech if different retrieval contexts are used across tasks. The findings from testing with YF support this claim.

References

- Kambanaros, A. (2010). Action and object naming versus verb and noun retrieval in connected speech: Comparisons in late bilingual Greek-English speakers. *Aphasiology*, 24(2), 210–230.
- Poncellet, M., Majerus, S., Raman, I., Warginaire, S., & Weekes, B.S. (2007). Naming actions and objects in bilingual aphasia. *Brain & Language*, 103, 158-159.
- Weekes, B.S. (2010). Issues in bilingual aphasia. *Aphasiology*, 24(2), 123-125.