

ANALOGY AND OTHER TYPES OF NON-PHONETIC CHANGE IN BIZKAIAN BASQUE

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1. Introduction

In the study of historical changes affecting the shape of words in a language, it is useful and customary to distinguish between phonetically-conditioned sound changes (or sound changes *tout court*, from the Neogrammarian perspective), on the one hand, and other changes which are said to have their origin in analogy, including reanalysis and other non-phonetic processes, on the other. In general, the distinction is clear. (For recent discussions of the concepts of sound change and analogy, see Hock 2003, Lahiri 2000). For example, the palatalization of /n/, /l/, and sometimes other coronal consonants, after /i/, found in many Basque dialects, as in *mina* > *miña* ‘the pain’, *mutila* > *mutilla* ‘the boy’, and the raising of /a/ to /e/ after a high vowel, as in *laguna* > *lagune* ‘the friend’, are phonetically-conditioned sound changes. Both are assimilatory processes. The initial consonant of *tarte* ‘interval’ (cf. *arte* ‘between’), on the other hand, cannot have been originated by purely phonetic means. This initial consonant is the product of reanalysis of a consonant which was originally part of the root in compounds such as *bet-arte* ‘space between the eyes’, from where it spread as an epenthetic consonant in other compounds such as *bi-t-arte* lit. ‘between two’, and finally was reanalyzed as morpheme initial (cf. also *talde* ‘group’ < *alde* ‘side’, earlier ‘group’, as in *art-alde* ‘flock of sheep’; Bizkaian *kume* ‘offspring of an animal’ < *ume* ‘child’; *tegi* ‘place’ < *-egi* ‘place’, etc.).

Although we tend to think of the former type of change as “regular” and of the later as “irregular” or “sporadic”, it is important to realize that these labels are not always appropriate. On the one hand, sound changes with a clear phonetic basis may not be regular and, in fact, the regularity or irregularity of their application may be quite unpredictable. Consider palatalization of /s/. In Lekeitio, this phonetically-motivated sound change applied regularly, as shown in (1), to the extent that the sequence /is/ is no longer found in present-day Lekeitio Basque, /s/ having been replaced by *x* /ʃ/ after /i/ everywhere within word domains (see Hualde, Elordieta & Elordieta 1994). In neighboring Ondarroa, however, the picture is very different. What we find here is that some lexical items have undergone the change and others have not, without any apparent systematicity in which items

are treated in one way and which in the other. This is what is called “lexical diffusion” (In this paper I use the letters *s* and *z* with their etymological distribution. Both letters represent the same phoneme in all the dialects studied here. This also applies to *ts* and *tz*):

(1) Palatalization of /s/ in Lekeitio and Ondarroa

Common Bq	Lekeitio	Ondarroa	
<i>gizon</i>	<i>gixon</i>	<i>gixon</i>	‘man’
<i>bizi</i>	<i>bixi</i>	<i>bixi</i>	‘live’
<i>izen</i>	<i>ixen</i>	<i>ixen</i>	‘name’
<i>bizar</i>	<i>bixar</i>	<i>bizar</i>	‘beard’
<i>izar</i>	<i>ixar</i>	<i>izar</i>	‘star’
<i>izerdi</i>	<i>ixerdi</i>	<i>izerdi</i>	‘sweat’

On the other hand, changes lacking any conceivable phonetic origin can apply in a systematic way.¹ In Hualde (2000) an example of this was examined, the shifting of lexical accent to the antepenultimate in Markina Basque, as in *gizónak* > *gizonak* ‘the men’. We will consider another very regular analogical change below.

For the classification of a given sound change as non-phonetic, what really matters, in principle, is whether or not there is a plausible articulatory or perceptual justification for the change without making reference to meaning relations between forms. It is our knowledge of how sounds tend to change in the vicinity of other sounds that allows us to classify the changes in *mina* > *miña* and in *laguna* > *lagune* as phonetically conditioned.² That same knowledge leads us to deny that label to *alde* > *talde*.³ As we will see, however, things are not always crystal-clear in this respect. Besides the plausibility of a natural phonetic origin for a change $\alpha > \beta$, some times other criteria need to be used in order to determine whether or not the origin of the change is phonetic or analogical.

My goal in this paper is to take some steps towards making a catalog of analogical and other non-phonetic changes in Basque. Analogical changes are of the greatest interest in that they provide us with evidence about the way speakers analyze their language and the types of lexical correspondences that they establish. Nevertheless, analogical developments in Basque have not received the same systematic attention as phonetically-conditioned changes. The main phonetically-motivated sound changes in the history of the Basque language have been systematically studied in works such as Michelena (1977) and Trask (1997). Even the various changes which affect vowel sequences involving the determiners, where a considerable amount of

¹ Cf. McMahon’s (1994: 70) claim that “there are few, if any, cases of absolute regular analogy”. It seems that Basque does present some such cases.

² In addition to their phonetic conditioning both rules are, however, morphologically conditioned. Thus, palatalization after /i/ does not apply in compounds (e.g. *belarri-luze* ‘long-eared’) and the rising of /a/ to /e/ after a high vowel takes place with some suffixes but not with others (see Hualde 1991).

³ Although in relation to a different example, this criterion to determine the cause of a change is used by Mitxelena (1988[1960]: 38): “Nolanahi ere, horrelako lege fonetikorik ezagutzen ez dugunez gero, analogia izan bide da aldaketa horren eragilea.” [In any event, since we do not know any phonetic rule of that type, the trigger of that change must have been analogy].

diversity is found among local Basque dialects, have been more-or-less exhaustively examined and catalogued (Hualde & Gaminde 1998 and earlier work by other authors). But, because of their very nature, analogical changes do not lend themselves to easy systematization and, consequently, are less systematically treated in Michelena's magnum opus or Trask's excellent historical grammar of the language. This does not mean, however, that changes of this type have been completely ignored. For instance, Michelena (1977: 115) provides an insightful account for a seemingly isolated development, such as *doa* > *doia* 's/he is going', in many western varieties (e.g. in Lekeitio, but not in Ondarroa), which appears to have involved a phonetically conditioned change, the dissimilation of /aa/ to /ea/, found also in singular inflection (*neska-a* > *neskea* 'the girl'), in forms bearing a complementizer suffix such as the relative marker *-an* 'that', followed by morphological reanalysis: *doa-an* 'that is going' > *doe-an* > *doi-an* reanalyzed as *doia-n* and hence *doia* 's/he is going'. Trask (1997: 183-88) also remarks on the regularity of haplology in Basque word formation (as in *sagar+ardo* 'apple-wine' > *sagardo* 'cider') and examples of non-phonetically motivated change in the shape of words in Basque are also discussed in Trask (1997) and Trask (1996). But we still do not have anything like a systematic treatment of these processes.

Here I will propose a simple classification of changes in the shape of words lacking a purely phonetic explanation in Basque. I think that for our purposes it is useful to classify these changes into four types:

- a) Analogical changes that by their very nature are clearly non-phonetic.
- b) Analogical changes which are not obviously different in their effects from phonetically-triggered sound changes.
- c) Contamination.
- d) Hypercorrection resulting from interdialectal interaction.

In the first two types I include only examples of changes that can be modeled as cases of four-part analogy ("a is to b as c is to x"). The examples that will be discussed are mostly from northern Bizkaian varieties. Some of the examples that I will discuss are well known. Others are less well known or have not been studied in this context.

2. Obviously non-phonetic analogical changes

In this section I will consider examples of analogically-motivated innovations that are totally different from sound changes. In these examples of four-part analogy the innovative forms differ from their historical inputs in ways that could not have resulted from phonetic evolution.

2.1. Bermeo *bazin* 'to be able'

Some Bermeo speakers use expressions such as that in (2a), although the same meaning can also be expressed with other constructions such as those in (2b) and (2c). All three constructions are based on indicative forms, (2d), with the addition of a potential morpheme:

(2) Bermeo potential constructions

- a. *bazin tzut emon*
 potential AUX give
 'I can give it to you'
- b. *al tzut emon* cf. Standard Bq *eman abal dizut*
 potential
- c. *emon lei tzut*
 potential
- d. *emon tzut*
 'I have given it to you'

The origin of the unusual construction in (2a) is obvious to anyone who knows the language and, for that reason, the construction remains somewhat stigmatized as a "mistake". Although the form *bazin* 'can' is not found anywhere else, all Basque dialects have *ezin* 'cannot'. The innovative Bermeo affirmative potential is based on the reanalysis of negative potential forms with *ezin*. That is, *bazin tzut emon* 'I can give it to you' is the affirmative counterpart of *ezin tzut emon* 'I cannot give it to you' (cf. standard Bq *ezin dizut eman*), through the reinterpretation of *ezin* as containing the negative particle *ez* 'no, not' plus a potential morpheme *zin*. This type of process can be explained making use of the traditional notion of four-part analogy, as in (3). The only problem is that this mechanism forces us to choose a specific example for the analogy among the many possible ones that could have triggered the innovation.

(3) Analogical origin of Bermeo *bazin*

- | | | |
|----------------------------------|---|---------------------------------|
| <i>ezan</i> | : | <i>bazan</i> |
| 's/he wasn't' (< <i>ez zan</i>) | | 's/he was' |
| <i>ezin (tzut emon)</i> | : | x; x = <i>bazin (tzut emon)</i> |
| 'I couldn't (give it to you)' | | 'I could (give it to you)' |

Changes of this type are interesting as they tell us much about the way speakers (as opposed to linguists and language teachers) analyze the forms of their language.

2.2. Berriatua *gau* 'we V it'

Reading Itziar Aramaio's *tesina de licenciatura*, I find that in Berriatua the present tense auxiliary *dogu* 'we V it' has been (optionally) replaced by *gau* in the speech of some speakers of the dialect. This form *gau* is not found in either Ondarroa (4 km away) or Markina (7 km away), with which neighboring dialects Aramaio (2001) systematically compares the Berriatua forms. The Berriatua present tense bivalent auxiliary forms (for a third person singular object) are given in (4):

(4) Berriatua

- 1s *dot*
 3s *dau*
 1p *dogu - gau*
 2s *dozu*
 2p *dozue*
 3p *dabe*

There can be little doubt that the replacement of *dogu* with the innovative synonym *gau* is not due to phonetic causes. It is not likely that a sequence of phonetically natural events may have transformed *dogu* into *gau*. The change is clearly analogical. The only issue here is finding the analogical source of this innovation. The only form of the paradigm it resembles is the third person singular *dau*. But the existence of this parallelism does not appear to be sufficient for speakers to start replacing *dogu* by *gau* without raising eyebrows, so to speak. The two forms *dogu* and *gau* are too different, and this is a very common form, not one likely to be forgotten.

Aramaio (2001) gives us a clue for the way the change may have emerged in the fact that *dogu* is often reduced: *jan dogu* - *ja ogu* - *jan gu* 'we have eaten'. Replacing *jan gu* by *jan gau* (- *ja au*) does not look like such a radical innovation. We still need to determine, however, why some speakers may have thought of using *jan gau* instead of *jan gu*, perhaps seeing it as a less reduced variant of the same form. It turns out that the answer is provided by the trivalent forms:

(5) Berriatua

otsat 'I V it to him/her' *otsau* (<*dotsagu*) 'we V it to him/her'

otzut 'I V it to you' *otzu* - *otzugu* (<*dotzugu*) - *otzuau* 'we V it to you'

I would suggest that a form such as *otsau* 'we V it to him/her' (from earlier *dot-sa-gu*) was reanalyzed as containing a subject marker *-au* 'we', which then spread to other forms of the trivalent paradigm by analogy: *otsat* is to *otsau* as *otzut* is to *x*; where *x* = *otzuau*, which would now compete with etymological *otzu(g)u*. Then there is a second reanalysis: the ending *-au* is interpreted as a variant of the bivalent auxiliary, which permits its appearance in sequences such as *ja au* 'we have eaten it' and its "reconstructed" fuller variant *jan gau*. At this point, for the reconstruction of /g/ before the diphthong /au/, instead of between /a/ and /u/, it is where parallelism with *dau* must undoubtedly have played a role. (Notice also the four-part analogy between third singular and first plural forms of the intransitive and transitive auxiliaries: *da* 's/he is': *ga* 'we are': *dau* 's/he has it': *gau* 'we have it').

The biggest leap in this story would seem to be the identification of a suffix in a trivalent form with a bivalent auxiliary. We have some evidence, from parallel cases, that this is indeed a sort of reanalysis in which speakers are likely to engage, as we will now see.

Karlos Arregi (p.c.) has commented to me that in Ondarroa one occasionally finds forms such as *emostazendun* 'you gave it to me', corresponding to present tense *emostazu* 'you have given it to me', instead of the more common *emostazun*, which is itself analogical in origin, or the etymological *emon zeustan*. The form *-stazendun* is not listed in the dialectological sources such as Yrizar (1992) and Gaminde (1984) and appears to have the status of a "mistake" or memory lapsus. But, as we know, what is an occasional mistake at a given point may become an accepted form some time later.

This form is clearly based on the bivalent past auxiliary *zendun* 'you had it' with reanalysis of *emo-stazu* as *emosta-zu*, where the last component is identified with the bivalent present tense auxiliary *zu* (< *dozu*) 'you have it'. The analogical pattern that created it would be as in (6):

- (6) analogical origin of Ond. *emostazendun*
- | | | |
|---------------------------|---|----------------------------|
| <i>(eran)zu</i> | : | <i>(eran)zendun</i> |
| 'you have (drunk) it' | | 'you (drank) it' |
| <i>(emo)stazu</i> | : | <i>x = (emo)sta-zendun</i> |
| 'you have given it to me' | | 'you gave it to me' |

This analogical reanalysis is exactly parallel to the less obvious one we need to assume to explain the origin of Berriatua *gau*, in my opinion.

The examples discussed in this section are clear cases of analogical change lacking a phonetic motivation. We turn now to other cases where the formal change is such that it could also have happened by natural phonetic evolution.

3. Changes that look like they could be phonetically-motivated but in fact are not

Determining whether a given change in the shape of words is phonetically-grounded or analogical in nature is not always obvious. This is a reason why it is dangerous to draw conclusions from isolated data from a language one doesn't know. In this section, I will examine other cases where, without considering other facts of the language, one might be led to propose a phonetic explanation, but which, upon closer inspection, turn out to have non-phonetic explanations.

3.1. Final vowels in uninflected nominals

Consider the historical changes in (7):

- (7) Word-final changes in uninflected nominal forms
- e > -a / — # *lore* > *lora* 'flower', *agure* > *agura* 'old man', *andre* > *andra* 'woman' (Western)
 - a > Ø / — # *gauza* > *gauz* 'thing', *silla* > *sil* 'chair' (Gipuzkoa)
 - u > -o / — # *léku* > *léko* 'place', *buru* > *buro* 'head' (Ondarroa)

All three changes in (7) could in principle be phonetically-motivated as they can be conceptualized as instances of reduction of final vowels. In fact, as we will see below, another change that produces the same results as (7c) was phonetically motivated in a different dialect area. Nevertheless, specialists agree that these are analogical changes. One reason for thinking that these changes are analogical is that they are restricted to a very specific morphological context: uninflected nominal forms. In particular they are not found in inflected forms, even if the same phonetic context may obtain in them as well, which is the case for (7b) and (7c). Secondly, and this is crucial, each of these developments is restricted to a dialectal area where certain specific lexical correspondences obtain. Finally, phonetically intermediate forms are never found. Change (7a) is found only in dialects where originally /e/-final and /a/-final stems present identical sequences in the absolutive singular, such as those varieties in (8a), as a consequence of a well-known historical dissimilatory change /a+a/ > /ea/ in singular forms (and subsequent developments in some areas), (8b):

(8) uninflected/abs sg correspondence in varieties of the western type

a.	a-class		e-class		
	uninfl	abs sg	uninfl	abs sg	
	<i>neska</i>	<i>neskea</i>	<i>etxe</i>	<i>etxea</i>	'girl' (e.g. Arratia)
	<i>neska</i>	<i>neskia</i>	<i>etxe</i>	<i>etxia</i>	(e.g. Eibar)
	<i>neska</i>	<i>neskie</i>	<i>etxe</i>	<i>etxie</i>	(e.g. Gernika)
	<i>neska</i>	<i>neski</i>	<i>etxe</i>	<i>etxi</i>	(e.g. Ondarroa)
b.	a+a (sg) > ea (> ia > ie > i) e.g. <i>neskaa</i> > <i>neskea</i> (> <i>neskia</i> > <i>neskie</i> > <i>neski</i>)				

Arguably, the absolutive singular, which is the citation form of nouns and adjectives, is cognitively more salient in western Basque than the uninflected form. It is far more likely that a speaker may not be sure about the uninflected form of a noun for which she or he knows the singular than viceversa. The fact that forms ending in say, /-ia/, in the absolutive singular may have either final /-a/ or final /-e/ when uninflected, is likely to occasionally cause some memory problems, resolved by analogy. When the analogical model that is searched is incorrect from an etymological point of view, we have the type of change that we are discussing. That is, this change has more in common with the changes discussed in section 2 than with phonetically-motivated sound changes. It can be modeled as a four-part analogy:

(9) Analogical origin of *andria*

Sg	: uninfl
<i>neskia</i>	: <i>neska</i>
<i>andria</i>	: x = <i>andra</i> (replacing original <i>andre</i>)

Exactly the same analogical process is at play in the loss of final /a/ in uninflected forms in parts of Gipuzkoa. In this area (as in standard Basque) the lack of distinction in inflected forms is between /a/-final and consonant-final forms, since instead of the Western development a + a > ea with the determiner, the change that took place was a + a > a. The abundance of sg/uninflected correspondences of the type *gizona/gizon* has triggered the analogical restructuring of pairs like *gauza/gauza* > *gauza/gauz*, where the form without the /a/ has a possible word-final consonant (but not in *alaba*, or *neska*, since ***alab*, ***nesk* are not possible Basque words). The analogy has also operated to remove the final /a/ of words originally ending in /ia/; e.g. sg/uninfl *astokeria* > sg/uninfl *astokerial askokeri* 'stupid behavior', uninfl *komeria* > *komeri* 'comedy', etc. (cf. "correct" sg/uninfl *mendial/mendi*). The general strategy is that to create the uninflected form of a word for which you know the absolutive singular you remove word-final /a/. This rule, which works in most cases, can also produce etymologically incorrect forms when applied to words that also happen to end in /a/ in their uninflected form.

The developments in (7a) (*lora* > *lore*) and (7b) (*gauza* > *gauz*) are very well-known as they are found over wide but complementary geographical areas. Both changes lack systematicity, affecting some words but not others where a similar phonetic context obtains. Zuazo (1999: 22), in his dialectological study of the Deba Valley, points out that the sporadic change in (7a) is found throughout the area, but not necessarily in the same lexical items. The development in (7b) as well

is always a sporadic change, although it has considerable strength in some areas, such as Hondarribia.

The change in (7c) (*léku* > *léko*) is more geographically restricted and historically more recent. As one would expect from what we have just seen, this change has taken place in dialects where originally /o/-final and /u/-final stems coincide in the absolutive singular and other inflected forms (Michelena 1977: 130-31). That is, the change is in principle not possible in dialects with uninfl/sg correspondences like those found in Gernika, but may take place in dialects with the other correspondences illustrated in (10a), which are due to the original raising of /o/ in hiatus, as in (10b), a very common rule throughout the Basque territory:

(10) Neutralization of /o/-stems and /u/-stems

- | | | | | | |
|----|-------------------------|--|--------------------------|--|---------------------------|
| a. | o-class | | u-class | | |
| | Uninfl abs sg | | uninfl abs sg | | |
| | <i>beso besoa</i> ‘arm’ | | <i>esku eskue</i> ‘hand’ | | (e.g. Gernika) |
| | <i>beso besua</i> | | <i>esku eskua</i> | | (e.g. Lekeitio, Eibar) |
| | <i>beso besue</i> | | <i>esku eskue</i> | | (e.g. Bermeo, Azkoitia) |
| | <i>beso besu</i> | | <i>esku esku</i> | | (e.g. Ondarroa before 7c) |
- b. o > u / __V e.g. *besoa* > *besua* (>*besue* > *besu*)

It is interesting to note that in all cases in (7), the analogy has been in favor of maximal differentiation between inflected and uninflected stem, never vice versa.⁴ We don't seem to find dialects where the analogy has gone in the opposite direction, producing, say, ***neske bat* for *neska bat* in western varieties, ***gizona bat* for *gizon bat* in other areas, or ***besu bat* for *beso bat* in dialects where in the singular we find results such as *besua* and *eskua* with identical endings. Thus, whereas it is often repeated that the most common function of analogy “is to make morphologically, syntactically and/or semantically related forms more similar to each other in their phonetic ... structure” (Hock 1991: 167), in the cases at hand analogy always makes related forms more dissimilar. These are thus “anti-levelling” or “analogical extension” processes (Campbell 1999: 94-95, McMahon 1994: 71-73, etc.), very much like, for instance, the extension of umlaut in plurals in German (cf. Hock 1991: 181-82, 187). As in the German case, what we get by analogically extending an alternation is a more clear contrast between two morphological classes, uninflected and inflected in our case. As pointed out by Hock (1991: 235-36, 2003: 446), this is precisely the set of contexts where we may expect an alternation to be analogically extended, where it serves a morphological purpose (see also Elvira 1998).

One aspect that makes the case in (7c) interesting is that, whereas (7a) and (7b) are never systematic in their application (i.e. they show lexical diffusion), (7c) is completely general in some of the varieties where it has applied. In Ondarroa (and

⁴ In Roncalese, where *i*-stems and *u*-stems show the same sequence /ia/ in the absolutive (e.g. *méndi* ‘mountain’, *méndia* ‘the mountain’; *esku* ‘hand’, *éskia* ‘the hand’), there is a parallel analogical transfer to the *u*-class of some items originally ending in /-i/. Thus, we find Ronc. *gúzu* ‘all’ for common *guz(t)i*, abs. sg. *gúzia*.

perhaps also in Markina), this change has been as general in its application as any of the phonetically-motivated changes applying in nominal inflection: all uninflected forms formerly ending in /o/ have been restructured as ending in /o/: the uninflected form of *eskú* (< *eskua*) 'the hand' is now *esko* 'hand' (< *esku*), that of *burú* 'the head' is now *buro* 'head', etc.; the only exception being monosyllabic stems such as *sue* 'the fire', *su* 'fire'. All nominals ending in /u/ in the absolutive singular now end in /o/ in the uninflected form, the etymological distinction between /o/ final and /u/ final stems having been completely lost:

(11) Ondarroa: -u > -o in uninflected forms

uninfl	abs sg		
<i>baso</i>	<i>basú</i>	'forest'	< <i>baso</i>
<i>beso</i>	<i>besú</i>	'arm'	< <i>beso</i>
<i>esko</i>	<i>eskú</i>	'hand'	< <i>esku</i>
<i>buro</i>	<i>burú</i>	'head'	< <i>buru</i>
<i>léko</i>	<i>léku</i>	'place'	< <i>léku</i>
<i>lengúso</i>	<i>lengúsu</i>	'cousin'	< <i>lengúsu</i> (< <i>lehéngusu</i>)
<i>diru</i>	<i>dirú</i>	'money'	< <i>diru</i>

An intermediate stage in the evolution is that described by Rotaetxe (1978: 52), who reports fluctuation between, for instance, *meriku bat* and *meriko bat* 'a physician'. Nowadays this fluctuation in the uninflected stem appears to have been solved in favor of the variant in /-o/ in this context for the younger generation of speakers. In present-day Ondarroa Basque nominals ending in /-o/ are always uninflected stems and nominals ending in /-u/ are always singular forms. The analogical process has thus increased the transparency of the connection between form and grammatical category, which was obscured by the deletion of final /a/ after another vowel in this dialect. This process is thus in agreement with the universal "tendency to form clear, regular exponents of morphosyntactic categories" by means of analogical reformation (Vincent 1974: 430).

Generality or lack thereof in its application cannot therefore be the deciding criterion in determining whether a given change has a phonetic or an analogical origin. In Ondarroa this has been a totally regular change, even if it lacks a phonetic cause.

In other dialects such as Bermeo and Azkoitia, however, the same change has been applied only sporadically, affecting some words (*diru* > *diro*), but not others (*buru*). Furthermore, although the change has its motivation in the identity of /o/-stems and /u/-stems in the absolutive singular and other inflected forms, not all dialects where these inflected forms coincide have changed /u/ to /o/ in uninflected stems. Lekeitio speakers still distinguish between /o/-stems and /u/-stems along etymological lines, even though here too the two endings are conflated before vowel-initial inflectional suffixes. In fact, in Lekeitio, correspondences are more complicated, because of another change that deleted word-final glides, as in (**patrone* > *patroe* >) *patroi* > *patro* 'boss'. The result is that in the present-day Lekeitio dialect there are two-to-one correspondences in both directions, where it is not possible to predict either the uninflected form from the inflected one or vice-versa:

(12) Lekeitio

uninfl	abs sg	uninfl	abs sg	
-u	-ua	<i>buru</i>	<i>burua</i>	'head'
-o	-ua	<i>beso</i>	<i>besua</i>	'arm'
-o	-oia	<i>patro</i>	<i>patroia</i>	'boss'

There are even some minimally contrastive pairs such as *koro* 'choir', *korua* 'the choir' vs. *koro* 'crown', *koroia* 'the crown'.⁵ We, however, should not expect items formerly ending in /-oi/ (< /-oe/) to conflate with those of the other classes in their inflected forms so that, for instance, uninflected *patro* may develop an inflected form ***patrua* or *korua* may become the singular of both 'choir' and 'crown'. This is because the forms that are primary for speakers are the inflected ones, as noted above. Thus, although the correspondences above in (12) show that there is not complete predictability in either direction, it is far more likely that a Lekeitio speaker may produce an etymologically incorrect uninflected form (say, *diro* from inflected *dirua*) than an etymologically incorrect singular form (***patrua* from uninflected *patro*).

Many dialects indeed preserve a contrast in inflected forms between stems originally ending in /Ve/ and those originally ending in /Vi/, even though, when word-final, these two sequences have been neutralized. For instance, the abs sg of *patroi*, from original *patroe*, is *patroia* in areas where the abs sg of, say, *odoi* 'cloud', is *odoixa*. Structuralist/generativist-minded linguists interested in providing the simplest or most elegant analysis of the facts may want to postulate that the historical contrast has somehow been preserved in abstract underlying representations, as in (13):

(13) Generativist analysis (e.g. Hualde 1993)

/patroe/	<i>patroi</i>	/odoi/	<i>odoi</i>
/patroe+a/	<i>patroia</i>	/odoi+a/	<i>odoixa</i>

It is important to realize, however, that speakers do not seem to employ this level of abstraction in their productive behavior. Most likely our speaker (unlike a linguist or a second language learner in a classroom environment) will learn the inflected forms *patroia* and *odoixa* most robustly. The productivity that is likely to be required is for the corresponding uninflected forms, some of which our speaker may occasionally not remember or may even not have heard at all. But this performance presents no complication, since, in this variety both abs sg -*Via* and -*Vixa* are paired with uninflected forms in -*Vi*. Obtaining an uninflected form by analogy is trivial and unambiguous in this case:

⁵ For the word meaning 'choir' there is actually variation in the uninflected form: *koro bat* - *koru bat* 'a choir'. As for the word 'crown', this word is also interesting as it appears to show an exceptional historical transfer of an *a*-final stem to the *e*-class later obscured by other developments. Lat/Rom *corona* > Bq *koroa* (see Trask 1997: 139-42, Michelena 1977). With the singular determiner, **koroaa* > **koroa* (> *koroia*). In its uninflected form, *koroa* became **koro*, and later **koro* > *koroi* > *koro*. This transfer is not surprising in this particular case given the exceptionality of the ending -*oa* in an uninflected form and, on the other hand, the large number of stems in -*oe* from Rom -*one*.

(14) Lexical correspondences

sg		uninfl	
<i>patroia</i>	→	<i>patroi</i>	(Via → Vi)
<i>odoixa</i>	→	<i>odoi</i>	(Vixa → Vi)

To summarize so far, the replacement of stem-final /u/ by /o/ in uninflected forms is an analogically-based change that has taken place in some of the dialects where /o/ was raised to /u/ before a vowel in inflected forms, creating potential insecurity about the shape of the uninflected stem (the less frequent and less salient form). This is a necessary but not sufficient condition, since some of the dialects where it obtains, such as Lekeitio, have not undergone the change. A change takes place once an innovation is accepted in the speech community as something other than a mistake, and in Lekeitio that does not seem to have happened. At the other end, in Ondarroa (and possibly Markina), the change has spread to all uninflected stems formerly ending in /u/, except for monosyllables (which are also special in not losing the final vowel in hiatus in the inflected forms), so that nowadays all words ending in /u/ in the absolutive singular end in /o/ in their uninflected form.

Some High Navarrese dialects appear, at first glance, to have undergone the same development. Consider the following examples in the dialect of Arrarats (from Pagola 1992, as cited in Ibarra 1995: 102-3):

(15) Arrarats (High Navarrese)

abs sg	uninflected	
<i>eskuu</i>	<i>esko bat</i>	'the hand/a hand'
<i>katuu</i>	<i>iru kato</i>	'the cat/three cats'
<i>porruu</i>	<i>iru porro</i>	'the leek/three leeks'

Ibarra (1995) explicitly argues against "hypercorrection" (=analogy) as the source of the phenomenon in these High Navarrese varieties (against Pagola 1992), while accepting analogy as the explanation for other dialects with this evolution. The reason Ibarra gives against accepting the hypercorrection explanation for these High Navarrese varieties is that here, unlike in Bizkaian and Gipuzkoan varieties presenting this phenomenon, we find the same change in other morphological environments, such as participles (e.g. *sartu* > *sarto* 'enter'), auxiliaries (*zaizu* > *zai-zo* 'it is to you'), etc.

I believe that Ibarra is correct in thinking that the *u* > *o* change in High Navarrese has a different character from the *u* > *o* change of Ondarroa, Azpeitia, etc. However, the fact that it applies in a larger number of contexts, where "hypercorrection" (i.e. overextension of a correspondence) is not a possible explanation, is not necessarily incompatible with an analogical origin. The change could have started in uninflected nominals by analogy, in the way we have described for Ondarroa, etc., and later have spread to other contexts by lexical diffusion. I believe, however, that a more compelling reason for siding with Ibarra against an analogical origin of the change is that in this area, unlike in Bizkaia and Gipuzkoa, we find realizations that are phonetically intermediate between /o/ and /u/. The same phenomenon is also found with the front vowels (*etorri* > *etorre* 'come'). In principle, in the case of phonetically motivated changes we will find phonetically

intermediate forms at the outset of the change, whereas in analogically motivated changes we will not. Once a sound change has been started, however, its subsequent spread, both throughout the lexicon and from dialect to dialect may be identical in both cases.

To conclude this discussion. A change is analogical when its occurrence requires correspondences between lexical items, not just a specific phonetic context. Given the necessary conditions, whether an analogical change will apply or not is not predictable, although we may predict that there will be a tendency for speakers to apply certain specific analogies. Lack of regularity is not a criterion for determining that a change is analogical. Once an analogical pattern starts to operate it may or may not generalize to the whole set of possible inputs (just like a phonetically-motivated sound change). In our particular case, analogy may restructure uninflected forms starting from the inflected ones, but not vice versa. This is because of specific properties of Basque.

3.2. *e* > *a* in Gernika

In the Gernika area, we find a change exemplified by *basóetara* > *basóatara* ‘to the forests’. Again, without other facts to bear on the issue, we would not know whether this change is phonetically motivated or not. In fact, it is not. In the dialects where this change is found we also find the assimilation rule mentioned in the introduction of this paper whereby /a/ is raised to /e/ after a high vowel (within certain morphological domains), so that we have, for instance, *basora* ‘to the forest’, *etxera* ‘to the house’, but *eskure* ‘to the hand’ (<*eskura*), *mendire* ‘to the mountain’ (<*mendira*). The existence of this alternation with suffixes that etymologically contained the vowel /a/ has been analogically extended to suffixes that contained /e/, such as the locative pluralizer /-eta-/, which should not vary in its shape:

(16) Gernika

stage 1		stage 2		stage 3
<i>basora</i>	>	<i>basora</i>	>	<i>basora</i>
<i>eskura</i>	>	<i>eskure</i>	>	<i>eskure</i>
<i>basóetara</i>	>	<i>basóetara</i>	>	<i>basóatara</i>
<i>eskúetara</i>	>	<i>eskúetara</i>	>	<i>eskúetara</i>

Stage 1 > Stage 2: a > e/ V[+hi] (C)___ (sound change)

Stage 2 > Stage 3: e > a/ V[-hi] (C)___ (analogy)

As in the cases in the subsection above, a phonetically-motivated change has triggered an analogically-motivated one in the opposite direction in other forms of the morphological paradigm. The secondary analogical change reinforces the complementary distribution between /a/ and /e/ in inflectional suffixes triggered by the first, phonetically-motivated, change. This is thus another case of “analogical extension” of an alternation.

3.3. Ondarroa *naz* > *na* 'I am'

In Ondarroa, the first person singular present indicative form of the copula *naz* 'I am' is frequently pronounced without its final sibilant. That is, we have an ongoing change *naz* > *na*. The same development is also found in Markina and in Bermeo as well as in Aramaio, Araba (Ormaetxea 2002: 92). The loss of /s/ in final position is, of course, a very common phenomenon in Romance, first accomplished in Italian, later in French, and currently in progress in many Spanish dialects. However, there are reasons to suspect that unlike these other cases of /s/ > Ø, in the Basque case this is an analogical change, not a phonetically-conditioned sound change. One reason for suspecting that /s/ > Ø in the Basque dialects of Ondarroa, Markina and Bermeo is not a phonetically-conditioned process is that it is in fact limited to the form *na(i)z* 'I am'. Another, compelling, reason is that phonetically-intermediate forms are not found: there is either final /s/ or zero, but never [h] or some other reduced consonant. In (17) we show the present-day present-tense Ondarroa and Bermeo paradigms for the verb 'to be' (monovalent forms), together with the corresponding forms in a conservative form of Bizkaian:

(17)	Ondarroa	Bermeo	Older Bizkaian	
	1s <i>na - naz</i>	<i>nai</i>	<i>naiz, (na(i)x>) naz</i>	'I am'
	3s <i>da</i>	<i>da</i>	<i>da</i>	's/he is'
	1p <i>ga - gaz</i>	<i>gara - gariez</i>	<i>gara</i>	'we are'
	2s <i>za - zaz</i>	<i>zara</i>	<i>zara</i>	'you are'
	2p <i>zaze</i>	<i>zarie</i>	<i>zaree</i>	'you-pl are'
	3p <i>di - diz</i>	<i>di(r)ez</i>	<i>dira</i>	'they are'

What we see is that, especially in Ondarroa, almost all forms in this paradigm have variants with and without final *-z*. From the comparison with the Literary Bizkaian forms (or with standard Basque, for that matter), we notice that this fluctuation has resulted from insertion of *-z* in all cases, except in the case of the first person singular Ond. *na - naz*, Ber. *nai*, where the variant with *-z* is the etymologically primary one. We are thus dealing with two distinct phenomena here: the addition of *-z* to most forms of the paradigm and the deletion of *-z* in the first person singular. The explanation for both phenomena is that final *-z* has been interpreted as a plural marker. I will briefly elaborate on this before coming back to the paradigm at hand.

Two complications in Basque verbal morphology where the "one-form-one-meaning" morphological ideal is not respected are the correspondences between present-tense and past-tense forms, on the one hand, and between singular and plural forms, on the other. To give some examples, in the standard Basque forms in (18) a first person singular ergative subject is marked by means of the suffix *-t* in present-tense forms, but by a prefix *n-* in the corresponding past-tense forms. Regarding the marking of a plural object, this is done by *-it-* in the paradigm in (18a), by *-zki-* in (18b) and by *-z-* in (18c) (the forms in (18a) and (18b) belong to the transitive auxiliary, whereas those in (18c) belong to the independent verb *eduki* 'to have, possess'):

- (18) present/past and sg/pl marking
- dut/ditut/nuen/nituen* 'I have it/I have them/I had it/I had them'
 - diot/dizkiot/nion/nizkion* 'I have it to him/I have them to them/I had it to him/I had them to him'
 - daukat/dauzkat/neukan/neuzkan* 'I have it/I have them/I had it/I had them'

Throughout the western area we find a tendency to regularize both correspondences. In the case of tense marking, this tendency reaches maximal application in Bermeo where, for the younger generations, virtually all past tense forms are now created by simply adding *-(e)n* to the corresponding present form; e.g.: *dot* 'I have it', *doten* 'I had it' (together with older *nauen*). This regularization is studied in Hualde (2002), where I tried to show that it was accomplished in a step-by-step analogical fashion, starting with the least frequently used forms. Less advanced analogical regularization is found in many other western varieties.

Regarding the marking of plurality, the western tendency has been the analogical extension of a single plural marker *-z*, formerly found only in a few forms such as *doa* 's/he is going', *doaz* 'they are going', but especially salient because of its position at the end of the word. In some cases, this pluralizer has been added to forms containing another pluralizer and some variation is found synchronically within a single dialect. Thus, nowadays in Eibar, corresponding to *dogu* 'we have it', for a plural object we find the etymological *dittugu* 'we have them', the doubly-marked *dittuguz* and the restructured *doguz*, formed according to the simple rule of adding *-z* to the corresponding form for a singular object (Zuazo 1999: 110). In the most advanced western varieties the polymorphism in the expression of tense and plurality has all but disappeared: the plural is expressed by adding *-z* to the singular, and the past, by adding *-(e)n* to the present, as demanded by the one-form-one-meaning principle:⁶

(19) Standard Basque	Bermeo	
<i>dugu</i>	<i>du</i>	'we have it'
<i>ditugu</i>	<i>duz</i>	'we have them'
<i>genuen</i>	<i>dun</i>	'we had it'
<i>genituen</i>	<i>duzen</i>	'we had them'
<i>eman dizugu</i>	<i>emon-tzugu</i>	'we have given it to you'
<i>eman dizkizugu</i>	<i>emon-tzuguz</i>	'we have given them to you'
<i>eman genizun</i>	<i>emon-tzugun</i>	'we gave it to you'
<i>eman genizkizun</i>	<i>emon-tzuguzen</i>	'we gave them to you'

Returning to the present tense of 'to be', the generalization of *-z* as a plural marker for an absolutive argument brought about the restructuring of intransitive forms for a plural subject which lacked any clear plural marker in varieties such as those of Ondarroa and Bermeo. A final *-z* was added to the forms for a first and a

⁶ These forms are used in "downtown" Bermeo (*kalea*). Bermeo farmers (*baserritarrok*) have an etymologically more conservative verbal system. See Egaña (1984), Gaminde (1985).

third person plural subject: *gara* > *garaz* ‘we are’, *dire* > *direz* ‘they are’ by analogy with *goaz* ‘we are going’, *doaz* ‘they are going’, etc. Clearly it was felt that these plural forms “needed” a plural affix. In addition, in Bermeo the form for ‘we are’ also took the plural suffix *-ie* of *zarie* ‘you-pl are’.

Once final *-z* was generalized as an absolutive plural marker, the final *-z /s/* of *na(i)z*, which is etymologically part of the root, was felt as being somewhat wrong for a first person singular form and, consequently, was deleted. Going beyond adding *-z* to forms that “should have it”, *-z* was deleted from forms that “shouldn’t have it”. The deletion of final */-s/* in *nai(z)* is thus rather similar to the well-known reinterpretation of stem-final */-z/* as a plural marker in English that has produced *pea* from Old English *pise* and *cherry* from the French loanword *cerise* (Hock 1991: 204).⁷

In Ondarroa, but not in Bermeo, plural *-z* has also been extended to the form for ‘you-sg are’. In spite of the singular meaning of this form, present-day ‘you-sg’ forms historically used to be ‘you-pl’ forms, a fact still reflected in the morphology as complete parallelism between first person plural (*gu*) and second person singular (*zu*) forms. Given this, it is not surprising that the existence of *ga(ra) - ga(ra)z* would trigger a parallel alternation *za(ra) - za(ra)z* in spite of the singular reference of the latter form. This is rather similar to the analogical spread of *-o* from the first person singular to the third person plural in Italian verbs (Rohlf’s 1968: 255). In Bermeo, however, meaning considerations do appear to have blocked extension of *-z* to *zara*). In pseudo-Optimality terms, here there is a conflict between two analogical principles: (a) “*-z* means plural” and (b) “*gu* ‘we’ and *zu* ‘you’ forms are strictly parallel”. In Ondarroa, (b) >> (a), whereas in Bermeo (a) >> (b).

Thus, to conclude, whereas the deletion of final */s/* is a perfectly natural phonological development, in our case there can be little doubt that this is, instead, an analogical development.

4. Contamination

Standard textbooks often include contamination from a frequently co-occurring word under the rubric of analogy (Crowley 1997: 235-36, for instance, refers to it as “analogical change by meaning” and Campbell 1999: 97-98 treats it as analogical change based on an immediate model). Nevertheless, those instances where the shape of a word is altered to make it more similar to a different word with which it

⁷ I. Gaminde (p.c.) points out to me that in Ondarroa and Markina an additional factor in this evolution may have been the influence of the verb *egon* ‘to be, stay’, whose inflected forms have undergone contraction in these dialects: *nago* > *na* ‘I am, stay’. The two verbs, nevertheless, have not merged, since they are still different in their accentual properties: *argalá ra* Sp. ‘es delgado’ (< *da*) vs. *argala rá*, Sp. ‘está delgado’ (< *dago*) (Hualde 2000). They are also different regarding the application of the low vowel raising rule, cf. Ondarroa *totú re* ‘es gordo’ (< *da*) vs. *totu rá* ‘está gordo’ (< *dago*).

I. Gaminde has also indicated to me that A. Irigoien entertained the hypothesis that the Bermeo form *nai* may derive from *nadi(n)*, nowadays a present subjunctive form. I have not been able to locate this reference.

frequently co-occurs are conceptually different from all the cases discussed above. As Trask (1996) puts it, this is a special kind of analogy.

Trask (1996: 112) mentions the change *bederatzu* > *bederatzi* 'nine' under the influence of *zortzi* 'eight' as an example of contamination. Besides being very frequent in numerals, contamination also tends to affect antonyms (Hock 1991: 197). For this latter case, we can also provide an interesting Basque example. In the dialect of Antzuola, *noa* 'I am going' has become *noar* in the speech of younger speakers. Clearly this is not a phonetically-conditioned change. Neither can it be seen the product of any obvious four-part analogy. Rather, the most obvious source of the innovative final /r/ appears to be contamination with *nator* 'I am coming' (Olabarria 1995, Larrañaga 1998). As far as I know this development is not found in any other Basque dialect.

5. Hypercorrection

Trask (1996: 112) provides the following definition of hypercorrection: "The other special type of analogy is *hypercorrection*. This occurs when a speaker deliberately tries to adjust his or her own speech in the direction of another variety perceived as more prestigious but 'overshoots the mark' by applying an adjustment too broadly".

In some parts of Bizkaia, we can observe the operation of a historical change *au* > *eu*. In Gernika, for example, *áurre* > *éurre* 'front', *gaur* > *geur* 'today', *dau* > *deu* 's/he has it'. This change does not give rise to any morphophonological alternations, except those involving the auxiliary *deu*, and has not affected all etymological instances of /au/ either (e.g. *lau* 'four' has not changed). In other parts of Bizkaia, such as Getxo, we find a change in the opposite direction, *eu* > *au*, as in *éuskera* > *áus-kerá* 'Basque language', *euki* > *auki* 'have', *euli* > *auli* 'fly', *auri* > *auri* 'rain'.

When we map the distribution of dialectal variants for *ahuntz* 'goat', *euli* 'fly' and *auri* 'rain' gathered in Gaminde (1988), it becomes apparent that the area covered by one of the changes or the other includes most of Bizkaia. We also notice that it is possible to trace a continuous isogloss between the area where /au/ has become /eu/ and the area where /eu/ has become /au/. We only find one point, Fruiz, where nonetymological forms are reported by Gaminde for both sequences. There is also a small intervening area between the two isoglosses, including Gatika and Erandio, where neither change appears to have taken place. The change *au* > *eu* is found over a wide area of central Bizkaia. The area where the opposite change *eu* > *au* has taken place includes the south of Bizkaia and a western fringe. Neither phenomenon is found in the eastern third of the province. This is shown in Table I, where the relevant data extracted from Gaminde's (1988) dialectal vocabulary lists have been organized, and in the map below.

Whereas both changes could in principle have a purely phonetic motivation, the geographical distribution of the two phenomena makes this unlikely. It is more sensible to conclude that one of the two changes may have been phonetically motivated and the other has been a reaction to the first one, a sort of hypercorrection. As for which one of the two changes was the original, phonetically-motivated one,

Table I

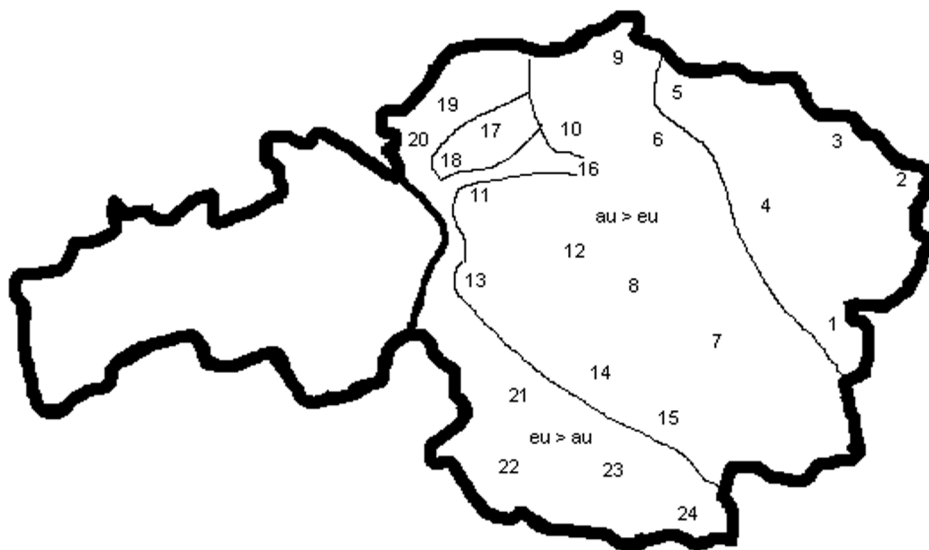
Extension of *au* > *eu* and *eu* > *au* in Bizkaia

	ahuntz 'goat'	euli 'fly'	huri 'rain'	au > eu	eu > au
1 Ermua	auntza	eulixa	eurixa	—	—
2 Ondarroa	auntze	eulixe	eurixe	—	—
3 Lekeitio	auntza	eulidxa	euridxa	—	—
4 Munitibar	auntze	eulidxe	euridxe	—	—
5 Elantxobe	auntze	eulidxe	euridxe	—	—
6 Axangiz	euntze	eulidxe	euridxe	x	
7 Abadiño	euntze	eulidxe	euridxe	x	
8 Zornotza	euntze	eulidxe	euridxe	x	
9 Bermeo	euntze	eulidxe	euridxe	x	
10 Meñaka	euntze	eulidxe	euridxe	x	
11 Zamudio	euntze	eulie	eurie	x	
12 Larrabetzu	euntze	eulie	eurie	x	
13 Zaratamo	euntze	eulidxe	euridxe	x	
14 Igorre	euntze	eulie	eurie	x	
15 Dima	euntze	eulie	eurie	x	
16 Fruiz	euntze	aulidxe	euridxe	x	x
17 Gatika	auntze	euli	huri	—	—
18 Erandio	auntze	euli	huri	—	—
19 Sopela	auntze	auli	auri		x
20 Getxo	auntze	auli	auri		x
21 Zeberio	auntze	aulie	aurie		x
22 Orozko	auntze	aulie	aurie		x
23 Zeanuri	auntze	aulie	aurie		x
24 Otxandio	auntze	aulidxe	auridxe		x

this is hard to establish without any other evidence. Either one of the two could be the result of a natural phonetic development. As external evidence for the primacy of the change *eu* > *au* (*huri* > *auri* 'rain') we may cite the fact that this change is

Map 1

au > *eu* and *eu* > *au* in Bizkaia. Numbers correspond to the towns listed in Table 1



independently found in another Basque area, Aezkoa (Camino 1997: 315-16), although a complication is introduced by the fact that in this latter area there is a systemic shift, whereby original *au* > *ou* (*daude* > *doude* 'they are, stay'). Going back to Bizkaia, we may speculate that a phonetically-motivated change *eu* > *au*, involving the backing of the first element in the diphthong, was stigmatized and triggered a reaction that eventually resulted in the hypercorrective production of /*eu*/ also in lexical items with etymological /*au*/.

6. Summary

In this paper we have examined some, mostly northern Bizkaian, examples of non-phonetically-triggered change in the shape of words. It was noticed that some of these changes do not look very different from phonetically-based sound changes in the modifications that they introduce, but their non-phonetic nature is clear from other considerations.

It is worth pointing out that for several of the main analogical changes we have discussed there is first a phonetically-based sound change, followed by an analogical development in the opposite direction, which serves to broaden or strengthen a lexical alternation triggered by the first, phonetically-motivated change. This is what we have in the cases summarized here in (20 I-III). In the case in (20 IV), which we discussed under hypercorrection, the general development is also the same, sound change followed by analogical reaction, but the two changes do not complement each other in strengthening a generalization.

(20) Phonetic sound change and analogical reaction: Summary

I	A. Phonetic sound change:	a > e / V[+hi] ____ in certain morphological contexts, including nominal inflection (<i>mendira</i> > <i>mendire</i>)
	B. Analogical reaction:	e > a / V[-hi] ____ in nominal inflection (<i>basóetara</i> > <i>basóatara</i>)
	C. Generalized alternation:	In inflectional contexts /a/ and /e/ are in complementary distribution. Suffixes have /e/ after high vowels and /a/ after nonhigh vowels.
II	A. Phonetic sound change:	o > u / __ V in certain morphological contexts, including nominal inflection (<i>basoa</i> > <i>basua</i>)
	B. Analogical reaction:	o > u/ __ # in uninflected nominal forms (<i>diru</i> > <i>diro</i>)
	C. Gen. alternation:	To sg /-ua/ corresponds uninflected /-o/ (tendency)
III	A. Phonetic sound change:	a > e / __ + a in certain morphological contexts, including singular nominal forms (<i>neskaa</i> > <i>neskea</i>)
	B. Analogical reaction:	e > a / __ # in uninflected nominal forms (<i>andre</i> > <i>andra</i>)
	C. Gen. alternation:	to sg /-ea/ corresponds uninflected /-a/ (tendency)
IV	A. Phonetic sound change	eu > au (<i>auri</i> > <i>auri</i>)
	B. Analogical reaction:	au > eu (<i>áurre</i> > <i>éurre</i>)

Other examples discussed in this paper have a somewhat different character. Thus, we saw that both the addition and the deletion of *-z* strengthen the generalization that (all and only) verbal forms encoding an absolutive plural argument end in *-z*. Both the epenthesis and the deletion processes, however, are analogical. We also mentioned other cases that do not interact with phonetic sound changes (phonological rules) as well as examples of contamination.

I believe it would be useful to explore other dialectal areas as well, perhaps classifying the processes in the way it has been done in this paper, in order to gain a better understanding of this type of change in the Basque language.

The inspection of the lexicon of local Basque varieties is also bound to reveal interesting cases of folk etymology. Mitxelena notes that, in spite of its seemingly obvious connection to *begi* 'eye', the word *begiratu* 'to look, take care' most likely

derives from Lat *vigilare*, modified by folk etymology (see Arbelaiz 1978). The likely influence of *mendi* ‘mountain’ in the word *urkamendi* ‘gallows’ from expected *urkamendu* (Sp *ahorcamiento*) has also been remarked upon. Whereas these two examples are part of the common Basque lexicon, local varieties are likely to contain many more such examples. In Trask (1996: 36) the transformation of Sp *zanahoria* ‘carrot’ into Bq *zain-horia* lit. ‘yellow root’ (no dialect is specified) is declared “the most successful folk etymology of all time”. Examining Ormaetxea’s lexicon of the Aramaio variety, I find two noteworthy examples. The word for ‘rosary’, from Sp *rosario*, is listed as *erresaixo*, where one can easily see the influence of *erresu* ‘prayer’, *erresau* ‘to pray’. Another interesting example is the adaptation of Sp *sacristán* ‘sexton’ as *sankristau*, lit. ‘christian saint’.

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