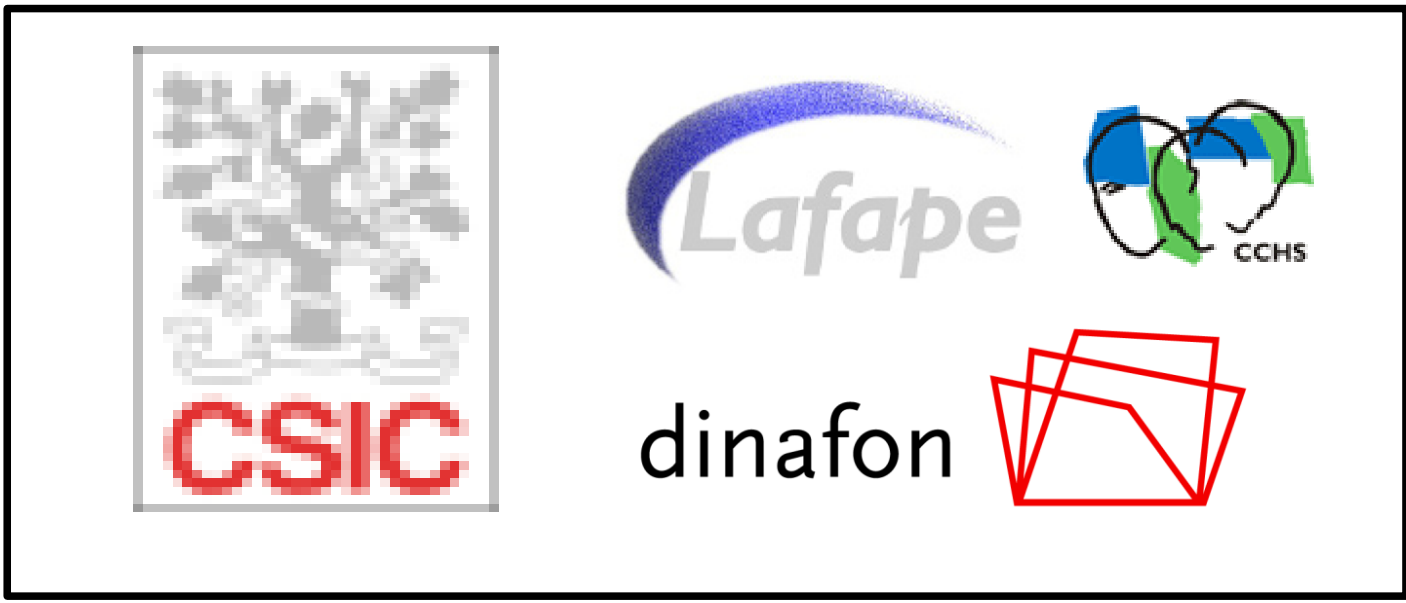


Approaches to the synchrony and diachrony of back fricatives in three dialects of Spanish



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Introduction

This ongoing investigation examines the production of back fricatives in Spanish. From a gestural perspective, the aim is to understand the linguistic changes of these sounds. Synchronically we describe three dialects patterns for a /x/ phoneme realization.

Synchronic perspective

Material and Methods Informants

- We recorded:
- One subject from Madrid
 - Two female informants, both from Paraguay;
 - Nine informants from Caribbean areas:
 - four Colombians, three women and one man,
 - one Venezuelan male;
 - one female from El Salvador;
 - one male informant from Costa Rica;
 - and one Cuban male.

All informants have a high educational level with age varying from 25 to 35 years.

Target sound

- The phone varies according to its occurrence between [a]_[a],[i]_[i] or [u]_[u].
- In order to deal with the difficulty of finding infrequent vowel pairs, we used a search tool called CORDE (*Corpus Diacrónico del Español*).
- The corpus was collected at Phonetic Laboratory of the *Consejo Superior de Investigación Científica* (CSIC), located in Madrid, Spain.

Diachronic perspective

- f > h > Ø
- 1) [f] ~ [ɸ] > [h];
 - 2) [f] ~ [hɸ]/[ɸh] or [f] ~ [ɸ] > [h];
 - 3) [f] ~ [h] > [h];
 - 4) [f] > [h], induced for a vasque interference;
 - 5) Variation according to vocalic context



- /S/ posteriorization
- Sibilant system reestructuration

Reference

- FORREST et al., Statistical analysis of word-initial voiceless obstruents: preliminary data. *Journal of the Acoustical Society of America*, 84, p. 115-123, 1988
- QUILIS, A. *Tratado de Fonología y Fonética españolas*. Gredos: Madrid, 1993
- TORREIRA, F. Coarticulation between Aspirated-s and VoicelessStops in Spanish: An Interdialectal Comparison. *Selected Proceedings of the 9th Hispanic Linguistics Symposium*, ed. Nuria Sagarra and Almeida Jacqueline Toribio, 113-120. Somerville, MA: Cascadilla Proceedings Project.

Process in course:
• [-s] ~ [-h]

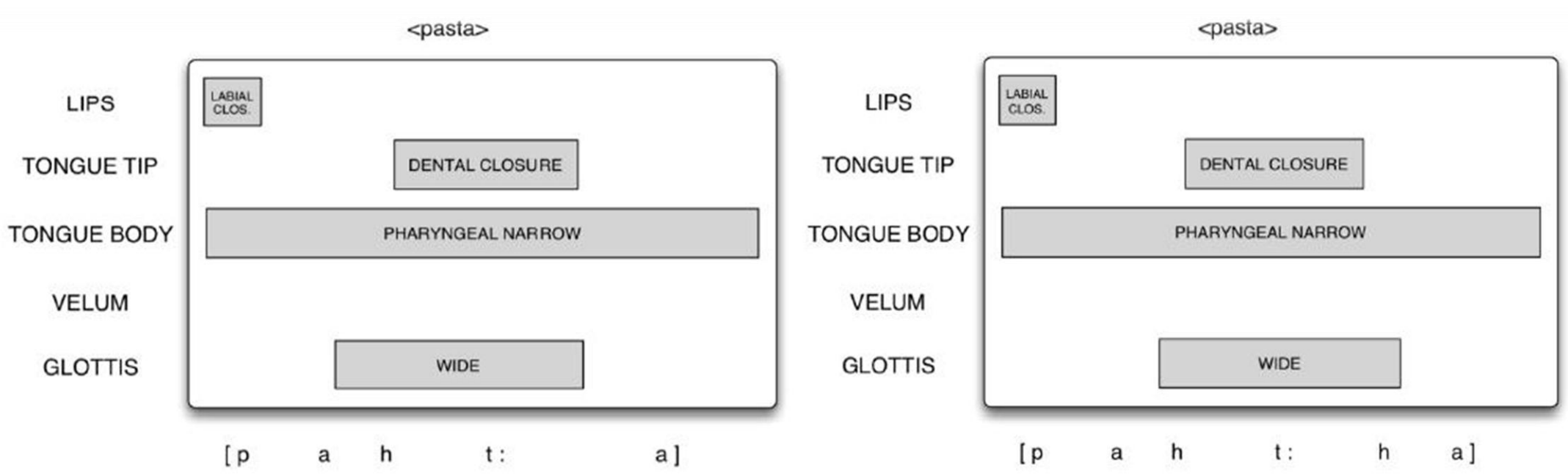
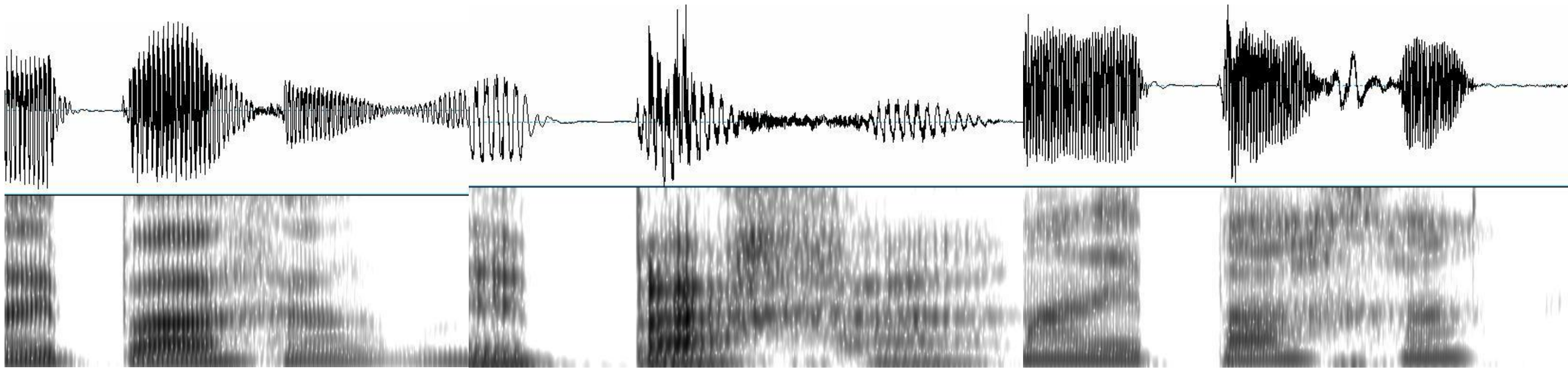


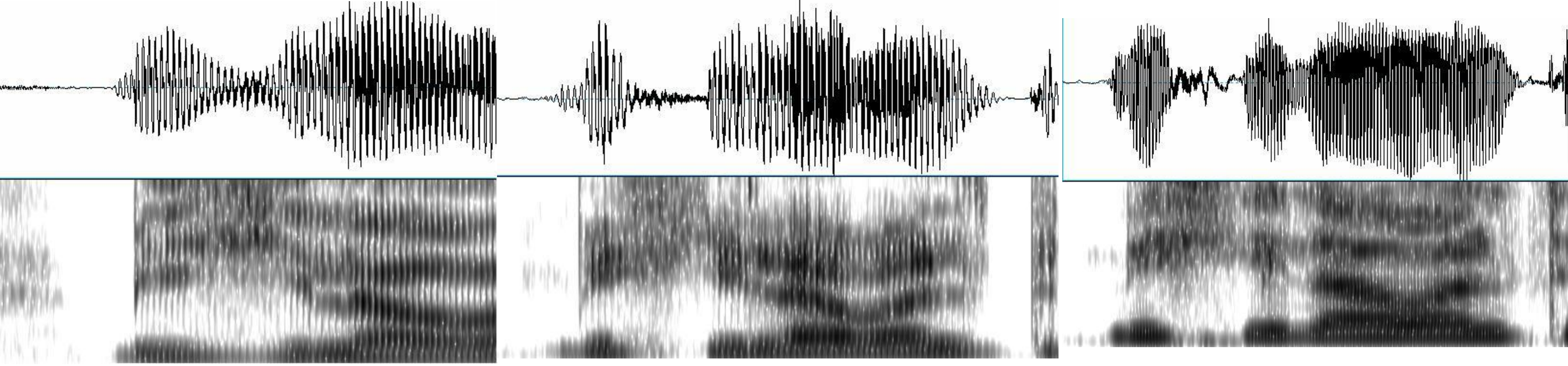
Figure 6 Gestural scores for the word *pasta* in Western Andalusian (left) and Portenjo and Puerto Rican Spanish (right).

(Torreira, 2006, p. 133)

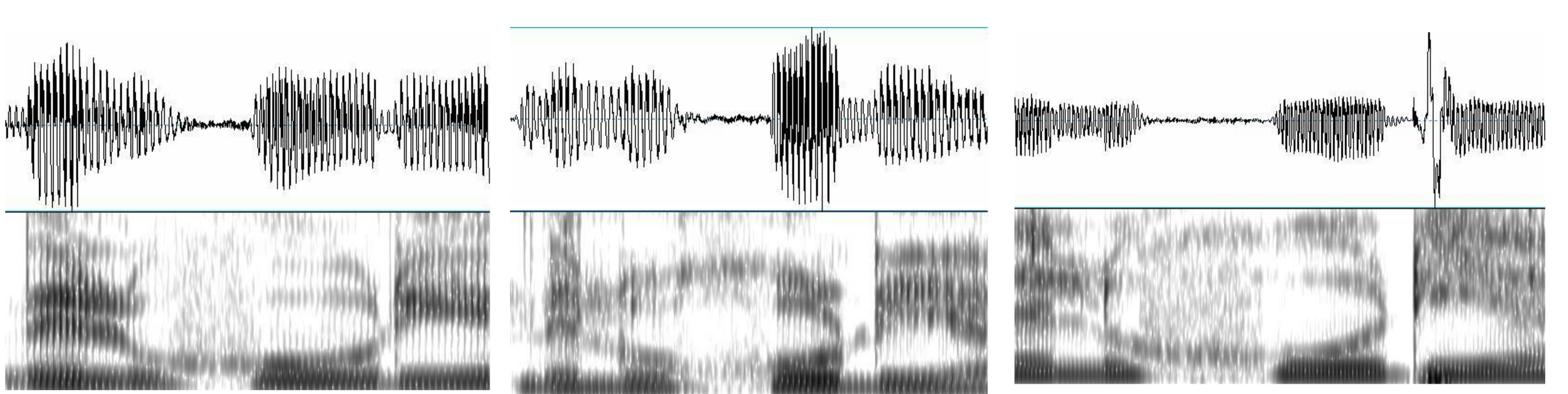
[a]_[a]: caribbean, paraguayan and Madrid's varieties --- *paja* 'straw'



[i]_[i]: caribbean, paraguayan and Madrid's varieties --- *vigilaba* 'he watched'



[u]_[u]: caribbean, paraguayan and Madrid's varieties --- *lujuria* 'luxury'



Spectral moments (Forrest et al., 1988):

	Centre of gravity	Standar deviation	Skewness	Kurtosis
lujurioso	323,27	lujurioso 576,35	originales 5,13	originales 75,38
brujulear	356,39	rebujuaron 600,84	prodigiosos 5,71	relaja 121,28
tu_jubilacion	367,58	brujulear 614,03	sigilosa 6,30	vertiginosamente 145,83
rebujuaron	396,47	tu_jubilacion 646,45	relaja 6,48	paja 151,05
esdrujula	407,48	brujula 661,37	paja 6,87	sigilosa 174,26
brujula	425,94	pajaro 717,67	vertiginosamente 7,39	baja 205,56
pajaro	449,70	esdrujula 750,56	vigilaba 7,42	vigilaba 211,35
lujuria	515,96	lujuria 854,25	baja 7,53	prodigiosos 211,45
baja	637,07	baja 868,49	trabaja 7,86	trabaja 244,45
paja	660,00	paja 936,94	pajaro 10,31	pajaro 315,53
relaja	669,97	trabaja 947,61	lujuria 10,41	lujuria 317,32
trabaja	812,58	relaja 972,23	esdrujula 12,68	esdrujula 399,58
vigilaba	1099,83	vertiginosamente 1305,30	brujula 13,68	brujulear 475,00
vertiginosamente	1180,17	vigilaba 1350,61	brujulear 14,99	brujula 484,88
originales	1237,92	sigilosa 1404,23	tu_jubilacion 15,69	rebujuaron 522,24
prodigiosos	1604,07	originales 1535,67	rebujuaron 15,78	tu_jubilacion 691,76
sigilosa	1724,27	prodigiosos 1558,85	lujurioso 18,98	lujurioso 712,58

Acknowledgements: