Laryngeal Relativism predicts Italian

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Roadmap

- two-way laryngeal systems
- “laryngeal realism”: [voice] languages vs. [spread glottis] / aspiration languages ~ Element Theory: **L**-systems vs. **H**-systems
- “laryngeal relativism” (E. Cyran): both the marked and the unmarked sets may receive any (more or less arbitrary) phonetic interpretation
- proposal#1 (Balogné Bérces – Huszthy 2017, Balogné Bérces 2017): “classical” aspiration languages do not fit into Cyran’s typology -> three subtypes of binary laryngeal systems: **L**-systems vs. **H**-systems vs. unmarked systems (**h**-systems)
- proposal#2: Italian is an **h**-system

Two-way laryngeal contrasts in obstruents

Examples	p ~ b̥	b	pʰ	p’
English, German, Welsh, Mandarin Chinese	[ ]		[sg]	
French, Spanish, Russian, Hungarian, Dutch	[ ]	[voice]		
K'ekchi (Q'eqchi'), Mam	[ ]			[cst gl]

+ three- and four-way contrasts (Thai, Korean; Hindi)

Aspiration vs. voice lang's

- "the narrow interpretation of [voice]" or "**laryngeal realism**" (e.g., Honeybone 2005, Iverson & Salmons 2008): spread glottis/**aspiration lang's** vs. **voice lang's**
- Huber & Balogné Bérces (2010 and elsewhere): the difference is primarily **phonological**: two totally different phonological mechanisms – in voice lang's the [voice] feature is phonologically active (-> assimilation processes), in aspiration lang's no signs of any laryngeal activity are detectable

Aspiration vs. voice lang's

the difference is primarily **phonological**: the presence/absence of phonological behaviour (in our case, RVA) implies the presence/absence of the representation of some phonological agent (in our case, some laryngeal prime)

English: *ma<u>tch</u>* [-tʃ] + *<u>b</u>ox* [b̥-] -> *ma<u>tchb</u>ox* [-tʃb̥-] **vs.**

Hungarian: *ma<u>tchb</u>ox* [-dʒb-] 'small toy car'

“Laryngeal relativism”

- Cyran (various publications, e.g., 2014)
- as long as a sufficient phonetic distance is kept between the two sets of obstruents to maintain phonological contrast (“**sufficient discriminability** in production and perception”), both the marked and the unmarked sets may receive **any** (more or less arbitrary) phonetic interpretation
- phonetic interpretation is partly systemic (phonological)

“Laryngeal relativism”

- Polish: **Warsaw Polish** (WP) vs. **Cracow Polish** (CP)
- differ phonologically but are phonetically identical in terms of laryngeal features:
- WP: “classical” [voice] system (analysed as an “L-system” by Cyran): **L-spreading**
- CP: “H-system”, with phonologically active H: **H-spreading**

“Laryngeal relativism”

- re-defines the category of **H**-systems: active **H** that spreads
- but recall: in their “classical” version, e.g., in (standard) English and German, no laryngeal activity in the form of any kind of spreading is attested – suggesting the **absence** of any laryngeal element (following Huber & Balogné Bérces 2010)
- -> we arrive at a typology with **three** systems:

Three subtypes of binary laryngeal systems

a) the absence of a source element
b) **L** in the marked series of obstruents
c) **H** in the marked series of obstruents

a) the absence of a source element: **h**-systems

- (true) aspiration languages like English and German
- Huber & Balogné Bérces (2010): fortisness/aspiration is dominant obstruency (**h**) dependent on licensing, i.e., on prosodic position
- no laryngeal spreading
- the lenis series undergoes **passive voicing**

a) the absence of a source element: **h**-systems

obtain [əb̥ˈtʰeɪn]	*matchbox* [ˈmætʃb̥ɒks]
cheesecake [ˈtʃiːz̥kʰeɪk]	*baseball* [ˈb̥eɪsb̥ɔːɬ]
bigfoot [ˈb̥ɪg̊fʊt]	*cookbook* [ˈkʰʊkb̥ʊk]
eggghead [ˈeg̊hed̥]	*life gear* [ˈlaɪfg̊ɪə(r)]
roadster [ˈrəʊd̥stə(r)]	*Shoot back!* [ˈʃuːt ˈb̥æk]

apparent “devoicing RVA” / “Progressive Devoicing”

a) the absence of a source element: **h**-systems

- plus: “laryngeal relativism” predicts languages in which the lenis series is phonetically voiced -> account for **Swedish** (“the [voice] fallacy of [sg] languages” – Balogné Bérces & Huber 2010)
- Swedish simply “overshoots” the phonetic distance required for discriminability

Swedish initial plosives

[p^{h}]acka 'pack'	[t^{h}]ak 'roof'	[k^{h}]ub 'cube'
[b]ad 'bath'	[d]äck 'deck'	[g]ap 'mouth'

b) **L** in the marked series of obstruents

- (true) [voice] languages/**L-systems** like Warsaw Polish, French or (Standard) Hungarian, in harmony with Cyran

rabtól [ˈrɒptoːl]	*matchbox* [ˈmɛdʒboks]
rézkarc [ˈreːskɒrts]	*baseball* [ˈbeːzboːl]
hangfal [ˈhɒŋkfɒl]	*tökből* [ˈtøgbøːl]
éghez [ˈeːkhɛz]	*afgán* [ˈɒvgaːn]
roadshow [ˈroːtʃoː]	*kertből* [ˈkɛrdbøːl]
(glosses: 'from prisoner'	(glosses: 'toy car'
'copper etching'	'ibid.'
'loudspeaker'	'from pumpkin'
'to sky'	'Afghan'
'ibid.')	'from garden')

c) **H** in the marked series of obstruents

- (Cyran's) **H-systems**, i.e., languages like Cracow Polish
- H-spreading only
- Balogné Bérces (2017): "Yorkshire Assimilation"
- in harmony with Cyran, if such languages also have final obstruent delaryngealisation, they also exhibit **cross-word passive voicing** manifested in "pre-sonorant voicing" (cf. Slovak, Catalan, Southern Dutch/West Flemish, Ecuadorian Spanish)

(Varieties of) Italian

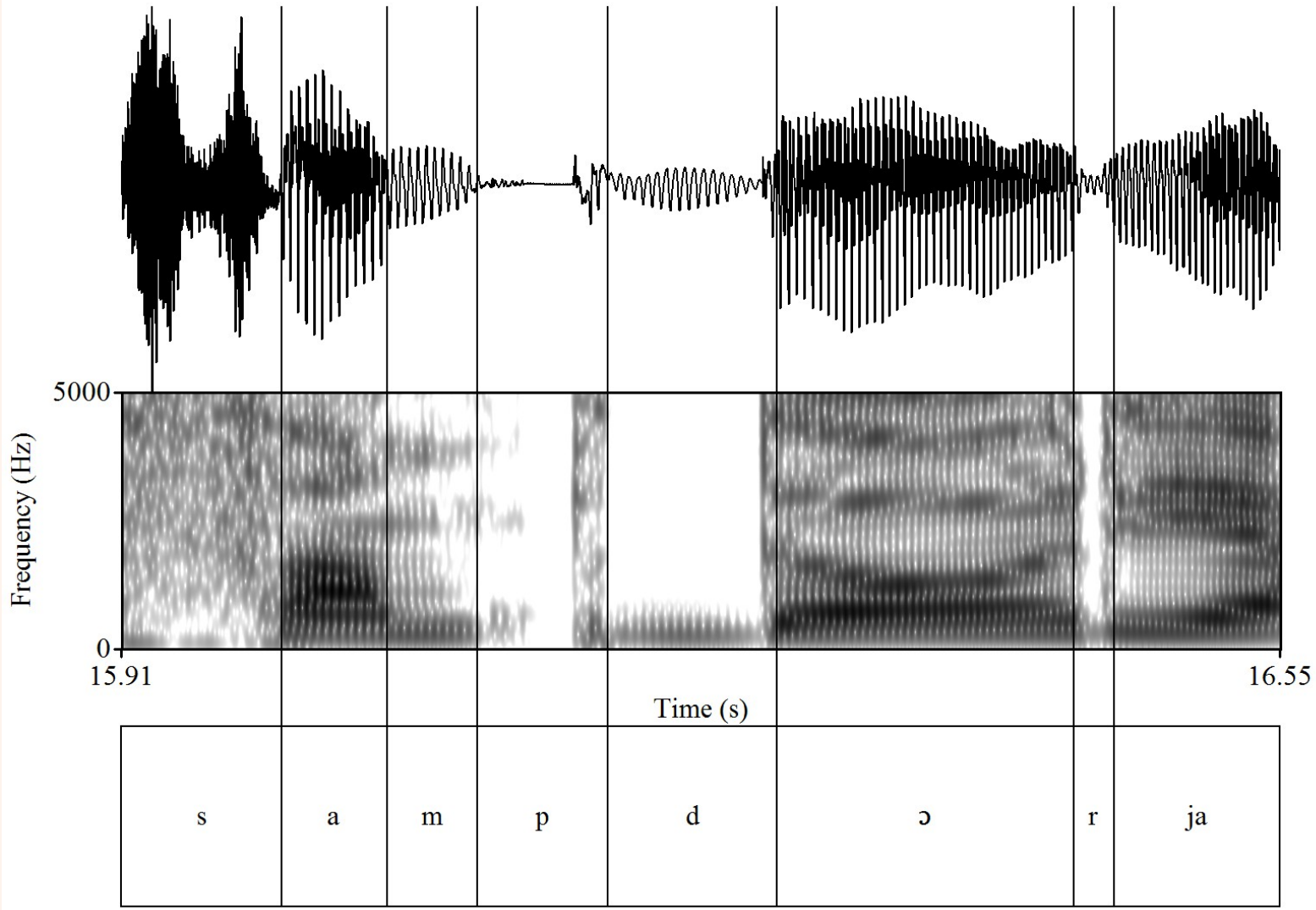
- Laryngeal Relativism also predicts the existence of, e.g., **h**-systems with virtually no aspiration in the fortis series
- this is indeed the laryngeal characterisation of Italian
- **Italian**: Romance + phonetics -> generally considered as an **L**-language
- deficient phonotactics of the native vocabulary: laryngeal activity proper cannot be detected due to the absence of obstruent clusters (other than /sC/)
- our data (Huszthy in prep., poster in *Beyond VOT* poster session): potential feature spreading situations, elicited in loanword and foreign accent settings

%	no VA	RVA	PD	DEL	ERR	SCHWA
North1f	44	9	24	23	1	0
North2f	60	16	9	13	2	11
North3m	67	14	5	13	1	18
North4f	40	24	28	8	0	4
NORTH	54	15	16	15	1	9
Centre1f	64	10	4	20	2	1
Centre2f_biling.	37	53	3	7	0	1
Centre3f	69	15	3	12	1	7
Centre4f	58	24	10	8	0	8
Centre5f_biling.	47	46	4	3	0	7
CENTRE	56	27	5	11	1	4
South1f	89	5	3	0	3	41
South2m	88	3	1	7	2	32
South3m	88	7	3	2	0	22
South4f	57	22	14	7	0	15
South5f	83	2	4	9	1	28
SOUTH	83	6	4	5	1	30
TOTAL	**66**	**15**	**8**	**10**	**1**	**15**

(See *Statistics* in BH's poster in *Beyond VOT* poster session)

		Target word	Prevalent Italian pronunciation
a.	D + T	*vo*dk*a*	[ˈvɔ:dka], [ˈvɔ:dəka], [ˈvɔddəka]
b.		*rag*t*ime*	[regˈtajmə], [retˈtajmə]
c.		*gangster*	[ˈgaŋgster], [ˈgaŋgəster]
d.		*so*vch*oz*	[ˈsɔ:vkot͡s]
e.		*ping*p*ong*	[piŋgˈpɔŋgə], [piŋgəˈpɔŋgə]
f.		*Sing*s*piel*	[ˈsiŋgʃpil], [ˈsiŋgəʃpil]
g.	T + D	*McDonald's*	[mekˈdɔ:naldə], [mekˈdɔ:nalts]
h.		*out*d*oor*	[ˈawtdor], [ˈawtədor], [ˈawddor]
i.		*foot*b*all*	[futˈbollə], [futəˈbollə], [futtəˈbollə]
j.		*up*g*rade*	[apˈgrejdə], [apəˈgrejdə], [appəˈgrejdə]
k.		*sur*fb*oard*	[ˈsɛrfbordə], [serfˈbordə]
l.		*cat*g*ut*	[katˈgattə], [katəˈgattə]

(See further examples in BH's poster in *Beyond VOT* poster session)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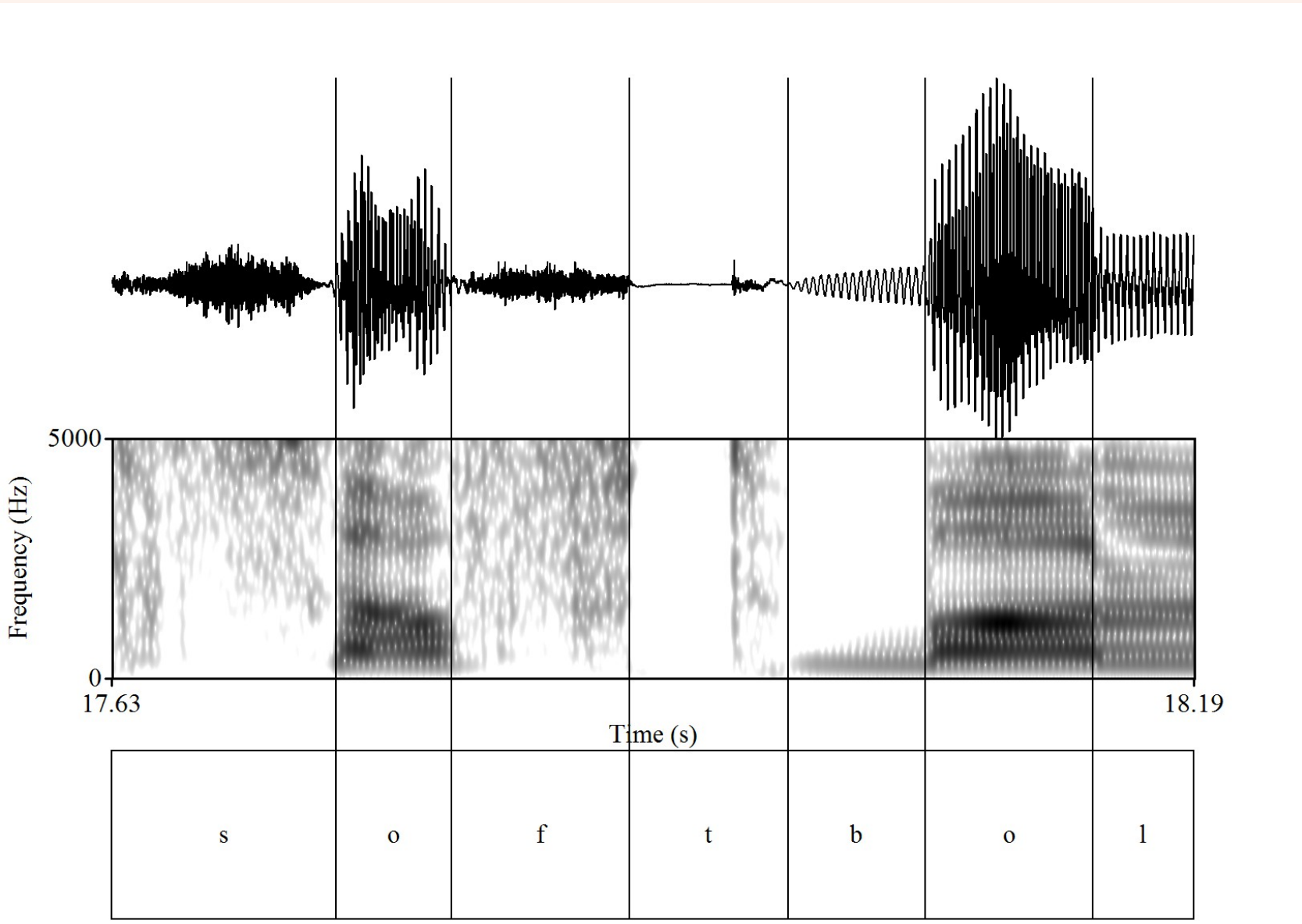
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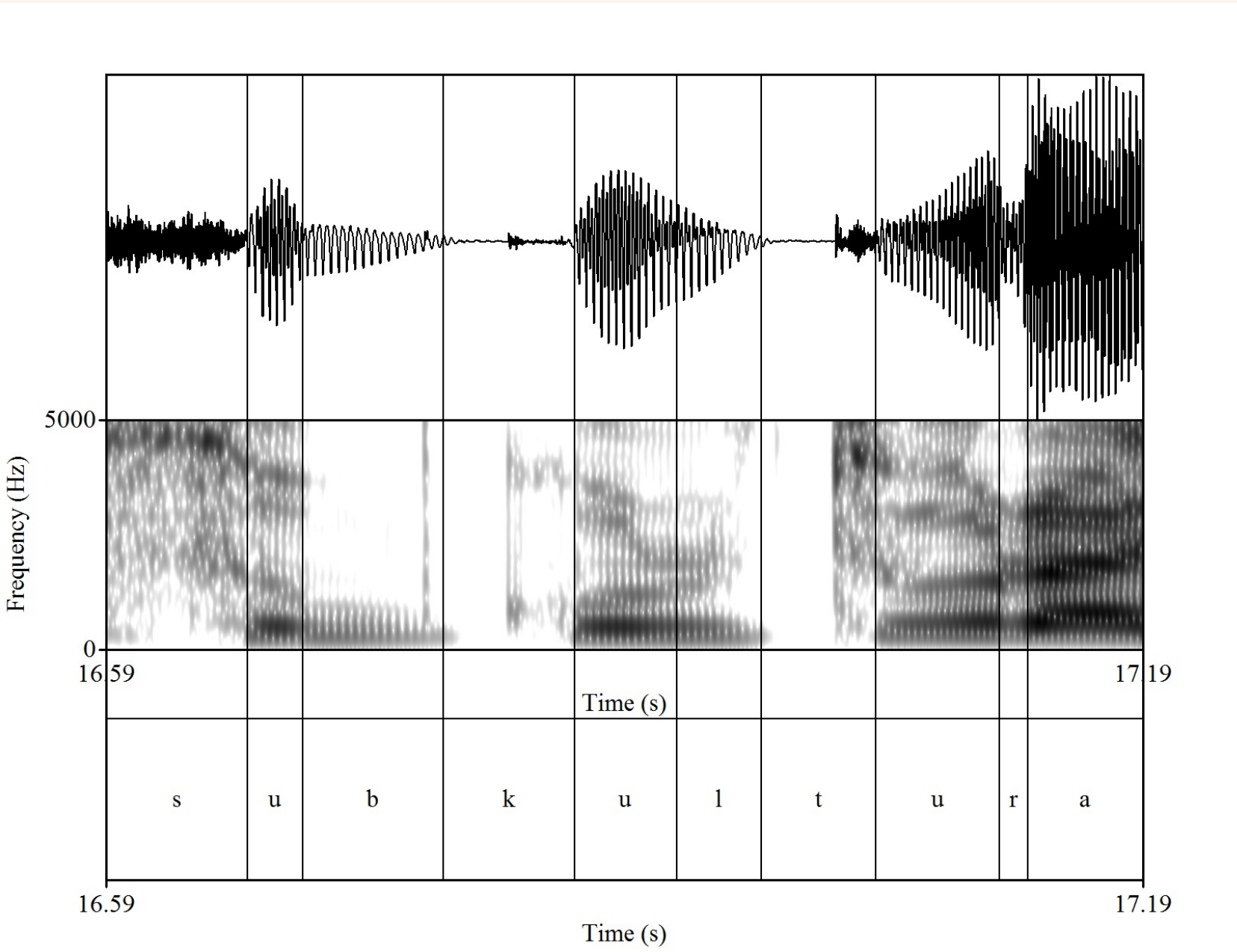
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(Varieties of) Italian

- substantial voicing of lenis and voicelessness of fortis, **but**:
- "RVA": 15% only (mostly devoicing; voicing RVA in 4% only) + "Progressive Devoicing" (PD): 8% (North: 16%) – very much like in, e.g., English
- analysis: **no RVA**
- the voicing present in the lenis set is fundamentally **passive voicing**, maintained in sonorant environments and frequently lost next to a fortis obstruent (= "devoicing RVA" / "PD")

(Varieties of) Italian

- phonologically: no true laryngeal activity (no assimilation/spreading) => in our present system, it is an **h-language**
- fortis: a degree of overall **aspiration** that falls between the standard values of “ordinary” **L**-systems like Slavic/Hungarian and **h**-systems like (standard) English: /p/: 24 ms /t/: 27 ms /k/: 46 ms
- That is, it seems to be **an h-system with virtually no aspiration in the fortis series** – an option actually ***predicted*** by “laryngeal relativism”

Conclusion

- "**laryngeal relativism**" clarifies the relation btw. **phonological system** and **phonetic realisation** ("sufficient discriminability in production and perception") and explains how two different systems may receive identical phonetic interpretation
- the present paper: adds the insight of Huber & Balogné Bérces (2010, etc.) concerning representations in aspiration languages
- -> proposal: **three subtypes of binary laryngeal systems**: L-systems vs. H-systems vs. unmarked systems (h-systems)
- **Italian is an h-system**

Conclusion

- acoustic analysis: a degree of overall aspiration in the fortis series that falls between the standard values of **L**-systems and **h**-systems like (standard) English
- but **we contend that primary evidence is to be sought in phonological behaviour**
- arbitrarily related to phonetic realisation – in Italian very much like in the Cracow dialect of Polish

Conclusion

- Italian: northern/central vs. southern
- The data from our southern informants exhibit repair strategies in the case of input obstruent clusters preventing output clusters (e.g., schwa epenthesis) to such an extent that still deprives us of sufficient empirical evidence of the laryngeal phonology of these varieties

Future research

- we assume that 3- and 4-way systems (Thai, Korean; Hindi) can be accounted for in a similar vein
- binary systems based on constricted glottis (e.g., K'ekchi)

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(a) Representations in a [voice] language

	[p]	[f]	[m]	[b]	[v]	[β] or [ʋ]	[w]
EDGE	[**h**]	[**h**]	[ ]	[**h**]	[**h**]	[ ]	[ ]
	[**ʔ**]	[ ]	[**ʔ**]	[**ʔ**]	[ ]	[ ]	[ ]
SOURCE	[ ]	[ ]	[**N**]	[**N**]	[**N**]	[**N**]	[ ]
comp	[ ]	[ ]	[ ]	[**N**]	[**N**]	[**N**]	[ ]
RESONANCE	[**U**]	[**U**]	[**U**]	[**U**]	[**U**]	[**U**]	[**U**]

(b) Representations in a [sg] language

	[p^h]	[f^h]	[p] = [$\underset{\circ}{b}$]	[f] = [$\underset{\circ}{v}$]	[m]
EDGE	[**h**]	[**h**]	[**h**]	[**h**]	[ ]
comp	[**h**]	[**h**]	[ ]	[ ]	[ ]
	[**ʔ**]	[ ]	[**ʔ**]	[ ]	[**ʔ**]
RESONANCE	[**U**]	[**U**]	[**U**]	[**U**]	[**U**]