

Mid Vowel Raising and Second Vowel Deletion in Oiartzun Basque¹

Bill Haddican and Paul Foulkes

Abstract

This paper reports on a pilot study of change involving two non-standard vowel interactions in Oiartzun Basque, mid vowel raising and second vowel deletion. Using a corpus of conversational Oiartzun Basque speech collected in 2003 and 2004, we present data from an auditory analysis of both variables and acoustic data for mid vowel raising. The data support two main claims. First, apparent time evidence suggests that both of these rules are being lost in Oiartzun, plausibly as a consequence of contact with a Basque standard, *Batua*, developed and promulgated since the late 1960's. These apparent processes of change in fact constitute reversals of change in the extended history of the dialect, since in both cases, the forms corresponding to today's standard are more conservative. Second, these two changes are not progressing at the same rate; our data suggest that second vowel deletion is being lost much more quickly than mid vowel raising. We argue that this difference is due to the different starting points of these changes: while mid vowel raising among older speakers is effectively categorical in the data, second vowel deletion is variable. The much more rapid loss of second vowel deletion, then, is plausibly attributable to its "head start" relative to mid vowel raising.

1. Introduction

This paper reports on a pilot study of change in two non-standard vowel interactions in Oiartzun Basque—mid vowel raising (MVR) and second vowel deletion (SVD). Over the past few decades, a considerable amount of work has focused on the consequences of the advent of a new Basque standard variety—Euskara Batua (Unified Basque)—on language usage in Basque (Michelena 1981, Urla 1987, 1993, Echeverria 2000, Zuazo 2003, Hernández 2005). This paper departs in particular from work by Haddican (2007), which aimed to gauge the extent to which Batua features may be

¹ This paper is for Patxi Goenaga, in recognition of his important contributions to Basque linguistics over several decades.

displacing local dialectal features in the town of Oiartzun, based on a quantitative analysis of variation in a corpus of local speech. The data from the study show a mixed pattern familiar from much of the literature on language change, namely that while some standard features are indeed entering local speech, other emblematic features of the local dialect are not giving way to competing Basque forms (Labov 1972, Johnstone et al 2002 Bailey et al 1993). (See Haddican 2007 for a discussion of the social context of these linguistic changes.) However, with the exception of one consonantal feature—*t*-palatalisation—all of the variables examined in Haddican’s (2007) study were morphological or lexical (dative displacement, participial affix “doubling” and *naiz* > *naz*). This paper, therefore, examines evidence for change in the vowel phonology of Oiartzun. We take this issue to be particularly germane in view of evidence that the phonological consequences of language contact are often visible primarily in vowel systems (Labov 1994, 2001, Watt and Milroy 1999).

In an effort to address this gap in the literature, this paper presents data from an auditory analysis of MVR and SVD and acoustic data for MVR from a corpus of conversational Oiartzun speech collected in 2003 and 2004. The data support two main claims about change in these features. First, apparent time evidence suggests that both of these rules are being lost in Oiartzun: younger speakers (18-26 years old) in our data show lower rates of usage both MVR and SVD than older (60+ year old) speakers. This apparent shift in fact constitutes a reversal of change in the extended history of the dialect, since in both cases, the forms corresponding to today’s standard are more conservative. Second, the two changes are not progressing at the same rate; our data suggest that SVD is being lost much more quickly than MVR. We speculate that this difference is due to the different starting points of these processes of change. While MVR among older speakers is effectively categorical in Oiartzun, SVD is variable among the older generation of speakers. The much more rapid loss of SVD is then plausibly attributable to this difference: because SVD was variable within the community at the start of this process of change, it constituted a more readily available sociolinguistic resource in local speech for speakers instigating this change, and was therefore more prone to socially motivated change.

In part 2 of this paper, we describe these two features in Oiartzun Basque, and note some properties of these phenomena in Oiartzun that have not been reported for other dialects. In part 3 we present two data on variation in MVR and SVD in Oiartzun Basque. In part 4, we discuss these findings and some possible accounts of different rates of change of MVR and SVD in our data.

2. Vowel interactions in Oiartzun Basque

MVR and SVD and the relationship between them have been discussed in detail in the Basque historical literature and in the phonology literature more generally as classic examples of “rule ordering” in synchronic derivational phonology (Hualde 1991, Kenstowicz and Kisseberth 1996) and/or in processes of phonological change (Hualde 1998, Hualde and Gaminde 1998, Trask 1996). In the following discussion we will focus instead on change in these features and the diachronic relationship between them.

2.1 Mid-vowel raising

In many Basque dialects, mid vowels /e/ and /o/ raise to [i] and [u] respectively following another vowel. In Oiartzun, this is restricted to contexts where a stem ending in a mid vowel is followed by the definite article *-a* or a demonstrative.

- (1) a. /beso-a/ > [besua]
arm def.
‘the arm’
- b. /beste-oi/ > [bestioi]
other that
‘that other one’
- c. /xoko - ortan/ > [xokuortan]
game in that
‘in that game’

As noted in previous work on other dialects, raising does not apply across a word boundary (Hualde 1991, 2003).

(2) /etʃe#asko/ > [etʃeasko], *[etʃiasko]

house many

‘many houses’

(3) /etʃe#aundia/ > [etʃeaundija], *[etʃiaundija]

house big

‘the big house’

Raising in Oiartzun also appears to be blocked by an underlying /b,d,g,r/ even when these segments are absent from the surface form. We return to these facts in section 3. (See Hualde 1991: 65-6 for a discussion of similar facts in Ondarroa Basque.)

(4) /baso-ra/ > [basoa], *[basua]

forest to

‘to the forest’

(5) /no-ra/ > [noa], *[nua]

wh + to

‘where’

2.2 Second vowel deletion.

Many southern Basque dialects also have a rule of “second vowel deletion” targeting [e] and [a] in hiatus, when these vowels mark the definite article.

(6) Northern Bizkaian

/besoa/ > [besu] ‘the arm’

(Hualde and Gaminde 1998)

Oiartzun Basque shares this rule, subject to some cross-speaker and intra-speaker variability, as we shall see. Word-finally, SVD is restricted to closed syllables. However, in word-internal open syllables, [a] may also delete following some

postpositions. Examples of SVD in these two environments are given in (7) and (8), respectively.

(7) Oiartzun

- a. /seme-a/ > [semia], *[seme] ‘the son’
- b. /seme-ak/ > [semik] ‘the sons’

(8) Oiartzun

- a. /seme-akin/ > [semikin]
son-with
‘with the son’ (Fraile and Fraile 1996:78)
- b. /gison-akin/ > *[gison-kin]
man-with
‘with the man’

In addition, SVD in Oiartzun appears to be sensitive to the phonological status of the preceding vowel. The rule applies following an underlying /u/ and surface high vowels ([i] or [u]) derived by mid vowel raising.

(9) Second vowel deletion following a lexical /u/

/iŋguru-an/ > [iŋguru-n] ‘in the area’

(10) Deletion following a derived /u/

/guraso-ak/ > [gurasuk] ‘the parents’

(11) Deletion following a derived /i/

/besteak/ > [bestik] ‘the others’

In the data set on which this paper is based, this rule is unattested following underived high front vowels as in (12) and (13) (cf. Fraile and Fraile 1996: 24).

- (12) [baseri-an] > [baserian], *[baserin] ‘in the farmhouse’
 (13) [ituri-an] > [iturian], *[iturin] ‘in the spring’

This asymmetry between lexical high back vowels and lexical high front vowels in conditioning deletion may be related to the availability of glide insertion following these vowels. Oiartzun Basque speakers optionally insert a glide between a high front vowel and a following vowel as in (14) (Fraile and Fraile 1996: 24)²

- (14) /iri-ak/ ‘the cities’ > [irijak]

While many dialects have a similar process of [β]-epenthesis between a high back vowel and a following vowel (Hualde 1991, 2003), in Oiartzun, this process seems to be restricted to a handful of words such as *gau* ‘night’ and *lau* ‘four’.

- (15) a. /lau-ak/ > [laβak] ‘the four’
 b. /gau-ak/ > [gaβak] ‘the nights’

Hence, the availability of second vowel deletion following a lexical /u/ but not a lexical /i/ might plausibly be captured in synchronic terms, if glide insertion bleeds deletion in the case of the /i/, but not /u/ (Hualde 1991).

Finally, SVD is sensitive to word stress, which in Oiartzun Basque is canonically peninitial.

² In our data, there is some variation across speakers and speaker internally in the application of this rule. Impressionistically, older speakers, seem to insert glides more than younger speakers. Glide insertion is unattested in our data following a derived high front vowel.² (Again see Hualde (1991) for extensive discussion of similar facts in other dialects.)

- (i) /beste-ak > [bestiak], [bestik], *[bestijak] ‘the others’

- (16) a. [baséria] ‘farm(house)’
 b. [astíyaraya] place name
 c. [ardúa] ‘wine’

There are two kinds of exceptions to this pattern: monosyllabic items, in which stress is realized on the root, and lexically marked exceptions—typically Romance in origin—in which stress typically falls on the initial syllable, e.g. *kále*, ‘street.’³

In Oiartzun, second vowel deletion is unavailable following a vowel bearing word stress.⁴

- (17) Stressed vowels + /a/
- | | | | |
|----|-----------|------------|---------------|
| a. | /etʃé-ak/ | > *[etʃík] | ‘the houses’ |
| b. | /urté-ak/ | > *[urtík] | ‘the years’ |
| c. | /esné-an/ | > *[esnín] | ‘in the milk’ |
| d. | /astó-ak/ | > *[astúk] | ‘the donkeys’ |

By contrast, SVD following an unstressed vowel is robustly attested in our data.

- (18) Unstressed vowels + /a/
- | | | | |
|----|-------------|------------|-----------------|
| a. | /kóntu-ak/ | > [kóntuk] | ‘the stories’ |
| b. | /xóko-ak/ | > [xókuk] | ‘the games’ |
| c. | /kále-an/ | > [kálin] | ‘in the street’ |
| d. | /mólde-ak / | > [móldik] | ‘manners’ |

³ In addition, Fraile and Fraile (1996) report that for some speakers singular and plural forms are distinguished by accentuation. We find no evidence of this in the present data set.

⁴ In our corpus, we have one attested counter example (*etxé+an* > *etxin* ‘in the house’). See also Hualde (1998) for a discussion of the relationship between phrasal stress and low vowel deletion in Ondarroa.

In the following discussion, we will therefore only consider variation in the latter environment.

2.3 Diachronic relationship between MVR and SVD.

As noted earlier, both MVR and SVD are non-standard; they are not reflected orthographically in the written standard, and avoided in more formal speech contexts, such as Basque-medium news (EITB) broadcasts (Euskaltzaindia 1998). In addition, the standard variant in both cases corresponds to the historically more conservative form; that is, both MVR and SVD are transparent innovations, absent in relic areas including much of the North (Hualde 1999, Hualde and Gaminde 1998).

As Hualde (1998) notes in describing similar facts in Ondarroa Basque, the history of these processes can be reconstructed unproblematically. In particular, MVR must have applied before SVD, since the former feeds the latter.

(19)	Historical development	/kale-an/ ‘in the street’
	1. MVR (V→[+high] / __ V _[-low])	kalian
	2. SVD	/kalin/

The data presented in the following section suggests that these changes are being lost in Oiartzun speech in the reverse order in which they occurred; that is, SVD is being lost more quickly than MVR. We speculate that this is due to the relative starting points of these reversals: while MVR former had effectively gone to completion in Oiartzun, the latter had not.

3. Data and results

The data presented below come from a corpus of conversational speech gathered by the first author in Oiartzun in 2003 and 2004. The corpus consists of speech data from 40 native speakers of Oiartzun Basque in interviews between the subject and a native-speaking community member, researcher. The corpus was stratified by age, sex, neighbourhood of residence in the Oiartzun Valley. In the interviews, each of which

lasted about an hour, subjects were asked a series of questions focusing on childhood experiences and community designed to elicit maximally unself-conscious, conversational speech (Labov 1972). These interviews were later transcribed and coded for quantitative analysis. The data presented here come from subsamples of this corpus as described below.

3.1 Mid vowel raising

For older speakers, raising of /e/ and /o/ to [i] and [u] (exemplified in section 2.1) appears categorical. For some of the younger speakers, however, a different pattern appears to be emerging. While the process of raising /e/ and /o/ is still observed, the degree of raising appears less than that for the older speakers. We illustrate these observations with reference to acoustic data. Two speakers were chosen who typified the general patterns observed across the data set – an older male, Manuel (born in 1941) and a younger female, Goizargi (born 1973).⁵ Vowel formant measurements were obtained for each speaker using the *Praat* analysis program (version 4.6.35 for Macintosh; Boersma and Weenink 2007). Tokens of /e/ and /o/ in raising contexts were identified, as were examples of phonological /i e a o u/ in tonic positions, for reference purposes. A total of 56 tokens were analysed for Manuel and 76 for Goizargi.

The acoustic data are shown in the form of scatter plots in Figures 1 and 2. The configuration of the data captures the close correspondence between the formant values and the IPA vowel quadrilateral. Front vowels, shown to the left of the figure, are characterised by high second formant (F2) values, while back vowels, to the right, have low F2 values. Similarly, vowel height is reflected on the vertical axis, with degree of closeness in inverse correlation with first formant (F1) values.

Figure 1 illustrates the data for Manuel. The tokens of raised /e/ and /o/ are shown as open squares and triangles respectively. These tokens clearly overlap with those of phonological /i/ and /u/ (filled squares and triangles), and form clusters quite distinct from those for (non-raised) phonological /e/ and /o/ (shown as crosses and turned crosses). Statistical analysis (unpaired 2-tailed t tests) confirms these interpretations, with

⁵ These are pseudonyms.

no significant differences between the values of /i/ and raised /e/, or between those of /u/ and raised /o/.

Figure 1. Vowel formant plot for Manuel (older male)

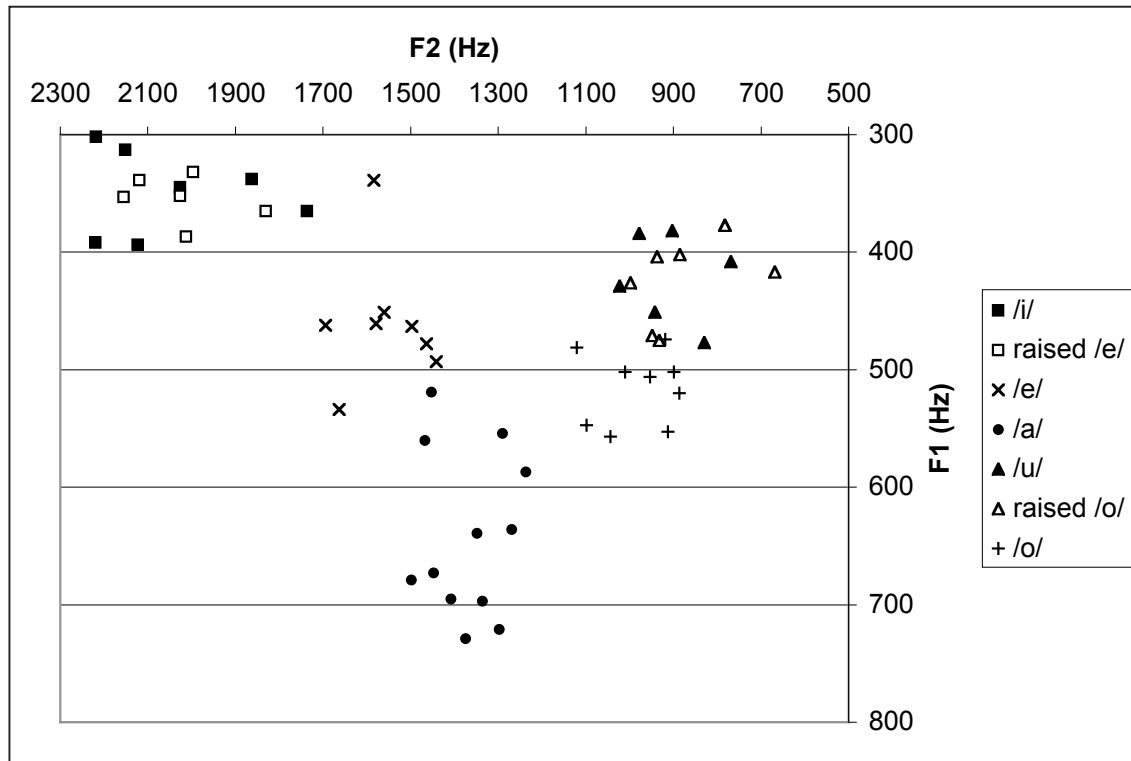
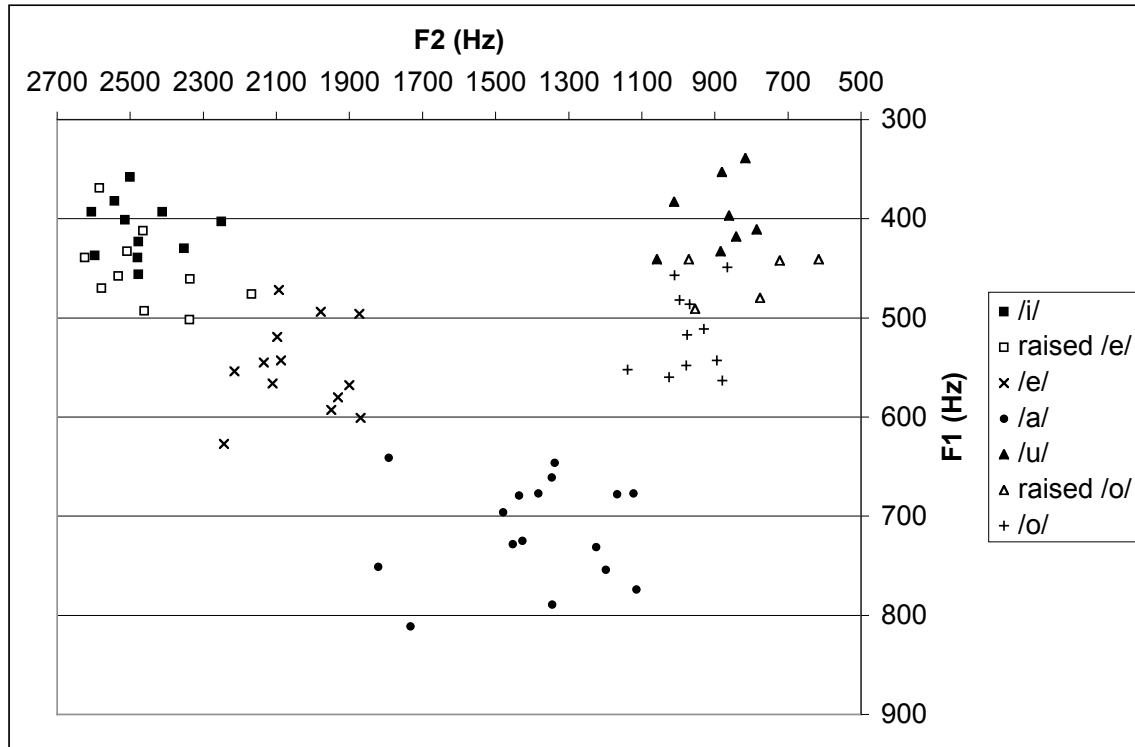


Figure 2 displays a different pattern for Goizargi. Some of her raised /e/ and /o/ tokens overlap with those for /i/ and /u/, and, moreover, the distinction relative to non-raised /e/ and /o/ is clear. To that extent Goizargi's patterns are similar to those described for Manuel. However, several examples of the raised vowels appear to be more open in the acoustic space, reflected in high F1 values, than the reference vowels /i/ and /u/. This is particularly clear in the case of raised /o/, where the overlap with /u/ is marginal. Statistical analysis reveals that the differences in F1 are significant when comparing raised /e/ with /i/ ($t = 2.71$, $df = 19$, $p = .014$) and raised /o/ with /u/ ($t = 3.33$, $df = 11$, $p = .007$). F2 comparisons do not yield significant differences, indicating that the difference is solely in the dimension of vowel height. Comparison of the raised tokens with non-raised /e/ and /o/ predictably yield overwhelming significant differences, in this case with respect to both F1 and F2 (raised /e/ versus non-raised /e/, $F1$: $t = 5.46$, $df = 21$, $p <$

.0001; F2: $t = 7.52$, $df = 21$, $p < .0001$; raised /o/ versus non-raised /o/, F1: $t = 2.79$, $df = 14$, $p = .015$; F2: $t = 2.86$, $df = 14$, $p = .013$).

Figure 2. Vowel formant plot for Goizargi (younger female)



From these acoustic data, then, we can infer that the raising process is being maintained, but variably so, with some tokens manifested with a less extreme degree of raising. We note that these acoustic results are consistent with our impressionistic auditory analysis of MVR in the greater 40-speaker corpus.

3.2 Second vowel deletion.

In an effort to assess possible change in progress in second vowel deletion, we examined variation in a 12-speaker subsample of the Oiartzun corpus. This subsample is stratified by age and sex, categories shown to bear significantly on variation in previous work in Oiartzun (Haddican 2003, 2007). In particular, speakers were grouped into two age groups, speakers 18-26 years old and those over 60. The two age groups also differ in their exposure to formal education in Batua. While all of the younger speakers in the subsample received Basque-medium primary and secondary education including

instruction in Batua, none of the older speakers had received any formal instruction in Batua.

The tokens extracted include only and all instances of an underlying /a/ following a derived high front vowel (see above) or a derived or underlying [u] in closed syllables. Open-syllable tokens were too infrequent to be usefully included in the data set, and were therefore excluded.

All of these tokens appear in one of five kinds of morphological environments. Approximately half of the tokens are stems with an inessive affix as in (20).

(20) Root + inessives

- a. /kámpo-an/ > [kampun], [kámpuan] ‘outside’
- b. /egún-ean/ > [egúnin], [egúnian] ‘on the day’
- c. /áure-an/ > [áurin], [áurian] ‘in front (of)’

Most of the remaining tokens consist of roots with an ergative *-ak* affix or homophonous absolutive plural or ergative plural affixes. These environments are illustrated in (21)(23).

(21) root + ergative

/bikáριο-ak/ > [bikáiuuk], [bikáiuak] ‘the vicar’

(22) root + absolutive plural

/móto+ak/ > [mótuk], [mótuak] ‘the motorcycles’

(23) root + ergative plural

/bikáριο-ak/ > [bikáiuuk], [bikáiuak] ‘the vicars’

Finally, a very small set of tokens involves words with the genitive affix *-an* as in (24). (In Oiartzun, these affixes do not inflect for possessor number and subject number respectively.)

(24) genitives

- a. /guráso-an/ > [gurásun], [gurásuan] ‘of the parents’
- b. /úme-an/ > [úmin], [úmian] ‘of the children’

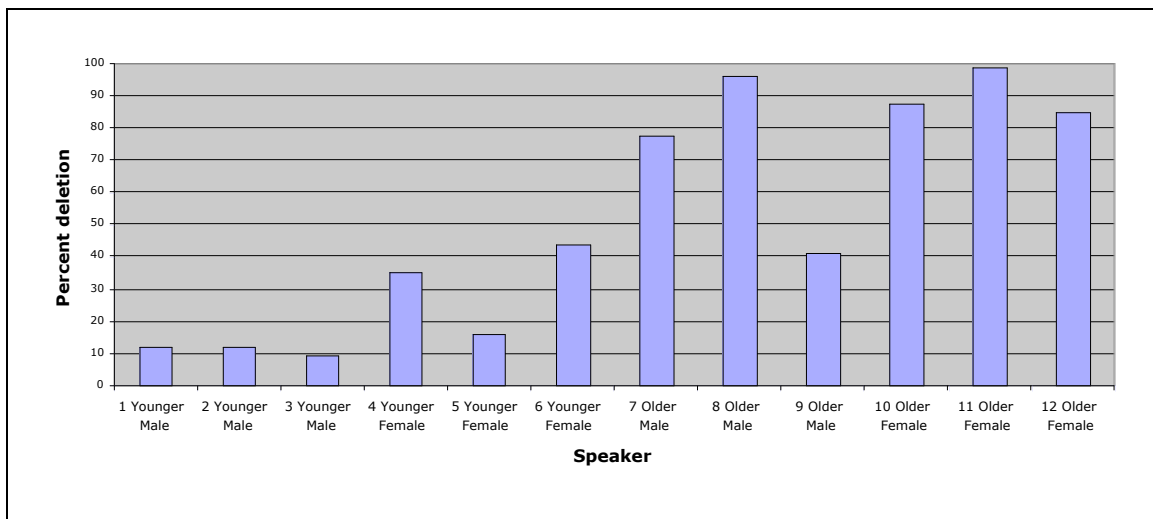
The data from the 12 speakers yielded 578 tokens, roughly evenly distributed across the 12 speakers. These tokens were coded as either deleted or undeleted and subjected to a one way ANOVA with second vowel deletion as the dependent variable and speaker sex, speaker age, following segment (/n/ vs /k/) and preceding vowel (/o/ vs /e/) as fixed factors. Of these, only speaker age ($F(1,562)=225.81, p<.0001$) and speaker sex ($F(1, 562)=14.37, p<.001$) were returned as significant.

Table 1 and Figure 2 show rates of second vowel deletion by sex and age group and by speaker respectively.

Table 1. Rates of second vowel deletion by age group and sex

	Women	Men	Total
Older (60+)	91% (125/137)	78% (101/130)	85% (226/267)
Young (20-26)	32% (49/153)	11% (17/158)	21% (66/311)
Total	60% (174/290)	41% (118/288)	51% (292/578)

Figure 3: Second vowel deletion by speaker



The data in Table 1 and Figure 3 illustrate the strong effect of age group on variation in the data; that is, older speakers show much higher rates of deletion than younger speakers. Indeed, while deletion is near-categorical for some of the older speakers (Speakers 8 and 11), it is approaching categorical absence (~12%) for the three younger males in the sample. These data then provide straightforward apparent time evidence of change in progress toward (standard) absence of second vowel deletion. We return to these facts later.

These data also bear out the weaker effect of sex on the data, i.e. that women in the subsample tend toward deletion more than men. This pattern is unexpected from the perspective of much of the language change literature from contemporary western societies, where women are typically reported to lead standardisation-type change (Labov 2001, Eckert 2000. See also Echeverria (2000, 2003) for extensive discussion of language usage and gender identity Donostia secondary schools.). Nevertheless, these results are not out of keeping with some previous work on Basque, where the effect of sex on standardisation-type change is much less straightforward. Haddican's (2005, 2007) study of variation between local dialectal and Batua features found no consistent sex pattern across variables: while women had higher rates of Batua forms for participial affix doubling, men showed higher rates of use of *t*-palatalisation, and in the case of dative displacement, no significant sex effect was found. Similarly, Haddican (2003) presents data from a separate corpus of Oiartzun Basque showing that across a range of variables, older men appeared to be leading changes toward more prestigious Gipuzkoan variants, while women retained conservative High Navarran forms.

The absence of consistent sex effects familiar from much of the literature on Western (especially English-speaking) societies is plausibly related to the unique history of Batua, and the circumstances of its development. Batua as a standard variety, used broadly in schools, media and public administration is still only one generation old, and the meaning of using Batua vs local dialectal forms remains highly mutable across dialects, speakers and contexts (Urla 1993, Amorrortu 2000, Echeverria 2000, Haddican 2007). As an *Ausbau* variety developed as part of a larger language maintenance effort, Batua was originally conceived not as a prestige variety, but rather as a written standard and as a variety for communication among speakers of different dialects (Zuazo 1995,

Urla 1987, 1993). In the years following the end of the Franquist dictatorship, and especially since the introduction of Batua into public schools and public administration in many parts of the Basque Country, Batua has emerged as an important resource in the labour market. But, despite this shift, Batua has still not come to be strongly linked to class/status in the same way found in many other western contexts discussed in the language change literature, but rather remains a variety constructed in opposition to local dialects (Echeverria 2000, 2003, Amorrortu 2000). Hence, from the perspective of received understanding of canonical sex effects on variation as a function of stylistic variation shaped by associations of class/status (Labov 2001, Eckert 2000, Cheshire 2002), the absence of more consistent sex-effects across variables in these data stands to reason. Much further work remains to be done on these issues.

4. Different rates of change for MVR and SVD

The data in section 3 suggest that SVD and MVR are changing at different rates in Oiartzun. SVD has decreased sharply over the three-generation period represented in this sample, from near-categorical use for most of the older speakers in this sample, to near-categorical absence for some of the younger speakers. By contrast, the difference in MVR across these age groups is less sharp. While some younger speakers (such as Goizargi), appear to raise /e/ and /o/ to lesser degree than the oldest speakers in our sample, other younger speakers' patterns of MVR in fact closely resemble those of their elders. We report this as a tentative conclusion in view of the fact that the illustrative acoustic data presented in the preceding section are drawn from only two speakers, however we reiterate that these findings are in line with impressionistic auditory analyses for the greater 40-speaker corpus.

We might entertain at least two explanations of this difference in rates of change. One possibility is that these changes are shaped by the effect they have on morphophonological contrast. In particular, as noted above in section 2.1 MVR is counterfered by a rule of intervocalic voiced consonant deletion (ICD) as in (25) and (26).

(25) /baso-Ra/ > [basoa], *[basua]

forest to

‘to the forest’

(26) /no-Ra/ > [noa], *[nua]

wh + to

‘where’

ICD has the consequence that, for a fairly large set of lexical items—nominal stems ending in a mid vowel—the distinction between adlative and absolutive morphology in singular forms is visible on the surface only in the height of the stem-final vowel, as in (27) and (28).⁶

(27) /etʃe-Ra/ > [etʃea], *[etʃia] ‘to the house’

(28) /etʃe-a/ > [etʃia], % [etʃea] ‘the house’

Hence, for this class of lexical items, the loss of MVR entails a neutralisation of this case distinction. By contrast, the loss of SVD has no such consequences for morphology.

These facts suggest one possible approach to the different rates of change for MVR and SVD, namely, that the persistence of MVR among younger speakers serves to preserve an overt distinction between goal arguments (with adlative morphology) and theme/experiencer arguments (bearing absolutive morphology) with this class of items. (This functionalist characterisation of this intuition, might perhaps stand as a promissory note for a more detailed account that explains contrast-preserving change as a consequence of patterns of ambiguity of input in language acquisition (Labov 1994)). Nevertheless, it is unclear that MVR would truly lead to any appreciable ambiguity in interpretation since the thematic interpretation of these arguments is in many contexts signaled through other means including the argument structure of the selecting verb and

⁶ Oiartzun Basque, unlike some other dialects of Basque, does not have a morphological distinction between animate and inanimate goals.

agreement morphology on auxiliaries. We have not undertaken a thorough quantitative study of the extent of such disambiguating information in the data, but tokens not co-occurring with such cues appear to be scarce.

A second possible account, which we tentatively adopt here, is that the difference in the rates of change between these two processes is a consequence of their different starting points. Table 1 shows that SVD had not yet gone to completion in Oiartzun, since, even among the oldest speakers in the sample, there is some variation. By contrast, our pilot auditory and acoustic results suggest that MVR had effectively gone to completion among the older generation of Oiartzun speakers, since, acoustically, raised /e/ and /o/ are indistinguishable from /i/ and /u/ (Figure 2). The apparent fact that loss of SVD has progressed faster than loss of MVR is plausibly related to this difference. That is, the existing variability in SVD within the community at the start of this process of change will have provided younger Oiartzun speakers leading this change with a ready linguistic resource for achieving different symbolic ends—presenting oneself as more formal, more “from Oiartzun,” more upwardly-mobile etc.—through social meanings indexed by the Batua-dialect opposition (Echeverria 2000, Urla 1993). The last 30 years of work in Labovian sociolinguistics have provided abundant evidence that social meaning attaching to variation may drive language change by affecting variation in just this way. By contrast, MVR will not constitute such a resource, and, in this light, the slow loss of MVR relative to SVD stands to reason. Our data suggesting that some younger speakers, such as Goizargi, do not raise mid vowels to the same degree as older speakers, then entails that these speakers, in doing so, are making use of a variable resource from outside the community.

5. Summary

The preliminary data reported in this pilot study suggest that both MVR and SVD are being lost in Oiartzun, plausibly as a consequence of contact with Batua. These changes, moreover, are proceeding at different rates, with loss of SVD progressing much more rapidly than loss of MVR. We have speculated that this difference is due to the different starting points of these processes of change.

This paper also highlights the unique perspective on language change afforded by *ausbau* standards, such as Batua. One advantage to studying change in such a context is that it avoids the problem of different time-depths across variables: because Batua was promulgated throughout the Basque Country at roughly the same time, all processes of change conditioned by it will, *a priori*, have the same starting point, which will facilitate gauging the speed of change. We have suggested that this insight has been crucial to understanding the trajectory of change in MVR and SVD in contemporary Oiartzun Basque.

References:

- Amorrortu, E., 2000, *Linguistic Attitudes in the Basque Country: The Social Acceptance of a New Variety*. Doctoral dissertation, USC.
- Bailey, G., T. Wikle, J. Tillery & L. Sand, 1993, "Some Patterns of Linguistic Diffusion", *Language Variation and Change* 3: 359–90.
- Boersma, P. & D. Weenink, 2007. *Praat: Doing phonetics by computer*. (www.praat.org).
- Cheshire, J., 2002, "Sex and gender in variationist research", in J. K. Chambers, P. Trudgill and N. Schilling-Estes (eds.) *Handbook of Language Variation and Change*. Blackwell, Oxford, 423-43.
- Echeverria, B., 2000, *Basque Schooling: What is it Good For?* Doctoral dissertation, UCSD.
- Euskaltzaindia, 1998, *Euskara batuaren ahoskera zaindua*, (www.euskaltzaindia.org).
- Eckert, P., 2000, *Linguistic Variation as Social Practice*, Blackwell, Malden Mass.
- Fraile, I. & A. Fraile, 1996, *Oiartzungo Hizkera*, Mugarri, Oiartzun.
- Haddican, B., 2003, "Dialect Contact in a Southern Basque Town" *Language Variation and Change* 15:1, 1-35.
- Haddican, B., 2005, *Aspects of Language Variation and Change in Contemporary Basque*. Doctoral dissertation, NYU.
- Haddican, B., 2007, "Suburbanization and Language Change in Basque" *Language in Society* 36:5, 677-706.

- Hernández, J., 2002, “Kale Neurketa: Sexuaren Araberako Erabilearen Emaitzak eta Horien Inguruan Sortutako Galderak” *Soziolinguistika Klusterra* 43.
- Hualde, J. I., 1991, *Basque Phonology*, Routledge, London.
- Hualde, J. I., & I. Gaminde, 1998, “Vowel interaction in Basque: A nearly exhaustive catalogue”, *Studies in the Linguistic Sciences* 28:1 41-77.
- Hualde, J. I., 1999, “Vowel interaction and related phenomena in Basque and the nature of morphophonological knowledge”, *Cognitive Linguistics* 10: 1, 33-56.
- Hualde, J. I., 2003, “Segmental Phonology”, In J. I. Hualde and J. Ortiz de Urbina (eds.), *A grammar of Basque*, Mouton de Gruyter, Berlin, 15-65.
- Johnstone, B., N. Bhasin, N., & D. Wittkofski, 2002, “‘Dahntahn Pittsburgh’: Monophthongal /aw/ and representations of localness in southwestern Pennsylvania”, *American Speech* 77, 148-166.
- Kenstowicz M. & C. Kisseberth, 1996, *Phonology in Generative Grammar*. Blackwell, Malden Mass.
- Kerswill, P. & A. Williams, 2002, “‘Salience’ as an explanatory factor in language change: evidence from dialect levelling in urban England”, in M. C. Jones & E. Esch (eds.) *Language change. The interplay of internal, external and extra-linguistic factors*, Mouton de Gruyter, Berlin 81-110.
- Kiparsky, P., 1982, *Explanation in Phonology*, Foris, Dordrecht.
- Labov, W., 1972, *Sociolinguistic Patterns*, University of Pennsylvania Press, Philadelphia.
- , 1994, *Principles of Linguistic Change*. Vol. 1 Blackwell, Oxford.
- , 2001, *Principles of Linguistic Change*. Vol. 2 Blackwell, Oxford.
- Mitxelena, K., 1981, “Lengua común y dialectos vascos” *ASJU* 15, 291-313.
- Txillardegi. 1982, *Euskal Fonologia*. Ediciones Vascas.
- Trask, R. L., 1996, *Historical Linguistics*, Arnold, London.
- Urla, J., 1987, *Being Basque, speaking Basque: The politics of language and identity in the Basque Country*. Doctoral dissertation, University of California, Berkeley.
- 1993, “Contesting Modernities: Language Standardization and the Production of an Ancient/Modern Basque Culture”, *Critique of Anthropology* 13:101-118.

Watt, D. & L. Milroy, 1999, "Patterns of variation and change in three Newcastle vowels: is this dialect levelling?" In P. Foulkes & G. Docherty (eds.), *Urban voices*, Arnold, London 25-46.

Zuazo, K., 1988, *Euskararen Batasuna*, Euskaltzaindia, Bilbo.

Zuazo, K., 2003, *Euskalkiak, Herriaren lekukoak*, Elkar, Donostia.