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## AGREEMENT DOUBLING IN BASQUE DIALECTS: IDENTICAL AND NON-IDENTICAL TWINS

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### ABSTRACT<sup>°</sup>

In this paper, we describe and analyze two types of agreement doubling —*identical* and *non-identical twins*—observed in dialectal varieties of Basque. We call *identical twins* two instances in which an argument (the DAT one) is indexed by two or even three occurrences (with minor phonetic alternations) of the same suffix; in turn, the label *non-identical twins* designates cases involving an argument's (in particular, DAT or ERG arguments') simultaneous indexing by two distinct markers, a prefix and a suffix. Here, we argue that the two phenomena differ as to their place in the computational system. *Identical twins and triplets* correspond to 'well-behaved' syntactic derivations in which every argument is probed by just one head. This doubling then arises in the mapping to PF because of a multiple insertion of a particular lexical item in a single set of [ $\Phi$ ]-features valued in syntax. Adopting an Optimality Theory-approach, we will claim that this multiple marking, a violation of INTEGRITY, is aimed at meeting a higher ranked constraint requiring that all the slots for person markers be filled out in the verbal template (FILL TEMPLATE).

On the contrary, *non-identical twins* arise in syntax, as the double agreement marking simply reflects the fact that the [person]-features of the same argument, either ERG or DAT, are probed twice in the syntactic derivation: in the former case, by T and V; in the latter, by  $\nu$  and V. This irregular syntactic derivation arises from the confluence of two independent properties of Basque: (i) V is always endowed with an uninterpretable [person]-feature that must be valued in the derivation, and (ii) 3rd person arguments lack any specification for [person].

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<sup>°</sup> We have devised this text as a companion to our original PowerPoint presentation available in the file "Fernandez&Albizu\_Doubling\_Presentation". Although the slides there have all been included in this text, we want to underline that by virtue of its animation effects the PowerPoint presentation offers a friendlier and easier step-by-step approach to the data and analyses. For those who choose to use text and presentation together, we have added the symbol "▷" throughout the text to mean that at that point they can prompt an animation effect in the PowerPoint presentation by pressing the space bar; the number of symbols in a sequence "▷(▷)" will represent the number of strokes.

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## 0. Introduction:

- **Goal:** To describe and analyze two little-known cases of agreement doubling observed in dialects of Basque.
  - ◆ **Identical twins:** a single argument indexed by two or even three occurrences of a person-marker (a suffix).
  - ◆ **Non-identical twins:** a single argument indexed at once by two distinct person-markers (a prefix and a suffix).
- **Main proposal:** Both phenomena differ as to their place in the computational system: the former is a morphological process; the latter, a morphological side-effect of a 'deviant' syntactic derivation.

### 1 ■ INTRODUCTION

▷ In this talk we want to describe and analyze two little-known cases of agreement doubling found in dialects of Basque. ▷ The first one involves *identical twins*. We call identical twins two instances in which a single argument is indexed by two or even three occurrences of the same suffixal person-marker. ▷ The second one involves non-identical twins. Contrary to the previous phenomenon, a single argument is now indexed at once by two different person-markers, that is, by doublets of a prefix and a suffix.

▷ Our main goal in this talk is to argue that the two phenomena belong to different places in the computational system: identical twins are the result of a morphological process; non-identical twins, a morphological side-effect of a 'deviant' syntactic derivation.

▷ Let us begin by presenting some basic aspects of the agreement morphology of Basque.

# 1. Basic characterization of Basque

- Ergative language
- Rich verbal agreement system (up to 4)
  - a. AGR with ERG, ABS and DAT arguments
  - b. non-argumental AGR: allocutives (ALLO)
- One-to-one relation between arguments and verbal agreement markers

- (1) GU-K ZU ikusi Z-a-it-u-GU  
 we-E you.A see.ASP 2A-plA-root-1plE  
 'We saw you'
- (2) GU-K ZU-RI liburuak eman d-i-ZKI-ZU-GU  
 we-E you-D book.plA give expl-(root)-DF-plA-2D-1plE  
 'We gave you the books'
- (3) GU-K HA-RI liburuak eman z-i-ZKI-O-A-GU  
 we-E him-D book.plA give expl-(root)-DF-plA-3sgD-mascALLO-1plE  
 'We gave them the books (male addressee)'

## 1 ■ BASIC CHARACTERIZATION OF BASQUE

▷ Basque is an ergative language at the morphological level (cf. Fernández 1997 and Ortiz de Urbina 1989, among others). As shown in (1), this ergativity is reflected ▷ in both its nominal declensional system and its verbal agreement system.<sup>1</sup> ▷ Also, the language has a rich agreement system: finite verbs may express agreement with ABS, ERG and DAT arguments at the same time. ▷ This is shown in (2). To these three, Basque may add a fourth type of agreement marker named allocutive. Allocutive is a type of non-argumental agreement that refers to the addressee of the speech situation when he/she does not participate in the event expressed by the verb. Thus, Basque finite verbs may include up to four agreement markers altogether. ▷ The verbal form *zizkioagu* in (3) shows them all.

Finally, as the three examples on the slide show, agreement markers are in a one-to-one relation with arguments.

<sup>1</sup> The following abbreviations will be used throughout the text: A(bs) = absolutive; AE= “displaced ergative”; AD = “displaced dative”; E(rg) = ergative; D(at) = dative; ALLO = allocutive; Agr = agreement; p = person; 1-2-3 = 1st, 2nd and 3rd person; n = number; pl = plural; sg = singular; Asp = aspect; DF = dative flag; expl = expletive; T = tense; v = verb; *v* = *verb*; vow = thematic vowel. The glosses we present are not exhaustive but include the minimal information relevant for a correct understanding of the Basque sentences as well as of our analysis. Moreover, we systematically avoid glossing any morphological information that is phonologically unrealized, as for instance present tense and 3rd person ERG and ABS agreement.

## 1. Basic characterization of Basque

### ■ Person agreement markers

	ABS	ERG	DAT	ALLO
1 sg	n-	-da- / -t		
2 sg MASC/FEM (familiar)	h-	-a- / -k (masc.) -na- / -n (fem.)		
3 sg			-o/-a	
1 pl	g-	gu		
2sg non-familiar	z-	zu		
2 pl	z-	zu		
3 pl				

▷ We show you next the full paradigm of person agreement markers in Standard Basque. For brevity's sake, we won't comment all the details in the table; yet, we want to call your attention to three aspects.

▷ First, the ERG, DAT and ALLO markers are homophonous for 1st and 2nd person, and contrast with ABS ones.

Second, the language has no 3rd person marker, ▷ except for DAT singular (/o-, -a-/).

■ Canonical ordering of person markers:

(4) ABS + root + DAT + (ALLO) + ERG + (ALLO)

- (5) a. Z-aitu-GU      ABS + ... + ERG      (= (1))  
 b. di-ZKI-ZU-GU    ... + plABS + DAT + ERG      (= (2))  
 c. zi-ZKI-O-A-GU    ... + plABS + DAT + ALLO + ERG (= (3))  
 d. zi-ZKI-GU-TE-K ... + plABS + DAT + plERG + ALLO

but see the Displacement phenomena in section 2

And last, person markers contrast not only in their form, but also in their linear disposition:  
 ▷ ABS markers are prefixal; ERG, DAT and ALLO markers are suffixal.▷ The linear ordering of person markers on finite verbs conform in Basque to the schema in (4): ABS markers are always in word initial position; the other three follow the root in a quite fixed order: the DAT marker precedes the ERG one; and ALLO markers, when present, generally occur between DAT and ERG; however, they sometimes appear moved to the right, depending on the person and number of the ERG morpheme.

## 2. Non-Identical twins

- **Dialectal distribution:** Varieties of Gipuzkoa and Lapurdi (Central dialects of Basque)
- **Description:** A sole argument (DAT or ERG) is indexed at once by two person-markers: (canonically) by a suffix and (non-canonically) by a prefix.

- **Ergative doubling:**

- (6) Askak GUK bodegan G-en-it-u-GU-n  
 through.pl.A we.E storeroom.the.in 1plA<sub>E</sub>-vow-3plA-root-1plE-past  
 ‘The throughs, we had them in the storeroom’  
 (Adapted from Agirretxe et alii 1998:228)

- **Dative doubling:**

- (7) Nik ZURI sagarrak eman Z-a-i-zki-TZU-t  
 I.E you.D apple.pl.A give.ASP 2A<sub>D</sub>-vow-(root)-DF-plA-2D-1sgE  
 ‘I gave you apples’ (Fernández & Ezeizabarrena 2001)

## 2 ■ NON-IDENTICAL TWINS

▷ Interestingly, some dialectal varieties diverge from Standard Basque in that ERG and DAT arguments may under very specific conditions be marked twice (or even three times) on the verb. Descriptively, agreement doublets and triplets can be classified into two distinct types on the basis of their morphological form. ▷ In the first place, we find *non-identical twins* in the varieties of Gipuzkoa and Lapurdi (Central dialects of Basque), that is, ▷ instances in which an argument (the ERG or the DAT argument) is indexed at once by two person-markers: (canonically) by a suffix and (non-canonically) by a prefix. This type of doubling is shown in (6) and (7). ▷ Let us start with the ergative doubling of Pasai Donibane, Gipuzkoa in (6). In *Askak guk bodegan genitugun* ‘The throughs, we had them in the storeroom’, the ergative argument *guk* ‘we’ is marked twice in the inflected verb *genitugun*: ▷ first, by the (canonical) suffix *-gu* and second, by the (non-canonical) prefix *g-*. ▷ Similarly, in the dative doubling of Sara, Lapurdi (7), *Nik zuri sagarrak eman zaizkitzut* ‘I gave you apples’, the auxiliary *zaizkitzut* shows two person-markers, ▷ the (canonical) suffix *-tzu* and the (non-canonical) prefix *z-*, for the same dative argument *zuri*. It should be pointed out that ergative and dative doubling are never attested in the same variety of Basque.

■ Prefix-suffix doublets are linked to the phenomena of Dative and Ergative Displacement.

• Ergative:

(8) Askak GUK bodegan d-it-u-GU (Canonical)  
 through.pl.A we.E storeroom.the.in expl-plA-root-1plE  
*'The thoughts, we have them in the storeroom'*

(9) Askak GUK bodegan G-en-it-u-en (ErgDispl)  
 through.pl.A we.E storeroom.the.in 1plA<sub>E</sub>-vow-3plA-root-past  
*'The thoughts, we had them in the storeroom'*

(10) Askak GUK bodegan G-en-it-u-GU-n (ErgDoubl)  
 through.pl.A we.E storeroom.the.in 1plA<sub>E</sub>-vow-3plA-root-1plE-past  
*'The thoughts, we had them in the storeroom'*

(Adapted from Agirretxe et alii 1998:228)

▷ Prefix-suffix doublets are linked to the phenomena of Dative and Ergative Displacement. ▷ To illustrate it, consider the following examples. In the canonical pattern of (8), *ditugu*, ▷ the ERG argument *guk* 'we' is indexed by the suffix *-gu*, as expected. Ergative displacement is illustrated by (9). In the verbal form of (9), *genituen*, ▷ the person marker is displaced to the left, as the ERG argument is now indexed by the prefix *g-* normally associated to absolutive ones. Now, consider (10), the doubling example. In (10), ▷ the two person markers co-occur on the same verb, so giving the doubling form *genitugun*. Notice that in all these sentences the ABS argument is 3rd person. Notice also that both ergative displacement and ergative doubling occur in past tense forms in contrast with the canonical agreement of the present tense forms.

- Dative:

- (11) Ník ZURI sagarra eman d-a-u-TZU-t (Canonical)  
 I.E you.D apple.the.A give.ASP expl-vow-root-2D-1sgE  
*'I gave you the apple'*
- (12) Ník ZURI sagarra eman Z-a-it-u-t (DatDispl)  
 I.E you.D apple.the.A give.ASP 2A<sub>pl</sub>-vow-plA-root-1sgE  
*'I gave you the apple'* (Fernández & Ezeizabarrena 2001:256)
- (13) Ník ZURI sagarrak eman Z-a-i-zki-TZU-t (DatDoub)  
 I.E you.D apple.pl.A give.ASP 2A<sub>pl</sub>-vow-(root)-DF-3plA-2D-1sgE  
*'I gave you apples'* (Fernández & Ezeizabarrena 2001)

▷▷ Something similar can be observed when we look at datives. Take (11). In the inflected form *dautzut*, the DAT argument *zuri* 'to you' is ▷ marked once by the canonical suffix *-tzu*. Compare it to (12), where again the DAT argument triggers ▷ the absolutive prefix *z-* in the auxiliary form *zaitut*; namely, we observe the phenomenon of dative displacement. In contrast to the previous examples, in (13) the auxiliary form *zaizkizut* ▷ combines these two markers and indexes the dative argument twice.



- **Properties:**
  - ◆ No semantic effect
  - ◆ Very restricted morphological distribution
    - ◆ Person and number restrictions:
      - ◆ **DAT Doubling:** DAT=1<sup>st</sup>/2<sup>nd</sup> plural; ABS=3<sup>rd</sup> plural
      - ◆ **ERG Doubling:** ERG=1<sup>st</sup>/2<sup>nd</sup> plural; ABS=3<sup>rd</sup>
    - ◆ Tense restrictions:
      - ◆ **DAT Doubling:** present and past forms
      - ◆ **ERG Doubling:** only past forms
    - ◆ Predicate restrictions: only with transitive and ditransitive verbs

▷ Let us review now the main descriptive properties of the phenomenon. We can start by noting that this doubling has no semantic effect on the sentence. ▷ Another aspect to bear in mind is that this doubling has a very restricted morphological distribution, subject to the following conditions. ▷ Firstly, there is a person and number restriction: both Dative and Ergative doubling are only attested when the doubled argument is 1<sup>st</sup> or 2<sup>nd</sup> person plural; moreover, the absolutive argument has to be 3<sup>rd</sup> person, and in the case of Dative doubling, also plural. ▷ Secondly, tense imposes additional restrictions but only on Ergative doubling. ▷ Finally, non-identical twins can be found only with transitive and ditransitive verbs, never with unaccusatives. As can be seen, the conditions are complex and not all that uniform.

### 3. Deriving non-identical twins

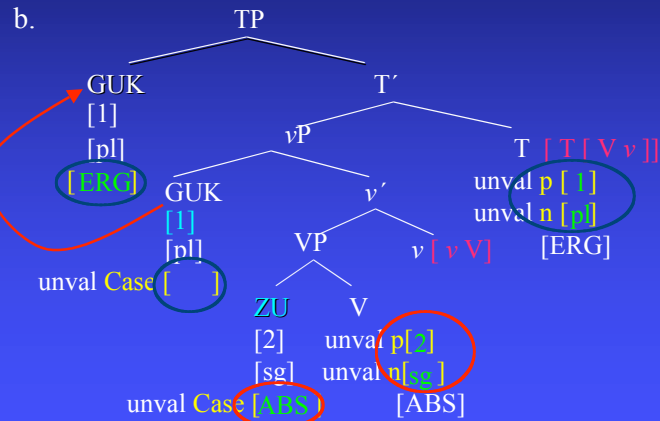
- Some standard assumptions on Basque syntactic structure:
  - ◆ Merge positions: ABS arg. → complement of V  
ERG arg. → Spec of *v*P
  - ◆ Feature values:
    - ◆ V: valued [ABS] case; unvalued *ö*-features (= person and number)
    - ◆ T: valued [ERG] case; unvalued *ö*-features
    - ◆ ERG/ABS arguments: unvalued case; valued *ö*-features
  - ◆ Agree and valuation of features: canonical derivation.
    - ◆ V, with low (ABS) argument
    - ◆ T, with high (ERG) argument
  - ◆ Verb raising: V-to-*v*-to-T

#### 3 ■ DERIVING NON-IDENTICAL TWINS

These are the empirical facts. ▷ Now the question is: how can we derive non-identical twins? ▷ To answer this question, we should first keep in mind a few standard assumptions on Basque syntactic derivations. We will present them as we analyze a canonical transitive sentence. So we skip to example number (14).

### 3. Deriving non-identical twins

- (14) a. Guk zu ikusi Z-int-u-GU-n  
 we.E you.A see.ASP 2A-vow-root-1pIE-past  
 'We saw you'



▷ Consider the canonical sentence *Guk zu ikusi zintugun* 'We saw you' in (14). ▷ To begin with, the ABS argument *zu* 'you' is merged in the complement position of V. This argument has an ▷ unvalued case-feature and valued  $\Phi$ -features. In its turn, ▷ V has unvalued  $\Phi$ -features but a valued ABS specification for case. After merge, the two agree and the ABS argument values ▷ its case feature and ▷ V, its  $\Phi$ -features. ▷ In a second stage, once little  $\nu$  is inserted in the derivation, it attracts the verbal head V. Also, the external argument *guk* 'we' is merged in the Spec position of little  $\nu$ P, ▷ with an unvalued case feature and valued  $\Phi$ -features. ▷ At the top of the derivation, T is merged and little  $\nu$  adjoins to it. ▷ T has unvalued  $\Phi$ -features, so that it attracts ▷ the ERG argument to Spec of TP. As a result of this movement, T values ▷ its person and number features and ▷ the ERG argument its case.

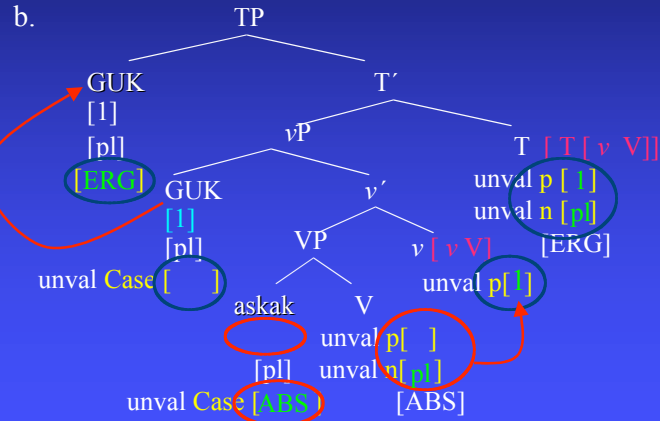
- **Basic problem:**
  - ◆ One-to-many relation between arguments and person-agreement morphology
  - ◆ Doubling person-markers belong to ABS and ERG/DAT sets
- **Proposal:**
  - ◆ V is endowed with an unvalued [person]-feature that must be valued in the derivation
  - ◆ Unlike 1<sup>st</sup>/2<sup>nd</sup> person ones, 3<sup>rd</sup> person arguments lack [person]-features and fail to do so
  - ◆ The unvalued [person]-feature of V is valued by ERG; as a result, ERG values two [person]-features: those of V and T

Bearing this in mind, ▷ recall that the basic problem with twin pairs is that there is a one-to-many relation between arguments and person-agreement morphology. Is it syntactic or morphological doubling? Here we would like to claim that this doubling is in fact syntactic, that is, a morphological side-effect of a ‘deviant’ syntactic derivation. Our analysis will rely on the fact that in non-identical twins person agreement markers belong to different prefix-suffix sets.

The irregular syntactic derivation arises from the confluence of two independent properties of Basque: ▷ on the one hand, V is always endowed with an unvalued [person]-feature that must be valued in the derivation; ▷ on the other hand, unlike 1<sup>st</sup> and 2<sup>nd</sup> person, 3<sup>rd</sup> person arguments lack any specification for [person] and fail to value V’s unvalued [person] feature. Thus, ▷ the unvalued [person]-feature of V is valued by ERG; as a result ERG values two [person]-features: those of V and T.

### 3. Deriving non-identical twins

- (15) a. Guk askak G-en-it-u-GU-n  
 we.E throughs.the.A 1plA<sub>E</sub>-vow-3plA-root-1plE-past  
 'We had the throughs' (Adapted from Agirretxe et alii 1998:228)



▷ Then, let us return to the ergative doubling in (6), slightly adapted in (15) *Guk askak genitugun*. ‘We had the throughs’. ▷ Recall that at this stage V has ▷ unvalued  $\Phi$ -features of person and number. Unlike 1st and 2nd person arguments, the 3rd person ABS argument *askak* has not a ▷ valued case and, what is more important, ▷ neither a specification for person. Thus, by the Agree operation ▷ the ABS case of the internal argument is valued, and also ▷ the number feature of V. Crucially, the person feature of V remains unvalued. ▷ In the next step of the derivation, ▷ V moves to small *v* and ▷ carries along its unvalued person feature. The ERG argument *guk* ‘we’ is merged with an ▷ unvalued case feature in the Spec of small *v*P. Now ▷ V can value its person feature with the ERG argument. ▷ Then the derivation proceeds and the ERG argument moves to Spec-TP where its case-feature takes the ERG value from T. In the other branch of the derivation, ▷ the unvalued  $\Phi$ -features of T are also valued with the ERG argument. As a result, the same argument, the ERG one, values two person features, those of V and T. Then the doubling relation takes place in syntax.

## 4. Identical twins and triplets

- **Dialectal distribution:** Varieties of Zuberoa and Erronkari (Easternmost dialects of Basque)
- **Description:** An argument is indexed by two (or occasionally even three) occurrences of the same suffix (non-standard examples from Yrizar 2002):

- (16) (Niri) esaten d-i-DA-zu (Standard Basque)  
 I.D say.ASP expl-(root)-DF-1sgD-2sgE  
 'You say it to me'
- (17) (Niri) erraiten d-e-i-TA-zü-T (Iruri, Zuberoa)  
 I.D say.ASP expl-vow-(root)-DF-1sgD-2E-1sgD
- (18) (Niri) erraiten d-e-i-TA-DA-zü-T (Iruri, Zuberoa)  
 I.D say.ASP expl-vow-(root)-DF-1sgD-1sgD-2E-1sgD

### 4 ■ IDENTICAL TWINS AND TRIPLETS

Let us now consider *identical twins and triplets*. ▷ Identical twins and triplets are attested in the two Easternmost dialects of Basque: north the Pyrénées, in varieties of Zuberoa; and to the south, in varieties of Erronkari. ▷ Descriptively, identical twins and triplets are cases in which two or even three occurrences of the same suffix index a single syntactic argument, in particular, the DAT argument. ▷ To illustrate the phenomenon, take the examples in (16), (17) and (18). The three examples translate into Basque the English sentence 'You say it to me'. The sentence in (16), *Niri esaten diñazu*, corresponds to Standard Basque; the sentences in (17) and (18), *Niri erraiten deitazüt* and *Niri erraiten deitadazüt*, correspond to the variety of Iruri in Zuberoa. The three sentences differ as to how the 1st person DAT argument *niri* is indexed on the verb: ▷ in Standard Basque, the verbal form *diñazu* carries the canonical DAT marker –DA-. Compare it now to the two verbal forms from Iruri: in (17), the form *deitazüt* shows ▷ the DAT marker –TA- and the word-final suffix –T, the two being phonetic variations of –DA-; in (18), ▷ in *deitadazüt* the canonical affix –DA- is added to the previous two.

#### 4. Identical twins and triplets

- (19) (Niri) hasi      z-i-tza-i-**DA**-n      kakeria bat      (Standard Basque)  
 I.D   start.ASP expl-vow-root-DF-1sgD-past   diarrhea one.A  
 'I started having a diarrhea'
- (20) (Niri) hasi      z-i-tzai-**TA-DA**-n      kakeria bat      (Erronkari)  
 I.D   start.ASP expl-vow-root-DF-1sgD-1sgD-past   diarrhea one.A  
 'I started having a diarrhea'      (Adapted from Estornes Lasa 1984, Yrizar 1992)

#### ■ Properties:

- ◆ No semantic effect
- ◆ Different scope depending on varieties
- ◆ Only with 1<sup>st</sup> person DAT arguments (stricter distribution with plural ones)
- ◆ Linear disposition of twin markers depends on the person and number of ERG and ALLO
- ◆ No restriction related to tense nor predicate-type

▷ We provide additional examples in (19) and (20). This time, the examples illustrate the same phenomenon with the unaccusative verb *hasi* 'begin'. The forms correspond to the dialect of Erronkari.

▷ On a descriptive level, we have detected five main properties of the phenomenon. To begin with, the same as prefix-suffix doublets, identical twins do not change the meaning of the sentence. ▷ Second, the morphological conditions of the phenomenon are not uniform across varieties; for instance, its scope is more restricted in Zuberoa than in Erronkari. ▷ In any case, the phenomenon is very limited in all the varieties. Indeed, it only applies to DAT arguments and, among them, only to 1st person ones; moreover, this doubling is even more restricted with plural 1st person DAT arguments. ▷ Twin markers may appear in different positions: sometimes they are adjacent, sometimes they are not. This linear disposition is determined by the person and number of the ERG and ALLO markers. ▷ And finally, identical twins show no restriction related to tense nor to the type of predicate, unlike prefix-suffix doublets.

- **Basic problem:**
  - ◆ One-to-many relation between syntax and morphology
  - ◆ Multiple instances of the same marker
- **Proposal:**
  - ◆ **Identity of markers:** unlike non-identical twins, only one set of [person]-features is valued in the derivation (canonical syntactic derivation)
  - ◆ **Motivation for multiple marking:** a template-based account: twins and triplets fill the ALLO slots in the morphological template in (4)

(21) ABS + root + DAT + (ALLO) + ERG + (ALLO) (= (4))

▷ In what follows, we will focus on two aspects of the phenomenon: on the one hand, the one-to-many mapping between syntactic arguments and agreement morphology and, on the other, the fact that the multiple occurrences of agreement are all alike.

▷ Let us first consider the second aspect. In this respect, we want to suggest that these sentences undergo a canonical syntactic derivation, so that one and only one set of [person]-features is valued in the derivation by the relevant DAT argument. Under this premise, it is always the same set of features that is spelled out by multiple agreement markers; of course, identity is exactly what we expect.



- (21) ABS + root + DAT + (ALLO) + ERG + (ALLO) (= (4))
- (22) a. z-i-tzai-TA-DA-n ... + DAT + DAT (= (20))  
 b. d-e-i-TA-zü-T ... + DAT + ERG + DAT (= (17))  
 c. d-e-i-TA-DA-zü-T ... + DAT + DAT + ERG + DAT (= (18))
- 

#### ■ Optimality Theory: main tenets

- ◆ Individual grammars set specific rankings on constraints
- ◆ Constraints may be violated
- ◆ A list of candidate forms is generated and evaluated. The winner is the one that best satisfies the constraint hierarchy

▷ Take the schema in (21). In the verbal template in (21), ▷ the DAT marker occupies a fixed position after the verb root; as for the ALLO marker, it may show up in two different positions: ▷ either adjacent to the DAT marker or to the right, following the ERG suffix. Crucially, in all the doubling forms the extra DAT markers fill the ALLO positions. Take first the unaccusative verbal form *zitzaitadan* ▷ in (22a). Here, the second DAT suffix –DA– fills the first ALLO slot. In the (b) example, ▷ in *deitazüt* the second DAT marker –T appears to the right of the ERG marker, again a position available for ALLO markers. Finally, take the form *deitadazüt* in (22c), ▷ the example of triple marking: the two ALLO slots are now filled at once by the two rightmost DAT markers. This means that, in this case, multiple agreement marking is no longer a syntactic process, but a morphological one. ▷ However, what is the morphological motivation for a phenomenon like this to happen? Our intuition is that this doubling phenomenon must be analyzed in connection to the morphological template presented in (4), now repeated in (21). The idea is that the extra twin markers are added just to fill the empty ALLO slots in the morphological template. The data seem to corroborate this correspondence.

- Sketching a formal account:
  - ◆ Two competing morphological constraints:
    - a. **Fill Template**: All the positions in the verbal template must be filled out
    - b. **Integrity**: No morphosyntactic node corresponds to more than one lexical entry
  - ◆ Dialectal variation derived from different rankings:
    - a. **Standard Basque**: Integrity >> Fill Template  
di-DA-zu >> dei-TA-DA-zü-T
    - b. **Doubling Dialects**: Fill Template >> Integrity  
dei-TA-DA-zü-T >> di-DA-zu

▷ In our view, Optimality Theory (Prince & Smolensky 1993 and subsequent work) offers the right tools to formulate this intuition. Very briefly, in Optimality Theory individual grammars set specific rankings on constraints. ▷ In principle, constraints may all be violated. ▷ An operation GEN generates a list of candidate forms for each input; then, these candidates compete against one another, and the winner is the one that best satisfies the constraint hierarchy of the language. ▷ Our analysis here postulates two morphological constraints for Basque. First, the constraint we call Fill Template, that requires that all the positions in the verbal template in (21) be filled. And second, McCarthy and Prince's INTEGRITY constraint. INTEGRITY belongs to the family of Correspondence constraints (McCarthy and Prince 1995 1999) that regulate the relation between inputs and outputs. INTEGRITY forbids one-to-many mappings between input and output. In our case, it rules out the multiple spell-out of a single morphosyntactic node.

▷ The dialectal variation between Standard Basque and the doubling varieties of Zuberoa and Erronkari follows from differences in the rankings of the two constraints. In Standard Basque, INTEGRITY dominates FILL TEMPLATE; in the doubling varieties, the two constraints are ordered just the opposite. According to these rankings, the evaluation between the two candidates *ðidazu* and *ðeitadazüt* will choose *ðidazu* in Standard Basque: *ðeitadazüt* meets FILL TEMPLATE but violates the dominant INTEGRITY two times; on the contrary, the winner form *ðidazu* involves a double violation of FILL TEMPLATE but complies to INTEGRITY, the higher ranked constraint. Of course, the opposite ranking in the Zuberoa and Erronkari varieties, where FILL TEMPLATE now dominates INTEGRITY, will favor *ðeitadazüt* over *ðidazu*.

■ Aspects for further research:

- ◆ Intermediate forms that only partially fill the template

dei-TA-DA-zü // dei-TA-zü-T

- ◆ Unaccusative forms: person-markers exceed the number of slots in the unaccusative template (but comply to the (di)transitive one):

(23) za-i-TA-zü-D ... + DAT + allo + DAT (Bidankoze, Erronkari)  
 za-i-TA-DA-k ... + DAT + DAT + allo

▷ To be honest, we must acknowledge that at this stage our proposal is a bit tentative and preliminary. Indeed, the analysis has to be worked out in more detail, for there are two sets of data that escape our analysis at this point. One such case are the intermediate forms *deitadzü* and *deitazüt*. Both forms involve one violation of INTEGRITY (because of the double presence of the DAT agreement marker) and one violation of FILL TEMPLATE (because the two leave one ALLO slot empty). According to the two basic hierarchies of constraints we have established so far, the intermediate forms *deitadzü* and *deitazüt* should never exist in Basque: they should always be beaten by either *diðazu* or *deitadzüt*.

Another aspect comes from unaccusative predicates. Consider the unaccusative verbal forms *zaitazud* and *zaitadak* in (23): in *zaitazud*, ▷ the now familiar twin DAT markers are ▷ aligned on both sides of the ALLO marker; in *zaitadak*, ▷ the two markers appear ▷ to its left. The striking fact is that the number of person markers exceeds in these forms that of the slots available in the unaccusative template: since the position of ALLO markers on unaccusative forms is systematic, in principle no extra slot should be available in the unaccusative template for the additional twin DAT marker.

At this point we can only say that we will address these problems in future research. In any event, we strongly believe that the account based on templates that we have pursued in this talk is the right approach to the phenomenon.

## 5. Conclusions

- Both phenomena differ as to their place in the computational system:
  - ◆ **Non-identical twins:** a morphological side-effect of a ‘deviant’ syntactic derivation:
    - $\phi$ -features of ERG or DAT arguments are probed and agreed with twice during the derivation;
    - an ‘extra’ set of  $\phi$ -features is thus valued in syntax
  - ◆ **Identical twins and triplets:** a morphological process:
    - one set of  $\phi$ -features is spelled out two or three times
    - double and triple marking is aimed at meeting a higher ranked constraint requiring that all the slots for person markers are filled out in the verbal template

### 5 ■ CONCLUSIONS

▷ So, to wrap up, in this talk we have studied some instances of identical and non-identical agreement doubling attested in dialects of Basque. We have proposed that the two phenomena differ as to their place in the computational system. On the one hand, non-identical twins are a morphological side-effect of a ‘deviant’ syntactic derivation: the  $\phi$ -features of the ERG or DAT argument are probed and agreed with twice in the derivation; as a result, an argument values an extra set of  $\phi$ -features in syntax. On the other, identical twins and triplets are the outcome of a morphological process whereby the same set of  $\phi$ -features is spelled out two or three times. This multiple marking is aimed at meeting a higher ranked constraint requiring that all the slots for person markers are filled out in the verbal template.

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