**Introduction**: Amharic, a Semitic language spoken in Ethiopia, seems to present two typological singularities. First, its syllable weight system undeniably treats coda geminates as moraic or weight-bearing but other codas as non-weight bearing (Sande and Hedding 2014). Second, it seems to have a cross-linguistically unique infixing reduplication pattern, where the plural marker on adjectives and the iterative marker on verbs are reduplicative infixes which target only heavy syllables. That is, these infixes can only surface in words containing heavy syllables, i.e. those containing geminates. Adjectives without heavy syllables must find an alternative way to express plural agreement with a plural head noun, and iterative phrases containing a verb without a heavy syllable must find an alternative means of expressing iterativity. It is the second fact that I investigate here.

The apparent target of infixation in Amharic is heavy syllables, which is not predicted by extant typologies of infixation pivots (Yu, 2003, 2007; Ultan, 1975; Moravcsik, 2000; Frampton, 2009). Yu (2003, 2007), for example, claims that infixation pivots will be edge-aligned or prominent (stressed) due to two competing factors: 1) reliability, the likelihood that a specific pivot will be present in every word; and 2) salience, the prominence of the pivot within a word. A weight-dependent pivot is not reliable in Yu's sense, as we cannot expect every word in a language to contain heavy syllables. Here I describe the infixing reduplication system in Amharic and demonstrate that despite its unique surface pattern, Stratal OT (Kiparsky, 2000, 2008) gives us the tools to see that the Amharic system is a combination of otherwise attested patterns, rather than a typological rarity.

**The data:** Adjectives in Amharic agree in number with the noun. There is no overt singular marker, but possible plural morphemes include reduplication (1b) or the suffix /-otʃtʃ/ (1a).

(1) **Plural adjectives**

| | Singular | Plural | Gloss | |
|---|---|---|---|---|
| a. | ta.katʃ | ta.ka.tʃ-otʃtʃ | 'lazy' | *suffixation* |
| b. | rädʒ.dʒäm | rä.dʒadʒ.dʒäm-(otʃtʃ) | 'tall' | *reduplication* |

The reduplication strategy in (1b) is only possible in words containing geminates, *takakatʃ, and it is required for those adjectives. Adjectives that undergo reduplication for pluralization may additionally optionally take the suffix /-otʃtʃ/, which is obligatory for adjectives with no alternative pluralization strategy. The same reduplication pattern is used to mark iterativity on verbs.

Both in adjective and verbal reduplication, the reduplicative infix contains two segments, a consonant with identical features to the geminate consonant, and a vowel that follows the regular epenthesis process of the language. The epenthetic vowel is always central /ɨ, ə, ä/, but its height is determined by the previous vowel in the word.

Important to note is that this reduplication process interacts with stress. Syllables closed by geminates (and not other codas) are always stressed in Amharic, no matter their position in the word. If no geminates are present in a word, there is alternating stress beginning at the left edge. Thus, because the reduplicant CV is always followed immediately by a geminate, it is always inside of a stressed heavy syllable.

**The analysis:** I demonstrate that while an Optimality Theory approach (Prince and Smolensky 1993/2004) requires us to say that Amharic infixation is weight-dependent and thus typologically singular, a stratal approach such as Stratal OT (Kiparsky 2000, 2008; Bermudez-Otero 1999) provides a simple means of accounting for the Amharic data via otherwise attested patterns.

The shape (CV) and phonological features of the adjectival and verbal infixes in Amharic can be analyzed as purely phonologically optimizing. This is possible with either parallel or Stratal OT. For example, if one must realize all morphemes segmentally, CV is the smallest additional structure

one can add to an Amharic word while maintaining phonotactic well-formedness. Constraints like *Struc(ture) (Zoll 1993, 1994; Prince and Smolensky 1993) and RealizeMorph(eme) (Kurisu 2001) ensure that no more or less structure than CV is added to a plural adjective or iterative verb. The features of the reduplicant consonant can be derived via correspondence and locality, much in the same way as Yu's (2005) analysis of Washo.

The infixing reduplicant always surfaces immediately before the geminate in Amharic. Although one could imagine constraints in parallel OT which specify that the plural morpheme on adjectives must be aligned to a geminate or heavy syllable; since such a process is unattested outside of Amharic, this would be an otherwise unnecessary language-specific constraint, something we would like to avoid in OT if possible. A Stratal OT account provides an obvious solution.

Because only geminates are weight-bearing in Amharic, and syllables closed by geminates are stressed without exception, it follows that at the stem-level of analysis only syllables closed by geminates would be stressed, while all other stress is assigned post-lexically. Thus, at the stem level, the only stressed syllables are the heavy ones (i.e. syllables closed by geminates). If reduplication also takes place at the stem level, then we can refer to stressed rather than heavy syllables when determining the location of the infixing reduplicant. A language-specific constraint like Align-L(Plural, $\sigma_{\mu\mu}$) is no longer necessary, and instead we can use a precedented constraint like Align-L(Plural, $'\sigma$) which aligns a morpheme to a stressed syllable. Such a constraint is needed in other languages where infixes target stress, such as Chamorro (Topping 1973, Klein 1997).

Further support for a stratal analysis comes from iterative marking on verbs. Iterativity is marked via reduplication of geminates in the *verb stem*. Crucially, stem-level geminates and not affixal ones reduplicate; there are many verbal affixes containing geminates, none of which undergo reduplication. The verb stem, underlined in (2), consists of a root plus aspectual morphology.

(2) **Reduplication in verb stems**

| | | | | |
|---|---|---|---|---|
| a. | säbbär-atʃtʃ-əhu | 'y'all broke' | säbabbär-atʃtʃ-əhu | 'y'all broke again and again' |
| b. | ɨjjä-käbbädä | 'they're becoming' | ɨjjä-käbbädä | 'they're constantly becoming' |

With the addition of the iterative morpheme to the forms in (2), the /b/ in (2a) and in (2b) reduplicates. Note that in (a), the /b/ is the first geminate in the word, while in (b) it is the final geminate in the word. In a parallel OT account, where candidates are evaluated once at the word level, it is impossible to distinguish stem from affixal geminates and get the correct output in both forms. However, in a stratal account, where stems are evaluated first and words are evaluated after the addition of other morphology, such a differentiation is predicted.

**Conclusion:** The appearance of weight-dependent infixation in Amharic is a product of the language's weight and stress systems in combination with stratum-sensitive stress-dependent infixation. Only syllables closed by geminates are heavy in Amharic, a cross-linguistically rare weight system (Davis 2011; Sande and Hedding 2014). On top of that, heavy syllables in Amharic attract stress. At the stem level then, the only stressed syllables are heavy ones, so when infixes are inserted targeting stressed syllables, those stressed syllables are also heavy syllables. With a Stratal OT account, we see that the Amharic infixing reduplication system no longer requires language-specific constraints, but results from a synthesis of other attested properties. A language would need all of these properties in combination to result in the appearance of weight-dependent infixation; this explains the rarity of such a system, even perhaps why surface weight-dependent infixation is unattested outside of Amharic.