I. Overview

**Subregular phonology and phonological locality**
- Phonology is subregular – Strictly Local (Chandlee 2014, Chandelle & Horne 2018, Chandelle & Jardine 2019)
- Basic observation: most, if not all, phonological processes operate on substrings of bounded length. Contexts and targets are local

**Non-locally phonology?**
- Long-distance harmony, tonal processes (spreading, deletion, etc.)
- Solution: Autosegmental Phonology (Lehmann 1973, Goldsmith 1976)

**Non-regular processes become local on relevant tiers (Edelin 1996)**

**Autosegmental Representation and Strictly Local Phonology**
- Many tonal processes are indeed only Strictly Local over Autosegmental Representation (Kower et al. 2018, Chandelle & Jardine 2019)
- More interestingly, adopting Autosegmental Representation does not always contribute to achieving phonological locality (Chandlee & Jardine 2019)

**Scope of the current paper**
- Extend the empirical coverage of the Autosegmental Input Strictly Local Framework: Metrical Dominance and Floating Tones
- More data on tones (Chandlee & Jardine 2019)
- Comparison: /a/ and /a/ in the input
- Map input tones faithfully to output except for the last tone (b-c); substitute the last tone with H (b)

II. Input Strictly Local (ISL) Functions

**Input Strictly Local (ISL) Functions**
- Mapping relations defined on contiguous substrings of bounded length in the input (Chandlee 2014)
  - Example: aaaa → abbb
    - Rule: /a/ → b
  - Substring length: 2 (permits a[a], a[i], ab, ah, ba, changes aa to ab)
  - FSA Equivalent: Subsequential Finite State Transducer (Chandlee 2014)

**Logical Equivalence:** Quantifier-Free First-Order logic (Chandlee & Lindell in prep)

III. Floating tone representation and metrical dominance

**Floating tone suffocation in Cantonese** (Chandlee 2000, Yip 2002)
- /a/ → σ
- Keep all TBUs (a) and all association lines (e)
- Floating tone σ: a tone without segmental information / tone-TBU association

**Metrical left dominance in Shanghai tone sandhi** (Guarniero 1995, 1999)
- Not linearly ISL if leftmost syllable has indefinitely many tones
- A hypothetical minimal pair:
  - a) [M] /‘hold the memory of Chen’
  - b) /‘hold the memory of T’
- An additional autosegmental tier: Morpheme
- A representational problem: Are morpheme associations conditioned by Tone-TBU associations?
- A morphophonological solution
  - The /HL/ lexical tone always "stays in place", while /LH/ always redistributes
  - Assumption: lexical tones can be either associated or floating. Associated tones cannot be deleted in Suzhou, while floating tones can redistribute

IV. Floating tones + metrical dominance

**Suzhou tone sandhi** (Sn & Jiang 2013, Zhu in prep)
- /a/ → b, m
- /a/ → ‘blind’ (LH) ‘blind’
- The /HL/ lexical tone always “stays in place”, while /LH/ always redistributes
- Hypothesis: lexical tones could be either associated or floating. Associated tones cannot be deleted in Suzhou, while floating tones can redistribute

**A representational problem**
- How do we know if a certain tone “belongs” to the first/second syllable?
  - A hypothetical minimal pair:
  - Same sequence on the tonal tier (L H L) + same associations (first L first syllable, second L second syllable) → different sandhi outcome
  - By using associated/floating status to represent tonal stability/displacement, we have lost the information on morphological affiliation

**A morphophonological solution**
- An additional autosegmental tier: Morpheme
- Morphological affiliation = Tone-Morpheme association
- A model-internal issue of A-ISL functions, but an underlying property of Autosegmental Representations
  - Regardless of types formalism, one has to capture: 1. Some lexical tones always redistribute, some do not 2. Redistribution only operates on the leftmost lexical tone