Perception and production of geminates by L1-German and L1-Swedish speakers with Italian as L3

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Background

1. VOWEL AND CONSONANT LENGTH

Italian has consonant **gemination**, i.e., **consonant length is phonemic**

(1) /pala/ vs. /pal:a/
'shovel' 'ball'

– Phonetically, the vowel is shorter when preceding a geminate compared to a singleton (no phonological consequences)
– Gemination is visible in orthography:

<pala> [pa:la] vs. <palla> [pal:a]

– L1 Italian speakers rely more on the consonant (than on the vowel) to distinguish words (Rochet & Rochet 1995)

German has **no gemination**, although vowel length is phonemic

(2) /ro:tə/ vs. /rɔtə/
'red' 'mob'

– The grapheme shows this contrast:

<rote> [ro:tə] vs. <Rotte> [rɔtə]

– Vowel quality differs
– Long consonants may occur at word or morpheme boundaries (but no phonological relevance):
<mit Ton> [mit:o:n]

Swedish has **complementary length**

– Short vowels + long consonants, long vowels + short consonants

(3) /ɑ:lɪbɪ/ vs. /ral:i/
'alibi' 'rally'

– The grapheme shows short vowels followed by double consonants:

<alibi> [ɑ:lɪbɪ] vs. <rally > [ral:i]

– L1 Swedish speakers rely more on vowel length than on consonant length

Summary
1. All three languages have **quantity distinctions** but **only Italian and Swedish have long consonants in their phoneme inventory**.
2. In all three language quantity changes are **represented in orthography**
3. The **similarities in spelling** across the languages are **not congruent with pronunciation**

2. L3-TRANSFER MODELS

1. **L2 Status Factor** (Bardel & Falk 2007, 2012), 2. **Cumulative Enhancement Model** (CEM) (Flynn et al. 2004), 3. **Typological Primacy Model** (TPM) (Rothman 2015) and 4. The **Linguistic Proximity Model** (LMP) (Westergaard et al. 2016). LMP predicts that **"all previously acquired languages remain active throughout the learning process, and [cross linguistic influence] takes place on a property-by-property basis"** (Westergaard et al. 2016:13). All models but LMP and CEM predict no differences between L1 German and L1 Swedish

Method

3. HYPOTHESIS:

Based on the LPM, **L1 Swedish speakers should have an advantage over L1 German speakers** in producing and perceiving Italian consonant gemination since Italian and Swedish distinguish long from short consonants.

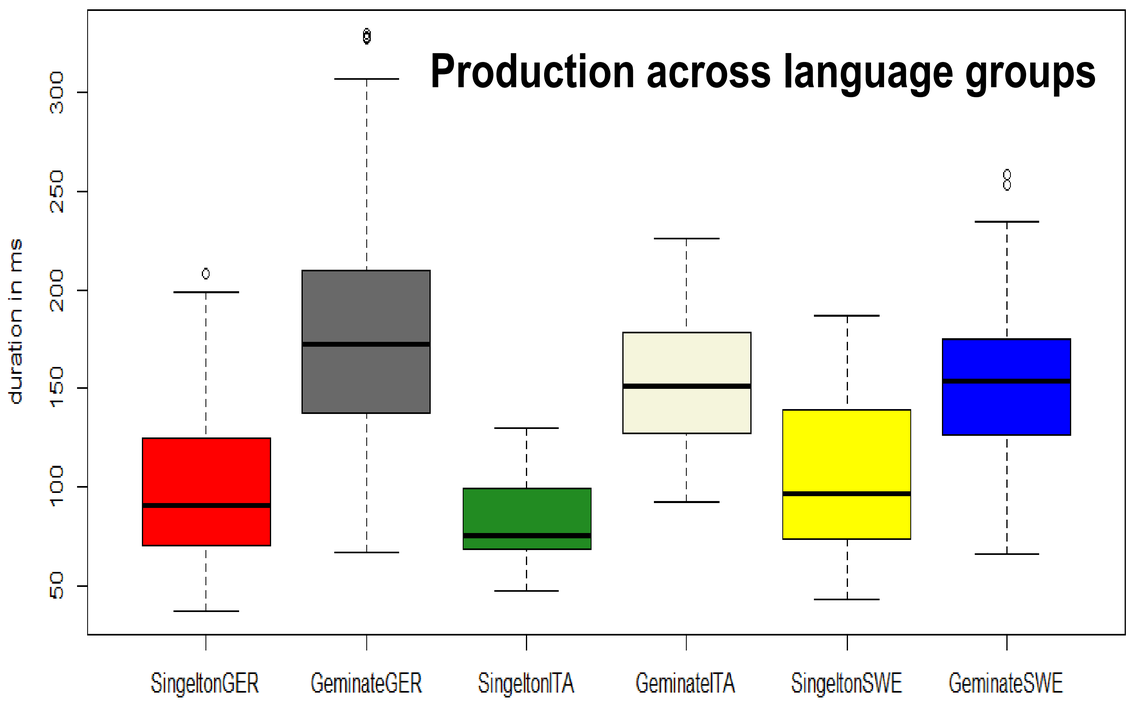
4. SUBJECTS

	N	Age (ys)	AoO (lt.)	L2	Voc. Score
German L1	10	20-34	5-19	En.	240-748
Swedish L1	4	68-75	36-55	En.	281-480
Italian L1	3	33-45	0	En.	-

Results

5. Production

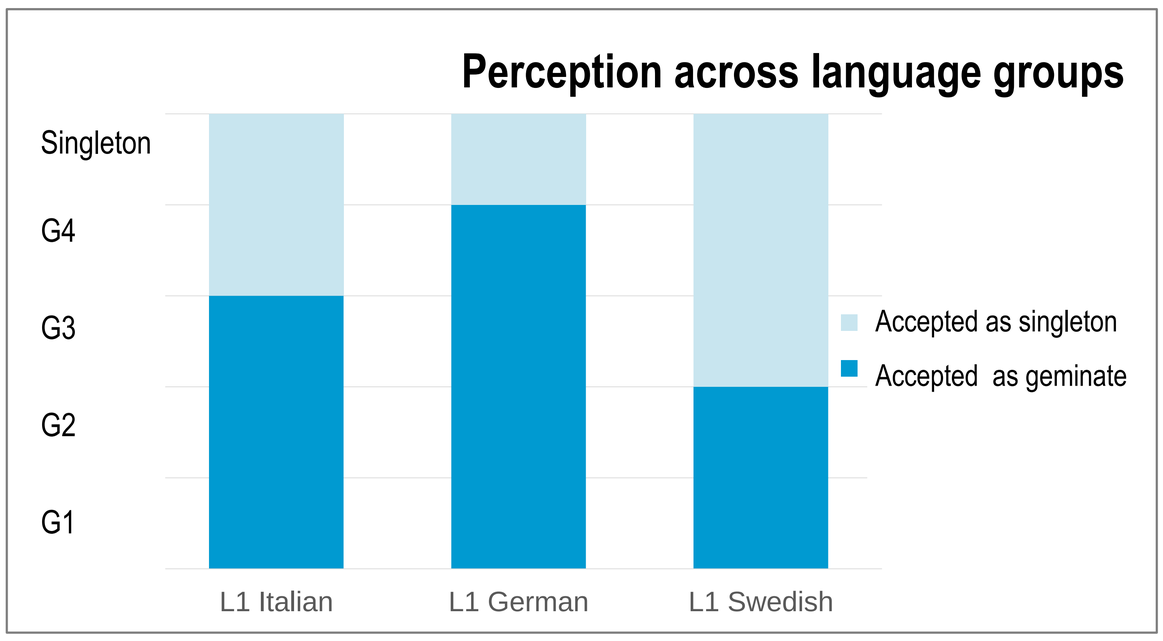
– Participants read 42 items in carrier sentence from PPT-slides, e.g., *Era "palla" che ho detto* (It was *palla* that I said) (16 geminates + 16 singleton counterparts + 10 distractors)
– Vowel length and consonant length measured with Praat



– All groups distinguish geminates and singletons, but L1 Germans do so more, i.e., **no advantage for L1 Swedish speakers**

6. Perception

- Picture-based minimal-pair-decision task with 11 singleton/geminate-pairs, e.g. *note* (**Singleton**) vs. *notte* (**G1**)
- 5 versions of words (Singleton, G4, G3, G2, G1) with intervocalic consonants = 55 items



- All groups recognized geminate 1 and singletons correctly (if item was known)
- Results for L1 Swedish speakers were mixed: **they accepted more manipulations as singletons** than the L1 Germans

7. DISCUSSION

LPM: Hypothesis not really confirmed: L1 Swedish speakers have no advantage over L1 Germans. Both groups distinguish Italian geminates from singletons in production.
PROFICIENCY: Groups differed in vocabulary score (Dialang): speakers with lower scores varied more in perception compared to speakers with higher scores; i.e., perception was consistent with by vocabulary score → L1 Swedish group has a lower vocab score and produces a smaller contrast in consonantal length.
ALTERNATIVE EXPLANATIONS: L2 transfer can be excluded (English has no geminates), but results seem consistent with the CEM: No negative impact of German but *possibly* a positive impact of Swedish. Problem that our learners might have been too proficient.

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