

Looking for the origins of stress-conditioned palatalization in 13th and 14th century Italian

Introduction: Palatalization is the process through which a velar stop is fronted to a palatal/palato-alveolar affricate or fricative. It is a phonetically based change that is cross linguistically very frequent [1]. In Late Latin and Proto-Romance, this process is known as the 2nd Romance palatalization, and it occurred after the 5th century CE [2]. It occurred before all front vowels independently of morpheme boundaries and stress position [3]. Palatalization of velars in contemporary Italian, instead, happens at the boundary between the word root and the masculine plural ending /-i/ in adjectives and nouns, and is largely stress-conditioned: it occurs in words with antepenultimate stress such as ['ko.mi.ko] – ['ko.mi.tʃi] ‘comic’, while it is much rarer in words with penultimate stress such as [ka.'du.ko] – [ka.'du.ki] ‘transitory’ [4]. How and when the process became stress-conditioned, is unclear.

The aim of this paper is to start addressing this issue, taking a screenshot of the diachronic development of velar palatalization. We analyze the distribution of [-ki] and [-gi] sequences in Tuscan vulgar texts between the second half of the 13th century and the first quarter of the 15th century, a time at which Tuscan varieties (Florentine in particular) became the foundation of standard modern Italian.

Assuming that texts in manuscripts reflect the underlying grammar of their authors, they can be used as a source of data to investigate speakers’ synchronic linguistic knowledge at a given point in time. Focusing on this specific time window, we can therefore ask: (Q1) was the distribution of palatalization more variable than the stress-conditioned contemporary Italian pattern? (Q2) was stress-conditioning already emerging? Finally, sound change doesn’t affect all words uniformly: in phonetically based changes, frequent words tend to change at a higher rate than low-frequency words [5]. We therefore asked whether (Q3) word frequency played a role in determining the diachronic development.

Methodology: We compiled a list of all lemmas in [-ko] and [-go] occurring in TLIO, a online historical dictionary based on prose and poetry from the 13th to the beginning of 15th century [6], and we associated to each lemma its complete set of listed plural forms. E.g., the lemma *eretico* ‘heretic’ has plural forms *eretici*, *heretici*, *eretichi*. Then, we analyzed the distribution of the full set of plural forms in OVI, a comprehensive and philologically reliable corpus of 13th and 14th century texts, through the online resource *GattoWeb* [7].

Results: We obtained a lexicon of 284 lemmas i.e., masculine nouns and adjectives in [-ko] and in [-go], for a total of 350 distinct plural forms. (A1) We found that 90 lemmas out of 284 are variable, i.e. associated to both palatalizing (PAL) and non-palatalizing (NPAL) forms, while 194 lemmas are invariable, i.e. associated to either PAL or NPAL form. We also found intra-author variability at the level of the single lemma: 58/531 authors present both PAL and NPAL forms of the same lemma. E.g., Boccaccio (1313-1375) uses both plurals [an.'dʒe.li.tʃi] and [an.'dʒe.li.ki] of the adjective *angelico* ‘angelic’ in the very same text (*Rime*, [8]). We found anecdotal evidence that these authors exploited variability for metrical reasons, that is palatalizing if the word rimed with a [-tʃi] ending word, and retaining the velar otherwise. (A2) Palatalization was more frequent among antepenultimately stressed forms, both in invariable (χ^2 (1, N=194) = 18.47, $p < 0.0001$) and in variable lemmas (χ^2 (1, N=3072) = 83.01, $p < 0.0001$). (A3) We called *conforming lemmas* those antepenultimately stressed lemmas which palatalize, and those penultimately stressed lemmas which do not; while we called *non-conforming* those antepenultimately stressed lemmas that do not palatalize, and those penultimately stressed lemmas which do. We found that effects of frequency on conformity to the stress rule show only for invariable lemmas: among these, high frequency forms conform to the stress rule more than low frequency forms (t-test, unpaired: t (185) = 2, $p < 0.05$). For variable lemmas, we found no correlation between the rate of conformity and

the word's frequency. Furthermore, not all authors conformed to the stress rule to the same extent: even correcting for the amount of text available *per* author, some authors consistently conformed, while others less.

Discussion: We found that some of the lemmas in the lexicon are variable (N= 90/284). We found both inter-author and intra-author variability. Both PAL and NPAL forms of a lemma coexist in the grammar of the same speaker. In spite of the great variability, we found an effect of stress on the application of palatalization for both groups of lemmas. As for frequency effects, more frequent invariable plural forms conform to the stress rule than less frequent invariable plural forms, as we predicted [5]. Among variable lemmas, we found no linear relationship between their percentage of conformity to the stress rule and the frequency of the plural forms. More generally, our results show that stress-conditioning in the distribution of the process was beginning in the timeframe under analysis, using a comprehensive corpus of Old Italian text. Our results question Faraoni [9], who appeals to a bi-causal origin for masculine nouns in Italian (PAL from Latin Nom. Pl. in *-i*; NPAL from Latin Acc Pl. in *-os*) and to a minor effect of stress in a small subset of the lexicon. We show that this proposal does not account for the variability observed in the early stages of Italian, nor does it account for the wide-spread effect of stress on the application of the process across the lexicon. Instead, we propose that velar palatalization was initially blocked in plural nouns and adjectives, because of a paradigmatic pressure for singular and plural nouns to share the same obstruent [k, g] [10]. In a subsequent stage of the language, before the 13th century CE (the stage analyzed here), phonetically marked [ki] sequences in antepenultimate stressed plurals started undergoing palatalization [11], while less marked sequences in penultimate stressed nouns retained the velar plosive. Subsequently, variability decreased and stress-position became the predominant factor determining the shape of plural nouns and adjectives.

References

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