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A Note on Parameter Setting in Contact Situations

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Abstract: This paper revisits the study of linguistic variation within the Government and Binding approach to parameters, pointing out some limitations of parameter schemata in language contact scenarios. Discussion is focused on the possibility that clustering effects (the schemata themselves) are more complex than conventional approaches suggest. We outline an alternative approach, directly connected to Uriagereka's typology or parameters, which is itself based on Chomsky's Theory of Formal Languages. Empirically, we focus on language contact situations, as they provide cases where variation by contact operates under what we call an Excess of Stimulus, whereby access to the relevant data is overwhelming, but somehow ignored by learners.

Keywords: agreement; Basque; dative; DOM; language contact; poverty of stimulus; Spanish

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1. Introduction

Minimalism has not provided any particularly noteworthy theoretical insight to the *Principle and Parameters* (PPT henceforth; cf. Chomsky 1986) approach to variation. It has, however, added two important pieces to that more general puzzle. On the one hand, the post-GB literature has questioned the validity of the empirical correlations (so-called "parameter clusters"; cf. Biberauer and Roberts 2015) that are supposed to obtain after a given parameter is set (cf. Newmeyer 2004; Roberts and Holmberg 2005; D'Alessandro 2014; among others). On the other, it allowed one to ask *why* linguistic variation exists and how it can meet interface conditions and non-linguistic efficiency principles (Chomsky 2005; Berwick and Chomsky 2011; Gallego 2011).

This paper focuses on a particular aspect of *Parameter Theory* (the typology of parameters) by relating it to a well-defined theory of formal grammars and its relation to what probably is the conceptual hallmark of the generative approach: the Poverty of Stimulus (PoS; cf. Chomsky 1986). We would like to approach this connection by concentrating on language contact phenomena, for they provide for obvious PoS situations in a somewhat paradoxical way: they are characterized by what we may call an Excess of Stimulus (EoS), in which access to the relevant data is rich, but somehow ignored by learners. Our goal is to show that this is not directly expected under customary assumptions, and to suggest that an alternative approach (whatever that may be, although we assume Uriagereka's 2007 proposal) is necessary.

Discussion is divided as follows: Sections 2 and 3 briefly summarize the Government and Binding based approach to parameters, coupled with the discussion in Uriagereka (2007, 2008); in Section 4, we see possible ways to explore Uriagereka's (2007, 2008) correlations; Section 5 is the core of the paper, as it discusses DOM in Spanish and Basque, and how the contact with these languages yields selective adoption of DOM (by the Basque spoken in the Iberian peninsula); Section 6 offers a quick summary of the paper.

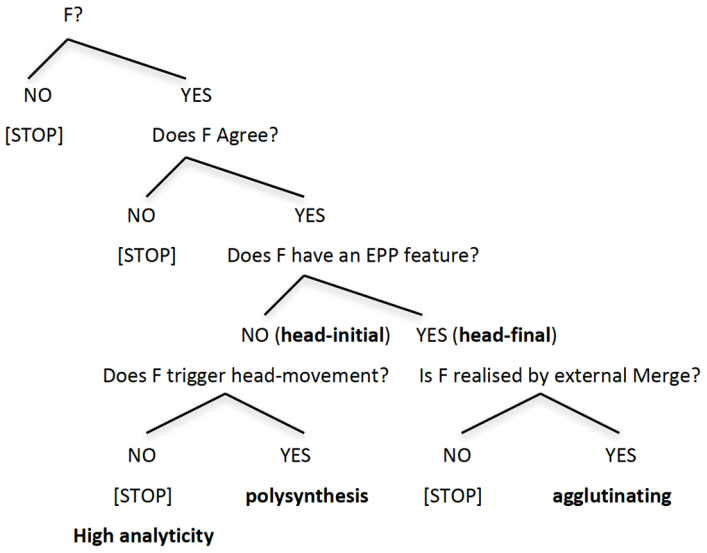
2. GB-Rooted Approaches to Linguistic Parameters

Language variation has been the focus of much research and discussion for the last few decades, the pendulum swinging from structuralist-rooted perspectives arguing that

"(l)anguages can differ from each other without limit and in unpredictable ways" (Joos 1957, p. 96) or taking speech to be "a human activity that varies without assignable limit as we pass from social group to social group" (Sapir 1921, p. 2) to formal models within the Chomskyan paradigm, based on the much less patent argument that syntactic structure must be, in some core sense, universal. This quasi paradox has not been resolved yet, and even staunch generativists will admit that they cannot understand why languages differ or, more basically, along which dimensions they may.

Within what Baker (2010) calls "formal generative typology", variation has been dealt with invoking the notion of *parameter*, originally conceived as representing the range of variation of universal principles, which Chomsky's (1986) PPT invited us to conceive of as a two-position switch. From this perspective, learners have to determine the position of the switch ("fix the parameter") after exposure to the data until a steady state of a particular grammar is reached. Accordingly, languages can be seen as clusters (networks) of properties to be determined through observable input. Linguists have, in fact, put forward different networks to capture the relevant groupings. Consider (1), taken from (Roberts and Holmberg 2010, p. 48) where F stands for "feature", and the downward options indicate the standard binary (YES/NO) path to fix points of language variation.

(1)



Each decision-point allegedly corresponds to a microparameter, whereas microparameter groupings count as macroparameters (cf. Baker 2008; Gallego 2011 and references therein for discussion).

3. Parameters, Markedness, and Grammar Types

Uriagereka (2007, 2008) explicitly connects the different types of variation displayed by natural languages with the *Theory of Formal Languages* (TFL) put forward in Chomsky (1956), in which we find regular grammars (for linearly adjacent dependencies), context-free grammars (for dependencies involving phrase markers), and context-sensitive grammars (for long-distance dependencies requiring collections of phrase markers—or chains). In Uriagereka (2007, 2008) makes the following proposal with respect to parameter types:[1]

(2) a. Microparameters → Markovian dependencies
b. Sub-case parameters → context-sensitive dependencies
c. Core parameters → context-sensitive dependencies

Before being directly concerned with matters of variation and learnability, Chomsky (1956) put forward a theory of formal grammar types according to their complexity: finite-

state, context-free and context-sensitive grammars. Given an alphabet (a finite repository of terminal units TUs) and a Computational Procedure (CP), the types of objects that these grammars can generate are: lists of TUs (as in (3a)), combinations of TUs yielding abstract non-terminal units ("phrases", signalled with square brackets in (3b)), and re-combinations of phrases that are pronounced in a position where they are not interpreted in ("chains", the discontinuous object in (3c)):

(3)

a. One, two, three, four, etc.
b. [Ulysses [built [the horse]]]
c. <[The horse]>, [Ulysses [built <[The horse]>]]]

In Uriagereka (2007, 2008), this hierarchy of grammars is reinterpreted, suggesting that its types correspond to the different structure-building CPs of Chomsky (2004): External Merge, Internal Merge, and Pair Merge. So, roughly, Uriagereka (2007, 2008) defends the correlations in (4):

(4) Grammar type → Formal object (operation type) (cf. Chomsky 1956, 2004)
a. Type 1: Context-sensitive grammars → Chains (Internal Merge)
b. Type 2: Context-free grammars → Phrases (External Merge)
c. Type 3: Finite-state grammars → Lists (Pair-Merge)

The key property distinguishing the types of grammars is memory, which should be understood as related to the system's resources—the CPs themselves. Uriagereka (2007, 2008) argues that the operations instantiating grammar types 1 and 2 correspond to Internal Merge (Move, in earlier formulations) and External Merge respectively. Type 0 (not represented above) corresponds to the Turing Machine and is therefore outside of natural languages. Type 3 cannot be outside too, though, since the CH has an implicational nature (i.e., more complex levels presuppose simpler ones). The basic property of type 3 concerns memory restrictions: it can only operate with immediately adjacent elements, as happens in the case of Markovian chains.

This provides a falsifiable theory of parameter types that echoes that of operations and grammars. More than that, it provides us with a complexity-based ranking of phenomena, which will be crucial for the point we want to make in this note.

4. Language Variation and Parameter Types

As noted, Uriagereka (2007, 2008) argues for a three-way classification of parameters, aimed at correlating with the CH and a markedness ranking: (i) peripheral, (ii) sub-case and (iii) core parameters, illustrated in (5), (6) and (7) below.

(5) a. I wonder [what you (S) said (V)]
b. I wonder [what said (V) you (S)]

(6) a. Yo (la) estoy viendo a Maria (Spanish)
I CL-her am seeing ACC Maria
'I am seeing her Maria'
b. Yo (*l') estic veient la Maria (Catalan)
I CL-her am seeing the Maria
'I am seeing her Maria'

(7) a. ∅ Maite ∅ nuen (Basque)
loved 1.sg-AUX-3.sg
'I loved it'
b. I her am seeing to/the Maria b. *(I) love *(her)

The idea behind the parameter types above is that they are based on the kind of phenomena they cover, from more to less detectable. Borrowing standard logic terminology,

we could say that parameters are first, second and third-order, according to the complexity of the objects they operate on: terminal elements (analogy based changes implying easily detectable word order changes, like subject–verb adjacency in (5)), phrases (clitic doubling phenomena under a "Big DP" approach), and chains (Probe–Goal dependencies affecting functional categories, like polysynthesis; cf. Baker 2001). This three-way classification, ranked from more to less accessible to learners is depicted in (8):

(8)

a. Peripheral Parameter = terminal elements (first-order data)
b. Sub-Case Parameter = phrases (second-order data)
c. Core Parameter = chains (third-order data)

MORE → LESS DETECTABLE

Given these correlations, we should further expect second and third-order parameters to instantiate networks more complex than those in (1). We think that contact-induced grammatical variation can illustrate the increasing complexity that those networks may have. We concentrate on the relevance of contact-induced change as a potential source of reflection on the nature of parameters and as a potential field of development on our thinking about the nature of parameter systems, their connection to complexity, and to unexpected learning situations, not only because they have not been discussed in the literature, but because the current approach to parameters does not even allow to say something about them.

5. Discussion

To see where these ideas lead, let us consider their potential application. For concreteness, we focus on Basque/Spanish/French contact. In particular, we concentrate on two types of contact-induced change that result in parameter networks of increasing complexity. The first one corresponds to wh-movement in Basque in contact with French. The second one corresponds to the development of DOM in Basque in contact with Spanish.

5.1. Basque—French Contact Situations

The first case is represented by the development of in-situ questions in Labourdin Basque, a variety of Basque in contact with French. As shown recently by Duguine and Irurtzun (2014), young speakers of Basque in contact with French have developed the possibility of leaving the wh-phrase in-situ, an option that is not available otherwise in Basque, but is possible in French (Obenauer 1994). Thus, young labourdin speakers can either leave the wh-phrase in-situ (9a, keeping the basic SOV order), or move it to the front of the sentence, triggering verb movement into the left periphery (Ortiz de Urbina 1989). In the latter case, the syntactic distribution of the wh-phrase parallels focused constituents in Basque (9c):

(9) a. **Nork** liburua erosi du ? (In-situ)
who.ERG book.the bought has
"Who bought the book?"

b. **Nork** erosi du liburua ?
who.ERG bought has book.the
"Who bought the book ?"

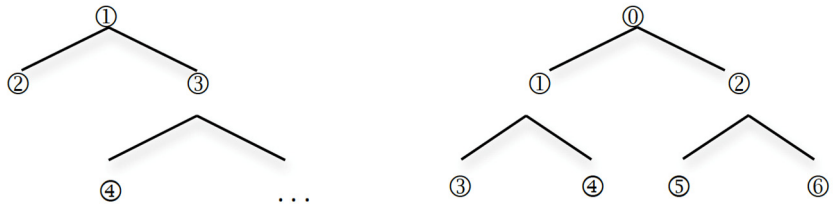
c. Jonek erosi du liburua
Jon.ERG bought has book.the
"It is Jon who has bought the book"

The nature of the parameter boils down to the possibility that the wh-feature is selected by a focus feature (which triggers displacement) or not. As such, it qualifies as a subcase parameter (8b above):

(10) a. [$_{FocP}$ F [$_{WhP}$ Wh . . .]] (General Basque, including Labourdin)
b. [$_{WhP}$ Wh . . .]] (Only Labourdin Basque)

The inclusion relation that arises between (10a) and (10b) from a structural point of view is mapped into a parameter network that is more complex than (1). There is no way to formally state the difference between general Basque and Labourdin Basque in terms of a simple binary schema such as (1): Labourdin Basque includes the option available in general Basque. The kind of parameter network that we would need would be at least of the complexity level in (11b). (11a) is the previous simple schemata, reproduced here:

(11) a. Standard Parameter Network b. Parameter network of higher complexity



(11b) displays a network that is both left- and righ-recursive, creating (potentially) multiple learning paths—to be determined by linguistic input. The starting point of the learning path is the question «Is the wh-feature selected by a focus feature ?», with the left-hand side representing, say, the "yes" answer (with its concomitant further questions), and the righthand side representing the "no" answer. Labourdin Basque includes, we argue, both options.

5.2. DOM in Contact Situations

The second contact-induced change that we would like to address within the general outlook presented here is the emergence of DOM in contact situations. The topic is vast, and we can not expect to cover all the facts here. Simplifying things somewhat, DOM consists in adding some morphological mark to the object in order to make it "different" from another local argument (local = within the same domain). Typically, this argument is the subject.[2] Crucially, DOM seems to be sensitive to a series of semantic notions (Torrego 1998; López 2012, and references therein), more prominently animacy:

(12) a. *Judas besó Jesús (Spanish)
Judas kissed Jesus
b. Judas besó a Jesús
Judas kissed to Jesus
"Judas kissed Jesus"

As the reader can see, DOM resorts to a preposition (*a* = to) in Spanish, which is taken to signal (differential) accusative, although it is morphologically dative. In the case of Basque, DOM involves both dative case-marking in the object and morphological indexing within the auxiliary, via agreement and a ditransitive root. This is the typical configuration that signals the presence of an indirect object. Consider (13), from Elordieta et al.'s (1995) description of the dialect of Lekeitio:

(13) Nik suri liburua emon dotzut (Basque)
I.ERG you.DAT book.ABS given 3sgA.root.2sgD.1sgE
"I gave you the book"

(13) is an ordinary ditransitive sentence, one that involves a verb of transfer and a dative goal. The goal is marked with the dative case suffix *–ri*, and it is indexed in the auxiliary by both person agreement and the presence of a special root for ditransitive verbs. Transitive sentences in standard Basque present an Ergative–Absolutive pattern, illustrated

in (14a). Until recently, this has been the general pattern for all Basque varieties. In (14a), the direct object of *ikusi* (Eng. "see") appears in the unmarked case form (absolutive). In present-day Basque, a number of varieties may present an Ergative–Dative pattern for transitive sentences (14b), particularly with 1st and 2nd person objects (example from Elordieta et al. 1995):

(14) a. Nik su ikusi sattut (ERG-ABS) (Basque)
I.ERG you.ABS seen 2sA.root.1sE
"I've seen you"
b. Nik suri ikusi dotzut (ERG-DAT)
I.ERG you.DAT seen 3sgA.root.2sgD.1sgE
"I've seen to you" (Eng. "I've seen you")

As the reader can check, both the case marking of the object (dative *–ri*) as well as the form of the auxiliary correspond to the ones we saw in (13) for dative goals. This is what we identify (following Mounole 2012; Fernández and Rezac 2016; Rodriguez-Ordoñez 2016, 2017; Odria 2017 among others) as DOM in Basque. Crucially, the phenomenon illustrated in (14b) only arises in those dialects that are in contact with Spanish (DOM does not exist at the other side of the Pyrenean border in the dialects in contact with French). In the relevant area, the phenomenon is widespread, and it is not recent: Mounole (2012) locates the first attestations of DOM in the second half of the XIXth century. Basque scholars have traditionally seen this phenomenon as resulting from contact with Spanish. Besides the geolinguistic distribution of the phenomenon, limited to the Spanish side of the border, other elements argue in favour of the idea that Basque DOM depends on contact: Austin (2006, 2015), who notes that DOM emerges at the same time (within the first three years of age) in Basque and Spanish during the course of early (simultaneous) bilingual acquisition[3] also points out that Spanish language dominance plays a role in the frequency of the phenomenon. In the context of adult usage, Gómez Seibane (2012) also notes that speakers with Spanish as the dominant language use DOM more frequently. Rodriguez-Ordoñez (2017) points out that DOM may be triggered directly by the borrowing of Spanish verbs into Basque that allow a DOM frame. The phenomenon is highly stigmatized in formal contexts. Many Basque speakers can (and do) spontaneously alternate between DOM marking and a more traditional marking (ERG-ABS) depending on the context of use. Note that this leads us into the scenario that we schematize in (11), in which contact has as a consequence a more inclusive system that preserves options of the old one and opens up new setting paths. However, the most intriguing aspect of DOM in Basque is that the DOM system that Basque children acquire in the course of early bilingual acquisition is not symmetric for both languages (see Rodriguez-Ordoñez 2016, 2017; Odria 2017; Fernández and Rezac 2016; among others). In this sense, contact-induced DOM presents a more complex parameter setting scenario, for which a left- and right-recursive parameter schema such as (11b) does not seem to be sufficient.

5.3. Some Properties of Spanish Basque

Before we go into the specifics of contact, a note is necessary concerning the relevant comparanda. The Spanish spoken in the Basque Country is known to possess a number of properties that singularizes it within the context of peninsular Spanish. Some of those properties, such as the existence of null objects where other varieties of Spanish require an accusative clitic (15a), or the presence of extended *leísmo* for animate direct objects (15b), can be observed in other contact varieties of Spanish (see Landa 1995; Gómez Seibane 2012; Klee and Lynch 2009).

(15) a. Los perros no podemos llevar nosotros a la playa (Basque Spanish)
the dogs neg we.can take.inf ourselves to the beach
"The dogs, we cannot take them to the beach ourselves"
(from Landa 1993, p. 139)

b. Le estoy buscando a María, pero no le encuentro
cl.dat I.am looking for Maria but neg cl.dat I.find
"I am looking for Maria, but I can't find her"

The latter phenomenon, so-called *leísmo*[4], is important for our purposes as it interacts with DOM. In the Spanish of the Basque Country, the same clitic (the dative one) doubles indirect objects in ditransitive sentences (Goals) and dative case-marked objects in transitive sentences (15b above). As the reader has probably noticed, this makes the Basque-Spanish system reminiscent of Basque DOM configurations, as it involves not only a special case marking on the object, but also a specific inflectional cue in the finite form (the clitic) that embraces both transitive and ditransitive predicates. We attribute special importance to the configurations that allow clitic doubling in Basque-Spanish, as they are the ones that approach Basque DOM most closely—a point that has been stressed previously, particularly by Rodriguez-Ordoñez (2017).

According to Landa (1995), Basque Spanish DOM targets objects that are [+human, +/-masculine, +/-singular]. As the feature [+human] implies countability, and gender is not represented morphologically in the dative clitic in the Basque leista dialect, we can conclude that Basque Spanish DOM is driven by animacy. Landa notes, however, that clitic doubling in Basque Spanish introduces a further condition: it requires that the doubled argument be interpreted as "presuppositional" (Franco 1993; Landa 1995; Franco and Mejias-Bikandi 1999). Franco and Mejias-Bikandi (1999) point at semantic contrasts such as (16a-b) and (17a-b) (from Franco and Mejias-Bikandi 1999, p. 108) as evidence for this additional condition on doubling:

(16) a. Le he visto a un marinero (Basque Spanish)
cl.dat I.have seen prep a sailor
"I have seen one of the sailors"

b. He visto a un marinero
I.have seen prep a sailor
"I have seen a sailor/one of the sailors"

(17) a. A quién le han Seleccionado ? (Basque Spanish)
prep who cl.dat they.have selected
"Who among them did they select ?"

b. A quién han seleccionado ?
prep who they.have selected
"Who did they select/who among them did they select?"

Franco and Mejias-Bikandi (1999) observe that whereas non-doubled indefinites can have either a specific or a non-specific reading (see also Leonetti 2012), clitic doubled indefinites can only have a specific one. This reading, they argue, corresponds to the insertion of the variable introduced by the indefinite in the restriction of the event quantification, along the lines of Diesing's (1992) *Mapping Hypothesis*. The clitic forces this reading by setting the scope position of the indefinite outside the vP, a position that maps into the restriction of the event quantification. The non-doubled indefinite on the other hand, can be mapped inside the vP or undergo covert raising, in which case it will end up in the same position of the clitic. Doubling thus has a semantic effect in the Spanish of the Basque Country.

Basque Spanish DOM, coupled with clitic doubling, spans across a variety of non-definite objects, as long as they are human and can be interpreted specifically. The range of DOM in the Spanish of the Basque Country is thus relatively large and includes other types of indefinites besides the ones we have seen. For instance, the dative clitic can double cardinal quantifiers, as long as they are interpreted partitively. I reproduce here data from Paasch-Kaiser (2015), recorded in her monograph about the Spanish of Getxo, a biscayan town (Paasch-Kaiser 2015: 344):

(18) Les cogieron a todos y venga, todos a la carcel. (Getxo Spanish)
cl.dat.pl they.caught prep all and come.on, all to the jail
Y les fusilaron a un montón
And cl.dat.pl they.shot prep a lot
"They caught all of them, and come on, everyone to jail.
And then they shot a lot (of them)"

The data gathered in Getxo also include one instance of doubling with a generically interpreted indefinite (Paasch-Kaiser 2015: 343). We take generic indefinites to be mapped into the restriction of event quantification.

(19) Hay gente que no le entiende a un bermeano (Getxo Spanish)
there.is people that neg cl.dat.sg understands to a bermean
'There's people that cannot understand a typical speaker from Bermeo'

NPIs, as far as they are animate can also occur in a DOM frame with clitic doubling. In that case, they are interpreted as partitive:

(20) No le he visto a nadie (Basque Spanish)
neg cl I.have seen prep anyone
"I didn't see anyone (of them)"

5.4. Back to DOM

The reason we go into so much detail about the Basque Spanish system is because, once the main lines of the Basque Spanish DOM are singled out, it turns out that it is significantly different from the Basque DOM system for which it has presumably served as a triggering or motivating factor. None of the specific indefinites that require DOM and clitic doubling in the Spanish of the Basque Country have DOM counterparts in Basque:[5]

(21) a. *Arrantzale bati ikusi diot. (Basque)
fisherman one.dat seen aux
"I have seen one (of the) fishermen"
b. *Pilo bati fusilatu zioten.
lot one.dat shot.past aux
"They shot a lot of them"
c. *Ez diot inori ikusi
neg aux anyone.dat seen
"I haven't seen anyone"

(22) provides a comparison of the DOM system in the Spanish of the Basque Country and in Basque, based on the mentioned literature.[6]

(22) DOM in Basque and the Spanish of the Basque Country

	Spanish	Basque
1/2 person	OK	OK
Human Definite	OK	%OK
Human Specific	OK	*
Human non-specific	OK	*
Non-Human specific	OK	*

The basic difference between the Basque system and the Spanish one can be defined broadly in terms of Aissen's typology of One-Dimensional DOM versus Two-Dimensional DOM. In her comparative study of DOM, Aissen (2003) distinguishes languages in which a single semantic or deictic factor (say specificity or animacy) is relevant to the differential marking of the object (e.g., Turkish or Yiddish) and languages in which both are (like Spanish, Hindi or Persian). Basque DOM seems to be organized around the animacy scale.

Spanish, including the Spanish of the Basque Country, is organized on the basis of two jointly operating scales: animacy and specificity.

Languages seem to restrict DOM to varying subsets of the feature combinations expressed in (22) (see Dalrymple and Nikolaeva 2011). From this point of view, there is nothing particularly noteworthy in the Basque cases, beyond what is due to account for this variation cross-linguistically. However, contact situations, particularly early bilingual acquisition, have the potential to underline specific inductive problems that L1 acquisition does not have to address. Why is it that the effects of contact stop at that precise point? Why is it not the case that contact-induced change goes all the way in Basque to mimic the Spanish system?

Odria (2017) proposes that what unites the different instances of DOM in Basque (definite third person objects and first and second person pronominals) is the presence of D in the object, which encompasses both definites and person pronominals (see also Artiagoitia 2012). We adopt this view, but with a twist. We propose that what underlies Basque DOM is clitic climbing. It has been observed that person agreement in Basque seems to behave as a clitic (Etxepare 2003; Arregi and Nevins 2012). It is relevant, at this point, to consider Long Distance Agreement cases, which we do in the next subsection.

5.5. Long Distance Agreement in Basque

In his work on Long Distance Agreement in Basque, Etxepare (2003, 2006, 2012) shows that LDA in person, unlike LDA in number, is restricted to restructuring contexts, those that in other languages constrain the domain of clitic climbing. LDA in Basque arises with two types of nominalized dependents, that we will call P-dependents and D-dependents. Under certain selecting predicates (typically modal, motion, and aspectual predicates as well as predicates expressing force-dynamic relations, in the sense of Talmy 2000), both person and number LDA are possible. The nominalized dependents that allow this are those that are headed by an aspectual postposition (P-dependents). Both person and number LDA are possible for instance with a control predicate like *saiatu* (Eng. "try"), a member of the set of lexical restructuring predicates cross-linguistically (Etxepare 2006, p. 304 for Basque; Wurmbrandt 2001) that in Basque selects a P-dependent:

(23) a. Saiatuko gara [$_{\text{PostP}}$ [$_{\text{NomP}}$ _ zu jendartean aurkitze]]-n]
try.prosp we.are you.abs among.the.people find.nom.post
"We will try to find you among the people"

b. Saiatuko **z**aitugu [$_{\text{PostP}}$ [$_{\text{NomP}}$ _ jendartean aurkitze]]-n]. (Basque)
try.prosp we.are.**you** among.the.people find.nom.post
"We will try to find you among the people"

(23a) represents an ordinary control configuration with the verb *saiatu* «try», an intransitive verb that selects a nominalized clause with a postpositional head and only agrees with its single argument (the subject). (23b) represents an LDA structure, in which the matrix auxiliary shows agreement both with the subject and with the second person object in the embedded sentence.

Person LDA is not possible outside the domain of prototypical restructuring predicates. Predicates that do not typically inform the category of restructuring verbs can also allow LDA in Basque. Those verbs select nominalized complements that are headed by the determiner *–a* (D-dependents), and they can include an overt subject.[7] They seem to be structurally more complex (see Goenaga 1984; Artiagoitia 1994; San Martin 2004; Etxepare 2006). A verb such as *gustatu* (Eng. "like") is a case in point. The verb *gustatu* (Eng. "like") in Basque allows LDA in number but not LDA in person. Consider (24a-b):

(24) a. Joni [$_{DetP}$ [$_{NomP}$ liburu erromantikoak irakurtzea]]-a] gustatzen zaio
Jon.dat book romantic.pl read.nom.det like.imp Present.3sA-3sD
'Jon likes to read romantic books'

b. Joni [$_{DetP}$ [$_{NomP}$ liburu erromantikoak irakurtzea]]-a] gustatzen zaizkio
Jon.dat book romantic.pl read.nom.det like.imp Present.3plA-3sD
'Jon likes to read romantic books'

In (24a) the auxiliary shows default 3rd person singular agreement, the index that corresponds to a nominalized clause headed by a Determiner. In (24b), the auxiliary shows plural agreement, which can only come from the embedded object, *romantic books*. This is a case of number LDA. In the same configuration, person LDA is not available:

(25) a. Joni [$_{DetP}$ [$_{NomP}$ zu inguruan ikuste]]-a] gustatzen zaio.
Jon.dat you around see.nom.det like.imp Present.3sA-3sD
"Jon likes to see you around"

b. *Joni [$_{DetP}$ [$_{NomP}$ inguruan ikuste]]-a] gustatzen **za**tzaizkio.
Jon.dat around see like.imp Present.**2s**-3sD
Jon likes to read romantic books"

In other words, only in those contexts that correspond cross-linguistically to restructuring contexts is person LDA allowed in Basque.

(Absolutive) person agreement is manifested by affixes that look like the reduced forms of the corresponding full pronominals. Consider the following table, from Berro and Etxepare (2017):

(26) Person agreement markers in Standard Basque:

	ABS	ERG	DAT	ALLO
1 SG	*n-*	*-t / -da-*		
2 SG MASC/FEM COLL	*h-*		*-k / -n* *-a- / -na-*	
3 SG			*-o-*	
1 PL	*g-*	*gu*		
2 SG NON-COLL	*z-*	*zu*		
2 PL	*z-*	*zu*		
3 PL				

The absolutive agreement markers in the table are reduced forms of the pronominal series. Thus, the agreement affix *n-*, for 1st person singular absolutive is a reduced form of the pronoun *ni* (Eng. "I"). The 2nd person singular agreement affixes for the colloquial and unmarked registers are *h-* and *–z*, which correspond to their pronominal counterparts *hi* and *zu* (Eng. "you"). First-person plural *g-* corresponds to the pronoun *gu* (Eng. "we"). There is no such relation in the (separate) paradigm of number agreement, which is completely unrelated to the pronominal system (see Berro and Etxepare 2017).

The table in (26) shows that 3rd person singular in Basque does not have any independent exponent. Basque third-person pronominals are null, and they have no corresponding affix marking in the auxiliary. Only their plural counterparts have, in the separate number agreement paradigm. We predict that LDA in person, which we take to result from clitic climbing, will fail precisely for the third person singular, as there seems to be no reduced pronominal corresponding to that cell. This prediction is borne out. There is no counterpart of (23b) with third-person singular LDA. The resulting sentence would be (27), which is ungrammatical:

(27) *Saiatuko dugu [$_{PostP}$ [$_{NomP}$ jendartean aurkitze]]-n] (Basque)
try.prosp we.are.**him/her** among.the.people find.nom.post
'We will try to find him/her among the people'

The auxiliary in (27) is, like the auxiliary in (23b), a transitive auxiliary, one that is required when an object is present in the vP. However, the form does not license LDA. This syntactic gap goes hand-in-hand with the absence of pronominal morphology in the auxiliary. Etxepare (2012) argues that this provides evidence for the idea that person agreement morphology is derived via clitic climbing from argument positions.

There is only one place in table (26) where the combination of the third person and singular is expressed by an overt exponent, and this is the dative slot. Furthermore, it has been plausibly claimed (by Gomez and Sainz 1995) that the exponent *–o* is actually a cognate of the proximate determiner *–o*. In present-day Basque the determiner *–o* includes the speaker within the denotatum of the article, as in (28):

(28) Lagun-o-n ospakizun-a (Basque)
friend-det-genitive celebration-det
'The celebration of us friends'

Following the logic of the discussion, we may ask whether the Basque dative agreement affix *–o* behaves on a par with person agreement morphology, namely as a clitic. Note that if that were the case, we could circumscribe DOM in Basque to those cases in which clitic climbing is possible. Can we show that dative agreement is an instance of clitic climbing in Basque? What we need to examine is whether LDA with datives behaves on a par with Person LDA or not. That is, whether it is possible only in restructuring contexts. Etxepare (2003) already showed that dative 3rd person LDA is possible in restructuring contexts, so we can find pairs such as (29a,b), parallel to (23a,b) (from Etxepare 2003, p. 173):

(29) a. Saiatuko gara [zuri hori ematen] (Basque)
try.prosp Present.1sA you.dat that.abs give.imp
'We will try to give you that'
b. Saiatuko dizugu [zuri hori ematen]
try.prosp Present.2sD.1sE you.dat that.abs give.imp
We will try to give you that'

In (29a), the verb *saiatu* (Eng. "try") behaves as an intransitive verb, agreeing with its subject in person and number (1st person singular). In (29b) the auxiliary includes an agreement index for the embedded indirect object *zuri* (Eng. "to you"), besides the agreement index for the subject of *try*. The presence of the two agreement indexes in the verbal form forces the choice of a ditransitive auxiliary root. As we showed for person agreement indexes, LDA is not possible with 3rd person datives outside bona fide restructuring contexts. We cannot use the verb *gustatu* (Eng. "like") to check this, as the verb *like* in Basque includes already a dative agreement index for its subject. We will use another non-restructuring predicate, *aztertu* (Eng. "examine, ponder") to show that the restrictions on dative 3rd person singular agreement are those of person agreement. Consider in this regard the following contrast:

(30) a. [DP zu salatzea] aztertu dute. (Basque)
you.abs accuse.nom.det consider.partc Present.3sA.3plE
'They considered accusing you'
b. *[DP zu salatzea] aztertu **z**aituzte.
you.abs accuse.nom.det consider.partc Present.2sA.3plE
'They considered accusing you'

(30a) involves a nominalized dependent headed by the determiner *–a* (a D-dependent). In this configuration, LDA in person is not possible. LDA in number, unlike LDA in person, is available:

(31) [$_{DP}$ Liburu batzuk saltzea] aztertu d**it**uzte. (Basque)
book some.abs sell.nom.det consider.partc Present.**3plA**.3plE
'They considered selling some books'

Dative LDA (both in 3rd person sing and 3rd person pl) behaves as person agreement. It is not possible out of a D-dependent (32b-c):

(32) a. [Legeari obeditzea] aztertu dute.
law.det.dat obey.nom.det consider.partc Present.3sA-3plE
'They considered obeying the law'
b. *[Legeari obeditzea] aztertu diote.
law.det.dat obey.nom.det consider.partc Present.**3sD**-3plE
'They considered obeying the law'
c. *[Legeei obeditzea] aztertu diete
law.det.pl.dat obey.nom.det consider.partc Present.**3plD**-3plE
'They considered obeying the law'

5.6. Conclusions

LDA phenomena in Basque support the idea that 3rd person dative agreement in Basque is an instance of person agreement, and that its occurrence as part of the finite auxiliary results from clitic climbing. If this is so, the parallelism between the scope of DOM in Basque and the scope of clitic climbing is complete. We can establish the following general constraint for DOM in Basque:

(33) DOM in Basque is possible if and only if the object has a person feature

We take (33) to follow from the conditions that allow clitic doubling (and climbing) in Basque. What the Basque bilingual learner is sensitive to is the conditions under which (34) is possible in Basque:

(34) Merge a clitic to the object

Note that (33) must be established as a principle governing the interaction of two grammatical systems. It can be seen as a restricting device that constrains access to relevant information: the triggering data from Spanish are only those that acomodate or are compatible with a general property of the Basque grammar, namely the clitic status of person agreement.

6. Wrapping Up

The previous section showed that language contact is selective. Despite robust evidence in favor of a potential parametric contact-based change, a given language ignores such evidence, sometimes totally, sometimes partially. A similar outcome obtains in other contact scenarios (more dramatically): Catalonia Spanish is leísta and, just like standard Spanish, uses clitics with dative morphology to replace masculine DOs, as shown in (35a,b): (35a) is the standard use of an accusative pronoun for a masculine DO clitic, whereas (35b) is an instance of leísmo.

(35) a. María **lo** saludó ((Catalonia) Spanish)
Maria CL-masc.sg.acc greeted
'María greeted him'
b. María le saludó ((Catalonia) Spanish)
Maria CL-masc.sg.dat greeted
'María greeted him'

Crucially, no variety of Catalan displays this phenomenon. Differently put, there is no (36) in any Catalan variety whatsoever. The fact is remarkable, given that (35) and (36) represent judgments of the same speakers.

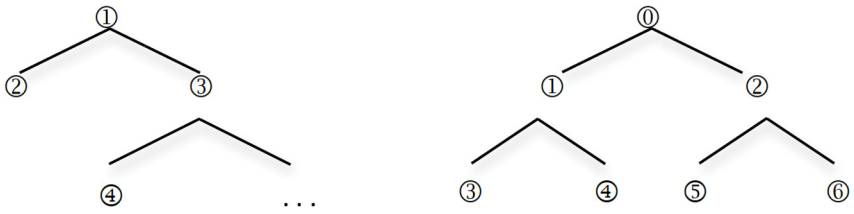
(36) *La Maria **li** va saludar (Catalan)
the Maria CL-masc.sg.dat aux-3.sg greeted
'Maria greeted him'

Somehow, and although the evidence for leísmo is overwhelming (it is, in our terms, an EoS situation, as (35b) is actually preferred over (35a)), Catalan ignores it. Let us call this the **failed generalization problem** of contact-induced change. The cases of Basque and Catalan we have just mentioned are the flipside of a standard PoS situation. In PoS scenarios, the grammatical change induced by contact is either null or clearly underdetermined by the data available. In EoS, the evidence is not only not null: it is empirically robust, in a systematic way, but for some reason, it does not take.

How is this possible? We submit that the ultimate reason lies in two factors. One is the phenomenon itself (DOM), which may underlie different scaffoldings. To be specific, what we call "DOM" may be deployed through different strategies crosslinguistically. We have seen this with Spanish and Basque, for only the latter involves clitic climbing (a context-sensitive dependency), hence its person restricted distribution. In the case of Spanish, where DOM is generalized, the facts are different, which indicate that this DOM may not involve the same underlying mechanism. The literature has argued that DOM can be analyzed in two ways, one involving a context-sensitive dependency (a chain, as in clitic climbing, see Section 5.6), the other involving a non-context-sensitive one, as everything merely depends on the lexical properties of an NP (the [+human], [+animate] or [+definite] features). It is not that we have to choose: both strategies may be at stake, languages picking one over the other, probably on the basis of related factors. A way to decide whether DOM involves a context-sensitive procedure or not is precisely by checking those related factors: clitic doubling, clitic climbing, and leísmo.

The second factor concerns the way parameters are determined/fixed. More particularly, just like some variants of DOM itself (a descriptive label that may cloud different grammatical processes) can be more complex, one may expect that fixing the relevant parameter requires a more complex dependency, in the sense of the Chomsky Hierarchy. As we pointed out in (8), we assume that parameters can be formally expressed as markovian chains (adjacency), phrases (dominance) or chains (dominance plus sisterhood). The more complex the relevant parameter, the harder it is to fix. If so, the kind of network necessary to model the constraints arising in Basque DOM cannot be represented by either (11a) or (11b), repeated below as (37) for convenience:

(37) a. Standard Parameter Network b. Parameter network of higher complexity



(11/37b) would correspond to those cases in which DOM is optional (a possibility for some speakers together with ordinary absolutive objects). The phenomenon must also make reference to other areas of grammar, with which it interacts. The kind of network we need, this time, is one in which mutual dependencies can be modelled: context-sensitive parameter schemata with long-distance dependencies involving chains, and thus points of the structure that can be far apart from each other, but still interacting. This much is hinted at Gallego's (2020) discussion of Romance parameters within the vP in Romance. In brief, such an approach, if still formulated by means of so-called parameter schemata, requires dependencies between positions that go beyond containment/dominance dependency.

Note that, in this picture, it is immediately obvious that typological factors are relevant. Basque and Spanish are not part of the same family, but they behave partially alike when it comes to DOM. It is the same the other way around: Catalan and Spanish are both Romance siblings, but leísmo seems to be unavailable to the former. This simply tells us that learners ignore these descriptive observations, which are relevant for classification purposes.

Let us sum up. This paper addressed the question of what type of parameter networks should we expect from parameters situated at different levels in the hierarchy Chomsky (1956) put forward. We proposed that parameters that invoke structural relations at different levels of complexity are also clustered in terms of increasingly complex networks, and that simple schemata of the type in (1), recently proposed as a general format for parameter setting, are insufficient. This has interesting consequences not only for our understanding of language variation, but also for contact situations where evidence is either weak (or null) but used for parameter-fixing or else strong but ignored. If Uriagereka (2007, 2008) is correct, we should expect that the second scenario involves situations where, although the relevant evidence is massive, it actually involves a second/third-order type of data. The consequences of this approach cover a wide range of topics that have been explored by minimalism, and whose basic logic goes back to its earliest works, already back in the fifties.

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Notes

1 More recent parameters of the "meso" and "nano" types, in Roberts's (2019) sense, do not immediately fit in this classification.

2 The general idea is not without problems, particularly in the context of ergative languages, which have overt case marking for their transitive subjects and may nevertheless show DOM (cf. Hindi or Basque, Odria 2017).

3 This is also the age by which monolingual learners of Spanish acquire mastery of DOM (see Rodriguez-Mondoñedo 2008).

4 *Leísmo* can be characterized as the cliticization of a direct object by an etimologically dative clitic (we adopt this simple definition from Landa 1995, p. 147). See Fernandez-Ordoñez (1999) for an overview of the different *leista* clitic-systems in Peninsular Spanish and Colomina et al. (2019) for a comparative morphosyntactic analysis of the different systems.

5 We don't include the equivalent of (19) with the verb *entenitu* (Eng. 'understand'), whose only possible frame with an animate object in all Basque varieties is dative, independently of the contact language. It is possible that this frame is related to the presence of an underlying communication event that saturates the theme argument: 'I understand him/her saying something'.

6 The star diacritic means the Basque equivalents of the Spanish DOM do not exist. The % diacritic in the case of third person definite human objects is meant to convey the fact that comparatively, it is less frequent than 1st and 2nd person DOM. It has been claimed that in certain DOM varieties only 1st and 2nd person DOM is possible (see Fernández and Rezac 2016). DOM with definite third person objects however is well attested in other areas (Gernika Basque, Rodriguez-Ordoñez 2017), although it is less systematic than first or second person DOM. This leads us again to the parametric system in (11b). Issues of normativity may exert an influence on the acceptance of third person DOM in Basque speakers (Rodriguez, p.c). We include third person DOM within the scope of our discussion.

7 When the nominalized dependent includes an overt subject it is interpreted as obviative with respect to the matrix subject. D-headed nominalized dependents selected by modal predicates freely alternate with finite dependents in the subjunctive mood in Basque, unlike P-headed ones.

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