O jectives

The primary objective of this paper is to provide a

Slovenian, L2 was Italian, third language (L3) was Friulian, and fourth language (L4) was English. The case study investigated if treatment in L2 would result in parallel improvement to all languages (L1, L2, L3, and L4) and if these hypothesized benefits of rehabilitation would be maintained four years post treatment. One-month post injuries, standardized aphasia batteries specific to each of the four languages were administered. The participant was given a six-month course of therapy (3 times/week) for 45 minutes in Italian. L2 was chosen because this was the language of communication that his family used in daily living and it was the participants' strongest pre-morbid language. The therapy focused on fluency control, phonemic discrimination, improving his phonological and morphological deficits through oral and written exercises, and communication exercises. At the end of rehabilitation, 6 months post, the participant was assessed again using the BAT in all languages (Slovenian version became available at this time). Two 2-factor ANOVA's (linguistic levels and time) and (language and time) along with the administration of Newman Keuls post hoc tests were carried out. The interaction between language and time were significant ($p<.001$). Performance of Slovenian deteriorated significantly between the second and third assessment ($p<.01$) was found. Also, statistically significant ($p<.05$) was the improvement between the second and third assessment of Italian. Improvement of Friulian and English did not reach statistical significance between the second and third assessment. Although not significant, Friulian, Italian, and English also showed a trend toward improvement. The authors suggested that the participant's weakest pre-morbid language proficiency of Slovenian (L1) was the reason for lack of crosslinguistic generalization from treatment. Filiputti et al. interpreted these findings as reflecting that the benefits of rehabilitation were maintained four years post treatment.

While this study tries to provide persuasive evidence that treatment in one language created crosslinguistic generalization in three of the four languages. When synthesizing these results, several questions remain. Firstly, it is unclear why the authors chose four years to view if rehabilitation effects were maintained post treatment. Furthermore, it is unclear why the authors did not choose to perform a re-assessment annually leading up to the four-year re-assessment. The study also began treatment six months post onset of the insult, and with debate of spontaneous recovery, one may question if the measured improvements could still have been due to spontaneous recovery or to the treatment provided. Nonetheless, two languages that were non-treated after therapy did improve but overall, this study should be regarded with caution until further evidence emerges.

Meinzer et al. (2007) reported a case study on a 35-year-old non-monolingual patient (L1=French; L2=German) with balanced pre-morbid language skills diagnosed with chronic aphasia. Functional magnetic resonance imaging measuring activation during picture-naming was completed at the start of the study (32 months post stroke) and 2 weeks later after intensive therapy in German (3 hrs/day for 10 days in an interactive group setting). The treatment took place 3 hours /day for 10 consecutive days by way of language games in an interactive group setting. In addition, his language was tested with a German neuropsychological language test, Aachen Aphasia Test (AAT) and a naming test of 150 photographic objects. His word retrieval in French was assessed with the same naming test. No standardized battery for aphasia was available to test his French language. Post hoc analysis performed after treatment confirmed a larger increase of activation across time for German compared to French in a time x language interaction. Results of

Russian and his L2 was Hebrew, which he considered his less proficient pre-morbid language. The participant was assessed four times (two weeks post onset, one month later, three and a half months later, and five months later) in both languages with the Israelia Loewenstein Aphasia Test (ILAT), BNT, auditory comprehension picture comprehension task, reading comprehension word-picture matching task, and writing evaluations. The participant received treatment in Hebrew for three-and-a-half months post injury five times per week for 45-minute sessions. Once results indicated progress of crosslinguistic generalization, he received a second treatment

Meirtsch, B, Meisel, J.M., & Frederic, I. (2009). Non-treated Languages in Aphasia Therapy of Polyglots Benefit from Improvement in the Treated language. *Journal of Neurolinguistics.*