Article

The Internal Structure of Spanish–German Verbalizations and the Sophistication of Bilinguals' Linguistic Knowledge

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Abstract: The present article reassesses some available data regarding word-internal language mixing (Spanish–German) involving verbs and nouns. The empirical generalization is that Spanish roots can be combined with German verbalizers, but not vice versa. Data of this type highlight the sophisticated knowledge of the underlying representations that code-switching bilinguals must have of both contributing grammars and, in turn, how these contribute to the formation of the grammar that underlies their rule-governed systems for amalgamating them. Despite agreeing with the general conclusions of González-Vilbazo and López's 2011 study regarding what the data tell us about code-switching more generally, we refine their analysis to better capture the patterns. Our proposal is that these mixtures are the only instances where the structural and lexical properties of verbal exponents used in both languages overlap, parting ways with previous analyses based on the possible zero nature of Spanish verbalizers or the absence of conjugation classes in German.

Keywords: verbalizations; mixing; bilingualism; theme vowels; grammatical overlap

1. Introduction

Bilingualism is ubiquitous. In fact, even by conservative estimates, over half the world's population is considered, at least, bilingual (De Houwer 2021). Of course, not all bilingualism is the same. Important differences related to timing of acquisition/age (e.g., simultaneous vs. sequential, late vs. early), the (social) context (e.g., societal bilingualism, naturalistic immersion in adulthood, non-naturalistic classroom learning), and opportunities for exposure and (choice of) language use are just some of the factors that dynamically cross to distinguish groups of bilinguals and individuals within them. While essential bilingual type categorizing factors,[1] such as age-of-acquisition and social context, map onto general trends pertaining to predictions for linguistic development and outcomes, they are insufficient to explain why individual bilingual grammars reflect the degrees of variation from one another we observe, much less why particular grammatical innovations in bilingual grammars are constrained the way they seemingly are. While variation and innovation also exist non-trivially in monolingualism, the degree and predictability of, as well as accounting for, them in bilingual grammars embody a much more complex situation.

Indeed, relevant differences for linguistic development, ultimate attainment, and language use between monolingualism and bilingualism are multifaceted. From monolingualism to bilingualism, the inherent complexities[2] do not increase as a mere factor of two simply because there is a doubling of the languages in a single a mind. Rather, differences are likely to exist on a range more akin to the Richter scale—where each step of magnitude of an earthquake's force, say from 6.0 to 6.1, is to the power of 10. Considering all this, a challenge for bilingualism studies focusing on formal linguistic descriptions of bilingual grammars is to determine how to deal with the (weighting of) many complexities fairly,

teasing out what obscures the object of study from its intended scope. As research over several decades can attest, finding sophistication, systematicity, and universal well-formedness is as much a hallmark of investigating bilingual grammars as it is in monolingual ones (see in particular Moro Quintanilla 2014), even, perhaps especially so, when this is not always apparent at first glance. While the lessons/potential gains for formal linguistics from examining bilingual grammars might be distinct, albeit complementary, compared to examining monolingual ones, there is little doubt that bilingual grammars constitute a natural laboratory for hypothesis testing of specific formal linguistic proposals (Lohndal et al. 2019; Moro Quintanilla 2014; Scontras et al. 2015). This is true not only, but precisely because bilingual variation and innovations have limits. These limits follow from universal constraints on grammar well-formedness and, in the case of innovations, it is clear that language-specific representations from the contributing grammars are respected when new properties emerge. Such observations reveal that bilinguals, regardless of the extent to which they seemingly diverge from monolinguals or each other, have very sophisticated knowledge of the representations of both their grammars to very high degrees.)

For decades, studies examining the formal grammatical properties of code-switching, code-mixing and/or emergent bilingual varieties such as so-called *Spanglish* all lead to the same conclusion: novel properties in emerging bilingual varieties are rule-governed, licensed only when satisfying universal considerations and language-specific facts imposed by their contributing systems. With many others, we take the position that finding, describing and explicating (in formal terms) the systematicity that underlies innovations in emerging varieties of bilingual grammars highlights the two-way, mutually beneficial relationship that formal linguistic theory and bilingual language acquisition studies have always shared: the former provides the constructs, mechanisms, and predictions to formally describe and understand observations in (bilingual) language whereas the latter provides a unique testing ground to put the former's (general) theoretical predictions to more stringent challenge. After all, bilingual grammars are natural human languages. As such, any theory striving to have explanatory power over linguistic description in general will have to account for the facts of bilingualism as well. Moreover, observing what is done in bilingual grammars can offer novel insights regarding competing proposals based on monolingual descriptions, as we will see in the present analysis.

Spanish in contact with other languages has long served as a fertile testing ground for describing and examining the formal properties of emerging bilingual varieties (see, e.g., Poplack et al. 1989; Klavans 1985; Belazi et al. 1994; MacSwan 1999, 2000, 2005; Toribio 2011; Lipski 2005; Rothman and Rell 2005; Herring et al. 2010; Toribio and González-Vilbazo 2014). The abundance of work featuring Spanish as a contributing language within bilingual pairs makes sense as Spanish, after all, is one of the most widely spoken languages globally and remains in significant naturalistic contact with many languages such as English in North America and many indigenous languages in South America among other contexts throughout the world. Such work has convincingly shown what we claimed above: apparent amalgamated grammars evidenced by code-switching/mixing are universally compliant, highly sophisticated, and rule-governed in a way that respects constraints imposed by both contributing grammars. Although not exclusively so, a sizable majority of the relevant work where Spanish is featured considers its contact with English in North America. While such work is enlightening and foundational to our understanding of bilingual grammars in general, there is much to be gained by examining Spanish in contact with other languages. The present article does just that, considering the context of morphologically mixed verbalizations in an emerging bilingual variety called *Esplugisch*, previously analysed by González-Vilbazo (2005), González-Vilbazo and López (2011, 2012), and—from a different perspective—in Alexiadou (2017), Alexiadou and Lohndal (2018).

Esplugisch, is an emerging variety spoken by highly proficient Spanish–German bilinguals in Barcelona, Spain. As reported by González-Vilbazo (2005), the data in this corpus were taken from students at the German School of Barcelona, a school with a population of over 1000 pupils in which ~90% are heritage speakers of German as a home language

(either with one or both parents being native German speakers). Data were collected by González-Vilbazo in 1996 (27 informants, ages 16–18) and supplemented by further data collection in the same school in collaboration with Susanne Müller in 2003 (55 informants of the same age range). Moreover, supplemental data with the same language pairings with informants reporting similar patterns of code-switching contexts were gathered over subsequent years in distinct contexts from Madrid, Bilbao, Málaga, Tenerife, Santiago de Chile, and Buenos Aires. Notably, these supplemental collected data were consistent with the data from the German School of Barcelona, adding credence to its general application. Data collection consisted of both oral production (conversations in *Esplugisch* were recorded between two informants) and written grammaticality judgments were tested. It was reported that informants from the German School belonged to a socially homogeneous socio-economic class: their parents are members of the middle class with college degrees. Because the informants were growing up in Spain and despite being in a German school, they had high exposure to both languages from an early age. They reported using mainly German in class and at home and Spanish and/or Catalan in all other contexts. As a result of this bilingual reality, the students at the school code-switched often when talking to one another. As confirmed in separate interviews with the informants, they are accepting, if not proud of their code-switching and have a positive attitude towards it as a badge of identity. In fact, it was the informants themselves that coined the name, "Esplugisch", given that their school was located in Esplugues del Llobregat, a suburb close to Barcelona.

The data collected in González-Vilbazo's (2005) show a very sharp asymmetry ((1), with the segmentation provided by the author).

(1)   a.   utilis-ieren
                 use^{Sp}-vbls^{Ger}
       b.   *benutz-ear
                 use^{Ger}-vbls^{Sp}

The example in (1) is a mere exemplar of a highly productive mixing phenomenon. In every case with morphological mixing as in (1), the base of the verb is of Spanish origin, and the affixes come from German (1a); the opposite combination (1b) is simply unattested. The reasonable conclusion is that the combination in (1a) is grammatical, but the (1b) type is ungrammatical. The non-trivial question that emerges can be stated as follows: What makes (1b) ungrammatical but (1a) grammatical in this variety? In the previous literature, as we will see, some approaches have searched for the answer in differences in the information contained by the bases, while others have proposed that the vocabulary items used to spell out the verbalizer explains the asymmetry. No matter which approach— previous ones or, alternatively, the novel one we advance herein—turns out to have the best degree of descriptive and explanatory adequacy it is important to note that all agree on a crucial non-trivial point: the descriptive facts of the evidence itself shows systematicity to *Esplugisch* and thus contribute to the evidence base highlighting the complexities of bilingual grammars and the non-random nature to their well-formedness. The devil, as it were, is in the details of answering the specific question of why only one amalgamation pattern is attested (grammatical) when at first glance both potentially could be. While we agree with previous analyses that only (1a) is grammatical for reasons related to facts about Spanish and German and how they could conceivably combine, we deviate from previous proposals arguing that that both the base and the verbalizer must be considered to explain the apparent asymmetry.

The asymmetry in (1) raises a second question that has not been discussed in detail in previous work. In all the mixing cases reported by González-Vilbazo (2005), the German affix used is *-(is)ieren*, and no other verbalizing affixes are documented even if they are more typically used in German, including the prefixes *be-*, *ent-*, or *zer-*, and zero derivation. Thus, a second question that we aim at answering in this article is why the only affix used is *-(is)ieren* for the grammatical mixing cases. We will argue, contra Alexiadou (2017) and Alexiadou and Lohndal (2018), that it cannot be argued that *-(is)ieren* is the default verbalizer in German; in our view, the verbalizer is always *-ieren* because it is the only

German verbalizer that is configurationally and lexically equivalent to a Spanish verbal morpheme, specifically the theme vowel. In doing so, we believe that the present analysis highlights even further the sophisticated knowledge that (these) bilinguals must have regarding both the contributing grammars to the novel emerging variety, thus reinforcing the notion that code-switching/mixing is not a compensatory strategy of bilinguals to fill in gaps in knowledge in one or both languages they command.

2. Spanish and German Verbalizations: The Basic Facts

As a background to our analysis, let us present first the main facts about verbalizations in German and in Spanish, considering first the main properties of underived verbs and then those of verbalizations.

2.1. Underived Verbs

A non-derived verb in German contrasts with a non-derived verb in Spanish in two relevant aspects of its morphological shape. Consider, first, the form in (2) in comparison to the form in (3), both in the infinitive or its citation form.

(2)   hüpf-en
        jump-inf
(3)   salt-a-r
        jump-ThV-inf

German underived verbs consist of a stem or root. In the infinitive, they take an /n/, represented as *-en* in the written form. The *-e-* that appears orthographically is, crucially, not pronounced. Thus, the infinitive *hüpfen* is pronounced /ˈhʏpfn̩/, where the nucleus of the last syllable is the nasal consonant. The absence of the vowel represented in writing is made even more clear by the fact that in normal speech the final nasal can assimilate to the previous consonant, as in *schreiben* /ˈʃraɪbm̩/. The absence of a real segment corresponding to the *-e-* is further noticeable in the conjugation of the verb (4). Only in one form, the 1st person singular, is there the possibility of pronouncing an *-e*, corresponding to the 1sg inflection.

(4)   hüpf-(e)   1sg
        hüpf-st   2sg
        hüpf-t   3sg
        hüpf-(e)n   1pl
        hüpf-t   2pl
        hüpf-(e)n   3pl

In contrast, the Spanish verb is always characterized by an additional morpheme which marks the conjugation class of the verb, commonly referred to as the theme vowel (Oltra-Massuet 1999). The example in (3) exhibits the theme vowel *-a-*, associated with the 1st conjugation class and is most broadly represented in Spanish (currently the only open or productive class). Other verbs as in (5) belong to the closed classes of the 2nd conjugation, with the theme vowel *-e-* (5a) and the 3rd conjugation, with *-i-* (5b).

(5)   a.   com-e-r
                       eat-ThV-inf
        b.   part-i-r
                       leave-ThV-inf

There is no known systematic rule that predicts the theme vowel that each underived verb in Spanish will carry. Thus, class membership is specified in the lexical representation of every single verb. In contrast to the ghost *-e-* vowel in German verbs, the Spanish theme vowel has conditioned the inflectional properties of the verb, for instance, determining the morpheme that will be used to express the imperfective past, which is *-ba* in the 1st conjugation and *-a* in the other two:

(6) a. salt-a-ba-s
jump-ThV-impf-2sg, 'you used to jump'
b. part-í-a-s
leave-ThV-impf-2sg, 'you used to leave'

The information provided by the theme vowel is also relevant to select the present subjunctive morphemes, which are -*e*- in the 1st conjugation (*cant-a* > *cant-e*) and -*a*- in the others (*beb-e* > *beb-a*). Moreover, the theme vowel is present as a segmentable unit in the conjugation, always preceding the agreement morpheme of the verb. In (7), we can see that the present indicative of the verb in (3) might only lack this morpheme in the 1sg form.

(7) salt-o   1sg
salt-a-s   2sg
salt-a   3sg
salt-a-mos 1pl
salt-á-is   2pl
salt-a-n   3pl

The first contrast between German and Spanish underived verbs is, then, that in Spanish there is an extra morpheme, the theme vowel. The second contrast is related to the participle. In the general case of underived verbs in German, the participle involves both a prefix and a suffix, as in (8). The suffix can be analyzed as the same morpheme as in the third person -*t* (4c), corresponding in both cases to default inflection when the features for number and person appear in their unmarked form. The prefix *ge*- is the one that differentiates between the participle and the 3sg form of the verb for regular cases.

(8) ge-hüpf-t

In contrast, in Spanish, the verbal participle of an underived verb is expressed through suffixes. However, like in German, the verbal participle can be decomposed in two exponents: a -*d*- suffix that does not correspond to any agreement morpheme of the verb and always follows the theme vowel in the regular cases as well as an invariable morpheme -*o* which manifests default gender and number inflection (9a). Note this is in contrast with the feminine or plural forms that can be exhibited by the participle outside of verbal contexts (9b, 9c). We take this invariable marker as equivalent to German -*t*.

(9) a. ha   salt-a-d-o
has   jump-ThV-ed-infl 'has jumped'
b. salt-a-d-a
jump-ThV-ed-f
c. salt-a-d-o-s
jump-ThV-ed-m-pl

2.2. Verbalizations

German can derive verbs from other categories in two main ways, where the most usual situation is that the nominal or adjectival base is combined with a prefix to turn it into a verb.

(10)   a.   be-sohl-(e)n   be-frei-(e)n

pref-sole-inf 'to resole'   pref-free-inf 'to free'

            b.   ent-kern-(e)n   ent-blöss-(e)n

pref-seed-inf 'to seed'   pref-naked-inf 'to expose'

            c.   er-gauner-n   er-blass-(e)n

pref-swindler-inf 'to cheat'   pref-pale-inf 'to get pale'

            d   ver-gold-(e)n   ver-länger-n

pref-gold-inf 'to enhance'   pref-longer-inf 'to lengthen'

            e   zer-fleisch-(e)n   zer-mürb-(e)n

pref-flesh-inf 'to tear'   pref-brittle-inf 'to finish, to make perish'

Note that in all these cases there is no suffix in addition to the infinitival one to build the verb. The prefixes are necessary to mark the verbalization, and the choice between them is occasionally determined by the semantics of the verb, but it is not entirely predictable. For instance, generally the use of *be-* involves a change of state that increases the degree of a particular property (*befreien*: 'to make someone more free than it was before'), while *ent-* tends to be oriented towards the negative pole in a scale or expresses separation (*entblössen*: 'to make someone naked, less dressed than before'), a fact that is reported in many descriptive grammars (for instance, Cochran 1965), but as far as we can tell this relation is not always transparent.

Using suffixes to mark a verbalization in German is possible (11), but very restricted in two senses.

(11)   stud-ier-en

study-vbl-inf

The bases that combine with *-ier-* in German are almost exclusively used in borrowings from other languages, including Latinate bases *ag-ier-en* 'to act', *ed-ier-en* 'to edit', *un-ier-en* 'to unite', *jongl-ier-en* 'to juggle', *bas-ier-en* 'to base', *dat-ier-en* 'to date', *stud-ier-en* 'to study', *reg-ier-en* 'to direct', *exist-ier-en* 'to exist', *fix-ier-en* 'to fix', *kop-ier-en* 'to copy', *pass-ier-en* 'to pass', *etabl-ier-en* 'to establish', *kod-ier-en* 'to (en)code', *oper-ier-en* 'to operate', *rot-ier-en* 'to rotate', *zit-ier-en* 'to cite', *imit-ier-en* 'to imitate', *paus-ier-en* 'to pause', *mont-ier-en* 'to mount', *emigr-ier-en* 'to emigrate', *sign-ier-en* 'to sign', among many others. Second, in most of these formations, the base is a root that in the original language was already a verb, more rarely a noun or an adjective. Formations using *-ier-* where the base is German and not a verb are documented (e.g., *halb-ier-en* 'to halve'), but they are clearly a minority in comparison with bases that are both foreign and already verbs in the borrowed languages.

A crucial property of these verbalizations, both those with a prefix and those with the suffix *-ier-*, is that they block the presence of the *ge-* prefix in the participial formation. The participles of the verbs in (13) are only characterized by the unmarked inflectional suffix *-t*, just as the verbs derived by *-ier-*.

(12)   a.   be-sohl-t   be-frei-t

pref-sole-infl 'resoled'   pref-free-infl 'freed'

            b.   ent-kern-t   ent-blöss-t

pref-seed-infl 'seeded'   pref-naked-infl 'exposed'

            c.   er-gauner-t   er-blass-t

pref-swindler-infl 'cheated'   pref-pale-infl 'paled'

            d   ver-gold-et   ver-länger-t

pref-gold-infl 'enhanced'   pref-longer-infl 'lengthened'

            e   zer-fleisch-t   zer-mürb-t

pref-flesh-infl 'torn'   pref-brittle-infl 'finished'

(13)   ag-ier-t 'acted', ed-ier-t 'edited', un-ier-t 'united', jongl-ier-t 'juggled', bas-ier-t 'based', dat-ier-t 'dated', stud-ier-t 'studied', reg-ier-t 'directed', exist-ier-t 'existed', fix-ier-t 'to fixed', kop-ier-t 'copied'...

In contrast to German, Spanish verbalizations that involve an overt verbalizer tend to use suffixation. There are several overt suffixal verbalizers in Spanish, and they share

the property that they must always combine with a theme vowel. The verbalizer used determines the theme vowel that will be added, and in turn this determines the conjugation class of the verb.

(14)　a.　clas-ific-a-r　　　　　　　　sant-ific-a-r
　　　　　　class-ify-ThV-inf 'classify'　　saint-ify-ThV-inf 'to sanctify'
　　　b.　favor-ec-e-r　　　　　　　　humed-ec-e-r
　　　　　　favour-vbls-ThV-r'to favour'　wet-vbls-ThV-inf 'to make something wet'
　　　c.　gol-e-a-r　　　　　　　　　fals-e-a-r
　　　　　　goal-vbls-ThV-inf　　　　　'to score' false-vbls-ThV-inf 'to falsify'
　　　d　carbon-iz-a-r　　　　　　　esteril-iz-a-r
　　　　　　coal-ize-ThV-inf 'to carbonise'　sterile-ize-ThV-inf 'to sterilise

There are also verbalizations where the verbalizer is not phonologically overt, and one only sees the theme vowel at the surface—in such cases, the verb compulsorily belongs to the 1st conjugation, such as those in (15).

(15)　suspir-ø-a-r　　　　　　　　　activ-ø-a-r
　　　　sigh-vbls-ThV-inf 'to sigh'　　　active-vbls-ThV-inf 'to activate'

Evidence for the presence of a covert verbalizer in cases like (15) comes from two sources: first, the theme vowel accompanies the verbalizer in other cases (14), that is, it does not have a verbalizing function *per se*. Second, the base can be a noun or adjective exhibiting overt nominalizers or adjectivalizers, which forces the presence of a head able to redefine the lexical category as a verb ([Borer 2013](#)).

(16)　insurrec-cion-ø-a-r
　　　　insurrec-tion-vbls-ThV-inf 'to start an insurrection'

In addition to the suffixes—at a minimum, a verbalizer, and a theme vowel, of which the first might be silent—Spanish verbalizations can also involve a prefix, in a process generally known as parasynthesis ([Mateu 2002](#); [Serrano Dolader 1999](#)). As in the case of German, these prefixes are not always semantically selected.

(17)　a.　en-gord-ø-a-r
　　　　　　pref-fat-vbls-ThV-inf 'to get fat'
　　　b.　a-lun-iz-a-r
　　　　　　pref-moon-ise-ThV-inf 'to land on the moon'
　　　c.　a-pedr-e-a-r
　　　　　　pref-stone-vbls-ThV-inf 'to throw stones'
　　　d　en-negr-ec-e-r
　　　　　　pref-black-vbls-ThV-inf 'to make black'

In contrast to the German prefixes, however, their presence does not preclude insertion of the participle morpheme; none of the suffixes used for verbs, or the theme vowel itself, blocks the insertion of the participial morphology.

(18)　a.　clas-ific-a-do　　　　　　　sant-ific-a-do
　　　　　　class-ify-ThV-prt　　　　　'classified' saint-ify-ThV-prt 'sanctified'
　　　b.　b. favor-ec-i-do　　　　　　humed-ec-i-do
　　　　　　favour-vbls-ThV-prt 'favoured'　wet-vbls-ThV-prt 'made wet'
　　　c.　en-gord-ø-a-do
　　　　　　pref-fat-vbls-ThV-part 'fattened'
　　　d　a-lun-iz-a-do
　　　　　　pref-moon-ise-ThV-prt 'landed on the moon'

Moreover, Spanish—unlike German—does not have one single verbalizer that is specialized in foreign bases. It is true, as noted repeatedly (for instance, [Romero 2010](#)) that the verbalizer *-e-*, imposing the theme vowel *-a-*, is frequently used with borrowings from English, but this is by no means the only documented option, and—as the examples above show—it is by no means true that even *-e-a(r)* is specialized in foreign bases, as it is very

productive with native Spanish roots.

(19)	a.	to knock	- noqu-e-a(r)
	b.	to sniff	- esnif-ø-a(r)
	c.	to computerize	- computer-iz-a(r)

Let us briefly summarize the main distinctions between verbalizations in the two languages, as this will be the base of our analysis.

(i)　　German lacks theme vowels; in Spanish all verbs carry a theme vowel
(ii)　　German prefers prefixation in verbalizations; Spanish always involves suffixes
(iii)　　German has a marked suffix for foreign bases; Spanish does not
(iv)　　German overt verbalizers block the participial *ge-*; Spanish verbalizers do not interfere with the participle.

3. The Analysis

In order to present our analysis, we must first state our assumptions about the internal structure of lexical verbs and how the individual morphemes match them.

3.1. The Structure of Underived Verbs in German and Spanish

As a point of departure, we apply Ramchand's (2018) proposal of decomposing Davidsonian events in syntax as consisting of two areas, as in Figure 1. The lower area is composed, maximally, of three verbal heads: Init, Proc, and Res. These heads provide partial descriptions of eventualities, introducing arguments, Aktionsart and conceptual semantics, but not including the time and world parameters required to combine the lexical verb with the clausal functional structure, which involves at least Aspect, Mood, and Tense. The higher head, Event, is the one responsible for tagging the event description with those world and time parameters. Essentially, this makes the description become an eventuality that can be manipulated by aspect and anchored to possible worlds and specific time intervals.
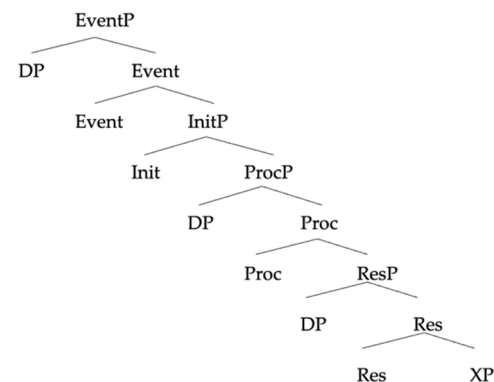

Figure 1. Assumed structure for lexical verbs.

Specifically, and taking the definitions from Ramchand (2008), we consider Init to be the head responsible for causative semantics—verbs that involve the setting into motion of a process by an entity carry Init. Proc introduces the dynamic part of the event, in a way that stative verbs lack and eventive verbs have. Res is, like Init, a stative head, but one that—as it is merged as the complement of Proc—defines the result state that follows the completion of the event. Let us consider how the verbs *comer/essen* 'eat' are represented in under such an approach. Recall that for the case of German we have shown that the ending -n corresponds to the infinitive, and the -e- does not correspond to any morpheme. This means that, as a verb denoting a Davidsonian event, the morpheme *ess-* spells out the structure in Figure 2. Here, we abstract away from word order, representing the verb corresponding to 'eat', syntactically, as an event description with two parts: a dynamic process that introduces the object *ein Epfel* 'an apple' as its complement—where it gets

interpreted as a path object that measures the process by the mereological parts of the entity—and the undergoer of that change as its specifier, and a stative relation whereby the entity acts as the undergoer, causer, agent or initiator of the event.
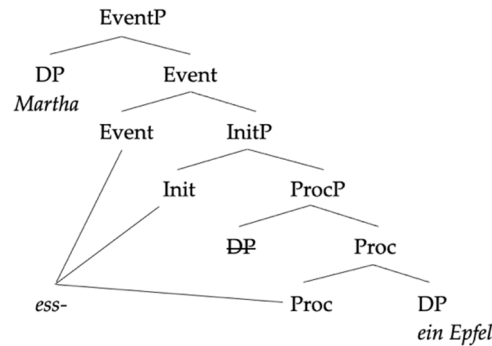

Figure 2. Spell out of a German lexical verb.

Above the descriptive heads, EventP is added. As can be seen in Figure 2, we assume that the exponent *ess-* spells out, at least, the heads Event-Init-Proc. We wish to remain neutral with respect to which operation reaches this spell out: head movement (Travis 1984), morphological fusion (Noyer 1997), spanning (Svenonius 2016), or phrasal spell out (Starke 2009), as the specific operation does not play any role in our analysis.

For Spanish, where in addition to the verbal stem we have a theme vowel in virtually all verbs, we propose the decomposition in Figure 3, where the theme vowel is located in Event and the verbal stem spells out the event-descriptive heads—here, Init and Proc.
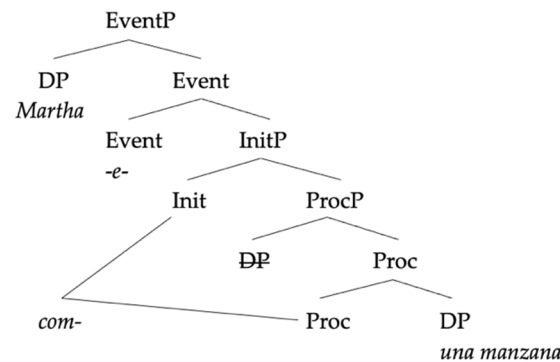

Figure 3. Spell out of a Spanish lexical verb.

The proposal that the theme vowel in Spanish is located in EventP is justified by the obligatoriness of this element in any verb. Any lexical verb in Spanish must carry a theme vowel which, as we saw above, remains when the verb is inflected within the clause. The theme vowel does not correlate with any conceptual, argument structure or Aktionsart property of the lexical verb, as we would expect from Event. Thus, for underived verbs in German and Spanish, the contrast reduces to this: German uses one exponent for the minimal verbal structure, while Spanish uses at least two exponents.

3.2. The Structure of Verbal Participles in German and Spanish

As we saw, the behavior of participles in derived verbs in the two languages differ. In our analysis, we will take this fact to mean that the material spelled out by each exponent is crucially different in the two languages. Following Kratzer (2000), Embick (2004), and Fábregas (2020), we analyze participial morphology as a manifestation of Aspect, which in the unmarked case—that is, when there are no additional elements in the structure, such as overt auxiliaries or operators—builds or extracts a state from the eventuality described by EventP. In the case of German, we assume that this aspectual head corresponds to the

prefix *ge-*, above which a second functional projection is merged (Figure 4). This functional projection, whose nature is yet to be identified, introduces the default inflectional marker.
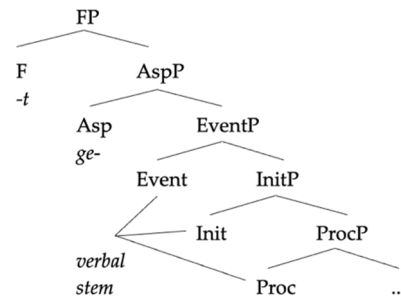

Figure 4. Spell out of a German participle.

In the case of Spanish, the underlying structure is the same, only that the manifestation of Asp is not a prefix, but a suffix (Figure 5).
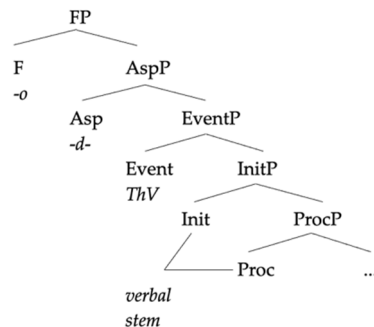

Figure 5. Spell out of a Spanish participle.

From this perspective, the internal structure of German and Spanish participles is very similar. The difference emerges when the exponents are linearized, because ge- is a prefix, while *-d-* is a suffix. Lacking an analysis based on syntactic movement of the difference between suffix and prefix, we assume that this difference emerges at PF, within the level that Distributed Morphology assigns to define the Morphological Structure or the so-called S-structure, as in Fábregas and Putnam's (2020) proposal. We assume that, by default, a c-commanding affix is linearized as a suffix of its complement, in correspondence with the Mirror Principle (Baker 1985). In the case of German *ge-*, the exponent has a diacritic marking its prefixal nature. This results in the following two different morphological/exponent structures for German and Spanish participles (Figure 6).
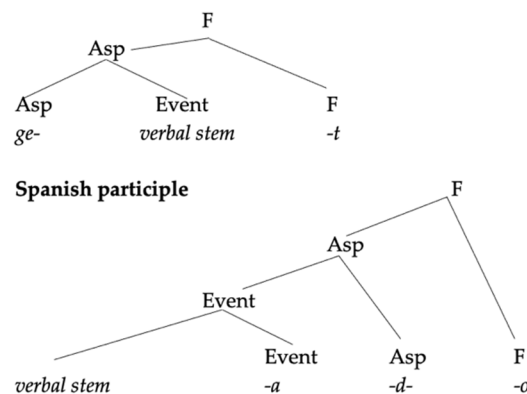

Figure 6. Exponent configuration of German vs. Spanish participles.

3.3. The Structure of Derived Verbs in German and Spanish

For derived verbs, we propose that there are three relevant areas: the one corresponding to the base, which can be as small as an acategorial root or as big as a categorized noun or adjective, the one corresponding to the verbal descriptive heads and the one that builds the Davidsonian event from those heads, corresponding to EventP. In Figure 7 and in the figures to follow the arguments are not represented for the sake of clarity.
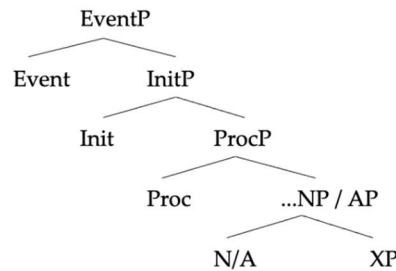
Figure 7. Structure of a derived verb.

Our proposal is that properly considered verbalizers spell out, at least, the event descriptive heads. Starting this time with Spanish, which is more transparent in this regard, Figure 8 presents the structure we assume for *utiliza*(r) 'to use' (20), which is built from the adjective *útil* 'useful'.

(20)   util-iz-a
       useful-ise-ThV
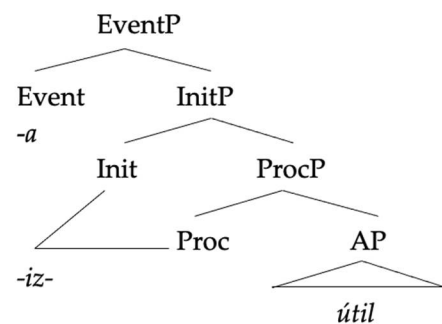
Figure 8. Structure of (27).

Once the exponents are introduced, the resulting morphological structure is the one in Figure 9.
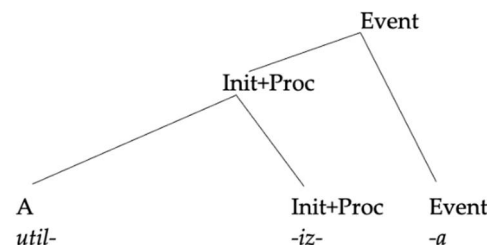
Figure 9. Spell out of a Spanish participle.

Importantly, the presence of a separate exponent for Event—the theme vowel—prevents the verbalizer from spelling out heads that are higher than Event. For this reason, when the participle is built, the exponent *-d-* is invariably introduced in the exponent representation (Figure 10).
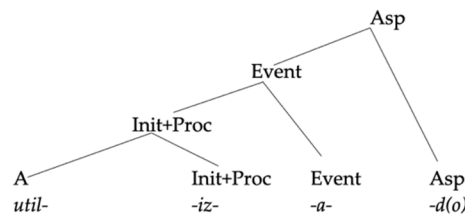
Figure 10. Exponent structure of a Spanish derived verb participle.

Let us now move to German. As we saw above, the standard way of verbalizing in German is with prefixes which, once present, block participial *ge-*. Our proposal is that, lacking theme vowels, German verbalizers can actually spell out the verbal descriptive heads, EventP and also Aspect, thus precluding insertion of the *ge-* exponent. In an underived verb, where the verbalizers are missing, there is no possibility to spell out the Asp head with them, and for this reason the *ge-* exponent emerges (Figure 11). We assume that it is an idiosyncratic, lexically listed property of German verbalizers that they spell out up to Asp, in contrast to Spanish verbalizers, where that possibility is blocked by the presence of a theme vowel that spells out Event, breaking the constituent that Asp and Init could form.

(21)   be-frei-t
         pref-free-infl 'freed'
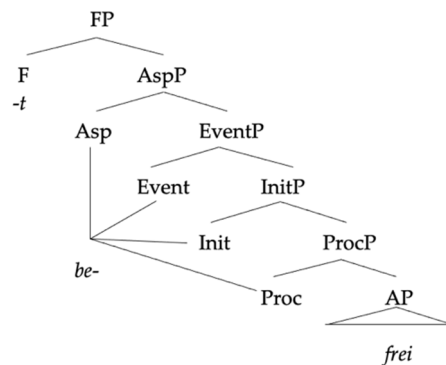
Figure 11. Spell out of a German derived verb participle.

Like *ge-*, the exponents used for verbalization are diacritically marked, which produces the following morphological or exponent structure (Figure 12):
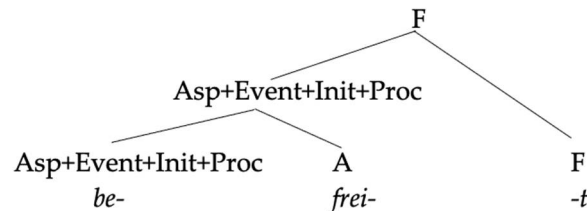
Figure 12. Exponent structure of a German derived verb participle.

3.4. Restricting Esplugisch Mixtures

At this point, we are ready to present how we address the puzzle in (1), namely, that (22a) is grammatical in Esplugisch but (22b) is not—and more in general, that Spanish bases can combine with a German verbalizer, but not vice versa.

(22)   a.   utilis-ier-(en)
         b.   *be-nütz-e-a(r)

Our analysis starts from one observation that we believe is crucial, even if it has not been addressed before in the literature, to the best of our knowledge: (22a) in fact contains a verbalizer, and the German morphology is added on top of it. As we have seen above, the Spanish adjective used as a base is *útil-*, not **utilis-*. The additional *-is-* segments bear a striking resemblance to the verbalizer *-iz-* 'ise', which is used in the verb *util-iz-(a)*, differing from it only in the last consonant, which is not the interdental /θ/ but the dental /s/. As is known, the Spanish variety spoken in Catalonia, as well as all Latin-American varieties and the Canary Island varieties, already lack the phoneme /θ/ and use instead /s/ through the well-known phenomenon of *seseo*. Through this phonological restriction, we see that *-is-* can be in fact the same verbalizer *-iz-* that appears in the monolingual *util-iz-a(r)*. There are also reasons to doubt that the extra *-is-* sequence is part of an allomorph of *-ieren*, *-isieren*, as Alexiadou and Lohndal (2018) assume; we will get to these in Section 4.2 below.

Thus, our claim is that the Esplugisch mixed verbalizations take as base something that is already categorized as a verb. The case of *utilisieren* is by no means a lexical exception in González-Vilbazo's (2005) data or in González-Vilbazo and López's (2011) data. The following cases are from González-Vilbazo (2005): we have one more case where the *-ier-* suffix combines with a base that already contains the verbalizer (*-e-(ar)*) and two cases where the base itself is an underived verb.

(23) a. cabr-e-a   > cabr-e-ier-en
          goat-vbls-ThV   goat-vbls-IER-inf 'to get angry'
      b. compr-a   > compr-ier-en
          buy-ThV   buy-IER-inf
      c. enter-a   > enter-ier-en
          realise-ThV   realise-IER-inf

All mixtures follow the same pattern, where *-ier-* is not in place of a verbalizer but appears in the place where Spanish would have introduced the theme vowel. In González-Vilbazo and López (2011) other verbs are cited, all following the same pattern: *cos-e* 'sew' > *cos-ier-en*, *jod-e* 'annoy' > *jod-ier-en*, *qued-a* 'make a date' > *qued-ier-en*, *mol-a* 'be appealing' > *mol-ier-en*, and *aleman-iz-a* 'to Germanise' > *aleman-is-ier-en*. Thus, *-ier-* is not in place of a verbalizer; note, incidentally, that *-isieren* appears only with verbal bases that in Spanish contain *-iz-* anyways. Tellingly, this combination with verbal bases is coherent with the properties of *-ier-* in German. We saw above those cases like *halbieren* 'to halve' are infrequent, and that the vast majority of *ier*-verbs are restricted to bases from foreign languages which were already verbs. Our proposal is, in fact, that German *-ier-* has the same role as the Spanish theme vowel—to abilitate a verb to combine with the tense, aspect and mood inflection– and therefore that it is located in the Event head, as in Figure 13.

(24) stud-ier-en
      study-IER-inf

Figure 13. Structure of a German derived verb with *-ieren*.
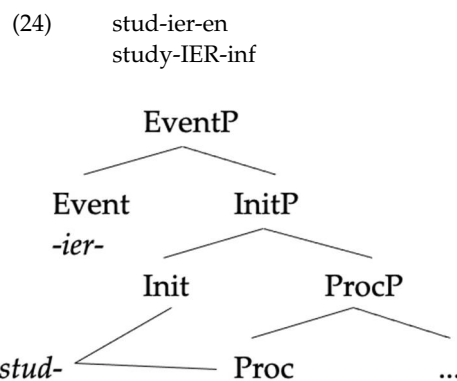
Recall that traditionally *-ier-* is seen as a morpheme that selects foreign forms and adapts them so that they can function as German verbs. In the analysis, we propose this intuitive role is formalized as *-ier-*, being the spell out of the head that adapts the eventuality description so that it can combine with the (German) aspect, mood, and tense inflection.

The bases combined with this suffix, in our analysis, are foreign exponents corresponding to partial eventuality descriptions lacking time and world parameters, and the role of *-ier-* is to adapt them so that they can combine with the German structure of the clause. In addition to this, like other exponents that in German spell out EventP, the suffix *-ier-* can spell out Asp, preventing insertion of *ge-*. The affix *-ier-* is not tagged as a prefix, which produces the following morphological structure representation, as in Figure 14.
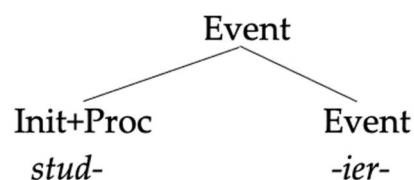
Event
Init+Proc   Event
stud-   *-ier-*

Figure 14. Exponent structure of a German derived verb with *-ieren*.

Compare this now with the morphological structure of a derived verb in Spanish and German. There is only one place where the representations are identical for German and Spanish in terms of the configuration—suffix vs. prefix—and the label of the exponent: the Theme vowel and the *-ier-* suffix. We argue that this is the reason why the mixtures noted by González-Vilbazo (2005) are possible: this is the only case where the morphological representation of the two languages, both in terms of exponents and structure, is overlapping.

We are therefore making the strong claim in (25).

(25)   Language mixing is only possible in the structural configurations and lexical representations where the two languages are identical.

The claim in (25) is probably too strong, but we would like to put it as a hypothesis that is formulated in its strongest shape so that it is easier to falsify in further research. Our claim, moreover, is likely to be more visible in word formations than in syntactic formations, in essence because the internal structure of one single word forces one to be more specific and detailed about the smallest constituents of structures built in the computational system. As one anonymous reviewer points out, it is unclear whether this strong principle applies in other structures. Our claim is that perhaps this is due to the (still) small number of studies that address bilingual mixing within word formation. At any rate, we want to formulate the principle in its strongest form and let the scientific community assess whether it can be extended to other cases.

Let us now see why German bases can seemingly never combine with Spanish affixes according to our hypothesis in (25), starting with underived verbs.

(26)   *ess-e(r)
        eat[Ger]-ThV
        Intended: 'to eat'

The problem in underived verbs is that the Spanish exponent, used as a base, spells out only up to Init, and Event is left for the theme vowel (compare Figures 8 and 11 above). The two exponent configurations are not identical: the German verbal stem reaches up to Event, while the Spanish verbal stem stops at Init (maximally), and the theme vowel materializes Event. Once the German stem is introduced, Event is already satisfied, precluding insertion of the Spanish theme vowel. However, having the information provided by the theme vowel is required in Spanish to select the exponents for tense, aspect, and mood, as we saw in (6) above.

(27) a.   b.

Event   Event

Event   Init+Proc   Event
ess   *com*   *-e*
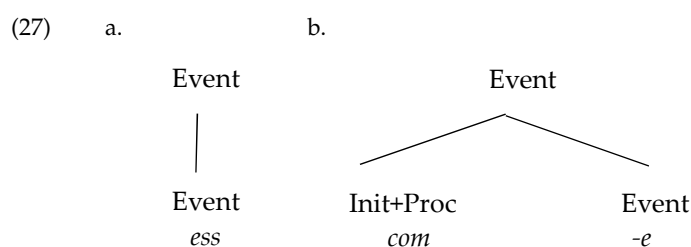
Moving now to derived verbs, we must disentangle at least two situations: verbalizations which involve suffixes from verbalizations that involve prefixes and suffixes (parasynthesis).

(28) a.   *frei-e-a(r)
                free[Ger]-vbls-ThV
      b.   *en-frei-a(r)

(28a) follows trivially from our premise: German verbalizations involve a prefix in the standard cases, while Spanish verbalizations represented in the morphological structure use suffixes (compare Figures 8 and 11 above). The configurations do not match, specifically for the case of the exponents used for the verbalization, and therefore the mixture in (28a) does not work and hence why it is seemingly unattested in Esplugisch. (28b) is blocked by a more subtle property, an interesting one that highlights the fact that Esplugisch speakers are not simply paying attention to the surface form of the exponents to diagnose the structural overlap. Even though German has prefixes on the surface, like Spanish, involved in the verbalization, the grammatical content that the prefixes spell out in each language is different: German prefixes arrive to EventP—and moreover, to AspP, while the Spanish prefixes never emerge without a theme vowel, showing that they never spell out Event. Consequently, the morphological representations are not identical in terms of feature content, even if one could argue that they might be configurationally similar or event identical, and the overlap is impossible: presence of the German prefix would mean precluding the insertion of the theme vowel, which again would lead to ungrammaticality because the inflectional exponents could not be selected in Spanish without the information that the theme vowel provides.
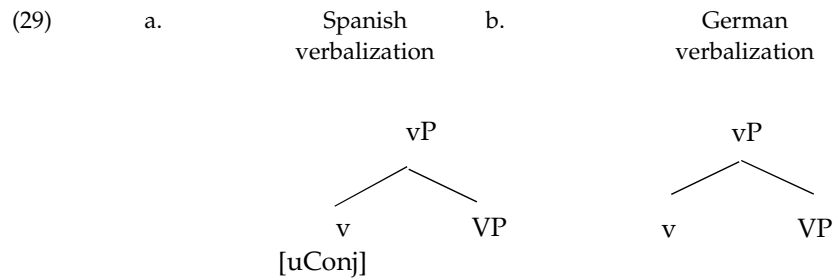
Thus, the only situation in which the mixture is possible is with a Spanish base that already contains the verbalizing structure, where -ier- is added to adapt the foreign verb into the German clause structure at the Event level.

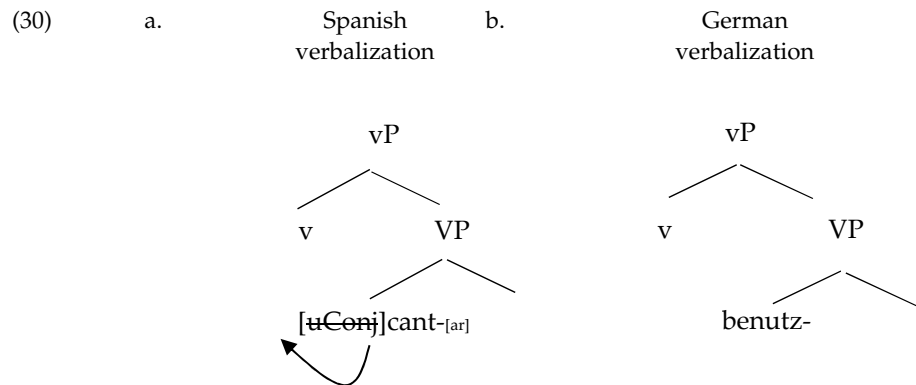## 4. Comparison with Previous Analyses

In this section, we will compare our analysis to two previous analyses of the same pattern of data in order to highlight what we take to be the advantages of our approach.

4.1. González-Vilbazo & López' Analysis

The above-discussed asymmetry is captured in González-Vilbazo and López (2011) as a mismatch between the information that the Spanish little v needs and the one provided by a German root. The analysis capitalizes on the fact that Spanish verb(alization)s compulsorily carry a theme vowel that associates the verb to a particular conjugation class—recall (6–7, in Section 2.1, above). Thus, the Spanish little v is tagged with an uninterpretable feature [uConj] which needs to be valued by the base of the verb, which in the simplest case is a root. In contrast, the German little v lacks this feature, because German does not have conjugation classes—at most, verbs can be tagged for different types of irregularities, as in English or as would be the case independently for some Spanish verbs, regardless of class membership.

(29)　　a.　　　　Spanish　　b.　　　　German
　　　　　　　　verbalization　　　　　　verbalization

```
          vP                        vP
         /  \                      /  \
        v    VP                   v    VP
     [uConj]
```

In this analysis, Spanish roots and German roots also differ in their feature endowment, in parallel with their respective little v heads. Spanish roots carry with them "a specification for conjugation class" which establishes a syntactic dependence with little v, "a goal with matching features" (González-Vilbazo and López 2011, p. 841), therefore satisfying the requirement that a conjugation class is assigned to little v. German roots, conversely, lack this specification as their little v heads do not require a conjugation class.

(30)　　a.　　　　Spanish　　b.　　　　German
　　　　　　　　verbalization　　　　　　verbalization

```
          vP                        vP
         /  \                      /  \
        v    VP                   v    VP
            /  \                      /  \
     [uConj]cant-[ar]              benutz-
```

Starting from these assumptions, the mixture between the two languages can only go in one direction: a Spanish base combined with a German little v. A combination like (31), where the little v is Spanish and the base is German, keeps the uninterpretable feature of little v unchecked, triggering—under standard assumptions—a non-convergent derivation where the structure is transferred to the interfaces with active uninterpretable features.

(31)　　*[vP v$_{[uConj]}$　　[VP benutz...]]

The opposite combination is, however, convergent (32): as the German little v does not require any conjugation class, there is no uninterpretable feature to check before transference. The base provides some interpretable information that is not used in the derivation, but as there are no unlicensed uninterpretable features, there is nothing formally wrong in the combination.

(32)　　[vP v　　[VP utilis...]]

This is an elegant and simple account of the asymmetry. However, both empirical and theoretical reasons lead us to argue against one of its basic assumptions, namely that Spanish roots are tagged with a conjugation class. To the extent this is a problematic assumption, as we will argue, this analysis of the descriptive facts breaks down.

Our empirical argument has two parts, both pointing towards the same conclusion: when a base lacks a conjugation class in Spanish, the result is not ungrammaticality, but either addition to the base of a verbalizer that specifies the conjugation class or assignment of the base to the unmarked first conjugation. Thus, even if Spanish roots had a specification of conjugation class which German roots lack, the German root could have been combined with the Spanish little v by one of these two procedures.

Many studies about Spanish verbalizations have reached the same conclusion: when a base coming from a foreign language (most frequently now, English) is adopted in Spanish, one of the most common solutions is to combine it with a verbalizer—typically, but not exclusively *-e-a*—to build its Spanish version (Pratt 1980; Romero 2010, among many others):

(33)   to chat > chat-e-a(r), to blog > blogu-e-a(r), to format > format-e-a(r), to ban > ban-e-a(r)...

This solution—to add an overt verbalizer to the configuration when the root used—is foreign, but is in fact quite general in Spanish. Take for instance verbalizations from foreign proper names, as in (34). In the reasonable assumption that a proper name coming from another language is not assigned a conjugation class of its own, what Spanish does is to add the verbalizer *-iz-* to these structures. The verbalizer *-iz-*, in turn, is assigned to the first conjugation class.

(34)   Trump > trump-iz-a(r) 'to act like Trump/to do like Trump', Bolsonaro > bolso nar-iz-a(r), Merkel > merkel-iz-a(r)....

The question that we want to pose, from the perspective of González-Vilbazo and López's analysis, is what prevents this type of solution for the German-Spanish mixtures, where the conjugation class is provided by a verbalizer. It is true that these authors explicitly say that they differentiate loanwords from code switching, but the difference proposed by them does not address the complication that we are noting. In our understanding of their analysis, borrowing involves copying a lexical item from one list (say, German) into a second list (say, Spanish), while code-switching involves introducing in the same numeration items from both lists, without previous copying in the other list (ibidem: 840–841). This might suggest that what González-Vilbazo and López (2011) have in mind for borrowing examples is that examples like (44) above have been copied into the Spanish list of lexical items, where they have been assigned a conjugation class. However, this would not work either: as we discussed in Section 2.1, *-ea(r)* is not one lexical item, but two, a segment corresponding to the verbalizer *-e-* which imposes the first conjugation class, and the theme vowel corresponding to this conjugation class. Thus, the borrowings in (33) belong to the first conjugation class because they are verbalized by *-e-*, not because their roots have been tagged with the first conjugation class. Tagging these roots with conjugation class information is either redundant or contradictory with the conjugation class specification of the verbalizer *-e-*, depending on the class assigned to them. This makes it implausible that the roots have been tagged with that information at the same time they combine with a verbalizer. However, even if we assume that such information has been added to the root, a problem remains for González-Vilbazo and López (2011): once the base contains *-e-*, that *-e-* carries information about the conjugation class, and the derivation in (35) should be convergent, counterfactually.

(35)   Spanish little v, German root, Spanish
   verbalizer
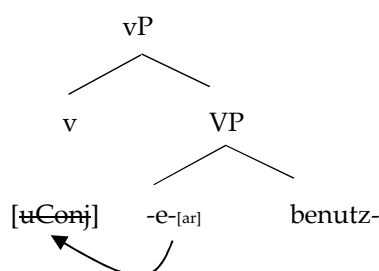
In other words, if the ungrammaticality of the combination of a German root with a Spanish verbalizer was due to the conjugation class specification required by Spanish,

as the authors do, the mixings should be possible once the German root combines with a Spanish verbalizer that already carries with it a specification of its conjugation class. From this perspective, it should not matter whether the root lacks its own specification or not.

The second empirical problem, in fact, is the claim that all conjugation classes must be specified within the root in Spanish. Let us assume, for the sake of the argument, that González-Vilbazo and López (2011) are right that Spanish roots specify their conjugation class. As we know, there are three conjugation classes in Spanish, but their status is very different. RAE and ASALE (2009) estimate that as much as 90% of Spanish verbs belong to the 1st conjugation, while the 2nd and the 3rd are dramatically less represented, are never used to adapt borrowings, and typically are mixed with each other in verbs of low frequency (e.g., *tañir ~ tañer*, 'to toll'). These facts are reflected in some work, such as Oltra-Massuet (1999) for Catalan, which propose that the 1st conjugation is the unmarked one, also from the perspective of its feature endowment.

This opens a theoretical possibility, in fact: the first conjugation is the one assigned by default to bases that lack any specification of conjugation class. If that was the case, in fact, one would not obtain ungrammaticality when the Spanish little v does not find any specification for the conjugation class of the base. In a configuration like (36), the first conjugation class would be the value assigned by default to the unchecked [uConj] feature, similarly to Preminger's (2014) claim about neuter gender being the default value assigned to unchecked gender features in many languages; instead of a non-convergent derivation, we would obtain a convergent derivation where unvalued features are manifested as default values.

(36)   Spanish little v, German base
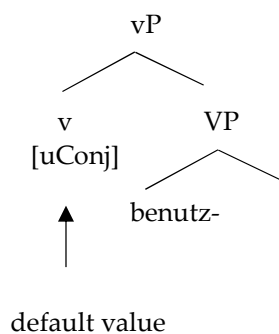
There is, in fact, empirical evidence that the 1st conjugation is the one assigned in Spanish in contexts where there is no specification about the conjugation class. Our first piece of evidence comes from so-called 'pentasilabismo' verbs, which are verbs derived without any overt verbalizer from nouns or adjectives that display overt nominalizers or adjectivalizers.

(37)   decep-ción 'disappoint-ment' > decepcion-a(r) 'to disappoint', apert-ura 'opening' > apertur-a(r) 'to inaugurate', influe-ncia 'influence' > influenci-a(r) 'to influence', explo-sión 'explosion' > explosion-a(r)...

In these verbs, the only conjugation class used is the 1st. More generally, in fact, there are no verbalizations in Spanish, coming from any noun or adjective, where the verbalizer is null, and the conjugation class is the 2nd or the 3rd.

(38)   a.   N-ø-a(r), *N-ø-e(r), *N-ø-i(r)
        b.   A-ø-a(r), *A-ø-e(r), *A-ø-i(r)

We believe that this strong empirical generalization makes sense if the 1st conjugation in fact is viewed as the default manifestation of conjugation class and not as the result of lexical assignment. In the examples above, the base lacks any specification of conjugation

class, being a noun or an adjective. The verbalizer is zero: if the first conjugation is assigned because the zero verbalizer specifies the 1st conjugation, then it becomes a lexical accident that there are no verbs from the 2nd or the 3rd conjugation with the shapes in (38). Instead, if the 1st conjugation is the default manifestation of the conjugation class, the pattern follows naturally. If one takes seriously the idea that a zero morpheme has morphosyntactic information but lacks morphophonological properties, its null nature must also mean that it lacks any specification for the conjugation class, meaning that the 2nd and the 3rd conjugation are excluded, and the 1st is assigned because it is the one used when there is no conjugation class that is specified.

Second, the theme vowel of the first conjugation is always the one to be found in the cases of nominalizations or adjectivalizations where the theme vowel is required by the suffix, and not imposed by the base. Consider the nouns in (39) and the adjectives in (40).

(39)   a.   leñ-a-dor
                    wood-1c-er 'someone that cuts wood'
        b.   histori-a-dor
                    history-1c-er 'someone that studies history'
(40)   a.   alcald-a-ble
                    major-1c-able 'that can become a major'
        b.   ministr-a-ble
                    minister-1c-able 'that can become a minister'

What is significant about these examples is that the bases cannot be verbs: *leñar*, *historiar*, *alcaldar*, and *ministrar* are unattested, in contrast to the nouns *leña, historia, alcalde*, and *ministro*. The bases are nominal, and the presence of the theme vowel is required by the final affix, which, respectively, derives agent nouns from verbs and modal adjectives from verbs. Our goal is not to analyze these cases, but simply to note that, once again, we have a configuration where the base is not verbal, precluding it from being associated to a conjugation class, and the result is not ungrammaticality, but assignment to the 1st conjugation.

From the perspective of González-Vilbazo and López (2011), this should mean that—if the problem for the asymmetry is the lack of a conjugation class specification in the base— Esplugisch should allow a German–Spanish mixture like **benuzt-a(r)*, where in the absence of any specification for the conjugation class the 1st conjugation is used. As forms like *benutzar* seem to be unattested, this is another problem for their proposal. Our final critique to González-Vilbazo and López (2011), admittedly, is less serious, because it is based on a theory internal contradiction that would be resolved if the theoretical framework were slightly modified. Nevertheless, in the theory adopted, roots should, like in Marantz (1997), lack any specification for grammatical category. Given that conjugation classes in Spanish are exclusive of verbs, it seems to us contradictory to say that an acategorial root specifies its conjugation class, because conjugation class presupposes a verbal status. In our view, it would be more internally coherent to adopt Acquaviva's (2009) proposal that conjugation classes and, in general, the assignment of roots to specific morphologically relevant classes exclusive of one single category, should be viewed as the root being licensed only in the context of a functional head that carries the right specification. However, this view would mean that the root does not carry any interpretable feature for conjugation class, and that in fact little v would be the one assigning the root to one conjugation class, not vice versa, which if anything would predict that *utilisieren* should be ungrammatical because the base *utilis-* would need to be licensed under a 1st conjugation context that is not provided by the German verbalizer.

The above could of course be solved theory-internally in several ways available to the authors: perhaps what combines with the verbalizers in the relevant examples is always some intermediate verbal lexical category—recall that we have noted that in their examples there is more material beyond the root, see Section 3.4, example (23)—, or maybe conjugation class should be viewed as a sub-categorical property that is manifested as noun class morphology when the root appears in a nominal context. For this reason, we do

not take this final problem to be as serious as the previous two, which we believe make the wrong empirical predictions for the data analyzed.

4.2. Alexiadou's and Alexiadou & Lohndal's Analysis

Like our own theory, Alexiadou's (2017) and Alexiadou and Lohndal's (2018) proposal is based on the nature of the exponents available in the German–Spanish pairs, but they adopt a view where the asymmetry in (1) follows from a preference for the unmarked or default realization of each morphological node: "Speakers pick the default/underspecified realization, if such a realization is available" (Alexiadou and Lohndal 2018, p. 11). Specifically, their proposal is that in the asymmetry in (1) the German verbalizer emerges because it is the default manifestation of the verbalizing head, in their assumed notation little v.

This competition is determined based on the available V[ocabular] I[tem]s for the individual language pairs: *-isier-* [is] the default realisation of v in the case of Spanish and German pairs, as Spanish has no overt realization of v that is salient enough for speakers to identify, unlike German (Alexiadou 2017, pp. 186–87).

We see three main issues with this approach. The first one refers to the claim that Spanish has no overt realization of v, the verbalizing head. We take this claim to mean that, following Oltra-Massuet (1999), the theme vowel could be treated as a dissociated morpheme whose position of exponence is not represented syntactically. While it is true that Spanish must have a zero verbalizer only identifiable by the theme vowel, we have seen in Section 2 above that Spanish has a robust set of overt exponents that correspond to the verbalizers and which come accompanied by theme vowels, among them *-iz-, -ific-,* and *-ec-,* so this claim is not strictly true unless interpreted in a much more restricted sense: the default verbalizer in Spanish happens to be materialized as zero, and is only visible by the addition of a theme vowel.

Let us, however, for the sake of the argument and fairness to their analysis, assume that both claims are true, that is, that theme vowels are not represented in syntax and that the default verbalizer in Spanish is zero. The problem is that the Esplugisch verbalizations mixing German and Spanish show either bases that were already verbs in Spanish or that contain some overt verbalizer, like *-e(ar)* or *-iz(ar)* in the seseante version, which shows that the competition cannot be happening between a Spanish and a German verbalizer in that context—simply because the base is already verbal, see (30) above.

Indeed, Alexiadou and Lohndal (2018) propose an identification of the suffix used as *-isier-,* thus segmenting the form as (41a), contra González-Vilbazo and López (2011), who segment it as (41b).

(41)   a.   util-isier(en)
        b.   utilis-ier(en)

It is true that in German *-isier-* is a recognized allomorph of *-ier-* (DUDEN 2006, §1046) but considering the pattern of data provided by Esplugisch it is unlikely that the segmentation is as in (41a).

There are several arguments against (41a). The first one is that when the base is a Spanish verb that is itself morphologically simple, the suffix used is always *-ier-,* never *-isier-.* The data document *cos-ier(en),* not **cos-isieren,* or *enter-ier(en),* not **enter-isier(en).* Therefore, a segmentation like (41a) needs to explain why this form only appears precisely in cases where the base is not verbal. Second, segmenting like (41a) misses the generalization that the sequence *-isier-* only appears precisely in forms that, in Spanish, would have carried precisely the verbalizer *-iz-* and not any other verbalizer:

(42)   a.   util-iz-a
        b.   aleman-iz-a

Take, for instance, *cabr-e-ier-en,* from *cabr-e-a* 'to annoy'. If the form *-isier-* were used by default, we would have expected **cabreisieren,* which is not the case. These two facts

strongly support a segmentation like (41b), where the segment *-is-* is part of the Spanish base, *pace* the absence of an interdental sound, thus corresponding to the verbalizer.

Given this, following the general reasoning, the absence of German roots verbalized by Spanish suffixes cannot be reduced to a competition between a German and a Spanish verbalizer, because the Spanish base is already verbalized. If there is any sense of default morphology at play here, that sense of default would rather be that, when the two structures overlap, the German exponent used is the one that spells out the minimal amount of structure that has not been already spelled out by the base, which in our analysis is Event, where otherwise Spanish would have introduced a theme vowel.

5. Conclusions

To conclude, this article has argued that the asymmetry found in *Esplugisch* verbalizations follows once each one of the affixes involved in the structure, and its role, is identified. From the perspective of bilingualism, what our analysis shows is that the knowledge that bilingual speakers have of the languages involved is as detailed as the one assumed for monolingual native speakers (Moro Quintanilla 2014) and makes explicit reference not to the surface properties of the elements, but to the structural configurations that underlie what might have been viewed as linearly identical sequences of elements: even if the linear relation is the same on the surface between the base and the suffixes in both cases, *Esplugisch* allows mixtures only when the configuration that underlies the relevant sequence is identical in the two languages, and allows the substitution of one item for another with the same label and structural position in the two languages. As such, the analysis in the present paper not only offers what we hope is a more accurate description of the underlying grammar of *Esplugisch* in this domain, but of equal importance provides yet another example to support the view that emergent bilingual grammatical mixings are based on structural properties and not on surface similarities.

Our hypothesis, synthesized as the claim in (25), is very strong, and because of this it makes predictions that could be easily falsified in further research. Relevantly, one immediate prediction should be that any German–Spanish community, independently of the societally dominant language, would follow the pattern in (1) provided that their input leads the speakers to identify the building blocks of verbs in the same way. Further research will tell whether this claim is too strong or can be confirmed by other language pairings within the domain of word formation.

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Notes

[1] For example, the criteria that makes someone qualify as say: a heritage language bilingual (exposure to and competence in a minority home language that is not a shared language in the larger society in which one grows up) as opposed to a second language learner bilingual (see Montrul 2008; Rothman 2009; Polinsky 2018).

[2] Albeit, distinct in non-trivial ways, the same or similar factors conspire to explain individual differences across bilinguals too (see Kupisch and Rothman 2018).

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