The Syntax of verb borrowing in Shipibo-Konibo

La sintaxis de los préstamos verbales en shipibo-konibo

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Abstract

In this article, I will discuss the syntax of language mixing in the verbal domain for Spanish verbs within Shipibo-Konibo. Against earlier explanations which assume a nominal source for verbal borrowings, it will be argued for an insertion process of uncategorized roots. First, the study of Valenzuela (2006) presenting the incorporation of Spanish verbs in Shipibo- Konibo and the derivational role of the causative affix -n will be summarized. Afterwards, a detailed definition of language mixing and Distributed Morphology will be given (Embick & Marantz 2008, Embick 2010). Finally, I will apply the Distributed Morphology framework to the present study of verbal borrowings and contrast the predictions uttered by both models present in this article.
Keywords: *Distributed Morphology; Shipibo-Konibo; Verbal Borrowing; Language Mixing*.

resumen

En este artículo, abordaré la sintaxis de algunos verbos provenientes del español, que han sido incorporados, gramaticalmente, en la lengua amazónica shipibo-konibo. A diferencia de propuestas anteriores, que asumen una fuente nominal para los préstamos verbales, defenderé la idea que estos se forman, mediante la inserción de raíces sin categoría gramatical. Primero, presentaré de manera resumida, el estudio de Valenzuela (2006), el cual aborda la incorporación de verbos españoles en la lengua shipibo-conibo y el rol que en él tiene el afijo causativo -n. Luego, ofreceré definiciones detalladas de los conceptos de "mezclado de lenguas" (language mixing) y del marco teórico de la morfología distribuida (Embick & Marantz 2008, Embick 2010). Finalmente, aplicaré dicho marco a los préstamos y contrastaré las predicciones de las dos propuestas presentadas.
Palabras clave: *Morfología distribuida; shipibo-conibo; préstamos verbales; "mezclado de lenguas"*.

0. Introduction

A central point in current investigations of language mixing is proposing grammatical Null- theories which handle both monolingual and bilingual data with the same syntactic tools. Through this, bilingual structures contribute to our knowledge of grammar. Crucial to this are the building blocks of language. In this article, I will present the borrowing of Spanish verbs in Shipibo- Konibo to discuss those building blocks with examples from language mixing. To do so I will contrast proposals of a nominal borrowing for verbs with that of the insertion of uncategorized roots.

First, I will introduce some information of both socio-linguistic and typological information of Shipibo-Konibo. Afterwards, the I will present the data of Shipibo-Konibo accommodating Spanish verbal roots into their grammar using a former causative affix as studied by Valenzuela (2006). While the author argues for an underlying nominal borrowing, I will provide an alternative explanation, namely the central role of uncategorized roots in language mixing. This explanation will be based on the exo-skeletal framework (Borer 2014, Å farli 2015) and especially Distributed Morphology (Embick 2010) where roots and categorizing morphemes have a crucial role. Earlier research about verb borrowings will also be referred to in the argumentation to summarize the state of the art and to account for alternative factors of importance such a speaker agency (Moravcsik 1975, Wohlgemuth 2009, Alexiadou 2017). The relevant examples in Shipibo-Konibo from Valenzuela will be presented in her glossing and translation to Spanish. As a first step, I will introduce the recent history of the peruvian amazon basin and socio- demographic facts about Shipibo-Konibo (S-K) communities. Subsequently, the relevant typology of S-K and Valenzuela's case study and concluding hypothesis of how S-K incorporates Spanish verbs in its own grammar will be presented. Afterwards, the exoskeletal framework and the relevant key definitions as roots and functional morphemes are established. A theory of mixing of roots instead of a borrowing process of nouns and verbs is proposed at the end.

1   Languages in the amazon: Shipibo-Konibo

1.1   An introduction to Shipibo-Konibo and recent amazon basin history

In this section, I will present a few key points of recent peruvian amazon histo-

ry based on San Román (2015), before giving an introduction to relevant S-K socio-demographic and typological characteristics. Since the end of the 19TH century, the peruvian low amazon area, where the S-K communities are located, has seen profound social restructuring. New communication networks and roads, especially the Lima-Pucallpa highway, established the incorporation of the selva inside the national capitalistic structure. This led to a variance of effects on the linguistic landscape in the amazon. After being in contact primarily with Quechua since the start of the colonization, Spanish played a central role since the national enterprise took off in the late 19TH century. Starting with the rubber boom at around the same time, strong migratory movements and centralistic urbanification started, with Iquitos and Pucallpa being the two main hubs for migration. While some groups voluntarily took an active role in this restructuring, others were forced to do so under violence. San Román describes the extent of this exploitation as "caza de indios como bestia salvaje" (153).

The S-K communities however were able to "defend their own identity and relative autonomy against the constant fights of the colonial and national societies" (Valenzuela 2006:122). In the next paragraph, I will introduce basic sociolinguistic characteristics of the S-K communities resulting from this autonomy and discuss relevant ideological aspects of lexical borrowings in the amazon basin.

Most people identifying themselves as S-K live near the city of Pucallpa along the Ucayali river and its communities still maintain an organisational level of independence towards national society, although not outside of its economic structure. Most of the children are monolingual S-K speakers until school, even though the later acquired level of Spanish is usually fluent, both that of speakers inside the communities as for speakers who migrated to the cities.[1] The number of speakers is estimated around 30.000 (Valenzuela 2006:121-123).

As for linguistic ideology, a crucial point for the discussion of linguistic contact in the amazon is the active rejection of lexical borrowings by the speakers. Epps & Michael go as far as stating "speaker's conscious efforts to avoid language mixing" as responsible for "low lexical borrowing" in the amazon basin (937). However, outside of speaker consciousness, grammatical feature convergence does take place and indeed did so at a great scale, "giving rise to zones of typological similarity that cross-cut genetic-linguistic differences"

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[1] Migration does not only occur within the amazon basin. For example, there is a big S-K community in the Cantagallo district in Lima, including a bilingual school and cultural activities as well as newly founded networks of different families (Pueblo del Peru´ 2016).

(Epps and Michael 934). The areal diffusion of features is supported by multilingualism and extensive long-term contact between the different languages. One of these languages, of course, is Shipibo-Konibo, whose main typology I will introduce in the next section.

2.2   The typology of Shipibo-Konibo

First, I give a short overview of S-K's typology based on Valenzuela before discussing the most relevant characteristics for the present study (2002, 2006).[2] S-K is part of the Pano language family, which includes about 30 languages. However, S-K is by far the most spoken one. It is an agglutinating language with affixing, clitics and postpositions of basic word order SOV and ergative-absolutive case-marking. Relevant for the study presented is especially the causative pattern and ergative case-marking which I will present in the next section.

Valenzuela distinguishes four different causative morphemes, *-n*, *-ma*, *-a* and *a(k)-* (2002:258).[3] As stated by Valenzuela, *-a* is a grammaticalization of the auxiliary verb *a(k)-* and both are not of relevance for this work because they don't apply in language mixing. Meanwhile, the other two causatives are central to my argumentation. They vary greatly in meaning, selection of verbs and also productivity, but both require an argument marked by the ergative case.   While *-ma* is by far the most productive causative, *-n* has a very limited distribution.[4] The most frequent but not the only occurrence of the latter is in direct contrast with *-t*, where a difference between transitivity and intransitivity is expressed. This occurs especially with body positions, as the examples in (1) taken by Valenzuela (2006:130) show.[5]

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[2] Note that in WALS, only 11 languages are identified as Panoan. It is an open discussion whether the Pano and Tacana languages should be seen as one language family (Dryer and Haspelmath 2013).

[3] S-K shows a high degree of allomorphy regarding /-n/ but is explained in the dissertation of the cited author. Even though -n is stated to also be an allomorph of the dedicated malefactive affix -naan, the relevant affix in this work is the causative -n.

[4] The same distribution is shown by Zariquiey 2012 in Cashibo-Cacataibo, which is also a Pano language. Also, Valenzuela offers examples of other Pano languages also applying the verbaliser -n for borrowed verbs. The causative and borrowing patterns could very well be spread along this language family.

[5] To avoid confusion it is important to add that the affix -n not only derives causative structures in the verbal domain demanding an ergative marker and incorporates verbal borrowings. In the nominal domain, "the phrasal enclitic -n exhibits a rich allomorphy and represents an interesting case of both case syncretism and *polyfunction- ality*. Besides the ergative, it also codes genitive, instrumental-means, locative-allative, temporal and other oblique functions" (Valenzuela 2002:83).

a. Anitexo   jiwi-n-ra   nato shino pani-ai
   big quinilla tree-LOC-EV   this monkey hangup-INC
   'This monkey (always) hangs from the big quinilla tree.'

b. Nokon koka-n   awinin-ra   jawen chopa patsa-a

   POS1   maternal.uncle-GEN wife:ERG-EV POS3 clothes wash-
   PP2:ABS

   pani-n-ai
   hang.up-CAUS-INCL
   'My maternal uncle's wife is hanging the clothes she has washed'

c. Variation /-t/ and /-n/ (Valenzuela 2006:131)
   raka- 'lying position'; raka-t- 'lie down'; raka-n- 'throw something' yaka
   yasa – 'sitted position' ; yaka-t- 'sit down'; yasa-n- 'sit something'

The difference in distribution between these two affixes will be referred to later on. In the next section, I will present the main thesis of Valenzuela (2006) article about the borrowing process of Spanish verbs into Shipibo-Konibo.

3   Verb borrowing in S-K

3.1   Incorporating Spanish verbs in S-K

While in S-K utterances -*n* never derives an intransitive verb because of it's valency increasing role as a causative, this is not the case with Spanish verbs. Those are always incorporated into S- K using the same affix -*n*, as seen in the examples in Table 1 taken from Valenzuela (2006:125).[6] We see clearly by the glosses that there are all kinds of different valencies derived. They range from intransitive to transitive but also include cases of middle voice.[7]

Also, according to Valenzuela, in this cases no ergative case-marking is required, in contrast to 'native' roots. After discussing possible Spanish and Quechua origins, the author concludes that a Pano origin is the only possible

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[6] An important critique about Valenzuela's article is concerning the presentation of examples. Apart from one utterance where -n actually derives a transitive verb, no complete utterances are presented as to analyze the argument structure.

[7] According to the cited author, -meet is a phonological fusion of -n and the middle voice affix (Valenzuela 2006:125).

explanation. Thus, a functional expansion of the causative *-n* to accomodate Spanish verbs into S-K grammar is proposed. Interestingly, some Quechua verbs are also integrated with the same affix, as seen in example (2) and argued by Valenzuela (2006:127).

Form	Gloss	Translation
viaja-n-ai	viaja-n-INC	'I travel'
trabaja-n-ti	trabaja-n-INF	'work'
cambia-n-ke	cambia-n-CMPL	'has changed'
saluda-n-kas-ai	saluda-n-DES-INC	'I want to greet'
pasea-n-i kai	pasea-n-SSIS GO.INC	'I will walk around'
diferencia-meet-ai	diferencia-n:V.MED-INC	'it is differentiated'
prepara-meet-a	PREPARA-N:V.MED-PP2	'it is prepared'

Table 1: Spanish verbs in S-K

(2)   Quechua verbs in S-K

Biri-n-ra tari a-ti atipa-n-ke.
Biri-ERG-EV cushma do-INF:ABS be.able-n-CMPL

'Biri can make an cushma (traditional vestment).'

However, this example has two problems. First, at first glance it seems that the affix might work in its proper causative function in this utterance, as 'Biri' is marked by the ergative case. Thus, it would not be the case that the morpheme fullfills a verbalizing role, but rather its causative function. Also, not all Quechua verbs are marked by this affix, while with Spanish the affixation is indispensable. For this and a more extensive discussion of the points mentioned, see Valenzuela (2006: 129). In the next paragraph, I will summarize the conclusions of the presented paper.

One of the main conclusions of Valenzuela's paper is thus the functional expansion of the causative *-n* to a "generic verbalizing element" (2006:139). However, her second conclusion, is not conclusive. She argues, in line with Moravcsik (1975), for the necessity of the verbalisation affix because of a "corresponding nominal meaning" (Valenzuela 2006:138). This is based on verbs being borrowed in a bi-morphemic structure as proposed in Moravcsik (1975). Crucially, this includes a nominal borrowing as a first element, which then is combined

with a verbalizing item. The reason for this is that among the common strategies for verb borrowing are Light Verb constructions and verbalizing affixes (Alexiadou 166). Another argument stated by Valenzuela is that of nominal predominance in borrowing processes. Both authors arrive to that conclusion because they don't see an alternative account for presence of the verbalising affix. However, to attribute a nominal meaning because of a bi-morphemic structure is not convincing. As Wohlgemuth correctly states, "it makes a huge difference to claim that verbs are borrowed as nouns as opposed to claiming they are essentially borrowed as non-verbs" (280). In this article, I will not argue against an underlying bi-morphemic structure. However, the motivation surges out of the question of what the verbalized element is. To propose a nominal borrowing should crucially involve nominal occurrences of the very same form. Before providing the alternative syntactic analysis of category-less roots, I will give a socio-linguistic motivation of this overt verbalizing process in the next section.

3.2   Speaker agency in the process of verbal borrowing

As for the role of speaker agency in borrowing processes, we remember from section (2) that part of the linguistic ideology in the amazon basin is the rejection of lexical borrowings. Also, speakers are aware of the borrowed status of Spanish verbs (2006:129). However, it should also be remembered that Quechua verbs fully integrated into S-K do not receive the affixal marker and are also not recognized as borrowed by the speakers. See the following contrast in (3).

(3)   Source: Valenzuela (2006:129)

baila-n- → 'bailar' [dance]

ransa-   → 'bailar, danzar' [dance]

Ransa-, even though it originated from the Spanish *danzar*, found its way into S-K through Quechua. "The bilingual speakers [...] recognize the form *baila-n* as borrowing, meanwhile they consider the form *ransa* as proper of S-K" (Valenzuela 2006:129). Crucially, this is shown by the change of the initial consonant from /d/ to /r/, a typical accommodation to Quechua phonology. The causative could be connected to speaker's choice of marking the borrowed verbs as such. For this cases, Wohlgemuth mentions "'the speakers' perception of incompatibility and their attitude toward borrowed elements" (2009:278) as crucial, however, without going deeper with his analysis. This opens up the im-

portant point of the agentive role speakers have in contact processes. But even if speaker agency and the intention to mark the borrowings was the reason for the verbalising, structure deriving such patterns has to be accounted for. To propose an alternative explanation as the borrowing as non-verbs, Distributed Morphology (DM) will be introduced in the next section to account for the borrowing of a-categorical concepts.

4 The foundations of language mixing

One of the central terms for the development of this article is that of 'language mixing'. In this section, I will thus lay the grounds for the following analysis and define the most important theoretical terms. In the second part, the central notion of roots and functional morphemes in Distributed Morphology, one of the representatives of the exoskeletal branch of grammar.

4.1 The insertion-alternation continuum

Rejecting the traditional view to differentiate between Borrowings and Code-Switching as fun- damentally different processes, current approaches treat them as the two ends of a diachronic continuum which is summarized as 'language mixing' (Matras 2009, Muysken 2014, Grimstad 2017). Crucially, both complex clauses and single-word insertions are seen as cases of language mixing from this point of view. A central aim in current research is to work on the base of a Null-Theory, this is to say, to find a syntactic model for grammar which handles both language mixing and monolingual data without extra mechanisms (Åfarli 2015, Ló pez, Alexiadou, and Veenstra 2017, Alexiadou and Lohndal 2018, Riksem et al. 2019). To do so, a middle way between the Matrix Language Frame (Myers-Scotton 2002) and the Minimalist Program (summarized in Grimstad et al. (2017)) is taken. While the Null-Theory approach comes from the latter, the Matrix Language Frame (MLF) contributes with important analytical devices, especially the asymmetry between the involved languages (Åfarli 13).

Central to the MLF is the differentiation between a Matrix Language, which contributes both the syntactic structure and lexical content, and an embedded language, which provides only the latter. This is a frequently recurring pattern which will also be presented in the data analysis in this work. Applying this asymmetry, the terms 'Insertion' and 'Alternation', both ends of the language mixing continuum, are introduced to give a clearer understanding of the underlying grammatical processes. For cases of Insertion it is only the Matrix Language imposing syntactic constraints, whereas in Alternation there are various languages constraining the syntactic struc- ture (Muysken 259). Important cri-

teria to distinguish between both cases are frequency, stability and diffusion (Åfarli 16). However, the underlying grammatical processes for language mixing are the same. In the following section, I will discuss how the exo-skeletal theories, represented in this case by Distributed Morphology, can account for complex mixing phenomena.

4.2   The building blocks of Distributed Morphology

As stated by Marantz (8), "Chomsky's 'Remarks on Nominalization' is often identified as the birthplace of lexicalism". In this theory, word formation takes place in the lexicon and grammatical categorization as 'verb' or 'noun' is an inalienable part of the word before syntactic processes occurs. However, as Chomsky argues, "there is no reason to retain the notion of category at all, even for the base. We might just as well eliminate the distinction of fea- ture and category, and regard all symbols of the grammar as sets of features" (49). Now, this is exactly what DM does. The central point to exoskeletal grammar is the separation of semantic, syntactic and morphological features from their phonological representations (Halle and Marantz 1993, 1994:275). Consequently, the sound/meaning connection is not established in a pre-syntactic word formation, but rather 'distributed' along the syntactic processes. While" Lexicalism claims that the syntax manipulates internally complex words, not unanalyzable atomic units" (Marantz 1), DM argues for "Syntactic Hierarchical Structure All the Way Down" (Halle and Marantz 276).[8] Only two different types of terminal nodes are necessary in this framework, as presented in the following definition taken from Embick (31):

4.   Terminals

a. *Functional Morphemes*: Terminal nodes consisting of (bundles of) grammatical features, such as [past] and [pl]; these do not have phonological representations.

b. *Roots*: Members of the open-class or "lexical" vo- cabulary: items such as √Cat, *√Ox,*   , and √Kick.

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[8] While DM did lay the ground for this model, the term "exoskeletal" has been popularized by Borer (Borer 2005) and the general ideas adopted by various researches focusing on the syntactic construction of meaning (Ramchand 2008, Lohndal 2014). While they differ in details, the general ideas of roots and categorizing elements remains constant along the different works.

As for the grammatical category, "Roots are assumed to be category neutral. They are catego- rized in syntactic structures by *category-defining* functional heads: *v*, *n*, *a*, and so on, to yield 'verbs' [and] 'nouns' (Embick 31).[9] Without this categorization, Roots cannot be inter- preted. A proposal of the difference between nouns and verbs and the meaning of interpretation is given by Panagiotidis who characterizes categorizers as providing "the interpretive perspec- tive in which concepts can be related with semantically deficient root material" (365). This also exemplifies the semantic deficiency as further elaborated in Harley (225):

5. [R]oots cannot be phonologically identified, since there are suppletive roots, and they cannot be semantically identified, since there are roots with highly variable semantic content, analogous to 'semantic suppletion'. [...] Roots must therefore be individuated purely abstractly, as independent in- dices on the $\sqrt{}$ node in the syntactic computation" (Harley 225).

Following from this, roots lack both specific semantic and phonological con- tent. Panagiotidis argues that "the semantic content of the root is serious- ly underspecified/impoverished" (2011:374) and "associate[s] the root with conceptual content" (2011:376). In the next section, I will remark some basic characteristics of functional heads with special focus to the category- defining morphemes.

4.3. About the representation of features

Functional Morphemes represent the semantic and syntactic features which are subject to syntactic processes such as merger or head-to-head movement. It is especially important to highlight the fact that these movements are "strictly local and respect syntactic hierarchical princi- ples" (Halle and Ma- rantz 277). One kind of these functional heads are category-defining heads, for example *v* or *n*.[10] In DM, a main characteristic of those category-defining heads is to "define cyclic domains" (Embick 44). The 'cyclicity' refers to the

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[9] Another explanation is given by Borer (2014), who argues against a zero-derivation in English and supports a view where syntactic structure alone accounts for categoriza- tion, e.g. KP or TP structures assigning the gram- matical category to their underlying structure. In this case, the separation of features from their phonological representation is crucial, as the phonological vocabulary items can be underspecified, arguably up to a point where they are ø.

[10] Panagiotidis also argues for Categorizers not being functional heads but "the only true lexical heads" (366). However, this distinction is not important for this discussion and thus not elaborated more in detail.

cycles of computation for the Phonological Form and is of crucial relevance for Allomorphy and Root interpretation. For example, "word order, prosody and the expression of information structure are all determined by the phase head" (López, Alexiadou, and Veenstra 3). Evidence for this comes amongst others from Light Verb Constructions. The special relevance for the phase-hood of category-defining heads in language mixing is because of the determination of the phonology of Spell-Out, whereas the root has, as we have seen before, no innate phonological representation. (López, Alexiadou, and Veenstra 3). I will come back to this topic later on.

To account for intransitive/transitive and also telicity alternations, it is assumed that "there exist different types of n, v, and so on, distinguished by virtue of their feature content" (Embick and Marantz 6). This also accounts for the necessity of a specialised [v] feature which receives overt phonological representation, such as causatives or inner aspect affixes. "More often than not, v does not have an exponent. [...] However, v may also have several exponents in the form of derivational morphemes" (López, Alexiadou, and Veenstra 2). The structure following from these definitions would look as in example (6).

(6) Cited from Embick & Marantz
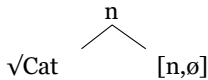
In this case, the phonological realization of the functional head [n] is ø. Some authors argue against categorizing heads (Borer 2005) or for a more fine-grained approach to category, such as complex event structure (Ramchand 2008) instead of abstract categorizers. While this seems indeed more plausible, this discussion is not part of my analysis. In the next section, I will discuss the application of this model to language mixing.

5. Language mixing and Distributed Morphology

The exoskeletal approach has been applied with great success in various recent studies where complex mixing occurs (Åfarli 2015, Alexiadou and Lohndal 2018, Grimstad et al. 2018, Rik- sem et al. 2019). The common conclusion is that while the embedded language provides lexical items, they are void of all syntactic information, this is to say, they are uncategorized roots. Those are inserted in an Syntax which is fully that of the matrix language. For verbs, this incor- poration can be direct, with a verbalizing affix representing the categoriz-

ing head [v] or a Light Verb construction.[11] In the next section, I will show how the verb insertion of Shipibo-Konibo can be explained for by DM.

5.1. Functional extension in morphemes of low productivity

Both proposals presented have to explain how the former-causative morpheme can derive verbal structures that do not comply with the valency-deriving role of the affix. The most plausible hypothesis for that is that it has undergone functional extension. Due to its low productivity in causative environments and its strong contrast with the morpheme /-t/, no conflicting patterns emerge with the inserted roots when verbalizing those.[12] This is not unprecedented at all, but rather common in morphology. Just one example for this is the case of Cypriot-Greek and English. In this case, it is also the affixal strategy used to incorporate the English verbs into Cypriot-Greek.

(7) Examples taken from Alexiadou (175), who cites Gardner-Chloros (50-51)

      a. muv-ar-o
          move-AFF-1SG
          'I am moving.'

      b. kansel-ar-o
          cancel-AFF-1SG
          'I am cancelling.'

The affixal pattern alone of the examples in (7) would not be surprising. However, what is sur- prising is the nature of the affix *-ar*. "Unlike other affixes such as *-iz*, *ev*, *on-*, *-ar-* is used less frequently in Modern Greek and selects a narrow range of native bases, but it is the default affix in the mixing varieties" (Alexiadou 175). Thus, the pattern in this language-mixing variety is exactly the same to the present S-K study: the verbalizing affix in structures of insertion is in both cases an affix of previously low productivity which extends its functionality. Whether this is coincidence or the verbalizing through an affix with low productivity presents a structured pattern across various languages should be matter of future investigations. After all, it seems like the most plausible

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[11] It is important to note that at the moment, no predictions can be made as of which language will apply which of those constructions. A lot of different factors of both typological and sociolinguistic nature play a huge role (Wohlgemuth 2009).

[12] This could be explained by deriving those structures at different points of the syntactic projection. To detail this would break the scope of this article, however.

hypothesis for this structure and is applicable to both syntactic proposals for the insertion process. Then, it is not surprising that it derives non-transitive structures as well as transitive structures: It simply has another, also derivative but non-related function of inserting Spanish roots into S-K syntax. In the next section, I will apply this model to the mixing case of S-K.

5.2 Roots and categories in language mixing

It is possible to distinguish three different strategies for the insertion of verbs in language mixing contexts: a direct insertion via a phonologically ø-vocabulary item, a light verb construction and, as the third option, an affixation pattern. Wohlgemuth (2009) offers an overview of those different verbalization possibilities in borrowing processes. According to this author, important factors in choosing the strategy are bilingualism, basic constituent order and, as shown before, speaker agency (Wohlgemuth 287). As I have shown before, speaker agency is also crucial in this case. Also, I have argued in the anterior section that the morpheme -*n* has extended its function and thus should be treated independently from its transitive structure deriving function when applied to inserted roots. Rather, it represents the verbalizing morpheme bearing the category [V] and thus a case of the affixation pattern for language mixing in verbal phrases. Applied to the cases shown earlier, the Spanish item is treated as root, while the morpheme -*n* represents the overt verbalizing affix as shown in Figure 1.

The argument made by this structure is that the basic unit not only for language mixing, but for language in general, are uncategorized roots (Alexiadou and Lohndal 11). Meanwhile, the proposal of an underlying nominal borrowing for verbal language mixing contexts by Moravcsik (1975) and Valenzuela (2006) lacks one central point: To argue for a nominal borrowing, it has to be shown that the elements also occur in nominal contexts. Otherwise it is just a strong claim without the backing through data. One crucial point of their proposal is maintained, however: the bi-morphemic structure. Both models presented in this article conclude that the inserted
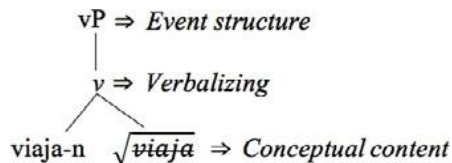

Figure 1: Tree structure of verbalizing

element is verbalized, and that this process might be universal. However, the first proposal claims for a nominal borrowing, while the exoskeletal approaches argue for root insertion.

Applying the criteria of a Null-Theory for language mixing which applies the same mechanisms for all grammars, whether mono or multilingual, it is clearly the exoskeletal approach which accommodates best the presence of such verbalizing elements. The strength of the exoskeletal model is clearly that it satisfies the criteria of a null-theory: Both mono and multilingual data are handled by the same syntactic processes. The basic building blocks are roots, and functional morphemes. While the lexical items can stem from both the embedded and the matrix language, the inflectional morphology usually complies to the syntax of the matrix language.[13] In this case, the verbalizing morpheme has undergone a functional extension and fulfills two separated roles, which is possible due to its relatively low productivity in its original causative function. The fact that only Spanish roots are selected, however, raises the question about selectional features. It has been argued by some exoskeletal grammarians that roots are devoid of language specific information (Riksem et al. 196). However, the fact that only Spanish roots are selected by the morpheme in this functional role seems to indicate that at least some information about selection is present on the root, as argued independently for monolingual data (Ramchand 3). The presence of such selectional features is still discussed intensively by different authors (see discussion in Lohndal (2014)), but the present case seems to strengthen the position that roots cannot be devoid of any information of language specificity.

6. Conclusions

A theory of grammar should be able to account for language-mixing phenomena just as well as for monolingual grammar. From this perspective, language boundaries are crossed and the only distinction is between Roots and Functional Morphemes. In this article, I have shown that DM can contribute exactly that: It explains verb insertion in language mixing by the same tools as monolingual data and does not rely on extra rules to do so. The proposal of nominal borrowings for verbs has the crucial weak point that it has not been shown that those items can indeed occur in nominal contexts. Thus, it is a very strong claim which is based on the bi-morphemic structure of insertions. However, this structure can be explained equally well by exoskeletal models, who in re-

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[13] However, smaller phrases can be inserted in the syntax of the embedded language. What is predicted to not occur, however, is the mixing of inflectional morphology of the two languages within a word.

turn do not have to propose the strong claim of nominal borrowings for verbs. However, the strong claim of this model that roots are devoid of any syntactic information cannot explain why only some are selected by this affix and others are not. This indicates that at least some language-specific information on the roots is maintained.

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