Opacity in Mojeño Trinitario Reduplication: A Harmonic Serialism Account

1. Introduction: In Mojeño Trinitario (henceforth MT), rhythmic vowel deletion underlies in reduplicated forms. I propose a Harmonic Serialism analysis for this opacity, in which the standard faithfulness contraint MaxBr has the double function of triggering reduplication and protecting the reduplicant vowel from deletion later in the derivation.

2. The data and its challenges:

   (1) \text{pi-sopo-po-xi-k'o-nu} & (2) \text{ti-ko-xu'-ma-ma-xi} \\
   2SG-believe-RED-CLF-ACT-1SG & 3F-VZ-sickness-RED-CLF \\
   ‘You half-believe me.’ & ‘She is sickly.’ (Rose 2014)

Reduplication copies the last syllable of the verbal stem, attaching it to its right edge. Rhythmic vowel deletion applies to all underlying forms, deleting every second vowel starting with the first one (that is, all odd-numbered vowels are subject to deletion). Crucially, the vowel of the reduplicant is never deleted, even if odd-numbered, as in (2). The same holds for the word-final syllable. The stem vowel, however, is deleted transparently in case it is odd-numbered, as (1) shows. However, the reduplicant is not entirely invisible for vowel deletion: if it is odd-numbered and should be deleted, vowel deletion targets the next odd-numbered vowel instead, which in the schematized example (3) would be \( V_7 \).

\[
\begin{align*}
(3) & \quad (C V_6, C V_4, C V_2)_{\text{Stem}} - (C V_7)_{\text{RED}} - C V_6, C V_4, C V_{\text{FIN}}.
\end{align*}
\]

If the reduplicant were completely invisible for vowel deletion, deletion would target \( V_6 \), since it would be the next odd-numbered vowel. Instead, \( V_7 \) is deleted, which implies that the vowel deletion rule can in fact “see” the reduplicant as part of the structure. This leads to a rule-ordering problem for serial rule-based accounts of reduplication (e.g. Frampton 2009) since no relative ordering of vowel deletion and reduplication can account for the pattern.

3. An Implementation in HS: Following Kager (1997), I interpret vowel deletion as reduction of vocalic features in weak vowels triggered by \( \text{REDUCE} \). I assume left-aligned foot parsing into iambs with main stress on the penultimate foot. Following McCarthy (2016) I assume that syllabification does not require a seperate step in the derivation.

![Harmonic Serialism Tableau](image)

The above harmonic improvement tableau summarizes the derivation of the reduplicated form in (2), where the reduplicant is expected to be deleted, but is preserved whatsoever.

In the first step, reduplication takes place, triggered by a high-ranked Max-BR constraint, and the material is parsed into syllables. The shape and position of the reduplicant is adjusted by the cover constraint REDFORM and the higher-ranked RED=SYL. The second operation parses the reduplicated form into left-aligned iambic metrical feet, assigning main stress to the second syllable of the penultimate foot. In the third step, \( \text{REDUCE} \) triggers the reduction of every weak (that is, first) syllable of a foot. Deletion of the reduplicant vowel is prevented by MaxBR, which by definition is violated when a feature in the base does not have a correspondent in the reduplicant (cf. Kager 1999). Reducing the vowel of the base thus does not violate MaxBR, but reducing the vowel of the reduplicant does. In the last step of the derivation converges. This double role of MaxBR, namely triggering reduplication and protecting the reduplicant from deletion, works in HS, but not in the basic model of parallel OT (which is commonly used to account for reduplication, (McCarthy & Prince 1995)), since (basic) parallel OT does not involve an input-reduplicant faithfulness relation. In HS, this problem does not arise since reduplication and vowel deletion constitute two different steps which are ordered sequentially and stem-reduplicant correspondence is not necessary.

4. Conclusion: I have presented an opaque interaction of reduplication and vowel deletion in MT and proposed an analysis in HS making use of standard constraints. My proposal is based on independent assumptions and standard constraints and does not need an additional system specific to reduplication such as Serial Template Satisfaction (STS, McCarthy et. al. 2012).