

A hidden geminate and phonological opacity in Veneto Italian [☆]

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1 INTRODUCTION

Scope of paper:

- At first sight Veneto has a voicing distinction: /s/~/z/
- Cross-dialectal comparison reveals: contrast based on long~short distinction
- Surface-true analysis misses a generalisation,
Cannot fully account for all distributional data
- Opacity grammar relies on abstract URs,
apparently contradicting Lexicon Optimization

Conclusion: Opacity analysis is needed to sustain Richness of the Base

2 THE VENETO PATTERN

(1) Veneto

a. ca[s]a	'cash register'	h. di[sp]iacere	'displeasure'
b. ca[z]a	'house'	i. di[zg]razia	'misfortune'
c. ca[z]-ina	'house' diminutive	j. a-[s]ociale	'asocial'
d. [s]eta	'silk'	k. tra[s]-alpino	'transalpine'
e. [z]eta	'z'	l. e[s]-amico	'ex-friend'
f. ga[s]	'gas'	m. lo [s]apevo	'I knew it'
g. di[z]-onesto	'dishonest'	n. telefonati#[s]i	'having called each other'

Voicing pattern unpredictable:

- ☞ Word-internal fricative contrasts (a,b);
- ☞ Word-initial fricative contrasts (d,e);
- ☞ Prefix-final contrast (g vs. k,l)

☹ Affixes have a morpheme-final contrast which stems lack (compare (f vs. g/k,l))

3 A PHONEMIC OT ANALYSIS

(2) Contrast in OT

- Contrast: FAITH(F) >> *F
- Neutralisation: *F >> FAITH(F)

^{*} Special thanks go to Agnese, Emanuela, Giuseppe, and Natalina, my informants.

(3) Veneto contrast grammar:

- a. IO-IDENT: 'Input and output segments are identical in the specification of their features.'
- b. VOP (Voiced Obstruent Prohibition): 'Obstruents are voiceless.'
- c. *GEMINATE: 'Geminates are not allowed.'
- d. Ranking:

*GEMINATE >> IO-IDENT(voice) >> VOP

Advantages of analysis:

- 1. Learners can assume surface forms as URs.
- 2. Voiced and voiceless fricatives can occur freely.

(4) Learning

stage 1: *GEMINATE, VOP >> IO-IDENT(voice)

stage 2: *GEMINATE >> IO-IDENT(voice) >> VOP

(5) Veneto contrast

	IO-IDENT	VOP
☞ a. /zeta/ ~ zeta		*
b. /zeta/ ~ seta	*!	
☞ c. /kaza/ ~ kaza		*
d. /kaza/ ~ kasa	*!	
☞ e. /kasa/ ~ kasa		
f. /kasa/ ~ kaza	*!	*

(6) Contrast and Lexicon Optimization

	*GEMINATE	IO-IDENT(voice)	VOP
a. /kassa/ ~ kasa		*!	
☞ b. /kasa/ ~ kaza			

3 A COINCIDENCE?

(7) Lombardian

- | | |
|---------------------------------|---|
| a. ca[ss]a 'cash register' | h. di[sp]iacere 'displeasure' |
| b. ca[z]a 'house' | i. di[zg]razia 'misfortune' |
| c. ca[z]-ina 'house' diminutive | j. a-[s]ociale 'asocial' |
| d. [s]eta 'silk' | k. tran[z]-alpino 'transalpine' |
| e. [dz]eta 'z' | l. ek[s]-amico 'ex-friend' |
| f. ga[s] 'gas' | m. lo [s]apevo 'I knew it' |
| g. di[z]-onesto 'dishonest' | n. telefonati#[s]i 'having called each other' |

→ Voicing of *s* is completely predictable. (intervocalic *s*-voicing; see Nespor & Vogel 1986, Peperkamp 1995, 1997, Kenstowicz 1996, Loporcaro 1999, Bertinetto 1999, van Oostendorp 1999, Krämer 2001, in press)

(8) Tuscan

a. ca[ss]a	'cash register'	h. di[sp]iacere	'displeasure'
b. ca[s]a	'house'	i. di[zg]razia	'misfortune'
c. ca[s]-ina	'house' diminutive	j. a-[s]ociale	'asocial'
d. [s]eta	'silk'	k. tran[s]-alpino	'transalpine'
e. [d̥z]eta	'z'	l. ek[s]-amico	'ex-friend'
f. ga[s]	'gas'	m. lo [s]apevo	'I knew it'
g. di[z]-onesto	'dishonest'	n. telefonati#[s]i	'having called each other'

(9) Neutralisation and contrast in Venetian

Veneto	Lombardian	Tuscan	gloss
a. ca[z]a	ca[z]a	ca[s]a	'house'
b. co[z]a	co[z]a	co[s]a	'thing'
c. ca[z]o	ca[z]o	ca[z]o	'case'
d. ca[s]a	ca[s:]a	ca[s:]a	'box, cashier'
contrast: voice	length	both	

Chain shift: 1. voiceless → voiced; 2. long → short, voiceless

(10) Geminate and syllable-final nasals in Venetian

a. [rɔza rosa]	rosa rossa	'red rose'
[sasi]	sassi	'stones'
[kasetta]	cassetta	'cassette, tape'
[kasa]	cassa	'box'
[lɔto]	lotto	'lotto'
[fredo]	freddo	'cold'
b. [kɔ̃siʎo]	consiglio	'advice'
[vakã:se]	vacanze	'holidays'
[pɛ̃sare]	pensare	'to think'
[trãsalpino]	transalpino	'transalpine'
[trãsatlã:tiko]	transatlantico	'transatlantic'

(11) Coincidences ?:

1. All geminate *s:* / nasal + *s* clusters in Lombardian and Tuscan correspond to voiceless fricatives in Venetian;
2. All voiced fricatives in Venetian correspond to voiced fricatives in Lombardian but not in Tuscan.

Problem for simple voicing contrast analysis: Geminate coronal fricatives have no voicing contrast in Italian. */zz/

Are geminates underlyingly redundantly specified for voicing?

(12) Lombardian/Venetian mismatch: prefix *tra(n)s-* (1,7l)

(13) Degemination hypothesis:

1. Veneto has intervocalic s-voicing
2. Veneto has degemination
3. Veneto has (nasal-initial) cluster reduction
4. Fricative in underlying geminates/clusters is voiceless at surface

3.1 A MATTER OF HISTORY?

(14) A diachronic approach:

- Stage 1: Veneto = Lombardian
 Stage 2: Veneto degeminates, reduces clusters
 Stage 3: Intervocalic voicing is 'switched off'

(15) Hypothetical result

a. <i>ca[z]a</i>	'cash register'	h. <i>di[sp]iacere</i>	'displeasure'
b. <i>ca[z]a</i>	'house'	i. <i>di[zg]razia</i>	'misfortune'
c. <i>ca[z]-ina</i>	'house' diminutive	j. <i>a-[s]ociale</i>	'asocial'
d. <i>[s]eta</i>	'silk'	k. <i>tra[z]-alpino</i>	'transalpine'
e. <i>[z]eta</i>	'z'	l. <i>e[z]-amico</i>	'ex-friend'
f. <i>ga[s]</i>	'gas'	m. <i>lo [s]apevo</i>	'I knew it'
g. <i>di[z]-onesto</i>	'dishonest'	n. <i>telefonati#[s]i</i>	'having called each other'

This is not Veneto Italian.



(16) Second try of a diachronic analysis:

- Stage 1: Veneto = Lombardian
 Stage 2: Lexicon Optimization stores all voiced tokens as such,
 Intervocalic voicing constraint is demoted below faithfulness
 Stage 3: Veneto degeminates, reduces clusters

Problem: stage 2 contradicts general OT assumptions on language acquisition

(17) Initial stage in language acquisition: Markedness >> Faithfulness

(Smolensky 1996, Gnanadesikan 1995, Tesar & Smolensky 2000)

Italian: $*(VsV)_{\text{pwd}} \gg \text{IDENT}$

- At historical stage 2 no evidence for demotion of $*(VsV)_{\text{pwd}}$.
- ¿Why is the *s* in the prefix *tra(n)s-* not voiced in Veneto?

→ Summary: Historical sequencing of constraint rerankings not clear.

- Start: Tuscan-type grammar
 Stage 2: Lombardian-type grammar (intervocalic s-voicing)
 Stage 3: Lexicalisation of static/nonalternating forms
 Stage 4: Demotion of intervocalic voicing constraint
 Stage 5: Degemination, nasal deletion

Swapping of stages 5 and 4 results in voiced ex-geminates.

Stage 4 is theoretically problematic.

3.2 AN OPACITY ANALYSIS

Present-day Veneto has underlying geminates and active intervocalic s-voicing.

- Intervocalic voicing does not apply to degeminated *s*,
 but applies to prefix-final intervocalic *s*;
 nasal-initial consonant clusters are reduced;
 The *s* in *tra(n)s-* remains voiceless though in intervocalic position at the surface.

(18) Possible ordered rules in Veneto

	/dis- + onesto/	/trans- + alpino/	/a- + sociale/
1. syllabification	↓	↓	↓
	di.s#o.nes.to	tran.s#al.pi.no	a.#so.tʃa.le
2. layering/bracket erasure	↓	↓	↓
	(di.so.nes.to)	(tran.sal.pi.no)	a.(so.tʃa.le)
3. s-voicing	↓	↓	↓
	dizonesto	<i>n.a.</i>	<i>n.a.</i>
4. nasal coda deletion, degemination	↓	↓	↓
	<i>n.a.</i>	tra.sal.pi.no	<i>n.a.</i>
	↓	↓	↓
5. output	dizonesto	trasalpino	asotʃale

(19) Additional constraints:

- a. $*(VsV)_{PWd}$: 'No intervocalic *s* within a Prosodic Word.' (Krämer 2001, in press)
- b. $NO_{STOPCODA}$: 'No stop in coda position.'
- c. $*GEMINATE$: 'No geminates.'
- d. I-CONTIGUITY ("No Skipping", McCarthy & Prince, 1995):
 The portion of S_1 standing in correspondence forms a contiguous string.
 Domain (\mathfrak{R}) is a single contiguous string in S_1 .
 $\text{↯} /xyz/ \rightarrow xz$

(20) Rankings for reduction and degemination:

- a. $NO_{STOPCODA} \gg I-CONTIG$
- b. $*GEMINATE \gg I-CONTIG$

(21) Veneto cluster reduction

	*GEMI	NO _{STOP} CODA	I-CONTIG
a. /trans-alpino/ ~ transalpi.no		*!	
☞ b. /trans-alpino/ ~ trasalpino			*
c. /kassa/ ~ kassa	*!		
☞ d. /kassa/ ~ kasa			*

(22) Ranking for intervocalic voicing:

$$*(VsV)_{pWd} \gg IO-IDENT \gg VOP$$

(23) IO-IDENT >> VOP: [zia] 'aunt'

	IO-IDENT	VOP
☞ a. /zia/ ~ zia		*
b. /zia/ ~ sia	*!	

(24) Veneto intervocalic voicing

/dis- onesto/	*(VsV) _{pWd}	IO-IDENT	VOP
a. disonesto	*!		
☞ b. dizonesto			*

(25) A problem with degemination and cluster reduction

	*(VsV) _{pWd}	IO-IDENT	*VOP
⊗ a. /kas:a/ ~ kasa	*!		
●* b. /kas:a/ ~ kaza			*
⊗ c. /trans- alpino/ ~ trasalpino	*!		
●* d. /trans- alpino/ ~ trazalpino			*

(26) The solution - Local Conjunction: I-CONTIG&VOP

(27) No surface geminates in Veneto and no 'ex-geminate' voicing

	*GEM	I-CONT&VOP	*(VsV) _{pWd}	IO-ID	VOP	I-CONT
a. /kassa/ ~ kassa	*!					
☞ b. /kassa/ ~ kasa			*			*
c. /kassa/ ~ kaza		*!			*	*
d. /kasa/ ~ kassa	*!			*		*
e. /kasa/ ~ kasa			*!			
☞ f. /kasa/ ~ kaza					*	

(28) No prefix-final voicing of underlying clusters

/trans-alpino/	NO _{STOP} CODA	I-CONT& VOP	*(VsV) _{PWD}	IO- IDENT	VOP	I- CONT
a. tran.sal.pi.no	*!					
b. tra.zal.pi.no		*!			*	*
☞ c. tra.sal.pi.no			*			*

(29) Veneto complete ranking:

*GEM, NO_{STOP}CODA, I-CONT&VOP >> *(VsV)_{PWD} >> IO-IDENT >> VOP

Lexicon Optimization in a nutshell: For a given output choose the input~output pair out of all possible pairings of inputs with this output which incurs the least severe constraint violations.

(30) Optimal URs?

	*GEM	I-CONT&VOP	*(VsV) _{PWD}	IO-ID	VOP	I-CONT
a. /kassa/ ~ kasa			*			*!
☞ b. /kasa/ ~ kasa			*			
c. /kasa/ ~ kaza				*!	*	
☞ d. /kaza/ ~ kaza					*	

For pairs (a,b), Lexicon Optimization leads to the wrong result, though actually pair (b) is no possible pair in this grammar.

(31) Re-evaluation of the 'degeminated' input

	*GEM	I-CONT&VOP	*(VsV) _{PWD}	IO-ID	VOP	I-CONT
☞ a. /kasa/ ~ kaza				*		*
☞ b. /kasa/ ~ kasa			*!			

→ "Lexicon optimization limit": evaluate only *possible* pairs.

(32)

	*GEM	I-CONT& VOP	*(VsV) _{PWD}	IO-ID	VOP	I- CONT
a. /transalpino/ ~ trāsalpino			*			*
☞ b. /trāsalpino/ ~ trāsalpino			*			

(33)

	*GEM	I-CONT& VOP	*(VsV) _{PWD}	IO-ID	VOP	I- CONT
☞ a. /trāsalpino/ ~ trāzalpino				*		*
☞ b. /trāsalpino/ ~ trāsalpino			*!			

(34) Re-ranking?:

	*GEM	I-CONT& VOP	IO-ID	*(VsV) _{PWD}	VOP	I- CONT
a. /trāsalpino/ ~ trāzalpino			*!			*
☞ b. /trāsalpino/ ~ trāsalpino				*		

→ Problem for re-ranking: Grammar becomes unstable – new words would not be treated in "Veneto fashion".

This contradicts the Richness of the Base Hypothesis (Prince & Smolensky 1993, Smolensky 1996:3):

(35) Richness of the Base:

The source of all systematic cross-linguistic variation is constraint reranking. In particular, the set of *inputs* to the grammars of all languages is the same. The grammatical inventories of a language are the *outputs* which emerge from the grammar when it is fed the universal set of all possible inputs.

Consequence: Tuscan (or any other) inputs should result in Venetan outputs when fed into the Venetan grammar (as with the ranking in 29).

(36) A nonsense word and its spontaneous production

[buzino] *bussino 'little bus'

4 SUMMARY AND CONCLUSIONS

→ Veneto Italian voicing patterns are an example of phonological opacity;

→ Comparison with other varieties reveals a word-internal chain shift from voiceless to voiced and from long to short;

→ non-opacity analyses miss crucial generalisations:

1. The parallels/differences between Veneto and Lombardian as well as Tuscan,
2. Grammatical stability: all inputs to a grammar should result in 'typical' outputs (Richness of the Base hypothesis);

→ Abstract forms are possible in OT and necessary;

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