

Palatalisation and the Role of Morphological Bases Across the Italian Lexicon

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ABSTRACT: I propose that a palatalisation rule in Italian misapplies because of Base-to-Derivative correspondence effects. In previous work I showed that the rule misapplies in verbal morphology because verbs stand in a stress-dependent correspondence relationship with the base from of their paradigm: verbs under- or overpalatalise when the stressed syllable of their infinitive contains a [±STRIDENT] segment. I now propose a means of unifying this work with Giavazzi's (2012) account of the rule's application in nouns and adjectives, wherein segments near to stress avoid neutralisation. Derivational verbs may underpalatalise as their suffixes reassign stress: when stress is reassigned to a syllable containing a relevant stem-final segment, it will not palatalise. The reason that stress does not prevent palatalisation in relevant underived verbs appears to be diachronic, but I will nonetheless suggest that a synchronic constraint targeting forms without a derivational base will shed further light on palatalisation in the contemporary language. In particular, and in line with phonetic theory, it will show that the contemporary neutralisation has become less aggressive, now targeting only the front-most vowel /i/. This fact accounts for the as-yet unexplained failure of the feminine plural suffix /-e/ to trigger the rule.

1. Introduction

In evolution from Latin, palatalisation of velar segments before front vowels in Italian (1) has ranged from being non-existent (pre AD 400), to potentially exceptionless (Sidney Allen 1978), to what appears to currently be a stage in between the two.

(1) **Simple palatalisation rule:**

$$/k,g/ \rightarrow [tʃ,dʒ] / _i,e$$

At the boundary between word stem and agreement suffix, palatalisation does not always apply as the rule in (1) implies for either nouns and adjectives (Giavazzi 2012) or verbs:

(2)	a.	<i>lírico</i>	lírík-o	'lyrical _{M.SG} '	<i>antíco</i>	antík-o	'ancient _{M.SG} '
		<i>líríci</i>	lírítʃ-i	'lyrical _{M.PL} '	<i>antíchi</i>	antík-i	'ancient _{M.PL} '
		<i>líríche</i>	lírík-e	'lyrical _{F.PL} '	<i>antíche</i>	antík-e	'ancient _{F.PL} '
	b.	<i>vínco</i>	vínk-o	'I win'	<i>stánco</i>	stánk-o	'I tire'
		<i>vínci</i>	víntʃ-i	'you _{SG} win'	<i>stánchi</i>	stánk-i	'you _{SG} tire'
		<i>vínce</i>	víntʃ-e	's/he wins'	<i>stánca</i>	stank-a	's/he tires'

The simple rule above is subject to both paradigmatic and phonetic pressures:

- Paradigmatic application: FEM.PL nouns and adjectives never palatalise
Palatalisation misapplies in various ways by verb family
- Phonetic application: Stress influences palatalisation in MASC.PL N/As

The first half of this work accounts for the rule's application in verbal morphology, while the second attempts to align the proposals with other work on palatalisation which take it to be a phonetically-driven neutralisation process (Wilson 2006, Giavazzi 2012).

2. Palatalisation in Italian verbs

Traditional grammars divide Italian verbs into the three Romance families, as defined by the theme vowel of their infinitive suffix *-are*, *-ere*, or *-ire*. The following are a small selection of relevant couples from each verb family, along with the suffixes of the present indicative.

(3)	Verbs with stem ending /k/ or /g/		Present indicative suffixes	
	<i>gioc-are</i>	‘to play’	/dʒɔk-/	/-o/ 1P.SG
	<i>pag-are</i>	‘to pay’	/pag-/	/-i/ 2P.SG
	<i>piac-ere</i>	‘to please’	/pjak-/	/-a,-e/ 3P.SG
	<i>volg-ere</i>	‘to turn’	/vɔlg-/	/-jamo/ 1P.PL
	<i>cuc-ire</i>	‘to sew’	/kuk-/	/-ate,-ete,-ite/ 2P.PL
	<i>ag-ire</i>	‘to act’	/ag-/	/-ano,-ono/ 3P.PL

Normal palatalisation is only seen for a subgroup of *-ere* verbs:

(4)	Conjugation of <i>víncere</i> - ‘to win’		(normal palatalisation)
	<i>víncere</i> → <i>vinco</i>	/vink+o/ → [viŋko]	‘to win → 1P.SG
	→ <i>vinci</i>	/vink+i/ → [vintʃi]	→ 2P.SG’

In (2b) above palatalisation *underapplied*. This is the case with all *-are* verbs:

(5)	Conjugation of <i>pagáre</i> - ‘to pay’		(underpalatalisation)
	<i>pagáre</i> → <i>pago</i>	/pag+o/ → [pago]	‘to pay → 1P.SG
	→ <i>paghi</i>	/pag+i/ → [pagi]	→ 2P.SG’

Less obvious, perhaps, is that palatalisation may *overapply*, as observed for a minor subgroup of *-ere* verbs

(6)	Conjugation of <i>tacére</i> - ‘to be quiet’		(overpalatalisation: cf. <i>takwi</i> - <i>pass. remoto</i>)
	<i>tacére</i> → <i>taccio</i>	/tak+o/ → [tatʃo]	‘to be quiet → 1P.SG
	→ <i>taci</i>	/tak+i/ → [tatʃi]	→ 2P.SG’

The different palatalisation patterns observed in the *-ere* family is predictable from the infinitive form. Verbs with infinitives that stress the verb root rather than their suffix (as the other families do) have normal palatalisation; those with infinitive stress on the suffix overpalatalise.

(7)	Verb families and palatalisation patterns	
I.	<i>-are</i> verbs	Underpalatalisation
	<i>pagáre</i> - ‘to pay’	→ <i>pago, paghi</i>
II.	Irregular <i>-ére</i> verbs	Normal palatalisation
	<i>víncere</i> - ‘to win’	→ <i>vinco, vinci</i>
	Regular <i>-ěre</i> verbs	Overpalatalisation
	<i>tacére</i> - ‘to go quiet’	→ <i>taccio, taci</i>

Note that the *-ire* family has all three applications of palatalisation - more on this later:

III. <i>-ire</i> verbs		Normal, Over-, and Underpalatalisation
<i>farcióre</i> - ‘to fill/top’	→	<i>farçisco, farçisci</i>
<i>cucióre</i> - ‘to sew’	→	<i>cucio, cuci</i>
<i>bianchóre</i> - ‘to make white’	→	<i>bianchisco, bianchisci</i>

2.1 Analysis of palatalisation in verbs

The various applications of palatalisation are due to Base-to-Derivative (BD) faithfulness, a type of Output-to-Output correspondence (Benua 1998). My claim is the following:

Base-Derivative stress-dependent¹ faithfulness:

- Conjugated verbs must remain faithful for STRIDENCY to the segments in the stressed syllable of their infinitive.

To know how palatalisation applies in a given verb form, then, two things must be known. First, how the infinitive palatalises, and second, where stress falls on the infinitive.

- Palatalisation in the infinitive simply depends on whether the theme vowel of the infinitive suffix is a palatalisation trigger or not.
- *-are* and *-ire* verbs always stress the infinitive suffix. *-ere* verbs tend to assign stress to the initial syllable if heavy (vín.tʃe.re) or the penultimate syllable otherwise (ta.tʃé.re)²

(8) Palatalisation as a function of infinitive stress and conjugation

	Stress on theme vowel σ	Stress not on theme vowel σ
Theme vowel triggers palatalisation	<i>Overapplication</i> <i>-ére & -ire</i> verbs, like <i>tacére</i>	<i>‘Normal’ application</i> <i>-ère</i> verbs, like <i>víncere</i>
Theme vowel does not trigger palatalisation	<i>Underapplication</i> <i>-are</i> verbs, like <i>pagáre</i>	

The correspondence is now modelled in OT with three constraints, ranked as follows:

- (9) ID(STRIDENT) / $\acute{\sigma}$ (BD): When a segment in a *Derivative* has a stressed correspondent in the *Base* the two must match for stridency.
- *ki: Penalise velar stop - front vowel sequences
- ID(STRIDENT) (IO): A segment in the *Output* must match for stridency with its correspondent in the *Input*.

¹ See also Kager (1999) on application of stress-dependent correspondence in Levantine Arabic.

² This generalisation may be extended to the entire family of *-ere* verbs with moderate success (eg. *dipíngere* - ‘to paint’ vs. *temére* - ‘to fear’), though there are exceptions, eg. *crédere* - ‘to believe’. Although stress assignment in *-ere* infinitives is crucial to the analysis, it is not its focus. See Davis et al. (1987) for study of this.

2.1.1 Normal Palatalisation: Irregular *-ěre* verbs

Most *-ěre* verbs in fact belong to the irregular subgroup. Though these verbs' infinitives may have a relevant [\pm STRIDENT] segment, this does not receive stress so in conjugation palatalises due to the ranking of *KI higher than IO-FAITHFULNESS

(10) *vincere* → *vínco*, *vínci* 'to win, 1.SG, 2.SG'

i) Derivation of infinitive - palatalisation triggered

/vink+ere/	ID(STRI) / ǫ (BD)	*ki	ID(STRI) (IO)
vín.ke.re		*!	
☞ vín.tʃe.re			*

ii) Derivation of 1.SG - suffix does not trigger palatalisation

/vink+o/	ID(STRI) / ǫ (BD)	*ki	ID(STRI) (IO)
☞ vín.ko			
vín.tʃo			*!
<i>Base = Inf: vín.tʃe.re</i>			

iii) Derivation of 2.SG - suffix triggers palatalisation

/vink+i/	ID(STRI) / ǫ (BD)	*ki	ID(STRI) (IO)
vín.ki		*!	
☞ vín.tʃi			*
<i>Base = Inf: vín.tʃe.re</i>			

2.1.2 Overpalatalisation: Regular *-ére* verbs

All other verb types stress the suffix of their infinitive form, thus causing misapplication of palatalisation because of the now-relevant high-ranked BD-correspondence constraint. By contrast to irregular *-ěre* verbs above, regular *-ére* verbs overpalatalise because a crucial [+STRIDENT] segment is stressed in the infinitive, and so is carried over into conjugated forms.

(11) *tacere* → *táccio*, *táci* 'to be quiet, 1.SG, 2.SG' (cf. [takwi] - 1.SG, remote past)

i) Derivation of infinitive - palatalisation triggered

/tak+ere/	ID(STRI) / ǫ (BD)	*ki	ID(STRI) (IO)
ta.ké.re		*!	
☞ ta.tʃé.re			*

ii) Derivation of 1.SG - overpalatalisation

/tak+o/	ID(STRI) / ǫ (BD)	*ki	ID(STRI) (IO)
tá.ko	*!		
☞ tá.tʃo			*!
<i>Base = Inf: ta.tʃé.re</i>			

iii) Derivation of 2.SG

/tak+i/	ID(STRI) / ́ (BD)	*ki	ID(STRI) (IO)
tá.ki	*!	*	
☞ tá.tʃi			*
<i>Base = Inf: ta.tʃé.re</i>			

2.1.3 Underpalatalisation: -are verbs

Underpalatalisation in the case of *-are* verbs is derived in a similar manner to overpalatalisation above, though derivatives here are faithful to a stressed [-STRIDENT] infinitive segment:

(12) *pagáre* → *págo, pághi* ‘to pay, 1.SG, 2.SG’

i) Derivation of infinitive - palatalisation not triggered

/pag+áre/	ID(STRI) / ́ (BD)	*ki	ID(STRI) (IO)
☞ pa.gá.re			
pa.dzá.re			*!

ii) Derivation of 1.SG

/pag+o/	ID(STRI) / ́ (BD)	*ki	ID(STRI) (IO)
☞ pá.go			
pá.dzo	*!		*
<i>Base = Inf: pa.gá.re</i>			

iii) Derivation of 2.SG - underpalatalisation

/pag+i/	ID(STRI) / ́ (BD)	*ki	ID(STRI) (IO)
☞ pá.gi		*	
pá.dzi	*!		*
<i>Base = Inf: pa.gá.re</i>			

2.2 Other Palatalisation Patterns

The following derivations represent the remaining forms in a verb’s paradigm that are not immediately accounted for as outlined above

2.2.1 -are verbs with underlying affricates

Underlying affricates surface before the *-are* suffix, as in *lanciáre* - ‘to throw/launch’. When an affricate surfaces in an *-are* infinitive it is maintained due to faithfulness to a now [+STRIDENT] segment in both the base and the input forms:

- (13)
- lanciáre*
-
- lancio, lanci*
- ‘to throw/launch, 1.SG, 2.SG’

i) Derivation of infinitive - [+STRIDENT] present in UR

/lantʃ+áre/	ID(STRI) / ǫ (BD)	*ki	ID(STRI) (IO)
lan.ká.re			*!
☞ lan.tʃá.re			

ii) Derivation of 1.SG

/lantʃ+o/	ID(STRI) / ǫ (BD)	*ki	ID(STRI) (IO)
lán.ko	*!		*
☞ lán.tʃo			
<i>Base = Inf: lan.tʃá.re</i>			

iii) Derivation of 2.SG

/lantʃ+i/	ID(STRI) / ǫ (BD)	*ki	ID(STRI) (IO)
lán.ki	*!	*	*
☞ lán.tʃi			
<i>Base = Inf: lan.tʃá.re</i>			

2.2.2 -ire verbs

The majority of *-ire* verbs take an additional suffix *-isc-* which appears between the verb stem and agreement suffix. Both this infix and BD-correspondence may be the cause of palatalisation:

- (14)
- farcíre*
-
- farcisco, farcisci*
- ‘to fill/top, 1.SG, 2.SG’

i) Derivation of infinitive - palatalisation triggered (infinitive does not use infix)

/fark+íre/	ID(STRI) / ǫ (BD)	*ki	ID(STRI) (IO)
far.kí.re		*!	
☞ far.tʃí.re			*

ii) Derivation of 1.SG - normal palatalisation with *-isc-*

/fark+isk+o/	ID(STRI) / ǫ (BD)	*ki	ID(STRI) (IO)
far.kís.ko	*!	*	
☞ far.tʃís.ko			*
<i>Base = Inf: far.tʃí.re</i>			

iii) Derivation of 2.SG - palatalises normally

/fark+isk+i/	ID(STRI) / ǫ (BD)	*ki	ID(STRI) (IO)
far.kís.ki	*!	**	
far.kí.ʃi	*!	*	
☞ far.tʃí.ʃi			*
<i>Base = Inf: far.tʃí.re</i>			

Verbs that do not take the infix, eg. *cucíre*, ‘to sew’, may either overpalatalise (exactly as *tacére* above) or contain an underlying affricate³:

³ The verb *fuggire* - ‘to flee’, seems to be the account’s single exception: *fuggire* → *fuggo, fuggi*.

(15) *cucire* → *cúcio*, *cúci* ‘to sew, 1.SG, 2.SG’

i) Derivation of infinitive - palatalisation triggered

/kuk+ire/	ID(STRI) / ́ (BD)	*ki	ID(STRI) (IO)
ku.kí.re		*!	
☞ ku.tʃĩ.re			*

ii) Derivation of 1.SG - overpalatalisation

/kuk+o/	ID(STRI) / ́ (BD)	*ki	ID(STRI) (IO)
kú.ko	*!		
☞ kú.tʃo			*
<i>Base = Inf: ku.tʃĩ.re</i>			

iii) Derivation of 2.SG

/kuk+i/	ID(STRI) / ́ (BD)	*ki	ID(STRI) (IO)
kú.ki	*!	*	
☞ kú.tʃĩ			*
<i>Base = Inf: ku.tʃĩ.re</i>			

Derived *-ire* verbs do not palatalise in the infinitive, and as would be predicted then do not palatalise in conjugation where they take the additional suffix *-isc*. I return to reasons why the infinitive does not palatalise later.

(16) *biáncō* → *bianchíre* → *bianchísco*, *bianchísci* ‘white → to pale → 1.SG, 2.SG’

ii) Derivation of 1.SG (underpalatalisation)

/bjaŋk+isk+o/	ID(STRI) / ́ (BD)	*ki	ID(STRI) (IO)
☞ bjaŋ.kís.ko		*	
bjan.tʃĩs.ko	*!		*!
<i>Base = Inf: bjaŋ.kí.re</i>			

ii) Derivation of 2.SG (underpalatalisation)

/bjaŋk+isk+i/	ID(STRI) / ́ (BD)	*ki	ID(STRI) (IO)
bjaŋ.kís.ki		**!	
☞ bjaŋ.kí.ʃĩ		*	*
bjan.tʃĩ.ʃĩ	*!		**
<i>Base = Inf: bjaŋ.kí.re</i>			

2.2.3 /w/-initial suffixes

Evidence above for underlying /k/ in regular *-ére* verbs such as *tacére* was one of three *passato remoto* forms suffixed by /wi/, /we/, and /wero/. These are the only forms in their paradigm which do not overpalatalise.

(17) *tatʃére* → *takwi*, *takwe*, *takwero* ‘to be quiet → 1P.SG, 3P.SG, 3P.PL REMOTE PAST’

These forms resist palatalisation simply because of a high ranked markedness constraint *tʃw. The sequence is unattested in Italian phonology.

(18)

/tak+wi/	*tʃw	ID(STRI) / ó (BD)	*ki	ID(STRI) (IO)
☞ a. tak.wi		*		*
b. ta.tʃwi	*!			

Base = Inf: ta.tʃé.re

2.2.4 Irregular verbs

Conjugated forms of irregular verbs display stem final [k,tʃ] or [g,dʒ] despite their infinitive containing no such segment.

(19) *prodúrre* → *prodúkko*, *prodútʃi* ‘to produce, 1.SG, 2.SG’

Where it is observable, irregular verb forms always palatalise normally. As their infinitives lack the relevant segments to be faithful to, BD-correspondence is not invoked.

(20) i) Derivation of 1.SG of *prodúrre*

/produk+o/	ID(STRI) / ó (BD)	*ki	ID(STRI) (IO)
☞ pro.dú.ko			
pro.dú.tʃo			*!

Base = Inf: pro.dúr.re

ii) Derivation of 2.SG of *prodúrre*

/produk+i/	ID(STRI) / ó (BD)	*ki	ID(STRI) (IO)
pro.dú.ki		*!	
☞ pro.dú.tʃi			*

Base = Inf: pro.dúr.re

3. Derived forms and the Nominal Domain

As mentioned earlier, *-ire* has a use as a derivational suffix that may be applied to nouns and adjectives⁴. In this case, the suffix never causes palatalisation:

(21)	Derived verb			Noun/Adj (M.SG)	
	<i>bianchíre</i>	bjaŋkíre	‘to pale’	<i>biáncó</i>	bjaŋko ‘white’
	<i>rimboschíre</i>	rimboskíre	‘to reforest’	<i>bósco</i>	bósko ‘forest’
	<i>impraticíre</i>	impràtikíre	‘to train’	<i>prático</i>	prátiko ‘practice’
	<i>tedeschíre</i>	tèdeskíre	‘to ‘germanify’’	<i>tedésco</i>	tedésko ‘German’

- All and only derived *-ire* verbs do not palatalise before the infinitive suffix

I take this fact as a point of approach to building a unified account of palatalisation in Italian.

⁴ *-are* is also be used as a derivational suffix, but *-ere* is not.

3.1 Palatalising derivational suffixes

Another relevant suffix *-izzare* has a similar use to *-ire*, but allows palatalisation, which can be inferred from the masculine plural form of the noun or adjective they are built on:

(22)	Derived verb		Noun/Adj (M.PL)			
	<i>tipicizzáre</i>	tipit f izzáre	‘to make typical’	<i>típici</i>	típit f i	‘typical’
	<i>liricizzáre</i>	lirit f izzáre	‘to lyricise’	<i>lírici</i>	lirit f i	‘lyrical’
	<i>antichizzáre</i>	antik z izzáre	‘to make antique’	<i>antíchi</i>	antí k i	‘antique’
	<i>tedeschizzáre</i>	tedesk z izzáre	‘to make German’	<i>tedéschi</i>	tedés k i	‘German’

Is there (non-stress-dependent) correspondence between the derived verb and the noun or adjective it’s built on? I suggest not:

- *-ire* or *-izzare* verbs seem to correspond to different forms (SG. vs PL.) of an N/A base
 - M.PL can’t serve as base for *-ire* verbs: *prátici*_{PL} vs. *pràtichíre*

Palatalisation before these suffixes is stress-conditioned, as documented by Giavazzi (2012) for the masculine plural suffix *-i*. Palatalisation is prevented in the post-tonic syllable, but alternates when far from stress:

(23) Palatalisation in nouns and adjectives (Giavazzi 2012)⁵

- /k/* → [tʃ] / ó.σ.____
- **/k/* → [tʃ] / ó.____

This rule governs the alternation of palatalisation between singular and plural forms as seen above, but, may also govern the alternation before *-izzare*.

- *-izzare* reassigns main stress to the infinitive suffix
 - but secondary stress always falls where main stress is in the root:

(24)	Masc. singular		Masc. plural		Derived <i>-izzare</i> verb	
a.	<i>lírico</i>	lí.ri. ko	<i>lírici</i>	lí.ri. tʃi	<i>lìricizzáre</i>	lì.ri. tʃiz .zá.re
b.	<i>antíco</i>	an.tí. ko	<i>antíchi</i>	an.tí. ki	<i>antìcizzáre</i>	an.tì. kiz .zá.re

With the understanding that secondary stress conditions palatalisation just as main stress does, *-izzare* and plural *-i* cause palatalisation according to the same rules. *-ire* follows the same principle: stress-induced prominence prevents neutralisation:

- *-ire* reassigns stress, causing a stem-final velar to become the onset of the stressed syllable
 - this is evidence that palatalisation is also prevented tonic-internally

⁵ This rule is not without exceptions. It captures about 90% of Italian nouns and adjectives. A common counter-example is *amíco* → *amíci* - ‘friend/s’

3.2 Distribution of Palatalisation morpheme-internally

As further evidence that palatalisation is stress-conditioned - [ki] is preserved both within and following the tonic syllable - I present the distribution of [ki] sequences morpheme-internally⁶.

(25)	<i>Within stressed σ</i>	<i>Following stressed σ</i>	<i>*Following stressless σ</i>
	<i>orchéstra</i> ‘orchestra’	<i>máccchina</i> ‘car’	- unattested -
	<i>archívio</i> ‘archive’	<i>zúcchero</i> ‘sugar’	

3.3 Analysis of Nouns, Adjectives, and Derived Verbs

A simplified model of Giavazzi’s stress-conditioned palatalisation is represented here as a meta-ranking of two *ki constraints. In effect, a [kĩ] sequence far from stress is penalised before a [ki] sequence elsewhere:

(26) Prominence-based Palatalisation Constraints

- * σ .kĩ: Penalise [kĩ] sequences after a stressless syllable
- *ki: Penalise [ki] sequences

Ranking IO-faithfulness between these constraints derives plural nouns and adjectives as well as *-ire* and *-izzare* verbs:

(27) Palatalisation before the M.PL suffix -i

a. Palatalisation occurs in syllables far from stress

/lírík+i/	* σ .kĩ	ID(STRI) (IO)	*ki
a. lí.ri.ki	*!		*
☞ b. lí.ri.tʃĩ		*	

b. [ki] in a post-stress syllable is tolerated, palatalisation is prevented by IO-faithfulness

/antík+i/	* σ .kĩ	ID(STRI) (IO)	*ki
☞ a. an.tí.ki			*
b. an.tí.tʃĩ		*!	

(28) Palatalisation before the derivational affixes -ire and -izzare:

a. [ki] is tolerated inside the stressed syllable

/bjánk+i.re/	* σ .kĩ	ID(STRI) (IO)	*ki
☞ a. bjaŋ.kí.re			*
b. bjaŋ.tʃĩ.re		*!	

⁶ [ki] is also preserved in a stressless initial syllable: *chirúrgo* - ‘surgeon’, *chinóto* - ‘myrtle drink’. The constraint to be proposed does capture this fact, but I suggest at play really are separate faithfulness conditions targeting initial syllables, which are argued to be a psycholinguistically prominent positions (Beckman 1998, Becker et al. 2012)

b. Palatalisation occurs far from stress

/lʁik+izzáre/	*š.kĩ	ID(STRI) (IO)	*ki
a. lì.ri.kiz.zá.re	*!		*
☞ b. lì.ri.tʃiz.zá.re		*	

c. [ki] is tolerated in a post-stress syllable (with secondary stress)

/antík+ízzare/	*š.kĩ	ID(STRI) (IO)	*ki
☞ a. an.tì.kiz.zá.re			*
b. an.tì.tʃiz.zá.re		*!	

4.1 Exceptional Palatalisation

The account developed above refuted BD-correspondence, so on a purely phonotactic level, why do the two uses of *-ire* not cause the same palatalisation?

- Why is palatalisation before *-íre*, *-ére*, and also *-ěre* suffixes on underived verbs not stress-conditioned?
 - Specifically, stress on both *tacére* and *víncere* should prevent palatalisation

I propose that palatalisation in contemporary Italian is stress-conditioned, but that non-derivational uses of *-ire* and *-ere* palatalise exceptionally

- The *-ere* and *-ire* verb families are populated with verbs with direct descendants in Latin
- At some stage Italian's evolution from Latin, palatalisation may have been exceptionless

However, this exceptionality is not unpredictable. A contemporary Italian speaker may diagnose which forms obey this exceptionality: *only verbs without a derivational base display exceptional normal palatalisation*

(29) Exceptional palatalisation in forms without a derivational base

*ki_[-BASE]: Penalise velar stop - front vowel sequences in verbs with no derivational base

This constraint's influence is, then, most apparent in overpalatalisation in regular *-ere* verbs and underpalatalisation in *-are* verbs with antepenultimate stress:

(30) *tacére* → *táccio* 'to be quiet → 1.SG'

i) Derivation of the infinitive - with no base, exceptional palatalisation triggered

/tak+ére/	*ki _[-BASE]	ID(STRI) / ó (BD)	*š.kĩ	ID(STRI) (IO)	*ki
a. ta.ké.re	*!				*
☞ b. ta.tʃé.re				*	

ii) Derivation of 1.SG - overpalatalisation

/tak+o/	*ki _[-BASE]	ID(STRI) / ó (BD)	*š.kĩ	ID(STRI) (IO)	*ki
a. tá.ko		*!			
☞ b. tá.tʃo				*	

Base = *Inf*: ta.tʃé.re

(31) *praticáre* → *prátichi* ‘to practice → ‘2.SG’

i) Derivation of the infinitive

/pratík+áre/	*kí _[-BASE]	ID(STRI) / ó (BD)	*š.kĩ	ID(STRI) (IO)	*kí
☞ a. pra.ti.ká.re					*
b. pra.ti.tjá.re				*!	

ii) Derivation of 2.SG - underpalatalisation: [kí] is far from stress

/pratík+i/	*kí _[-BASE]	ID(STRI) / ó (BD)	*š.kĩ	ID(STRI) (IO)	*kí
☞ a. prá.ti.kí			*		*
b. prá.ti.tjí		*!		*	
Base = <i>Inf</i> : pra.ti.ká.re					

In the irregular *-ere* paradigm, BD-correspondence does not influence palatalisation in inflection. Palatalisation in forms like 2.SG *vínci* must be due to the exceptional constraint:

(32) *víncere* → *vínci* ‘to be quiet → 2.SG’

i) Derivation of the infinitive - with no base, exceptional palatalisation triggered

/vínk+ere/	*kí _[-BASE]	ID(STRI) / ó (BD)	*š.kĩ	ID(STRI) (IO)	*kí
a. víŋ.ke.re	*!				*
☞ b. vín.tje.re				*	

ii) Derivation of 2.SG - normal palatalisation independent of stress

/vínk+i/	*kí _[-BASE]	ID(STRI) / ó (BD)	*š.kĩ	ID(STRI) (IO)	*kí
a. víŋ.kí	*!				*
☞ b. vín.tjí				*	
Base = <i>Inf</i> : vín.tjé.re					

4.2 The feminine plural

The issue of why a suffix */-e/* causes palatalisation in verbs (as 3.SG) but not in nouns or adjectives (as FEM.PL) has not yet been addressed:

(33) a. *vínci* *víntŋi* ‘you_{SG} win’ b. *lírici* *líritŋi* ‘lyrical_{M.PL}’
vínce *víntje* ‘s/he wins’ *líriche* *lírike* ‘lyrical_{F.PL}’

Palatalisation in the examples immediately above would be caused by different constraints:

- In (a) the rule is governed by the exceptional constraint targeting underived verbs.
- In (b) palatalisation should follow from the lower ranked prominence-based constraints.
- but the FEM.PL form does not palatalise, even though [ke] is far from stress: **lirice*

A simple means of accounting for this is to specify exceptional palatalisation as targeting both front vowels /i/ and /e/, but stress-conditioned palatalisation as targeting only front-most /i/

- This tells us that the more active, prominence-based palatalisation has become less aggressive than exceptional, diachronically-rooted palatalisation.
- Reduction of palatalisation to only front-most vowel /i/ is phonetically grounded: [ke] creates less noise that is confusing to the listener than [ki], so pressure to neutralise is reduced.

A final redefinition of the constraints governing palatalisation in Italian would be as follows:

(34) *ki,ke_[-BASE] , ID(STRID) / ɕ (BD) >> *kĩ >> ID(STRID) (IO) >> *ki

5. Conclusion

The major part of this work has presented a novel account of the application of palatalisation in Italian verbal morphology.

- Normal application is found in the irregular subgroup of *-ĕre* verbs which, in not stressing their suffix, do not engage correspondence.
- Underpalatalisation occurs in *-are* verbs as the infinitive suffix stresses a stem-final [-STRIDENT] segment, which is then maintained in the rest of the paradigm
- Overpalatalisation occurs in regular *-ĕre* and *-ire* verbs as their infinitives stress a [+STRIDENT] segment.

The second part of this work has attempted to unify this account of verbal morphology with an analysis of palatalisation in nominal morphology as phonetically stress-conditioned:

- The account of palatalisation in nouns and adjectives as stress-dependent is reinforced with evidence from verbs derived with suffixes *-ire* and *-izzare*
- The lack of a base in non-derived verbs acts as an indicator of exceptional palatalisation in these forms
- Considering diachronically exceptional and contemporary stress-conditioned palatalisation as distinct allows explanation of why FEM.PL forms do not palatalise, and shows contemporary neutralisation has become less aggressive.

References

- Allen, W. Sidney. 1978. *Vox Latina: A Guide to the Pronunciation of Classical Latin*. 2nd Edition. Cambridge University Press
- Beckman, Jill. 1998. *Positional Faithfulness*. University of Massachusetts, Amherst Ph.D. Dissertation
- Becker, Michael, Andrew Nevins & Jonathan Levin. 2012. Asymmetries in generalizing alternations to and from initial syllables. *Language* 88.2. 231–268.
- Benua, Laura. 1998. *Transderivational identity: Phonological relations between words*. University of Massachusetts, Amherst. Ph.D. Dissertation.
- Davis, Stuart, Linda Manganaro & Donna Jo Napoli. 1987. Stress on Second Conjugation Infinitives in Italian, in *Italica* 64.3. American Association of Teachers of Italian. 477-498.
- Giavazzi, Maria. 2012. Stress Conditioned Palatalization in Italian. *Phonology*. (<http://web.mit.edu/magia/www/docs/Giavazzi.pdf>)
- Kager, R. 1999. Surface opacity of metrical structure in OT. *The Derivational Residue in Phonological OT*. John Benjamins
- Wilson, Colin. 2006. Learning Phonology with Substantive Bias: An Experimental and Computational Study of Velar Palatalization. *Cognitive Science*, 30. 945–982