

## Typological shift in bilinguals' L1: word order and case marking in two varieties of child Quechua

Many of the world's languages are agglutinative with basic SOV word order; these types are understudied. Studies are also infrequent where external groups impose bilingualism (G. Sankoff 2002:656); most focus on changes to L2, eg. Luján, Minaya and D. Sankoff (1984). Our goal is to document understudied varieties and illuminate changes to L1 produced by prolonged contact. Sánchez (2003) studies two varieties of Peruvian Quechua, QI and QIIB (Torero 1964) claiming that feature convergence in bilinguals correlates word order changes with changes in morphological marking. Our study extends this framework to Peruvian QIIC and Bolivian QIIC varieties, further supporting claims that common grammatical functions connect unrelated surface phenomena (Baker 1996) and that changes obstructed in one area may accelerate in another (Hintz 2016).

We tagged parts-of-speech in a corpus of 2860 declarative utterances archived at AILLA, collected among 105 children ages 5-15 speaking varieties of Quechua in rural highlands Cusco, Peru and Chuquisaca, Bolivia.

We analyzed proportion of VO vs. OV order in 1760 declarative sentences containing verbs and direct objects using a binomial generalized linear mixed-effects regression (GLMER) analysis, fitting the model using the lme4 package (Bates et al. 2015) in R (R Core Team 2017). The model included word order as dependent variable; country (Bolivia,  $n=920$  utterances; Peru,  $n=840$ ), sex (female,  $n=906$ ; male,  $n=854$ ), age, and presence of accusative *-ta* on direct objects (present,  $n=1419$ ; dropped,  $n=341$ ) as fixed effects; and child as random effect. The effect of country was significant ( $z=-2.27$ ,  $p<0.05$ ): Bolivian children produced more OV sentences (89.2% of analyzed sentences,) than Peruvian children (78.0%). Likewise, the effect of *-ta*-use was significant ( $z=5.81$ ,  $p<0.001$ ): sentences in which the accusative suffix was omitted exhibited OV order (98.2%) more often than sentences in which it was produced (80.4%). Bolivian children produced 338 direct objects without *-ta* vs. only 3 by Peruvian children. Sex was significant ( $z=2.23$ ,  $p<0.05$ ): males produced more OV sentences (86.4%) than females (81.5%). The effect of age was not significant.

We also analyzed relative order of genitive and possessed nouns in 79 sentences using a binomial GLMER, with noun order as the dependent variable; country (Bolivia,  $n=36$ ; Peru,  $n=43$ ), sex (Female,  $n=40$ ; Male,  $n=39$ ), and age as fixed effects; and child as random effect. The effect of country was significant ( $z=-2.75$ ;  $p<0.01$ ): Bolivian children produced the canonical order (with the genitive preceding the possessed; 83.3%) more often than Peruvian children (53.5%). Here, effects of sex and age were not significant.

Bolivian Quechua generally appears more affected by Spanish than Peruvian varieties; notably, evidential suffixes have disappeared that are still robust elsewhere (Kalt, in preparation) and determiners are emerging in Chuquisaca, which Sánchez also found in the IIB variety. Paradoxically, our finding of more conservative word order among Bolivian children supports the notion that their grammars are changing faster; omission of morphological marking places a greater burden on word order to identify thematic roles of arguments and mark them for definiteness and focus. Thus, reduction in one area of grammar leads to accelerated change in another.

## References

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