Degemination in Japanese Loanwords from Italian

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0. Preliminaries
- Italian loans in Japanese: in the musical and culinary domains.
- Donor language: Italian, geminates are also distinctive: [fa.to] ‘fate’ vs. [fatto] ‘fact’
- Lexical geminates are rare in the native vocabulary, while they are abundant in loanwords.
- I indicate the first part of a geminate with a capital letter.

1. The Puzzle
- When Japanese borrows lexical items from Italian, geminates in Italian can either be preserved: expresso [es.pre.so] → [e.su.pu.rê.so] or be degeminated: macchiato [ma.ki.jô.to] → [ma.ki.to].
- What are the patterns? What are the motivations?
- How can they be formalized within the framework of Optimality Theory (Prince & Smolensky 1993)?
- Are the predictions of the analysis real?

2. Basic Data & Proposal

Geminate Preservation
- Geminates in Italian borrowings arise as realization of geminates in the source forms (Tanaka 2007).
- Relaxed conditioned segmentation forfölle [far.fô.î.le] → [far nu.fô.î.le]
- Glosisando [gî끄.sân.dô] → [gu.rû.sân.dô]
- These geminates [liquids, [s]] are usually not allowed in other lexical strata.
- Preservation rate (Tanaka’s style, my data):
  - Preservation rate per position (Tanaka 2007):
  - The last three-syllable window = Italian stress & Japanese pitch accent

Positional Effect
- Geminates in the source forms tend to be preserved in the penultiminate syllables in the nativized forms, and they tend to be degeminated outside the last three-syllable window.
- Source: /far.ki.jê.te/ → [or.ek.ki.jê.te]
- Proposal: of relevance to Italian stress: a geminate in a stressed syllable can be preserved even in an accentuated syllable.
- Proposal: the preservation of a geminate depends on the head status of the syllable it belongs to in Italian.

3. A Positional Faithfulness Account

Phonological Representation of Geminates
- Assuming a moraic theory of weight (Hayes 1989), the loss of a geminate can be represented as follows:

O-O Faithfulness in Loanwords
- Assumption: Italian output = Japanese input
- Fully prosodically specified input to Japanese loan phonology:
  - zucotto [zu.kê.to.tê] → [zu.kê.to]
  - orechiette [or.e.ri.kê.tê.te] → [or.e.ri.kê.tê]

Positonal Faithfulness
- The positional effect on degemination can be captured as stress-based neutralization of consonant length.
- Positional neutralization ranking schema (Beckman, 1998):
  - IDENT-Position(\(P \rightarrow I + I\))
  - A twist: the prominence to which the positional faithfulness depends can be overruled by Japanese loanword accent.

4. Further Complication

Implicational Hierarchy
- Prediction of the Analysis:
  - 1. Preferences among candidates
  - 2. Preferences between strong and weak geminates
    - Degemination patterns and frequency in taglitelle:

Online Survey: Predictions
- For an input bottosso:
  - bo.to.sô > bo.to.sô > bo.to.tô > sa > bo.Tô.tô

Online Survey: Sample
- zucotto [zu.kê.to] [0-10] 1 2 3 4 5 6 7 8 9 10
- c. ti. [0-10] 1 2 3 4 5 6 7 8 9 10

Online Survey: Results
- Obtained 1620 responses.
- Average rating 4.9 (4.6) (4.1) (4.0)
- Hierarchy revealed (\(K(1) = 151.04, p < 0.001\))
  - bo.to.sô > bo.Tô.tô > bo.to.tô > sa > bo.Tô.tô
  - Trends confirmed:
    1. In strong positions, obstruent geminates prefer to be kept, while liquid geminates prefer not to.
    2. In weak positions, geminates prefer to be degeminated in general, but more for liquid than for obstruents.

5. Implicational Hierarchy and A Nonce-Adaptation Survey

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6. Conclusion

Summary
- The positional effect on degemination in Japanese loanwords from Italian can be formalized as stress-based positional neutralization, with the support of stratum-specific rankings of constraints.
- The effect can be formalized within the positional faithfulness schema, assuming an output-output correspondence relationship between the source form and its adapted form.
- Survey results confirmed to the predictions except for the implicational relation between faithfulness in strong and weak positions.

Future Work
- Perceptual experiment to test my initial proposal
- Exploration of output-oriented account

References:

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