Between phonology and morphosyntax:
voicing and spirantisation in the Spanish of Gran Canaria

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1. Introduction

In phonology, morphosyntactic information may play a crucial role in governing the distribution of sounds. As derivation goes beyond individual words, higher-order prosodic and syntactic constituents are formed, providing contexts for the application of those processes that appear to disregard word boundaries. In some languages, discrepancies can be observed between word-internal segmental behaviour and what happens across the word boundary. Other languages will feature similar or identical patterns in both cases. At times, opaque interactions may ensue. For this reason, phonological analysis must be sensitive to the workings of strings larger than a single grammatical constituent (be it stem, word, clitic structure or phrase).

As a Romance language, Spanish allows for the resyllabification of segments across word boundaries, which results in a mismatch between the prosodic and morphological structure of words. At the same time, the process feeds liberty in terms of across-the-board interactions: the status of word-internal segments is no different than that of the edges. Thus, many of the word-internal processes are naturally extended to contexts that contain a word boundary. This is the case of spirantisation. Interestingly, the familiar weakening phenomenon interacts with another process: postvocalic voicing observed in the Spanish of the Canary Islands. As the contexts of the two processes partially overlap, and the input segments belong to the same phonological category of noncontinuants, a synchronic chain effect is produced. This paper investigates the two processes from the perspective of changes in sound distribution and their consequences for the inventory. It also analyses the way in which such overlapping phenomena can be addressed in the framework of Optimality Theory. It is argued that phrase level phonological processes are problematic because they add an additional level of interpretation which involves domains that go beyond phonology *per se*. At the same time, such domains may be an arena, but not necessarily a trigger, of opacity in grammar.

The paper is structured as follows. In section 2, I describe the processes of spirantisation and noncontinuant voicing in the Spanish of Gran Canaria. Section 3 looks at the two phenomena from a broader perspective, taking into account both synchrony and diachrony. Section 4 provides a discussion of the role morphosyntax plays in the functioning of the two processes in the grammar.

This is followed by an OT account of the data in section 5. Section 6 provides a short discussion of the proposed solution and other frameworks. Section 7 presents conclusions.[1]

2. Noncontinuants in Gran Canarian

The Spanish of Canary Islands is characterised by a series of non-conservative features that deviate from northern peninsular varieties. It is often described as similar to the Caribbean dialects due to the generalised *seseo*,[2] *s* aspiration and loss, and relaxed approximant pronunciations, among other characteristics (Alarcos Llorach 1950, Harris 1969, Lapesa 1988). In itself, however, the Canarian dialect is by no means uniform and presents a variability of phonetic and phonological changes depending on the island. The Spanish of Gran Canaria is of particular interest here as it seems to have developed a process of weakening with the potential to cause a phonemic shift in the inventory. The process, referred to here as postvocalic voicing, has not been thoroughly described in the literature. The only source mentioning this change is Oftedal (1986) who studies various types of mutations and provides a phonetic description of intervocalic voicing in stops as produced on Gran Canaria, only briefly mentioning the contextual restrictions of the change. My fieldwork, which includes several speakers of the northern Gran Canarian variety spoken in the Gáldar region, has confirmed Oftedal's findings and revealed an uneven patterning of the process with a related process of spirantisation.[3]

As is well-known, the process of spirantisation in Spanish turns voiced stops into approximants ranging in pronunciaton from quite stable to very weak variants that may be eventually dropped in certain contexts, depending on the dialect.[4] Thus, [b d g] are produced as [β̞ ð̞ ɣ̞], usually in intervocalic position, both inside words and across word boundaries. What is more, the process has extended to almost all contexts that involve continuant sounds to the left of the target stop, hence it has often been analysed as a phonological process involving the spreading of the feature [+continuant] (Harris 1969; Lozano 1979; Mascaró 1984, 1991; Navarro Tomás 1967). As a result, in connected speech, underlying voiced stops are realised as approximants unless they

1 I would like to thank the anonymous reviewers for all their suggestions and comments, as well as to all the people involved in the elaboration of this paper, especially to my speakers (special thanks to Álvaro Carlos Molina Perdomo), to my colleague Joanna Zaleska, and to the participants of the APAP 2015 conference. All mistakes and omissions are solely mine.

2 *Seseo* is the lack of distinction between the voiceless dental fricative and the voiceless alveolar fricative – a feature typical of some Andalusian dialects and of Latin American Spanish (Lapesa 1988, Lipski 1996).

3 By related I mean a process that concerns sounds belonging to the same category in the phonemic inventory of Spanish, namely stops.

4 There has been some debate in recent years concerning the products of spirantisation. According to a substantial number of accounts, approximants, and not spirants, are produced in post-continuant position in Spanish. This is definitely the case of the dialect analysed here. I will keep using the familiar term 'spirantisation', however, when referring to this process as it is widely used and well understood in Romance literature. (see Martínez Celdrán 1991 for a phonetic characterisation of these sounds, also cf. Widdison 1987).

stand after a pause or a [-continuant] sound (i.e. a nasal or *l* in the case of /d/).5 Examples of spirantised segments and their blocking environments are presented in (1).

(1) Spirantisation in Spanish (non-conservative varieties)6

a. intervocalic position

lobo	[lóβ̞o]	'wolf'
está bien	[ehtaβ̞jén]	'it's OK'
codo	[kóð̞o]	'elbow'
no me digas	[nomeð̞íɣ̞ah]	'come on!'
mago	[máɣ̞o]	'magician'
una goma	[unaɣ̞óma]	'a tyre'

b. post-consonantal position

olvidar	[olβ̞ið̞áɾ]	'to forget'
es bueno	[ehβ̞wéno]	'he/she is good'
desde	[déhð̞e]	'since/from'
los dueños	[lohð̞wéɲoh]	'the owners'
rasgo	[rázɣ̞o]	'feature'
el gato	[elɣ̞áto]	'the cat'

c. after a pause

#vago	[**b**áɣ̞o]	'vague'
#domo	[**d**ómo]	'dome'
#goma	[**g**óma]	'tyre'

d. after a homorganic nasal

involucrado	[im**b**olukráð̞o]	'involved'
andar	[an**d**áɾ]	'to walk'
el Congo	[elkóŋ**g**o]	'Congo'

The examples presented in (1) demonstrate that spirantisation is an advanced phrase-level process sensitive to the feature [+continuant] rather than to intervocalic position only. The stops spirantise even when preceded by a consonant, as long as this consonant is [+continuant].7 Nasal sounds, which are [-continuant], block spirantisation. The lateral sound acts as a blocker only before the coronal stop because the airflow is stopped precisely at the alveoles and not elsewhere (e.g. by the velum or lips, as in the case of *l* + *g* and *l* + *b*). Thus, the word *aldea* 'village' is pronounced [aldéa] (see Mascaró 1991 for such treatment of the lateral, also cf. Eddington 2011 for phonetic evidence countering the special treatment of *ld* clusters).

5 Such a restricted number of sounds to the left is due to the phonotactics of Spanish. Should there be any noncontinuants in the preceding syllable, they are usually spirantised or otherwise weakened, which feeds spirantisation. In dialects which block such weakening or make it optional, spirantisation is blocked, which is in line with the generalisation that the feature [+continuant] triggers weakening. There exist other accounts of Spanish spirantisation that postulate other triggers of the change or question the continuancy of *l* before /b g/. See Mascaró (1991) for a thorough analysis of these facts. Also, confer Baković (1995) and Barlow (2003) who postulate underlying approximants. In my analysis, I assume the traditional view of the process as one turning underlying stops into approximants, following Mascaró, Harris and others.

6 I assume that *s* aspiration applies in coda position, as in the Spanish of Canary Islands. I disregard *s* dropping as it is an optional process.

7 Although some gradiency can be observed after fricatives in phonetic terms, at least in some dialects: e.g. in Honduran (Amastae 1989), in Costa Rican and Peninsular Spanish (Carrasco and Hualde 2009).

Spirantisation has been analysed by linguists as an instance of lenition, i.e. sound weakening whereby increased aperture facilitates articulation, muscles become more relaxed and the resultant sounds lose tenseness. In Browman and Goldstein´s terms (1992), articulatory gestures are simplified in casual speech both in terms of magnitude (contact, muscle constriction) and duration (temporal overlap). Such consonantal changes are usually triggered by environments conducive to weakening, e.g. intervocalic position (Escure 1977; Foley 1977; Martinet 1952) and the neighbourhood of continuant sounds. Weaker stricture and shorter duration of the closure in stops lead to greater gestural overlap, hence greater influence of the preceding sound (vowel or other segment) on the stop in question. This results in the loss of closure (approximantisation of voiced noncontinuants) and voicing (of voiceless noncontinuants). The latter process is due to the fact that the vocal folds do not have to stop vibrating to be later reset in motion (Westbury and Keating 1986). In acoustic terms, the voicing bar is present throughout the articulation of the sound and its surrounding vowels.

A typical feature of leniting changes is that they vary in advancement and include various pronunciations, all heading toward total sound disappearance in diachronic terms. This is usually captured by theories positing lenition trajectories, according to which voiceless stops become voiced, voiced stops become spirants or approximants, spirants debuccalise and, finally, all consonantal features are lost – elision takes place (Escure 1977; Lass 1984; Lavoie 1996; Trask 2000:190).8 Given the fact that Spanish intervocalic approximants tend to be dropped in certain contexts (usually at the end of a word and in morphologically predictable positions), e.g. in *cantaba* 'he/she/I was singing' [kantá:] or *he hablado* 'I have talked' [eaβ̞láo], there is reason to believe that Spanish spirantisation is a leniting change in transition toward voiced stop elision.

It is worth noting at this point that spirantisation has caused a minor gap in the Spanish phonemic system. The distribution of voiced stops is highly limited. They appear post-pausally and after homorganic non-continuants only. Meanwhile, approximants are not particularly stable – they differ in the degree of aperture, from spirant-like variants in some environments to weak approximants intervocalically, and tend to disappear completely in more and more extended contexts. This is of consequence for the whole of the inventory.

Against this background, the weakening of voiceless stops leads to an interesting case of phonemic overlap in the language. The Spanish of Gáldar presents voiceless stop voicing in environments that partially overlap with spirantisation. This is shown in (2).

8 There is an abundance of literature on lenition that cannot be cited here for reasons of space. For a review of weakening processes and their interpretation in terms of effort minimisation see e.g. Kirchner (1998).

(2) Stop voicing[9]

a. inside words

apasionado	[a**b**asjonáo̯]	'enthusiastic'
fonética	[foné**d**iga]	'phonetics'
frecuencia	[fre**g**wénsja]	'frequency'

b. across word boundaries

tengo una prima	[téŋgouna**b**ɾíma]	'I have a cousin'
juntos y tal	[xúntosi**d**ál]	'together and so on'
otra clase de	[otɾa**g**láseo̯e]	'other type of'

As can be observed above, the process of voicing applies both inside words and across word boundaries. It appears to be postvocalic: consonants on the right-hand side do not block the process. Consonants on the left side, however, do block it: *me desperté* 'I woke up' is produced [meo̯eh**p**eɾté], with no voicing. The same applies to *actualidad* 'the present' [ak**t**ualiðá], *el triple* 'three times' [el**t**ɾíple] or *super kómodo* 'very convenient' [subeɾ**k**ómoo̯o]. Thus, there is an asymmetry between the left-hand and the right-hand environments. This is the main difference between the processes of voicing and spirantisation in this dialect. Otherwise the two seem to overlap:

(3) Postvocalic voicing: blocking environments

a. after a pause

#pago	[**p**áɣo]	'I pay'
#tomo	[**t**ómo]	'I take'
#coma	[**k**óma]	'eat' subj.

b. after a homorganic nasal

un pueblo	[um**p**wéβ̞lo]	'a village'
entonces	[en**t**ónseh]	'so / then'
en un banko	[enumbáŋ**k**o]	'in a bank'

Although postvocalic voicing and spirantisation are not in direct interaction, the two processes affect sounds from the same group, namely obstruent noncontinuants. Also, the distributions of the resultant sounds partially overlap and, given the fact that both processes involve some kind of

9 All examples are taken from the recordings I made in 2014 and 2015 with my speakers.

weakening, they should be analysed together, purportedly as a part of the same, generalised lenition process involving Spanish. Note that in those varieties of Spanish that do not present postvocalic voicing, spirantisation is responsible for the uneven distribution of voiced and voiceless stops. Because approximants are produced instead of voiced stops in most environments, the contexts of occurence of the latter sounds are highly limited. Nevertheless, sound confusion or phonemic shift is not to be expected. This is exemplified by the Peninsular Spanish varieties whose distribution of stops and approximants is presented in the table below, alongside the distribution of stops and approximants in the Canarian variety.

(4) Distribution of stops and approximants – Peninsular varieties[10] and Gran Canarian

Peninsular			**Gran Canaria**		
[p t k]	**[b d g]**	**[β̞ ð̞ ɣ̞]**	**[p t k]**	**[b d g]**	**[β̞ ð̞ ɣ̞]**
#_	**#_**		**#_**	**#_**	
N_V	**N_V**		**N_V**	**N_V**	
S_V		**S_V**	**S_V**		**S_V**
V_V		**V_V**	**C_V**		**C_V**
V_S/N		**V_S/N**		**V_V**	**V_V**
C_V		**C_V**		**V_S/N**	**V_S/N**

In (4), N stands for a nasal, S stands for a sonorant consonant other than nasal, C stands for a continuant obstruent and V stands for a vowel. It can be observed that in the Peninsular varieties voiceless stops contrast with voiced approximants in most contexts (after sonorants other than nasals and after continuant obstruents), whereas the voiced-voiceless contrast is preserved at the beginning of a word and after a nasal.[11] This latter set of environments is definitely more restricted.

In the Spanish of Gran Canaria, however, the distribution of stops and approximants is different, and the contrastive feature is further shifted toward continuancy rather than voicing. As illustrated above, Gran Canarian Spanish features a threefold contrast: one between voiced and voiceless stops, one between voiceless stops and voiced approximants, and the third between voiced stops and voiced approximants. The first two seem to be quite robust in both phonetic and

10 I refer to the northern/central standard and not Andalusian varieties. Note, however, that intervocalic voicing has recently been reported as a phonetic process in Spain (Hualde, Simonet and Nadeu 2011).

11 If no spirantisation or other type of weakening that turns noncontinuants to continuants in coda position occurs in a given variety, coda obstruents behave like nasals and block spirantisation, e.g. the word *abdicar* 'abdicate' can be produced with a spirant or approximant in the coda of the first syllable, which feeds spirantisation: [aβðikaɾ]. Alternatively, it can have no coda weakening in careful speech and in some conservative Spanish varieties, thus no spirantisation applies in either of the stops: [abdikaɾ].

phonological terms. Note, however, that phonemic overlap (Bloch 1941) can be observed as a result: [b d g] can be allophones of both /p t k/ and /b d g/, thus two different sets of phonemes. By comparison, the third contrast is rather weak – the difference between voiced stops and voiced approximants is usually not phonemic. Whether it is perceptually distinguishable requires further research, yet it may be speculated that some issues with the auditory processing of minimal pairs featuring this contrast may arise among speakers. Given that both voicing and spirantisation are not sensitive to word boundaries, i.e. they apply all the way, the number of possible minimal pairs in the language substantially rises. Some examples are provided below.

(5) Weak minimal pairs

la cama	[la**g**áma]	'the bed'	la gama	[la˕̞áma]	'the range'
cuatro	[kwá**d**ɾo]	'four'	cuadro	[kwáð̞ɾo]	'painting'
paca	[pá**g**a]	'pack/alpaca'	paga	[pá˕̞a]	'pay', imperative
literatura	[lideɾa**d**úɾa]	'literature'	litera dura	[lideɾað̞úɾa]	'hard bed'
grato	[gɾá**d**o]	'pleasant'	grado	[gɾáð̞o]	'degree'
la poca	[la**b**óka]	'the little'	la boca	[laβ̞óka]	'the mouth'

Word pairs presented above feature weak consonantal contrasts dependent on one feature only: continuancy. Both [b d g] and [β̞ ð̞ ˕̞] are voiced and the difference between them is not particularly perceptible. First, the approximants are not fricatives – they present weak constriction and no friction occurs during their production. In weak intervocalic variants usually no occlusion occurs at all, as confirmed by the acoustic analysis of my data in Praat (Boersma & Weenink 2015) and by other studies on the subject, e.g. Eddington (2011). The degree of constriction can be measured by observing the intensity trough of the approximant compared to the intensity peak of the following vowel (the smaller the difference, the weaker, i.e. more vowel-like the approximant, and conversely – the higher the approximant-vowel intensity jump, the more constriction on the consonant). Since the constriction is not narrow enough for significant pressure build-up and turbulent airflow to be produced during the articulation of the approximants, the perceptual contrast between approximants and stops is diminished. The key cues for contrasting these sounds are therefore limited to intensity changes and formant transitions between the consonant and the following vowel, which inform us both of the degree of constriction and of the similarity in the place of articulation (Ladefoged 1962, 1964).[12]

12 It is worth noting that some languages do contrast fricative and approximant pronunciations, as reported by Ladefoged in his research on West African languages (1964: 25-27). Whether the same is true for Spanish requires

Apart from purely phonetic detail and phonology, functional considerations supposedly play a role in contrasting words and phrases of the type presented in (5). While individual words can be more difficult to contrast, the more syntax, and hence context comes into play, the more comprehensible a given piece of language. Thus, the neighbouring grammatical items (affixes, clitics, modifiers and lexical items) compensate for at least some part of the confusability and help disambiguate speech items. Consequently, from the functional perspective, even if the pairs [b d g – β̞ ð̞ ɣ̞] are not easily discerned perceptually, contextual meaning and grammatical information will resolve potential problems. The non-robustness of the contrast resulting from the existence of voicing and spirantisation in the same dialect may be therefore less of a problem than initially assumed. Nevertheless, it should not be ignored given the post-lexical status of the two processes and the wide range of possibly confusable items in spoken productions. It would be worthwhile to investigate the issue by means of a perception study conducted among the native speakers of the Gran Canarian dialect. This, however, goes beyong the scope of the present paper and cannot be resolved at this point.

3. Gran Canarian weakening processes as a chain shift

The current contrast between the two sets of stops and the set of voiced approximants in Gran Canarian shows a drive toward a shift in the contrastive category. Note that the feature that contrasts these sounds in the vast majority of contexts is [+/- continuant] and not [+/- voice]. Furthermore, it can be expected that the leniting changes will continue in the direction of eliminating approximants completely and further feeding the continuancy contrast. For instance, voiced stops produced by postvocalic voicing might further weaken to approximants and thus merge with the products of spirantisation. This could be fed by confusion produced by the weak contrast between voiced stops and voiced approximants (e.g. by undershoot). Alternatively, approximants might start to disappear, leaving a gap for voiced stops to spirantise in postvocalic position. As approximants do tend to elide in intervocalic position in rapid speech, especially in certain predictable word endings, such as *-aba*, *-ado*, it may be that the change will generalise and/or extend to other contexts. This would trigger a drag chain shift by which voiceless stops would be produced as voiced approximants in postvocalic position and as [p t k] elsewhere. Naturally, the contexts of each process might also be extended, altering this projection. Most importantly, however, it should be noted that the changes observed in the Gran Canarian variety of Spanish present a chain effect. Voiced stops become approximants and their voiceless counterparts are voiced in partially overlapping environments, yet underlying voiceless stops do not undergo further lenition. If they did, they would merge with the underlying

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further study.

voiced stops, yet this would give rise to lexical confusion. The change goes one category at a time, or – in other words – refers to one feature only. A phonological analysis of these facts must assume an order of events (voicing must apply second to counterfeed spirantisation). This is illustrated in (6).

(6) Feeding and counterfeeding orders

a. feeding order results in merger (unattested)

t → d, d → ð̣	coto 'property'	[kóto] → [kódo] → *[kóð̣o]
	codo 'elbow'	[kódo] → [kódo] → [kóð̣o]

b. counterfeeding order blocks merger (attested)

d → ð̣, t → d	coto 'property'	[kóto] → [kóto] → [kódo]
	codo 'elbow'	[kódo] → [kóð̣o]→ [kóð̣o]

Interestingly, the processes described here very much resemble historical changes in Romance languages. In French, lenition started with the spirantisation of voiced stops, followed by the voicing of obstruents, and the resultant sounds were then spirantised and lost completely (except [β] > [v]). The context for voicing was exactly the same as in modern Canarian: *aprilem* > *avril* 'April', *fratre* > *frère* 'brother', but *rumpere* > *rompre* 'to break' (Bichakjian 1972).

In Spanish, a drag chain can be observed in diachrony, as reported by Baker (2007).[13] In the evolution from Latin to Spanish, intevocalic geminates were simplified (e.g. *cuppa* > *copa* 'cup'). At the same time, voiceless stops were voiced in the same position (*lupu* > *lobo* 'wolf'), which helped avoid confusion and prevented sound merger. This, in turn, was licensed by spirantisation in the voiced singleton set (*caballu* > *ca[β]allo* 'horse', Lloyd 1987, Harris-Northhall 1990). Thus, a chain shift ocurred in the history of Spanish to avoid the loss of phonemic contrasts (Alarcos Llorach 1965, and recently Baker 2007). It is also worth noting that a group of Latin words with intevocalic voiced stops lost them completely, probably in the course of a second wave of weakening (e.g.

13 Baker suggests that a push chain (posited e.g. by Alarcos Llorach, 1965) would be counterintuitive and not compatible with sound change. The direction and temporal distribution of the changes forming part of the drag chain, however, are difficult to determine. No direct observations are available as to whether the changes took place more or less at the same time or one after another, interrupted by periods of coexistence of homophones. Spanish was in the period of formation when these changes ocurred. Interestingly, Latin voiced geminates did merge with singletons, but no merger seems to have ocurred in the case of Latin voiceless geminates and voiced/voiceless stops, suggesting that the chain effect is a legitimate hypothesis.

credo > *creo* 'I think'), while other cases persisted (*caballo, augustus* > a[ɣ̞]osto 'August'). The historical outputs of voicing, on the other hand, are spirantised in modern Spanish (*lupum* > *lobo* > modern Spanish [lóβo̞]) and, as already mentioned, lost in rapid speech in many dialects (*hablaba* [aβ̞lá:] 'he/she talked'). Needless to say, the analogy is not complete given the fact that the environments of the lenition changes in question have been extended to other positions and, most importantly, beyond the word-internal position in modern Spanish. Thus, in connected speech, the processes of voicing and spirantisation have gained in productivity, perhaps accelerating lenition.

4. The role of the morphosyntax

As exemplified by the Spanish data presented in this paper, syntax plays a crucial role in facilitating the application of both spirantisation and voicing. At the phrase level, crucial information concerning the context is supplied. Thus, the same word might have a different surface structure when produced in isolation or in the neighbourhood of words ending and beginning with sounds neutral to the two weakening processes than when preceded by a sound that triggers them. As a result, two phonologies emerge: one belonging straightforwardly to the word-internal structure, and one going beyond it. To give an example, while *fonética* 'phonetics' can be pronounced in the same way regardless of the context (there are no alternations), a word beginning with a voiceless stop will have two different surface representations, depending on what precedes the sound in question (*[p]laya* 'beach' vs. *la [b]laya* 'the beach').[14]

The fact that spirantisation and voicing are invoked at the phonology-morphosyntax interface suggests that they are coarticulatory in nature. This is confirmed by the fact that the two processes are sensitive to pauses in the speech signal. While syllable to syllable transitions across words are very smooth (resyllabification), with no glottal stop insertions or any other prosodic boundaries intervening, intonational pauses marking emphasis, hesitation or clarification, as well as meaningful unit boundaries (phrases) do affect the end pronunciations. Thus, after a pause both voicing and spirantisation are blocked. This observation seems to confirm Mathews' (1994) claim that resyllabification, which facilitates both phrasal processes, applies only up to the end of an intonational phrase. Given the fact that intonational peaks vary depending on the employed pauses and information put in focus (Quilis 1993), prominence changes with the restructuring of intonational units, which may be of consequence for phonological processes (see Nespor & Vogel 1986: 212). This is what happens in Gran Canarian. Usually, when an intonational phrase is

14 Note, however, that we cannot postulate underlying voiced stops in postvocalic position inside words (e.g. in *fonética* or *máquina*). Given the active process of spirantisation, these segments would become approximants, which is not the case. Thus, voiceless stops have to be underlying even word-internally where alternations are not observed.

shortened by a pause, the underlying segment appears on the surface.[15] If the speech signal is uninterrupted, lenition ensues. Hence the coarticulatory nature of the studied phenomena: both voicing and spirantisation have to do with the way articulators overlap in time and space across connected speech pronunciations. The shorter the transitions between voiced and voiceless articulations, and between the vocalic and consonantal gestures in the oral tract, the less marked the formant peaks and troughs in the acoustic signal. At the same time, the changes produced as a result of voicing and spirantisation are contrastive (they produce minimal pairs) and show alternations. Therefore, they must be accommodated by phonology. The question is what is the domain of application of the two phenomena discussed in this paper.

As stated above, voicing and spirantisation are post-lexical in nature: they are variable, they produce allophones, and tend to neutralise rather than enhance contrasts. They are also facilitated by by syntax. This means that they apply in domains larger than words (phrases) from the point of view of both morphology and syntax. In phonological terms, the prosodic domain of application involves combinations of prosodic words, as well as prefixed words and clitic structures (articles and other bound morphemes attached to lexical items that form prosodic words together with the base). Thus, I assume that the domain of application of voicing and spirantisation in Canarian is the phonological phrase. I discuss the ways in which this may be accommodated in OT below.

Within the framework of Optimality Theory, there are two ways of representing morphosyntax-phonology relations. The first consists in positing constraints referring to syntactic domains (e.g. minimal phrase) and other constituents (prosodic word, phonological phrase), as well as alignment constraints requiring that edges of a certain (morpho-)syntactic category coincide with the edges of the corresponding phonological categories. Reference to prosodic domains alludes to syntax indirectly (e.g. to the different behaviour of prefixed or cliticised structures), while reference to surface syntactic domains is straightforward and, when formulated in terms of markedness, assumes a one-way input-output mapping, and hence unidirectionality of the syntax-phonology interface (as argued by Pullum & Zwicky 1988 and others). Alignment, on the other hand, involves output mappings on both sides of the interface (e.g. by requiring that the left edge of a phrase correspond to the left edge of a syllable, etc.). Torres-Tamarit's (2012) prosodic parsing model proposed within the framework of Harmonic Serialism (McCarthy 2008, 2010) is an instantiation of an alignment-based approach to phrase-level phonology. Crucially, the morphological component builds morphological structures before phonology is involved. Roots and affixes are arranged hierarchically, and the morphosyntax-prosody mapping is then effected in phonological evaluaion via two types of constraints: alignment and parsing. Prosodic structures are erected serially, in a

15 This applies not only to voicing and spirantization, but also other phrase-level phenomena, such as /s/ aspiration or word-final consonant elision.

stepwise fashion (as per the Harmonic Serialist model) and subject to morphophonological control by several levels of stem alignment. Crucially, phrase-level processes of the type discussed here take place once words are concatenated into phrases by the workings of a constraint mandating that prosodic words be parsed into phonological phrases. Only then can two or more subsequent words be evaluated in parallel.

Another way of representing the syntax-phonology interface is architectural in nature. Within the framework of Optimality Theory, the standard model is mute as to the length of the input.[16] The natural interpretation of an 'input' was inherited from previous frameworks using 'underlying representations', and those typically refer to single lexical items. Nevertheless, there is no explicit mention of the type of strings to be analysed in OT, hence any number of words can be posited and then evaluated against the constraint ranking, at least in theory.[17] Soon after the emergence of the theory, however, linguists started to notice that when no explicit boundaries between morphemes and words are distinguished, opaque interactions may ensue (e.g. Kenstowicz 1996; Kirchner 1996; Kiparsky 1999, 2013; Bermúdez-Otero 2003). In other words, morphological and higher order prosodic boundaries can feed or block certain phonological processes, which is especially problematic for a strictly parallel model that makes no distinction between such constituents. Constraint types, such as alignment or anchoring, do not necessarily solve the problem. Other solutions had to be therefore put forward to represent morphology-phonology and syntax-phonology interactions. The key assumption of such models is to recognise the need for a separate evaluation level beyond individual words. This is achieved by Stratal OT (Kiparsky 1999, Bermúdez-Otero 2003, forthcoming), which posits three evaluation levels (strata). Crucially, the third of them is informed by morphosyntax and involves processes that apply both inside words and across word boundaries. Numerous *sandhi* phenomena have been reported as support for this key distinction (e.g. linking *r* in English, Bermúdez-Otero 2011; dark *l*, Turton 2012; liaison in French, Tranel 1996; *s* voicing in Ecuador, Strycharczuk 2012; *s* aspiration and loss in Spanish, Colina 2002, Broś 2012; vowel harmony in Turkish, Kirchner 1993; tone sandhi in Chinese, Zhang 2014; to name just a few).

Another approach to tackling events at the interface is proposed by output-output correspondence (e.g. Benua 1995, Kenstowicz 1996), which requires uniformity across members of the same paradigm: morphologically related words. In this model, surface forms are compared and evaluated against faithfulness constraints that penalise lack of featural identity between affixed or otherwise derived words with the same root. In this way morphological relations between words are

16 Although there has been some debate on input length in the context of restricting the theory and the exponential growth of the number of candidates with the growing number of input segments.

17 Conceptually, this is effected by means of prosodic parsing: syllables are parsed into feet, feet into phonological words, phonological words into phrases. The problem is that no such parsing is available at the level of the input.

rightly captured. Access to syntax is an added value: in languages which allow phonological processes to apply across word boundaries, output-output constraints may be evoked to ensure that no discrepancy occurs between the different contextual instantiations of the same morpheme. In the case of Spanish, for instance, where resyllabification takes place across word boundaries, the familiar process of coda *s* weakening overapplies in phrase phonology:[18] *mes* 'month' [méh], *mes entero* 'the whole month' [me.hen.té.ro]. Although in the latter case the *s* occupies the onset and not the coda position, the process applies, which can be explained in terms of output-output correspondence: the word *mes* needs to have the same surface representation across all contexts (e.g. Kenstowicz 1996, cf. Broś 2015).

A problem arises, however, when the influence of syntax is indirect. In the Gran Canarian case, the processes of voicing and spirantisation are interlaced. Although both are facilitated by syntax, this is only true for a subset of inputs – both apply inside words as well as across word boundaries, and only the latter case has anything to do with phrase parsing. Syntax is therefore relevant for extending the scope and number of changes and bounding them contextually beyond the word (e.g. the word *playa* 'beach' has a [p] while the sequence *buena playa* 'good beach' has a [b]). It is also responsible for blocking: reference to a post-pausal position is made in blocking word-initial voicing and spirantisation (#). At the same time, an opaque interaction ensues between the two processes, but cannot be attributed to the presence or absence of a morpheme or word boundary. Although voicing produces voiced stops, these output segments do not undergo spirantisation despite the fact that the structural description of the putative rule [spirantise] is met. Both processes are sensitive to the same postvocalic context, yet one of them underapplies. Since this cannot be explained in terms of level of application (stratum) or bracketing, or any kind of paradigmatic discrepancy, for that matter, nor by prosodic structure alone, Optimality Theory finds it difficult to represent the observed phenomena formally. This is illustrated in the next section.

5. OT account of the voicing-spirantisation interaction

As argued in the previous sections, the observed processes of voicing and spirantisation are problematic because their outputs partially overlap and a chain shift effect is observed, but no morphological or prosodic (in the sense of 'structural') motivation can be found. The two processes apply freely both inside words (lexical domain, prosodic word) and across word boundaries (post-lexical domain, phonological phrase) as long as their triggering environments are present (left-hand V and [+continuant], respectively). Let us first take each of them separately and see how they are evaluated under OT. In order to account for postvocalic voicing, we need to posit two crucial

18 In some dialects, e.g. Canary Islands or the Caribbean.

constraints: *V[-cont, -voice], which states that postvocalic voiceless noncontinuants are marked and should be avoided, and IDENT[voice] – a faithfulness constraint that penalises input-output changes in the feature [voice]. Crucially, markedness needs to outrank faithfulness to ensure voicing. Such an approach is dictated by the need to exclude all environments in which the process is not attested (left-hand blockers).[19]

(7) Evaluation of the phrase *una prima* 'a cousin'[20]

una + prima	*V [-cont, -voice]	IDENT[voice]
a. u.na.pɾí.ma	*!	
b. ☞u.na.bɾí.ma		*

Spirantisation, on the other hand, requires a change of the feature [continuant] and hence a violation of the constraint IDENT[continuant], crucially ranked below *[+cont][-cont, -nasal, +voice], which bans noncontinuants after continuant sounds. Here, the left-hand environment is extended to all sounds except noncontinuants, ensuring feature adjacency (in accordance with the observation that spirantisation is sensitive precisely to this feature and not only to vocalic contexts). The evaluation is as follows.

(8) Evaluation of the phrase *una broma* 'a joke'

una + broma	*[+cont] [-cont, -nasal, +voice]	IDENT[continuant]
a. u.na.bɾó.ma	*!	
b. ☞u.na.β̞ɾó.ma		*

When the two rankings are combined, however, the evaluation becomes problematic. With both spirantisation (unfaithfulness to the feature continuant) and voicing (unfaithfulness to the feature voice) allowed in the language, there is no way of preventing voiceless stops from going all the way to approximants in a parallel, constraint-based mapping.

(9) Failed evaluation of the phrase *una prima* 'a cousin' (all constraints considered)

19 I use positional markedness here, although the same processes could be reanalysed using positional faithfulness, and therefore by changing the focus. The end result would be the same (see Broś 2015 for a comparison of the two).

20 The phrases used in this and subsequent evaluations contain articles, which might be interpreted as special status items in clitic position. Note, however, that any adjective, adverb, noun or other category would trigger the same phonological changes in connected speech in Spanish. I use short examples to ensure expository clarity in the tableaux.

una + prima	*V [-cont, -voice]	*[+cont] [-cont, -nasal, +voice]	IDENT[cont]	IDENT[voice]
a. u.na.pɾí.ma	*!			
b.☹ u.na.bɾí.ma		*!		*
c.☜ u.na.β̞ɾí.ma			*	*

In (9), the desired candidate (9b) does not surface as optimal due to its violation of the high-ranked constraint banning nonadjacency in the feature [continuant]. Given the fact that the vowel context is a subset of the possible continuant sounds that constitute the context relevant for spirantisation, the more specific *V [-cont, -voice] constraint should be ranked higher than *[+cont] [-cont, -nasal, +voice]. At the same time, the ranking of IDENT[cont] with respect to IDENT[voice] cannot be determined based on the analysed data, hence the two remain mutually unranked (fine line), although lower than the two markedness constraints. Thus, given the fact that violating the two lowest-ranked constraints is less harmful than violating any of the higher-ranked ones, there is no way of preventing candidate (9c) from winning the evaluation. Nevertheless, such one fell swoop candidates are not attested.

Note that the problem does not lie in the overlap or juncture of any domains. A solution might be sought in Stratal OT which allows for constraint reranking. Nevertheless, both processes are phrase-level and hence neither of them can be applied at an earlier stratum than the other. If both are observed at the same stratum, no constraint reranking is possible and candidate (9c) will emerge as winner anyway. If we try to attribute the differences in voicing and spirantisation outputs to prosodic structure, we fail again (cf. minimal pairs in (5)). Thus, Harmonic Serialism will be equally unsuccessful: although it allows for a stepwise approach, there is no constraint reranking or any other device that would require single identity violation. The only option would be to introduce a constraint that explicitly requires faithfulness to the input at every stage of the derivation, i.e. a different type of faithfulness constraints that refer directly to the UR and not any intermediate input. The effect would be to ban underlying voiceless stops from spirantising. This would improve both on the HS and on the Stratal OT analyses. The limitations concerning the nature and number of such constraints allowed in the grammar are a major concern if such a solution is adopted, however. Besides, such a reformulation of faithfulness resembles a descriptive rule-based solution rather than an outcome that comes independently from the generalisations concerning the distribution of both sets of stops in the dialect. As for the output-output OT solution, paradigm uniformity is not the effect we want to achieve with these data. Words such as *prima* or *broma* need to have **different** surface forms depending on the context: [pɾí.ma] after a pause or a consonant and [bɾí.ma] after a vowel, [bɾó.ma] after a pause or [m] and [β̞ɾó.ma] after any continuant sound. Consequently, a solution must be sought elsewhere.

One of the ways in which synchronic chains of the Canarian type have been dealt with in OT is by applying the model of constraint conjunction (Kirchner 1996; Moreton & Smolensky 2002; Łubowicz 2002) which makes it possible to distinguish between different mappings in quantitative terms. According to Kirchner, chain shifts of the A → B → C type illustrate a ban on multiple feature changes. Typically, input A changes in some way to give output B and original B changes some part of its phonological makeup to produce C, but the two changes involve different features, and hence different faithfulness violations. A direct A → C mapping is not sanctioned as it involves a change in two features in order to satisfy one and the same markedness constraint. This cumulativity effect is achieved by combining the two crucial faithfulness constraints under a joint name and incorporating it in the ranking. In the case of Gran Canarian Spanish, voiceless stops are voiced and hence violate the IDENT[voice] constraint, while voiced stops are spirantised, violating the IDENT[continuant] constraint. Violating the two identity contraints at the same time, however, is fatal – no such candidates are observable outputs in the dialect.

Note that crucially, in tableau (9), candidate (9c) has a superflous violation of the second IDENT constraint, which is nonetheless irrelevant for the evaluation under the current ranking. With the use of constraint conjunction, however, we can capture this crucial difference by conjoining the two IDENT constraints. This is motivated by the fact that both represent featural changes pertinent to the realm of lenition that yield different stages of advancement in accordance with the lenition scales mentioned in section 2. As the generalised label of lenition encompasses processes that penalise oral constriction, voicing and aperture (continuancy) are promoted in sonorant contexts, but not both at the same time. The conjoined constraint IDENT[voice] & IDENT[cont] thus prevents more than one change in the same segment, as illustrated below.

(10) Evaluation of the phrase *una prima* 'a cousin' (constraint conjunction)

una + prima	*V [-cont, -voice]	IDENT[voice] & IDENT[cont]	*[+cont] [-cont, -nasal, +voice]	IDENT [cont]	IDENT[voice]
a. u.na.pɾí.ma	*!				
b. ☞u.na.bɾí.ma			*		*
c. u.na.β̞ɾí.ma		*!		*	*

In (10), the ranking of the conjoined constraint above *[+cont] [-cont, -nasal, +voice] ensures that underlying voiceless stops do not spirantise. The constraint militates against multiple feature changes. Candidate (10c) is thus eliminated. The voicing candidate (10b) surfaces as optimal. The added value of such an analysis is the possible demotion of the conjoined constraint, in which case

merger would take place. Given the historical changes in Romance and other languages, such a situation is possible. The constraint conjunction framework is thus legitimate as it provides a neat analysis of the observed facts and at the same time grasps the generalisation about lenition and sound change in general.[21]

6. Discussion and comparison with other frameworks

As argued in the previous section, synchronic chain effects cannot be accounted for by means of a standard OT model as they produce diverging surface forms inexplicable by constraint ranking. Instead, a minor improvement on the classical OT approach can be adopted in the form of constraint conjunction. The explanatory power behind such a solution is that there seems to be a ban on cumulative faithfulness violations that lead to contrast neutralisation. In order to maintain underlying contrasts despite language change, the grammar prohibits A → C mappings that involve a change of more than one feature by a segment that undergoes lenition. This is achieved by the use of already existing featural constraints that work in concert. The added value of such an approach is that the conjoined constraint is incorporated in the ranking and can be demoted if merger occurs in the language and segments in the inventory are reshuffled as a result of historical changes. A possible disadvantage of such a framework is an exponentially growing number of conjoined constraints. A question may be asked about the limit of such constraints and about the type of constraints that can be conjoined. As argued by Baković (1999), Lubowicz (2002), Itô & Mester (2003), Fukazawa & Miglio (1998), and others, conjunction should be limited in terms of conjoinable elements to prevent implausible mappings and unattested structures. This restriction involves certain constraint families or, most typically, allows faithfulness constraints only in order to prevent the proliferation of conjunction domains/strata.[22] Another important restriction is that the violation of the conjoined constraint must be incurred by one and the same segment and not neighbouring sounds or any other output configuration. Otherwise the framework would become too powerful. Therefore, constraint conjunction must be strictly local and its domains clearly defined (Smolensky 1993, 1997; Moreton and Smolensky 2002, but see McCarthy 2007:34-36 for a critical overview). As a result, we have a more restrictive theory that allows for making more precise predictions about phonological processes and their interactions (but cf. Jesney 2014).

There exist other solutions to the chain shift problem discussed in this paper. Gussenhoven

21 Note that the cumulativity effect described above cannot be dealt with in weighted constraint frameworks, such as Harmonic Grammar (e.g. Farris-Trimble 2008), just as Stratal OT and other serial approaches result helpless when opacity is not directly caused by morphology/syntax-phonology interactions.

22 But see Lubowicz (2002) for an account of derived environment effects using the conjuntion of faihfulness and markedness. Such devices are, however, not used in the case of chain shifts (see Moreton and Smolensky's 2002 arguments). Also, note that the original formulation of conjunction by Smolensky (1995) allows for conjoining complex constraints (e.g. constraints that themselves have already been conjoined formally and are thus reducible to simpler constraints, see McCarthy 2007 for a discussion).

and Jacobs (2011) discuss some of them in “Understanding Phonology”. As they report, a stratal approach would be formally tenable, but requires constraint reranking and hence assuming that the Canarian processes of voicing and spirantisation belong to different strata, for which there is no motivation. Comparative Markedness (McCarthy 2003), by contrast, is able to achieve similar results to constraint conjunction as it gives access to the underlying form by means of markedness constraints. According to this theory, candidates are evaluated against a fully faithful candidate instead of the UR (although this candidate is a direct copy of the input). Those candidates that incur a violation of a markedness constraint that is also present in the fully faithful candidate are eliminated. Those that violate the same markedness constraint but not 'against' the fully faithful candidate are said to incur a 'new' violation, which is lower in the hierarchy. For instance, the output [u.na.bɾí.ma] violates constraint *[+cont] [-cont, -nasal, +voice], which is also true of the fully faithful mapping [u.na.bɾí.ma] (input /una brima/). This is a high-ranked 'old' violation. At the same time, output [u.na.bɾí.ma] of the input /una prima/ incurs a 'new' violation of the above constraint – one that is not present in the fully faithful parse [u.na.pɾí.ma]. The 'new' markedness constraints are ranked lower than their duplicates – the 'old' markedness constraints. In this way, multiple feature changes are avoided. The problem is that in this way the number of markedness constraints is doubled and their mutual ranking is somewhat fixed: old higher than new. At the same time, there is only one type of faithfulness, ranked in between (i.e. higher than 'new' markedness), which is against the general principle of faithfulness/markedness interaction. For a given process to take place, faithfulness must be ranked lower than markedness, or alternatively positional and general markedness constraints are variably ranked depending on the observed surface structures, producing allophonic variation, among others. Although the Comparative Markedness approach requires some architectural changes (in constraint types, and insight into the lexicon during derivation), it may be tempting given that it allows for distinguishing between derived and lexical (underlying) contrasts.

Another approach within OT that is worth mentioning at this point is OT-CC (OT with Candidate Chains, McCarthy 2007). As noted by Gussenhoven and Jacobs (2011), it is possible to derive the correct forms of Gran Canarian under this framework by establishing a precedence relation between faithfulness violations. With a precedence constraint PREC(IDENT[cont], IDENT[voice]), violated whenever the violation of IDENT[voice] precedes the violation of IDENT[cont], the correct output of the problematic /una prima/ is generated. Because whole chains of subsequent items are evaluated against the PREC constraint while only the last item in the chain is evaluated against the other constraints, with the right ranking of PREC all candidates that present an undesired order of process application will be eliminated. In other words, spirantising first and only then voicing ensures the counterfeeding rule ordering presented in (6b). Although such an analysis

is plausible, it is definitely more complex. First, OT-CC requires several levels of evaluation within OT. First, evaluation at the level of Gen (candidate chains must be checked for internal chain validity against the ranking). Second, the last member of each candidate chain is evaluated against the constraint set (similarly to classic OT evaluation), and third: each chain's internal makeup is checked against the PREC constraint, which is itself arbitrarily ranked and constitutes an additional mechanism equivalent to extrinsic rule ordering. All in all, OT-CC lacks simplicity and insight into the motivation for the processes of voicing and spirantisation to apply in a chain shift fashion. Against this background, Comparative Markedness seems to be a more convincing alternative.

7. Conclusions

The Spanish of Gran Canaria presents an overlap of two lenition phenomena: voicing and spirantisation. The context of application of the first is a smaller domain included in the broader context of application of the second – vowels are a subset of continuants. The sounds involved are noncontinuants and the products are segments of two different advancement levels on the lenition scales. As has been argued, these facts point to the need for accounting for both processes in a joint manner. Most importantly, the output segments of voicing and spirantisation do not merge. Thus, although [continuant] feature changes are allowed in the grammar of the dialect, the number of feature changes in underlying voiceless stops is restricted to one. From the point of view of an output-based evaluation framework, such as OT, this is difficult to account for. Input differences are rendered irrelevant and the opaque chain effect cannot be generated properly without recourse to supplementary measures. Despite the fact that the analysed processes belong to the phrase component of the grammar, the distinction between the word and phrase alone is not particularly helpful. This is because opacity is produced **at** the phrase level, and not in transition from one level to another (at a stratum juncture, Kiparsky 2013). The problem is neatly solved by constraint conjunction, which bans multiple feature changes. At the same time, the model captures a general observation concerning language change: first, the processes observed in Gran Canarian Spanish are a part of a wide spectrum of phonological changes that slowly lead to inventory changes and diachronic sound reshuffling; second, the constraint responsible for penalising merger may be demoted when sound change enters a subsequent advancement stage. Compared to different OT subtheories presented in section 6, local constraint conjunction seems to have the most explanatory power. Besides, it does not require major architectural changes and can be used as a supplement to standard OT. As far as the processes presented in this paper are concerned, this solution seems to be the most suitable in terms of economy, although, as noted in the previous sections, it should be restricted domain- and constraintwise. Whether the other successful frameworks (Comparative

Markedness or OT-CC) are superior to local conjunction in some important aspects requires further investigation, which I leave for future research.

ANNEX. A short description of the empirical data.

The empirical data were gathered in the course of spontaneous interviews with three native speakers (two male, one female) of Gran Canarian Spanish from the region of Gáldar in the northern part of the island. After preliminary interviews in person and via Skype, their speech was recorded with the use of a digital mp3 recorder (Sony ICD-UX200) and a standard microphone. The digital material was then extracted and analysed in Praat (Boersma & Weenink 2015). The part of material that was deemed suitable for phonetic analysis in terms of noise minimisation and other quality features has the length of 47 minutes and 45 seconds (all recordings put together). The content of the digital data includes spontaneous conversations, as well as sets of sentences read several times by the speakers. The latter parts were incorporated into the research to ensure that infrequent contexts are evaluated for the presence or absence of noncontinuant voicing. Crucially, most of the material renders natural, colloquial speech of young (aged 20-25) native speakers from the island. The speech rate is quite fast across all speakers, although the same consonantal changes were observed in read and spontaneous speech. Speaker productions were later compared with digital materials on Gran Canarian culture featuring older speakers and available online as Canary Islands promotional material. Similar phonetic and phonological changes were observed in both types of recordings, which suggests that the processes described herein are well extended and generalised.[23]

The main features of the speech recorded in the course of my fieldwork include highly relaxed pronunciations of all consonants (weakening) and vowel shortening and skipping. Spirantisation is generalised to all positions but post-nasal (and *ld*) and post-pausal, with the highest degree of aperture in intervocalic position (and elision in some cases) and the lowest when following weakened or deleted coda consonants (e.g. *desde* [ð̞eʰð̞e, las dos [laØð̞oØ] 'form/since'). Coda consonants are substantially weakened and dropped before a pause or a consonant (e.g. *en realidad* [en rɐ̯aliðaØ] 'actually', *estas características* [eʰtaØkaɾakteɾiʰtigaØ] 'these features'). The velar fricative is glottalised (debuccalised) and often voiced in intervocalic position (viaja [β̬jaɦa] 'he/she travels').

A total of 463 cases of postvocalic voicing of noncontinuants were recorded. This includes

23 More fieldwork is scheduled as a part of this project for 2016.

the voicing of stops [p t k] and of the affricate [ʧ], as in *muchos* [muʤo^{h}] 'lots of'. As reported above, the voicing occurs after vocalic sounds only. It fails to apply after consonants, even when the preceding consonant is deleted: *si no pones pasión* [si no bóne pasjón] 'if you are not passionate (about it)'. The right-hand environment is irrelevant – *el triple moreno de piel que yo* 'with a skin three times darker than mine' is pronounced [el tríble moɾéno ð̞e bjel ke jó]. Crucially, the process of voicing applies also to proper names and foreign words, e.g. *incluso Tenerife también* 'and Tenerife too' is produced [iŋklúso deneɾífe tambjén], *va a recordar su topic sentence* 'he's going to remember his topic sentence' is rendered [β̞a: rekoɾð̞áɾ su dópik séntens]. A transcription of a sample sentence from the recorded material is provided below.

(11) Transcription of a sample phrase

Ahora mismo aquí vivo a quinientos metros o un poco más en, en un pisito pequeño, la verdad bastante pequeño y, vivimos dos personas ahí dentro y es en plan yo vivo en el salón... pero super cómodo en realidad.

'At the moment, here, I live 500 metres from here or a bit more, in a small apartment, the truth is it is quite small and... two of us live there [= I live there with a friend], I mean I live in the living room... but it is really comfortable.'

[aoɾa mí^{h}mo agí β̞iβ̞o a | kiɲénto métɾo o um pogo má | en | en um pisído begéɲo | la βeɾð̞á β̞ahtante begéɲo i | β̞iβ̞ímo ð̞o peɾsóna aí ð̞éntɾo i̯ eh em plan jo β̞íβ̞o en el salón | peɾo | subeɾ kómoð̞o en ɾe̯alið̞á]

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