

## Non-word repetition in Yélf Dnye

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### Author Note

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### Abstract

In nonword repetition (NWR) studies, participants are presented auditorily with an item that is phonologically legal but lexically meaningless in the local language. Accuracy is thought to reflect long-term phonological knowledge as well as online phonological working memory and flexible production patterns. In this study, we report on NWR results among children learning Yêly Dnyé, an isolate spoken in Rossel Island, PNG, with an unusually dense phonological inventory. This study contributes to three lines of research. First, we document that non-word items containing typologically rare sounds are repeated accurately less often than non-words containing more common sounds. Second, we document rather weak effects of item length, contributing to other research suggesting that length effects may be language-specific. Third, we do not find strong individual variation effects in this population, contrary to previous results documenting strong age-related effects. Together, these data provide a unique view of online phonological processing in a seldom-studied language, and contribute to both typological and language acquisition research.

## Non-word repetition in Yéî Dnye

The Yéî sound system, much like its baroque grammatical system in general [STEVE\_GRAMMAR\_REF], is unlike any other in the region, with 90 contrastive segments, including at least two contrasts not yet been documented elsewhere (labial-coronal double-articulations with dental vs. post-alveolar coronal placement in both oral and nasal stops) [STEVE\_GRAMMAR\_REF]. With only four primary places of articulation (bilabial, alveolar, post-alveolar, and velar) and no voicing contrasts, the phonological inventory is remarkably packed with acoustically similar segments. The core oral stop set includes both singleton (/p/, /t/, /t̥/, and /k/) and doubly-articulated (/tp/, /t̥p/, /kp/) segments, with full nasal equivalents (/m/, /n/, /ɲ/, /ŋ/, /nm/, /ɲm/, /ŋm/), and with a substantial portion of these able to be pre-nasalized or nasally released (/mp/, /nt/, /ɲt̥/, /ŋk/, /nmtp̥/, /ɲmtp̥/, /ŋm̥kp̥/, /t̥ɲ/, /kɲ/, /t̥p̥ɲm̥/, /kp̥ɲm̥/). Finally, a number of these can also be labialized or palatalized on the release, or both (/pʲ/, /tʲ/, /tpʲ/, /t̥ʲ/, /t̥pʲ/, /kʲ/, /kpʲ/, /pʲʷ/, /mbʲ/, /ndʒ/, /nmd̥bʲ/, /ɲd̥ʲ/, /ɲm̥d̥bʲ/, /mbʲʷ/, /ŋgʷ/, /mbʲʷ/, /t̥ɲʲ/, /t̥p̥ɲm̥ʲ/, /kɲʷ/, /mʲ/, /nʲ/, /nmʲ/, /ɲʲ/, /ɲmʲ/, /mʷ/, /ŋʷ/, mʲʷ/). Among the remaining consonants are small group of oral continuants (/w/, /j/, /ɣ/, /l/, /βʲ/, /l̥ʲ/, /l̥βʲ/). Vowels in Yéî Dnye may be oral or nasal, short or long. The 10 oral vowel qualities (/i/, /u/, /e/, /o/, /ə/, /ɛ/, /ɔ/, /æ/, /ɑ/) can be produced as short or long vowels, with 7 of these able to appear as short and long nasal vowels as well (/i/, /u/, /ə/, /ɛ/, /ɔ/, /æ/, /ɑ/). In total, Levinson [STEVE\_GRAMMAR\_REF] then counts 90 distinctive segments in Yéî Dnye (93 when including consonants that are extremely rarely used).

TESXwdfkh ɔ TESdfkjah grwerg /kʲ/, /kpʲ/, /pʲʷ/, /mbʲ/, /ndʒ/, /nmd̥bʲ/, /ɲd̥ʲ/, /ɲm̥d̥bʲ/, /mbʲʷ/, /ŋgʷ/, /mbʲʷ/, /t̥ɲʲ/, /t̥p̥ɲm̥ʲ/, /kɲʷ/, /mʲ/, /nʲ/, /nmʲ/, /ɲʲ/, /ɲmʲ/, /mʷ/, /ŋʷ/, mʲʷ/). Among the remaining consonants are small group of oral continuants (/w/, /j/, /ɣ/, /l/, /βʲ/, /l̥ʲ/, /l̥βʲ/) sdgfdfg