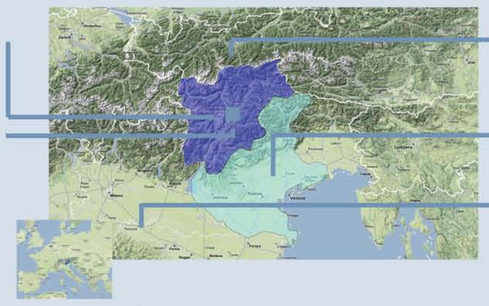
Freie Universität Bozen
Libera Università di Bolzano
Free University of Bozen - Bolzano
Forschungszentrum Sprachen | Centro di Ricerca Lingue | Centre for Language Studies

Phonetic variation of /r/ in a language contact context: The case of South-Tyrolean Italian

alessandro.vietti@unibz.it
lorenzo.spreafico@unibz.it

SOUTH-TYROLEAN ITALIAN: AN OVERVIEW

- South-Tyrolean Italian (STI-i)
  - North-Eastern variety of Italian [2]
  - Relicts of Italo-Romance dialects [2]
  - Influence of Venetian dialects (in the twenties)
- Italian of German (dialects) native speakers (STI-d) [8,9,10]
  - Interference from German and German dialects [10]
  - Interaction with STI-i
  - SLA semplification features



STI-d
Canepari [1] [ʁ ʀ ɣ ɾ]
Mioni [8,9] [ʁ ʀ]

STI-i
Canepari [1], Tonelli [13] [ɾ r]
Mioni [8,9] [ɾ]

German & Tyrolean dialects (Bozen)
[r ʀ] Tonelli [13], Mioni [10]
[r ʀ x] Klein / Schmitt [5]

Southern Venetian dialect
[ɽ ɾ ɻ] Romano [12]

Standard Italian
[ɾ r ɪr] Canepari [1]

GEOGRAPHICAL DISTRIBUTION OF /r/

METHODOLOGY AND DATA

Data elicitation

435 tokens
33 target words
11 in a word list
22 in a sentence list

Recording equipment

Behringer B-1
Marantz PMD660
Sampling 22kHz
Digitalization 16bit

Speakers

N.	Speaker	Age	Gender	Education	Native language	Back-r	Early L.E.	Primary School
1	MS	33	M	College	German dialect	+	-	German
2	AP	35	F	College	German dialect	-	-	German
3	VG	25	F	High school	German dialect	+	-	German
4	HS	38	F	High school	German dialect	-	-	German
5	UU	26	F	High school	German dialect	+	-	German
6	VW	31	F	High school	German dialect	+	-	German
7	LV	34	M	High school	German dialect	+	-	German
8	MB	27	M	College	Italian	-	-	Italian
9	EG	38	F	College	Italian	-	+	Italian
10	CM	33	F	College	Italian	-	+	German
11	MP	32	F	High school	Italian/German dialect	-	+	German

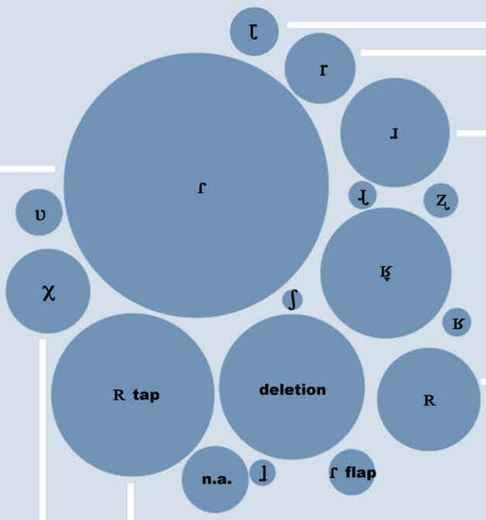
RESEARCH QUESTIONS

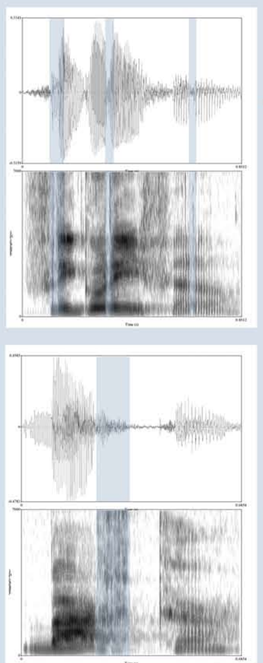
Are previous descriptions empirically consistent? Q1

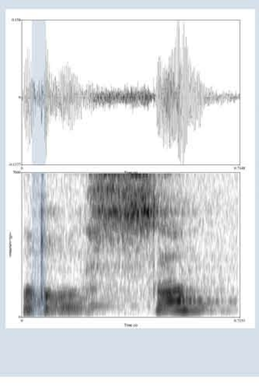
Is variation related to linguistic factors? Q2

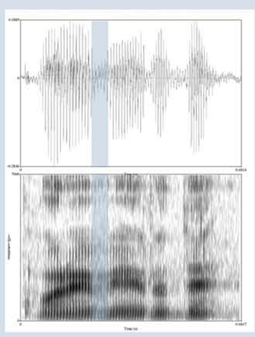
Is variation related to extra-linguistic factors? Q3

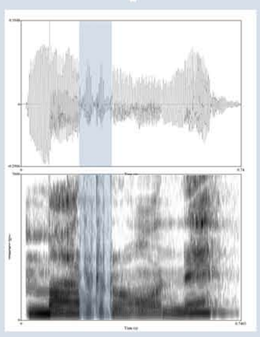
/r/ VARIANTS

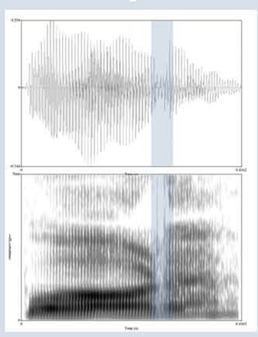


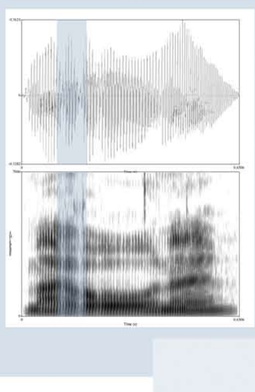








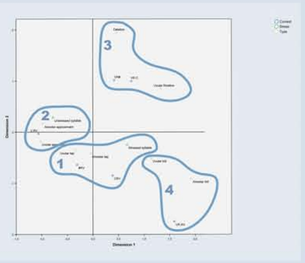




number of variants	speakers
4	2
5	4
6	2
7	2
8	1

Q1

LINGUISTIC LEVEL

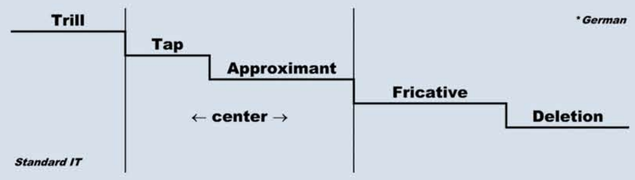


Discrimination Measures

	Dimension 1	Dimension 2	Mean
Type	0,490	0,654	0,572
Context	0,682	0,648	0,665
Stress	0,521	0,070	0,296
Active Total	1,692	1,372	1,532
% of Variance	56,412	45,736	51,074

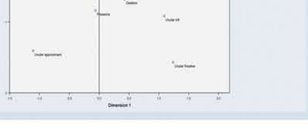
Multiple correspondence analysis [6]
Exploratory statistics aiming at a synthetic representation of our sample
Variables: context, stress, type

Variants are grouped in four main clusters according to manner of articulation (taps, approximants, trills, fricative-deletion):
Group 1: taps are prototypical realizations linked to onset and stressed syllabic contexts
Group 2: approximants occur between vowels in unstressed syllables
Group 3: fricatives and deletions are more marginal members and are likely to be found in coda positions
Group 4: alveolar trills are in a peripheral position and associated to VR.RV context only



Q2

EXTRA - LINGUISTIC LEVEL



Discrimination Measures

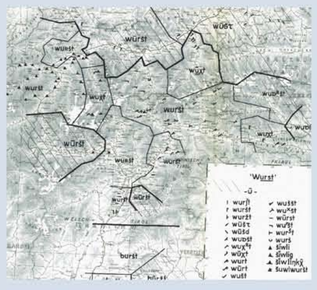
	Dimension 1	Dimension 2	Mean
Type	0,489	0,780	0,634
Context	0,679	0,096	0,388
Stress	0,521	0,000	0,261
Back R (L1)	0,004	0,687	0,345
Active Total	1,693	1,563	1,628
% of Variance	42,323	39,071	40,697

Multiple correspondence analysis [6]
Variables: context, stress, type, back R (L1)

Variants are grouped in two main clusters according to place of articulation (dimension 2) and to context – stress (dimension 1)
Group 1: front alveolar rothics are in the upper half-plane and are linked to the absence of back uvular variants in the native language
Group 2: back uvular rothics are in lower half-plane and are linked to the presence of back uvular

Q3

FINDINGS



Q1
a) previous descriptions seem to be partly consistent
b) more /r/-variants are likely to be found in STI
c) alveolar taps occur more frequently and in every phonological context
d) as a Northeastern variety of Italian there is no geminate [rr]

Q2
a) emerging correlation between manner of articulation, syllable position and stress (despite of place of articulation), especially for taps and approximants
b) uvular fricative and deletion are associated to weak syllable positions (coda and coda + word boundary)
c) alveolar trills are linked to orthographic geminate VR.RV context like ['karro]

Q3
"Is variation related to extra-linguistic factors?" should be reformulated as "Who produces uvular rothics in STI?"

	L1	Back R (L1)	Early L.E.
A	German	+	-
B		+ / -	-
C	Italian	-	+

REFERENCES

[1] Canepari L. (1999) *Manuale di pronuncia italiana.* Bologna, Zanichelli.
[2] Coletti V. / Patrizia C. / Zamboni A. (1992) "Il Trentino e l'Alto Adige". In: Bruni F. (ed.) *L'italiano nelle regioni. Lingua nazionale e identità regionali.* Torino, UTET: 178-219.
[3] Docherty G. / Foulkes P. (2001) "Variability in (r) production - instrumental perspectives". In: van de Velde H. / van Hout R. (eds.) *`r-atics: Sociolinguistic, phonetic and phonological characteristics of /r/, Etudes & Travaux* 4: 173-184.
[4] Flege J. (2007) "Language contact in bilingualism: Phonetic system interactions". In: Cole J. & Hualde J. (eds.) *Laboratory Phonology 9.* Berlin, Mouton de Gruyter.
[5] Klein K. / Schmitt L. (1965) *Tirolischer Sprachatlas,* Innsbruck, Tyrolia-Verlag.
[6] Greenacre M. (1984) *Theory and applications of correspondence analysis.* Academic Press, London.
[7] Ladefoged P. / Maddieson I. (1996) *The sounds of the world's languages.* Malden, Blackwell.
[8] Mioni A. (1990) "La standardizzazione fonetico-fonologica a Padova e a Bolzano". In: Cortelazzo M. / Mioni A. (a cura di) *L`italiano regionale.* Bulzoni, Roma: 193-208.
[9] Mioni A. (2001) "L`italiano nelle tre comunità linguistiche tirolesi". In: Egger K. / Lanthaler F. (Hrsg.) *Die Deutsche Sprache in Südtirol.* Wien-Bozen, Folio: 65-76.
[10] Mioni A. (1990) "Bilinguismo intra- e intercomunitario in Alto Adige/Südtirol: considerazioni sociolinguistiche". In: Lanthaler F. (ed.) *Mehr als eine Sprache. Zu einer Sprachstrategie in Südtirol - Più di una lingua. Per un progetto linguistico in Alto Adige.* Merano, Alpha & Beta: 13-36.
[11] Schiller N (1988) "The phonetic variation of German /r/". In: Butt M. & Fuhrhop N. (eds.) *Variation und Stabilität in der Wortstruktur. Untersuchungen zur Entwicklung, Erwerb und Varietäten des Deutschen und anderer Sprachen.* Hildesheim, Olms: 261-287.
[12] Romano A. (in press). "A contribution to the study of phonetic variation of /r/ in French and Italian linguistic domains". Com. pres. *'r-atics2': 2nd International Workshop on the Sociolinguistic, Phonetic and Phonological Characteristics of /r/.* Université Libre de Bruxelles, 5-7 Dic. 2002.
[13] Tonelli L. (2002) *Regionale Umgangsprachen.* Padova: Unipress261-287.
[14] Wiese R. (2000) *The phonology of German.* Oxford, Oxford University Press.
[15] Wiese R. (2001) "The unity and variation of (German) /r/". In: van de Velde H. / van Hout R. (eds.) *`r-atics: Sociolinguistic, phonetic and phonological characteristics of /r/, Etudes & Travaux* 4: 11-26.
[16] Wiesinger P. (1990)"The central and southern Bavarian dialects in Bavaria and Austria". In: Russ, C. (ed.) *The dialects of modern German.* London, Routledge: 438-517.