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## **Copying form without content: Relexification in ordinary contact-induced change**

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### **Abstract**

Two major types of change are generally distinguished in language contact studies: the transfer of linguistic form (frequently taken to include transfer of concomitant meaning or function) and the transfer of structural and semantic patterns by themselves, without attendant form. A type of change that is less frequently discussed is so-called relexification. This involves the transfer of form without model-language semantic or syntactic specifications that is grafted onto an equivalent recipient-language lemma. Relexification has been suggested to play a role in the development of mixed languages or creoles, but as is shown here, it can also be identified in several ordinary situations of language contact from around the world. This type of change represents a mirror image of the transfer of patterns without lexical material and supports recent models of language selection in bilinguals.

### **Keywords**

borrowing; loanwords; adposition; conjunction; derivational suffix; extension by analogy; MAT; PAT

## 1. Introduction

Scholars investigating language contact generally distinguish between two major types of contact-induced change (cf. Matras 2009a: 236, Winford 2013: 43-44, Gardani 2020: 263): the transfer of linguistic form and the transfer of structural and semantic patterns. These two types are variously labelled ‘direct diffusion’ vs. ‘indirect diffusion’ (Heath 1978: 119), ‘global copying’ vs. ‘selective copying’ (Johanson 1999, 2002), or ‘MAT[ter borrowing]’ vs. ‘PAT[tern borrowing]’ (Matras & Sakel 2007a). The MAT vs. PAT terminology is particularly popular due to its conciseness and iconicity and has been adopted by a growing number of authors (e.g. Wiemer & Wälchli 2012, Gardani et al. 2015, Grossman & Polis 2017, Arkadiev 2018). These terms have been defined by Sakel as follows:

We speak of MAT-borrowing when morphological material and its phonological shape from one language is replicated in another language. PAT describes the case where only the patterns of the other language are replicated, [...] while the form itself is not borrowed. In many cases of MAT-borrowing, also the function of the borrowed element is taken over, that is MAT and PAT are combined. (Sakel 2007a: 15)

As shown by this definition, the copying of a model-language form is often viewed as being accompanied by model-language meaning or function (see, for example, Haspelmath 2009: 38, Matras 2009b: 19-20, Wiemer & Wälchli 2012: 45, Karatsareas 2016: 50). Yet it is not necessarily the entire range of the model-language semantics or functions that gets copied together with a form, but merely a subset of these, as has been pointed out by various researchers (Johanson 1999: 43-44, Sakel 2007a: 17, Gardani et al. 2015: 6, Grossman & Polis 2017: 336). Furthermore, form can also be copied without concomitant ‘contents’. For example, in Johanson’s code-copying framework ‘selective copying’ can involve material on its own (1999: 44, 2002: 292). It should be noted, however, that in this approach material refers only to the “phonic properties” of model-language items, such as “sound features, phonotactic patterns, accent patterns, etc” (Johanson 2002: 292), not to lexical forms (at least, not explicitly), and that such selective copying of material “produces ‘loan phonology’” (Johanson 1999: 44). In a recent paper, Gardani (2020) proposes to clearly distinguish MAT copying not only from PAT copying, as is generally done, but also from MAT&PAT copying. He thus introduces a third type of change in order to differentiate cases where form is copied together with some meaning or function (MAT&PAT) from those where form is copied by itself (MAT).

Transfer of form without attendant semantic and functional structure was also described in detail by Muysken (1981) for *Media Lengua*, a mixed language in which 90% of the lexicon are of Spanish origins, while the grammar is of Quechua origins. To account for this split, Muysken used the term ‘relexification’, which he defined as “...the process of vocabulary substitution in which the only information adopted from the target language in the lexical entry is the phonological

representation” (Muysken 1981: 61). The concept of relexification was later applied to Haitian Creole and other creoles (Lefebvre 1998, 2008) as well as to Modern Hebrew (Horvath & Wexler 1997)—like *Media Lengua*, relatively young languages that arose under unusual circumstances. This implies “that the process of relexification may be qualitatively distinct from other, ‘normal’, instances of contact-induced language change” (Dikker 2008: 123), whence it follows that such an exceptional process need not be taken into account in situations of ‘ordinary’ language contact. It is the aim of this paper to demonstrate that relexification constitutes a separate type of contact-induced change in situations of ‘ordinary’ language contact, i.e. situations of relatively stable bi- or multilingualism that do not lead to the emergence of new languages. Relexification as discussed in this paper runs counter to Law’s (2020: 368) proposal that “MAT borrowing always entails borrowed patterns .... This suggests that we conceptualize MAT borrowing as a subtype of PAT borrowing, rather than an alternative to it”. The argument is based on a detailed analysis of three postpositions copied from the Turkic language Sakha (Yakut) into Lamunxhin Even, a Northern Tungusic lect spoken in central Yakutia, and is further substantiated with examples taken from a cross-linguistic survey of copied forms. As will be seen, cases of relexification at first glance might look like simple lexical copying, but closer inspection shows a mismatch in either the semantics or the syntactic specifications, or even both, between the model-language item and the copy. As I argue, this mismatch does not come about through semantic or functional changes of the copy in the recipient language; rather, they are the result of the relexification process, when a model-language form is grafted onto a recipient-language lemma with slightly different semantic and/or syntactic specifications. It is these mismatches that let us diagnose that relexification has taken place.

The article is structured as follows: to begin with, the contact situation involving Lamunxhin Even and its Turkic neighbour Sakha (Yakut) as well as the data used for the study are outlined (Section 2). Next, the postpositions of Sakha origin found in Lamunxhin Even, which triggered this study and on which much of the argument is based, are presented in some detail (Section 3). In Section 4, five more clear and three potential cases of relexification garnered from the literature are presented; these cover several languages of western Eurasia, various Latin American languages in contact with Spanish, and a Bantu language in contact with Swahili. The question whether the examples presented in Sections 3 and 4 indeed provide evidence for relexification, rather than for extension by analogy, is approached in Section 5; an analysis as relexification is argued for particularly on the basis of the Lamunxhin Even data. In Section 6, relexification is compared to other types of contact-induced change, and the role of pivot-matching is discussed. The paper ends with a brief conclusion about the relevance of this type of contact-induced change for historical linguistics (Section 7).

## 2. Lamunxhin Even, its contact situation, and the data used in this study

Even is a Northern Tungusic language spoken by small and isolated communities of former hunter-gatherers and reindeer herders dispersed over a vast region of northeastern Siberia, from the Lena-Yana watershed in the west to the Sea of Okhotsk and Kamchatka in the east. This spread over thousands of kilometers has led to noticeable dialectal fragmentation of the language, with 13 recognized dialects and up to 24 subdialects (called *govory* in Russian; Burykin 2004: 85); mutual intelligibility between peripheral dialects is decidedly impaired.

The focus of this paper is on one of the westernmost dialects, Lamunxhin Even, which is spoken in the village of Sebjan-Küöl in central Yakutia. Like all minority languages of the Russian Federation, the Lamunxhin dialect is in contact with Russian: the mass media (especially television) are in Russian and so is schooling. However, the primary contact language of this dialect is the Turkic language Sakha (Yakut), which is the dominant indigenous language of Yakutia. A survey of household registers in 2009 showed that 731 of the 863 inhabitants of the village (i.e. nearly 85%) registered as Evens, with only 64 (7.4%) being registered as Sakha. However, these data do not accurately reflect the number of Even speakers, since children of mixed Even-Sakha marriages are generally registered as Evens. Judging from personal observations during four trips to Sebjan-Küöl totalling over 20 weeks in the village, Sakha is the language commonly used in the everyday life of this settlement, e.g. in the village administration, the reindeer herding cooperative, or the teachers' room at school. Furthermore, as soon as there is one indigenous interlocutor who does not understand Even, conversation is conducted in Sakha. This intense contact situation has led to substantial changes in Lamunxhin Even, the most noticeable of which are the large number of lexical and even morphological copies from Sakha; strikingly, entire paradigms of verbal mood plus subject agreement markers have been copied (Pakendorf 2009, 2015, 2019). Among the lexemes of Sakha origin found in Lamunxhin Even there are several postpositions; however, as will be discussed here, three of these postpositions show evidence of representing merely the Sakha FORM, with the semantic and syntactic specifications being those of the original Even item.

The in-depth study of Sakha postpositions in Lamunxhin Even (Section 3) is based on two corpora of transcribed, translated, and glossed recordings of oral speech: one of Sakha and the other of Lamunxhin Even. The Sakha corpus is based on over six hours of recordings (covering mainly autobiographical narratives) and numbers approximately 30,600 words. Sixteen different speakers, nine women and seven men, are included. They were recorded in 2002 and 2003 in four different districts of Yakutia in order to cover the dialectal diversification of the language. All of the speakers were elderly, with their ages ranging from 63-95 years (see Pakendorf 2007: 62-64 for details on the corpus; one recording not included in that description was added at a later point). The Lamunxhin Even corpus is based on over 11 hours of recordings undertaken during four

fieldtrips to Sebjan-Küöl between 2008 and 2012<sup>1</sup>. It numbers approximately 52,000 words and comprises 36 different speakers, 24 women and 12 men aged 11-78 years at the time of recording. This covers a range of genres, including an hour-long conversation over tea between four women, several autobiographical narratives, discussions of taboos and traditions, fairy tales, and narratives elicited with the ‘pear story’ film (Chafe 1980).

In the current study, it is very difficult to distinguish between established copies and nonce copies or code-switches. A common criterion to identify established copies is when foreign items are used by monolingual speakers of the recipient language (cf. Haspelmath 2009: 40); however, there are no monolingual speakers of Lamunkhin Even who could serve this purpose, since everyone who speaks this lect is fluent in Sakha. The only criterion to distinguish more or less established copies from single insertions is therefore frequency of use and context. As will be seen below (Table 1), the postpositions of Sakha origin that are of interest in this paper are probably not yet fully established. However, I hold that established copies and code-switches represent a continuum and that all established copies start life as nonce copies/code-switches; hence, even copies that are not yet fully established can shed light on copying processes (cf. Winford 2005: 379, Haspelmath 2009: 41, and Backus & Verschik 2012: 131 for similar views, and Poplack & Dion (2012) for an opposing perspective). Indeed, the non-established nature of these copies can even be considered an advantage in the current study, since the semantic and syntactic contents of the Sakha forms can easily be compared to that of inherited Even forms that are still in use (Section 3). In addition, the fact that these copies must perforce be of very recent origin in Lamunkhin can aid in establishing whether we truly are dealing with relexification rather than extension by analogy (Section 5).

### 3. Sakha postpositions in Lamunkhin Even

Sakha and Lamunkhin Even are structurally very similar languages. Both are reasonably agglutinative and practically exclusively suffixing<sup>2</sup>, with nominative-accusative alignment, verb-final word order, large-scale use of non-finite verbs as predicates of subordinate clauses, and fairly large case complements. However, there is a notable difference in the size of the case complements: Lamunkhin Even has 12 cases, but only eight are found in Sakha (including the unmarked nominative in both languages). This results in syncretism of some case functions in Sakha that are expressed by separate suffixes in Lamunkhin Even, a point that is important with respect to the topic of this paper, namely the grafting of Sakha postpositional forms onto Even syntactic specifications. Thus, in Sakha the case suffix that is commonly called the dative marks recipients, static location as well as the goal of motion, whereas in Lamunkhin Even these

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<sup>1</sup> Part of the Lamunkhin Even collection is available at: <https://hdl.handle.net/1839/00-0000-0000-000F-2E32-5>.

<sup>2</sup> Sakha has a few emphatic elements that are preposed, such as the partial reduplication also found in other Turkic languages or an emphatic prefix added to demonstrative pronouns (Pakendorf & Stapert 2020: 435), but Lamunkhin Even is exclusively suffixing.

different functions are expressed by separate case markers—generally called dative, locative, and allative, respectively—albeit with some overlap in use between the individual cases. Similarly, while Lamunkhin Even has a dedicated prolicative case marker to express movement along or through, which differs in form from the instrumental case suffix, in Sakha both movement along or through as well as instruments are marked with the same suffix.

Three different types of postpositions can be distinguished in both Sakha and Lamunkhin Even: primary postpositions with opaque etymology (what Hagège [2010: 128] calls ‘simple adpositions’), postpositions that are more or less transparently derived from verbs, and relational nouns (comparable to what Hagège [2010: 38] calls ‘complex adpositions’). These last obligatorily agree with the dependent noun in person and number via possessive suffixes and take case-marking depending on their syntactic function (1a, b). For example, in (1a) the Even relational noun *ǰulde-* ‘front part’ (consisting of *ǰul* ‘front’ and a derivational suffix *-(gi)dE* ‘part, side’) takes dative or locative case marking when it refers to a static location in time or space and prolicative case marking when it refers to a movement in front of some entity. Note that in Sakha (1b), possessive-marked case suffixes are portmanteau morphemes that jointly express the number and person of the possessor as well as the case (cf. Pakendorf & Stapert 2020: 434), e.g. dative 1SG *-BAR*, dative 2SG *-GAR*. Furthermore, in declension many Sakha relational nouns, such as *ilin-* illustrated in the example, drop their second vowel. This leads to assimilation of the consonants, resulting in the stem form *inn-* seen in (1b), with secondary insertion of an epenthetic vowel in most person-number forms, including 1SG.

(1a) Lamunkhin Even, relational noun *ǰulde-* ‘front part’ (examples found in narratives)

DAT-3SG	<i>sljot ǰulde-du-n</i>	“ <b>before</b> the day of the reindeer herders” (called <i>sljot</i> )
LOC-1PL	<i>(mut) ǰulde-le-t</i>	“ <b>in front of</b> us”
PROL-2SG	<i>(hi:) ǰulde-li-s</i>	“[passed] <b>in front of</b> you[SG]”

(1b) Sakha, relational noun *ilin-* ‘front part’ (examples found in narratives)

ABL.3SG	<i>χolkuos terillien inn-itten</i>	“ <b>before</b> the organization of collective farms”
DAT.1SG	<i>min inn-i-ber</i>	“ <b>ahead</b> of me”
DAT.3SG	<i>min törüöm inn-iger</i>	“ <b>before</b> my birth”

In the Lamunkhin corpus, a total of 40 postpositions of Sakha origin belonging to 10 different types<sup>3</sup> are found (Table 1); this contrasts with several dozen types of postpositions mentioned in a Sakha grammar (Korkina et al. 1982: 416-418) and 26 different types found in the corpus of Sakha oral narratives. Of these Sakha postpositions, 38 are found with Even NPs, one (*bīs-*) occurs in a phrase with ellipted dependent noun, and one (*öttüiten*) occurs with a noun of Russian

<sup>3</sup> Note that in the table the relational noun *tus-* ‘about’ appears twice, once in its root form and once in the Sakha instrumental case-marked form *tuhunan*, leading to the appearance of there being 11 different postpositions.

origins in what is arguably a code-switched phrase. Five of these Sakha postpositions occur only once in the Lamunxhin corpus and might constitute instances of nonce copying, while one primary postposition, two secondary postpositions derived from verbs and two relational nouns occur between two and 14 times each and are used by two to five different speakers. Yet the Even counterparts, where they exist<sup>4</sup>, occur (far) more frequently in the Lamunxhin Even corpus, as far as can be assessed from relatively superficial concordance searches (cf. Table 1).

**Table 1.** Sakha postpositions found in the Lamunxhin Even oral corpus ordered by frequency of occurrence.

Postposition	Meaning in Sakha	Sakha copy		Even counterpart	Even counterpart	
		N tokens	N speakers		N tokens	N speakers
<i>dili</i>	until	14	5	<i>istala</i>	37	16
<i>ila</i>	from, since	8	4	Ablative	hundreds*	37
<i>tus-</i>	about	7	2	<i>ǰugu-</i>	51	20
<i>biha</i>	throughout	3	3	<i>kõndas</i>	18	6
<i>onnu-</i>	instead	2	2	----	----	----
<i>tuhunan</i> **	about	1	1	<i>ǰugulin</i>	51	20
<i>usta-</i>	during, while	1	1	----	----	----
<i>keriete</i>	as if	1	1	<i>-mdAs</i> / <i>-G(A)čIn</i>	15***	6
<i>suptu</i>	during	1	1	<i>kõndas</i>	18	6
<i>bis-</i>	between, through	1	1	<i>elge-</i>	1	1
<i>öttüten</i> **	from the side	1	1	----	----	----

\*In total, 618 tokens of the ablative case occur in the oral corpus, but not all express a meaning of ‘from, since’.

\*\**tuhunan* and *öttüten* are the Sakha case-marked forms of the relational nouns *tus-* and *örüt-*

\*\*\*Overall in the corpus there are 74 tokens of *-mdAs* and 36 tokens of *-G(A)čIn*; here, only those translated by (*kak budto* ‘as if’) were counted.

Interestingly, as a rule the copied Sakha relational nouns take Even instead of Sakha case and person marking, surfacing as *onnu-du-n* (instead of *onn-ugar*), *usta-du-n* (instead of *usta-tigar*), *tus-li-n/tuh-li-n* (instead of Sakha *tuh-unan*), and *bi:h-li-n* (instead of *bi:h-inan*)—there are 11

<sup>4</sup> No Even equivalent appears to exist for the relational noun *onnu-*: no comparable item is found in the Lamunxhin corpus, and *onnu-* is listed as a dialectal variant for western Even dialects in a substantial Russian-Even dictionary (Cincius & Rišes 1952: 65). Thus, this would appear to be a truly established copy. As for the relational noun *usta-* ‘during, while’, in Even this meaning is mostly expressed with simultaneous converb-marking on the predicate, so that this, too, can be said to lack an Even postpositional counterpart. Similarly, in Even the suffix *-(gi)dE* expresses ‘part, side’ and thus covers the functions of the Sakha relational noun *örüt-*, which is at the base of the form *öttüten*.



forms with Even suffixes as opposed to only two complete Sakha forms (Table 1). This indicates that speakers of Lamunxhin Even segment the Sakha relational nouns into roots and suffixes and transfer only the root rather than transferring the complete form, in accordance with the assumption that all speakers of Lamunxhin Even are fully bilingual in Sakha and have the necessary knowledge of the model language to perform such segmentation (cf. Pakendorf 2019: e377). However, it is notable that in the case of *onnu-* they transferred not the underlying root form *orun-*, but the stem form that occurs with possessive-marked case forms. This is similar to what Stapert (2013: 176-188) describes for relational nouns in the Turkic language Dolgan (linguistically a dialect of Sakha), which emerged through contact between Sakha speakers and Evenks.

Most of the copied postpositions do not differ from their Sakha model in terms of syntactic behaviour. These include those where Lamunxhin Even lacks a postpositional equivalent to the Sakha model (*ila*, *onnu-*, *usta-*, *keriete*) and those where the Even equivalent behaves syntactically in the same way as the Sakha postposition, governing accusative case (*biha*, *suptu*)<sup>5</sup>. Three of the copied postpositions, however, differ functionally from the Sakha model: these are the primary postposition *dili* “until” and the relational nouns *tus-* “about” and *bi:s-* “between, through”. As will be shown in the following, these clearly represent Sakha FORMS, but their semantic and syntactic CONTENTS are Even.

### 3.1 The primary postposition *dili* “until”

In Sakha, the primary postposition *dili* “until” governs the dative case and expresses both temporal and spatial extension up to a point (2a, b).

(2a) Sakha *dili*; temporal extension

*kiehe alta-ya dili olor-uox-χa höp*  
 evening six-DAT until sit-FUT.PTCP-DAT PTL  
 “Until six in the evening we can sit (like this).” (Efmy\_555)

(2b) Sakha *dili*; spatial extension

*min össö biligin Kitaj-ga dili bar-bit kihi dien olor-obun*  
 1SG still.R now China.R-DAT until go-PST.PTCP person say.PFV.CVB sit-PRS.1SG  
 “I still wish that I could go to China.” (LukP\_117)

In Even there is a postposition of probable verbal origin with a partly equivalent meaning: this is *istala*, which arguably contains the verbal root *is-* “reach”. This governs two different case forms resulting in two different meanings: with a complement in the locative case *istala* expresses both a

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<sup>5</sup> I am here not counting *öttüten*, which occurred in a code-switched phrase, so that nothing can be said about its functional specifications in Lamunxhin Even.

temporal and a spatial extension up to a point (3a, b), comparable to the meaning of Sakha *dili*. However, *istala* can also take a complement in the ablative case, and then it expresses a temporal extension from a point (3c). In the Lamunkhin Even examples, items of Sakha origin are in plain font and additionally marked by .Y in the glosses (while items of Russian origin in both the Sakha and Lamunkhin Even examples are indicated by .R in the glosses).

(3a) Lamunkhin Even, *istala*, temporal extension “until”

otton *digen-duk* *nunen-dule* *istala* *uroki* *ot-wra-nni*  
 DP.Y four-ABL six-LOC **until** homework.R make-HAB-2SG

“...from four to six you do your homework.” (AVZ\_indjuk\_internat\_053a)

(3b) Lamunkhin Even, *istala*, spatial extension “until”

*tarakam* *tor-ri* *oron-ot* *em-gere-če-l* *Siegen-dule* *istala*  
 then earth-PROL reindeer-INS come-HAB-PF.PTCP-PL Segen.Kuel-LOC **until**

*muran-at* *tarit* *er-tiki* *oron-ot*  
 horse-INS then PROX-ALL reindeer-INS

“In those days they came overland by reindeer, until Segen by horse, then here by reindeer.” (KKK\_history\_031)

(3c) Lamunkhin Even, *istala*, temporal extension “from, since”

če *tarit* *ta-duk* *istala* *e-du* *ču:l-bu* *ot-ča-l*  
 PTL.Y then DIST-ABL **until** PROX-DAT house-PL-ACC make-PF.PTCP-PL

“Well and from then on they built houses here.” (KKK\_history\_020)

In the Lamunkhin corpus *dili* occurs 13 times with locative-marked complements in its meaning of ‘until’ (4a, b) and once with an ablative-marked complement in a meaning of ‘since’ (4c).

(4a) Lamunkhin Even, *dili*, temporal extension “until”

*kučuken* *bi-hiji-j* *bi:* *mian* *tunḡan* *anḡani-la-j* *dili* *enin-čel*  
 small be-IPF.CVB-PRFL.SG 1SG ten five year-LOC-PRFL.SG **until.Y** mother-COM  
*aman-čal* [...] *domḡe-le* *her-gere-ri-w*  
 father-COM [...] taiga-LOC go-HAB-PST-POSS.1SG

“When I was small, until I turned 15, I used to go to the taiga with my mother, my father...” (AAS\_his\_life\_01)

(4b) Lamunkhin Even, *dili*, spatial extension “until”

*Beljanka* *gerbe* *okāt-la* *dili* *ih-ri* *bi-hi-n*  
 Beljanka name river-LOC **until.Y** reach-IPF.PTCP be-PST-POSS.3SG

“He used to get up to the river Beljanka.” (SPK\_oxota\_100)

(4c) Lamunkhin Even, *dili*, temporal extension “from”

*ta-duk dili noŋan balda-daŋ-an ineŋi-du-n*  
 DIST-ABL until.Y 3SG be.born-PST.PTCP-POSS.3SG day-DAT-POSS.3SG  
*ebezet ujamkam to:ki-w ma:-wra-ri-tna*  
 without.fail.Y mountain.sheep.ACC elk-ACC kill-HAB-PST-3PL

“Since that time, on his birthday they used to kill a mountain sheep or an elk.”

(RDA\_chuchuna\_family\_078)

There are thus two differences between *dili* in Lamunkhin Even and its Sakha model that reflect the semantic and combinatorial specifications of the Even counterpart: 1) both ‘until’ and ‘since’ are expressed and 2) instead of the dative case to express ‘until’ the postposition governs the locative, as specified by the syntactic features of the Even equivalent postposition *istala*. The identification of the Sakha dative and the Even locative case forms (called ‘pivot matching’ by Matras & Sakel 2007a) is facilitated by the fact that the Sakha dative case is polyfunctional and occurs in contexts in which the Even locative case is used.

### 3.2 The relational nouns *bï:s-* “between” and *tus-* “about”

As to the relational nouns *bï:s-* and *tus-*, a first difference from the Sakha model is that they are integrated into the Even morphosyntactic frame by taking Even case and person suffixes, as mentioned above. Furthermore, the copied relational nouns differ in their case-marking from the Sakha model: although in Sakha *bï:s-* takes the instrumental case when the postposition expresses a movement in between or through an entity (5a), the single example of *bï:s-* found in the Lamunkhin Even corpus takes prolativ case marking (5c). In this it behaves like the Even relational noun *elge-*, which also takes prolativ case marking to express a meaning of ‘between’ (5b).

(5a) Sakha *bï:s-* “crack” → “between, through”

*oju:r bï:h-inan a:ji aya us-tar köh-ö hiččji-bip-pit*  
 forest crack-INS.3SG every father clan-PL migrate-IPF.CVB IPFV-PST.PTCP-1PL  
 “We migrated in paternal clans through the woods.” (LukP\_022)

(5b) Lamunkhin Even, *elge-* “interval” → “between”

*čžo:r hiakita-w, hiakita elge-li-n, hiakita ačča bi-hek-en,*  
 two tree-ACC tree interval-PROL-POSS.3SG tree NEG be-COND.CVB-POSS.3SG  
*iŋa-li o:ŋe-čži-nni*  
 stone-PROL tie.up-FUT-2SG

“Between two trees, if there are no trees, you tie it to a stone.” (RDA\_TPK\_delburge\_046)

(5c) Lamunkhin Even, *bi:s-* “between”

*ma:-ča*     *bi-mče*,     *kata*     *o:n = gol*     *ia-li-n*     ***bi:h-li-n***  
 kill-PF.PTCP   be-SBJV   PTL.Y   how = INDF   HESIT-PROL-POSS.3SG   **crack.Y-PROL-POSS.3SG**  
*o:n = gol*     *ia-ča*  
 how = INDF     HESIT-PF.PTCP

“[The elk] would have killed her, but luckily she fell in between (the legs).”

(IVK\_memories\_240)

As to *tus-*, this is derived from the relational noun ‘side’ in Sakha, where it takes either dative or instrumental case marking depending on its meaning. With dative case marking (*tuhugar*) this item expresses ‘for the benefit of’ (6a), while with instrumental case marking (*tuhunan*) it expresses ‘about’ (6b). In Lamunkhin Even this latter meaning is also expressed by a relational noun, *ɕugur-*, which takes prolative case marking (6c). In contrast to Sakha, the relational noun *ɕugur-* does not appear to occur with a beneficiary meaning, which in Even is expressed with the specialized destinative case—used rather infrequently in Lamunkhin Even—or with the dative or locative case.

(6a) Sakha *tuhugar* “for the benefit of”

*onon*   *če*   *biligin*   *ol*   *oyo-lor-but*   ***tuh-ugar***,     *hien-ner-bit*     ***tuh-ugar***  
 DP     PTL   now     that   child-PL-1PL   **side-DAT.3SG**   grandchild-PL-1PL   **side-DAT.3SG**  
*dien*     *bar-an*     *hill-abit*  
 say.PFV.CVB   go-PFV.CVB   IPFV-PRS.1PL

“So now we live for the benefit of our children, for the benefit of our grandchildren.”

(Efmy\_520)

(6b) Sakha *tuhunan* “about”

*sibe:s*     ***tuh-unan***     *kepse:*  
 connection.R   **side-INS.3SG**   tell[IMP.2SG]

“Tell about the (phone) connection.” (LukP\_189)

(6c) Lamunkhin Even, *ɕugur-* “about”

*nonan*   *Omčeni*   ***ɕugur-li-n***     *ukčen-ɕi-m*  
 at.first   Omcheni   about-PROL-POSS.3SG   tell-FUT-1SG

“First I’ll tell (you) about Emcheni.” (KKK\_Omcheni\_009)

In the Lamunkhin corpus, the Sakha-derived form *tus-* occurs seven times, uttered by two speakers (e.g. [7]). It differs from the Sakha model in three ways: first of all, it occurs only with the meaning of ‘about’ and not with the beneficiary meaning; furthermore, in this function it takes

prolative instead of instrumental case marking, and for this it uses Even, and not Sakha, case and possessive suffixes:

(7) Lamunxhin Even, *tus-* “about”

*tara tač'in go:-mi tar omen ak-mu tus-li-n*  
 DIST DIST.QUAL say-COND.CVB DIST one brother-POSS.1SG side.Y-PROL-POSS.3SG  
 "Berne" *gerbe džo:ntur-u taŋ-đi-m*  
 lost.reindeer name poem-ACC read-FUT-1SG  
 “Saying that I will now recite a poem called “Berne” (the lost reindeer) about my older brother.” (stado#10\_SEN\_poems\_028)

Both *bis-* and *tus-* thus differ from the Sakha model in that they take prolative instead of the expected instrumental marking. This can again be explained by the fact that the Even counterparts *elge-* and *đugu-* take prolative case marking, and the Sakha form is grafted onto this syntactic specification of the Even item. Since the Sakha instrumental case is used to express a meaning of movement along or through as does the Even prolative case, there are sufficient grounds for bilingual speakers to identify the Sakha instrumental case form with the Even prolative. In addition, *tus-* in Lamunxhin Even differs from the Sakha model in that it does not occur with dative case marking and a beneficiary meaning.

### 3.3 Different types of Sakha-derived postpositions in Lamunxhin Even

To summarize, several postpositions of Sakha origin occur in Lamunxhin Even. While most of these do not differ semantically and syntactically from their model, three show striking discrepancies in their structure from that exhibited by the Sakha items. Notably, the semantic and syntactic structure of these items corresponds to that of Even translational equivalents, while the phonological form is indisputably of Sakha origin. It thus seems as if ONLY THE FORM, WITHOUT SEMANTIC OR SYNTACTIC CONTENTS, HAS BEEN TRANSFERRED, in line with Muysken’s (1981) definition of relexification.

However, close inspection reveals that the Sakha-derived postpositions in Lamunxhin Even are actually of three different types (see Table 1): 1) postpositions that have no Even postpositional equivalent (*ila*, *onnu-*, *usta-*, *keriete*); 2) postpositions where the Sakha model and the Even equivalent show subtle structural distinctions (*dili*, *tus-*, and *bis-*), and 3) postpositions where the Even translational equivalents do not differ structurally from the Sakha model (*biha* and *suptu*). Postpositions of type 1 can straightforwardly be assumed to represent copies of both form and concomitant meaning and function and belong to the category of items that are most commonly discussed in the literature on lexical copying. As to the postpositions of type 2, the differences between the model item and the recipient-language translational equivalent are crucial in identifying that relexification has taken place. Nevertheless, the syntactic differences exhibited by

these postpositions (i.e. the difference in case governed by *dili*, and the difference in case-marking of the relational nouns) were shown to be not random; rather, they can be traced to the functional overlap between the Sakha and the Lamunkhin Even cases: dative and locative on the one hand and instrumental and prolocative on the other. This overlap functions as a pivot in the sense of Matras & Sakel (2007a). In addition, some semantic overlap between the Sakha item and the Lamunkhin Even item is necessary to allow speakers to identify the two (cf. Muysken 1981: 62): the meaning of ‘until’ is shared by *dili* and *istala*, the meaning of ‘between’ is shared by *bis-* and *elge-*, and the meaning of ‘about’ is shared by *tus-* and *çugu-*. One might thus consider this overlapping meaning to have been copied from Sakha together with the form. However, since the Even item matches the Sakha item in this particular semantic aspect, it is a moot point whether this part of the semantic specification gets copied together with the Sakha form or is rather provided by the Even lemma. For simplicity’s sake I view the process as one where the semantics in their entirety are provided by the recipient-language lemma rather than being copied with the model-language form. This of course suggests that items of type 3, where the model and recipient-language items do not differ in their semantic and syntactic specifications, could also be analysed as representing copies of form alone (cf. Gardani 2020: 266), i.e. as more instances of relexification. However, since this cannot be conclusively demonstrated, I prefer to exclude such cases from my discussion of relexification as a type of contact-induced change.

I thus conclude that I have evidence for three relexified postpositions in Lamunkhin Even. However, although these data are intriguing, they concern only three lexemes in one particular situation of language contact, and as such might not be of further relevance for historical linguistics. I therefore present further examples of relexification in the following section to demonstrate that Lamunkhin Even is not an isolated case.

#### **4. Relexification in ordinary language contact**

In order to assess whether the finding of three relexified items in a single contact situation in North Asia has more than anecdotal value, I conducted a small cross-linguistic survey. For this, I searched for mention of items where the semantic or syntactic specification of the copied form corresponds to that of the erstwhile recipient-language element rather than the model, scanning works that deal specifically with lexical and grammatical copying. These included the contributions to Aikhenvald & Dixon (2006), Matras & Sakel (2007b), Siemund & Kintana (2008), Haspelmath & Tadmor (2009), Chamoreau & Léglise (2012), Vanhove et al. (2012), Wiemer et al. (2012), and Gardani et al. (2015), as well as the article by Stolz & Stolz (1996). This survey is unfortunately slightly areally biased, since case studies from Latin America are found in nearly all of the edited volumes, and Stolz & Stolz (1996) discuss copied function words specifically in Mesoamerica. It is thus perhaps no surprise that some of the clearest cases of

relexification in ordinary language contact, i.e. situations of contact that do not lead to the emergence of new languages, come from Latin American languages in contact with Spanish: Imbabura Quechua spoken in Ecuador and the related Inga spoken in Colombia (4.1), Zoque spoken in Mexico (4.2), Mosetén spoken in Bolivia (4.3), and Totonac, like Zoque a language of Mexico (4.4). In addition, a clear case of relexification is attested in Domari, an Indo-Aryan language in contact with Arabic (4.5), and potential candidates for this process were identified in Molise Slavic spoken in Italy, in Romanian in contact with Greek, and in Koti, a Bantu language of Mozambique (all three touched upon briefly at the end of Section 4.5). The targets of relexification have been a derivational suffix (4.1), conjunctions (4.2, 4.3), and prepositions (4.4, 4.5). The following survey is necessarily somewhat sketchier than the Even case study, since I had to make do with the descriptions found in the secondary literature as well as, where possible, in reference grammars of the relevant languages. I nevertheless feel that it is important to demonstrate that relexification is a cross-linguistically relevant phenomenon and not simply a ‘quirk’ of Lamunkhin Even.

#### 4.1 Quechua in contact with Spanish: the agent nominalizer *-dor*

Some Quechuan varieties have relexified their agent nominalizer, grafting the form of the Spanish suffix *-dor* onto the functions of the Quechuan agentive suffix *-j* (Muysken 2012: 488-489).<sup>6</sup> The Quechuan agentive nominalizer derives agent nouns from verbs (8a); together with the auxiliary *ka-* “to be” it expresses habitual aspect (8b).

(8a) Imbabura Quechua (Quechuan, Ecuador)<sup>7</sup>

<i>michi-j</i>	<i>yacha-chi-j</i>	
herd-AGNR	know-CAUS-AGNR	
“herder, one who herds”	“teacher”	(Cole 1982: 175)

(8b) Imbabura Quechua (Quechuan, Ecuador)

<i>Utavalu-pi</i>	<i>trabaja-j</i>	<i>ka-rka-ni</i>
Otavallo-LOC	work.Sp-AGNR	be-PST-1SG

<sup>6</sup> Note that in his article Muysken discusses the replacement of the Quechuan agentive suffix *-k*, whereas in the descriptions of Imbabura Quechua and Inga consulted here (Cole 1982, Levinsohn 1974), the suffix is spelled *-j*; this represents the velar fricative /x/. As explained by Muysken in personal communication (31.03.2020), *-k* is an abstract representation of the suffix.

<sup>7</sup> Glosses of published examples were adapted to the conventions used here and translated into English, where necessary, as were the free translations; unglossed examples were glossed or provided with a word-by-word translation to the best of my abilities. In addition, the orthography of the Inga examples was adapted to that found in Jansasoy et al. (1997). Affiliation is based on glottolog.org (Hammarström et al. 2019, accessed on 15.04.2020).

“I used to work in Otavalo.” (Cole 1982: 149)

In Imbabura Quechua, the Spanish-derived suffix *-dor* also derives nouns from verbs, particularly “when the action is characteristic or typical of the individual” (Cole 1982: 176; 9a). It has furthermore taken over the expression of habitual aspect in the present tense (9b), but not in other tenses; use of the inherited agent nominalizer *-j* would be unusual, albeit grammatical in this example (Cole 1982: 149). In Inga, a Quechuan language spoken in Colombia, *-dor* similarly derives agent nouns (9c). In addition, it expresses habitual aspect not only in the present tense (9d), but also in the past tense (9e; Levinsohn 1976a: 1).

(9a) Imbabura Quechua (Quechuan, Ecuador)

*michi-dur*

herd-AGNR.Sp

“herder” [not simply someone who is herding at the moment] (Cole 1982: 176)

(9b) Imbabura Quechua (Quechuan, Ecuador)

*Utavalu-pi-mi trabaja-dur ka-ni*

Otavalo-LOC-EVID work.Sp-AGNR.Sp be-1SG

“I habitually work in Otavalo.” (Cole 1982: 149)

(9c) Inga (Quechuan, Colombia)

*chi runa-mi macha-dor*

DIST person-FOC get.drunk-AGNR.Sp

“That person is a drunkard.” [Ese hombre es un borrachín] (Levinsohn 1976a: 1, ex.3)

(9d) Inga (Quechuan, Colombia)

*mana = chu aichana-dor ka*

NEG = FOC want.to.eat.meat-AGNR.Sp be[PRS.3SG]

“(When one has drunk), one doesn’t generally want meat to eat” (Levinsohn 1976b: 42, Cl 14b)

(9e) Inga (Quechuan, Colombia)

*ñuka uchulla ka-spa manima trabaja-dor ka-rka-ni*

1SG small be-SS.TEMP NEG work.Sp-AGNR.Sp be-PST-1SG

“When I was small, I didn’t work.” [Cuando yo era pequeño, no trabajaba] (Levinsohn 1976a: 1, ex.2)



In this case, the Spanish form of the agent nominalizer was filled with the Quechuan function of not only deriving agent nouns, but of also marking habitual aspect. As phrased by a reviewer of Muysken’s paper<sup>8</sup>: “... [the] form is Spanish [...] but [the] meaning is that of the Quechua suffix it replaces and not that of the Spanish suffix” (Muysken 2012: 488). This is thus a clear example of relexification.

#### 4.2 Zoque in contact with Spanish: the concessive construction

The Zoque concessive construction is shown by Stolz & Stolz (1996: 101) to be relexified: it consists of two conjunctions of Spanish origin, *aunque* “although” in the subordinate clause and *pero* “but” in the main clause (10a). This construction with doubled conjunction replicates the structure of concessive clauses in other indigenous languages of Mexico, such as Classical Nahuatl and Triqui (10b) and differs from the Spanish concessive construction (10c), in which only the subordinate clause is introduced by *aunque*. In the words of Stolz & Stolz (ibid): “The bipartite concessive construction appears to be an old indigenous means of expression which in Zoque was simply RELEXIFIED with Spanish” (my emphasis and translation).<sup>9</sup>

(10a) Chimalapa Zoque (Mixe-Zoque, Mexico)

*aunque*      *tuhí nim-pa*      *pero*    *’in niks-pa*  
**although.Sp** rain SBJ:INDF-ICPL **but.Sp** 1SG go-ICPL

“Although it is raining I will go.” (Stolz & Stolz 1996: 101, ex.15, from Knudson 1980: 138)

(10b) Copala Triqui (Otomanguean, Mexico)

*ta<sup>6</sup>*      *ze<sup>3</sup> amã<sup>3</sup>*      *cah<sup>4</sup> ne<sup>4</sup> ga‘ã<sup>4</sup>*      *’ũh<sup>5</sup> âh*  
**although that** rain:PROG **but and** go:FUT.1SG 1SG DECL

“Although it is raining, I will go.” (Stolz & Stolz 1996: 101, ex.16, from Hollenbach & Hollenbach 1975: 141)

(10c) Spanish (Indo-European, Europe and Latin America)

*voy*      *a*      *ir*      *aunque*      *está*      *llov-iendo*

<sup>8</sup> A reviewer of the current paper suggested the following more precise rephrasing: “the form is Spanish but the combinational pattern is that of the Quecha suffix it replaces, a process facilitated through the similarity in meaning with the Spanish suffix”.

<sup>9</sup> Die zweigliedrige Konzessivkonstruktion scheint ein etabliertes indigenes Ausdrucksverfahren mit hohem Alter zu sein, das im Zoque einfach nur spanisch [sic] relexifiziert wurde.

go.PRS.1SG PREP go.INF **although** be.PRS.3SG rain-GER

“I will go although it is raining.” (Knudson 1980: 138, ex.557)

### 4.3 Mosestén in contact with Spanish: the conjunction *pero* “but”

The Covendo Mosestén dialect of Mosestén-Chimane, an isolate language spoken in Bolivia<sup>10</sup>, has copied the form of the Spanish conjunction *pero* “but” in a way that is strongly indicative of relexification (Sakel 2007b: 570-571, 2007c: 30-33). The language has an inherited suffix *-ki* that marks contrast when the subject of the conjoined clause differs from that of the preceding clause (Sakel 2004: 406; [11a]). This is frequently duplicated (Sakel 2004: 407; [11b]) and can mark a change in topic (Sakel 2007c: 33; [11c]).

(11a) Mosestén(-Chimane) (isolate, Bolivia)

*mi’ tyaph-ye-i khäei’-si’ phen mö’-ki kawin faraj-ji’-yi-ti’*

3M.SG grab-VY-3F.OBJ RF-L.F woman 3F.SG-CO fast leave-CAUS-VY-RE-F.SBJ

“He grabbed his wife, but she rapidly freed herself again.” (Sakel 2004: 407, ex.13:8)

(11b) Mosestén(-Chimane) (isolate, Bolivia)

*yoj-tsa’ mi’-we öjñi’ jij-ka-i jam-ki-ki jedye’ äej-ä’*

R-FR 3M-DR river go-AM-M.SBJ NEG-CO-CO thing kill-VI-3F.OBJ

“Like I went to the river, but I did not catch anything.” (there was no possibility) (Sakel 2004: 408, ex.13:12)

(11c) Mosestén(-Chimane) (isolate, Bolivia)

*me’-ishtyi’ yäe jike-win ö-khan yäj-ki-’ käedäej-yäe yäe-ki-ki*

so-EVID 1SG PST-CPL F-IN leave-VK-F.SBJ baby-1SG 1SG-CO-CO

*khin’ waemtyi’-tom aj yok-tyi’-tom*

now husband-COM yet other-L.M-COM

“I have left my baby here, but I now have another husband.” (Sakel 2004: 408, ex. 13:13)

Interestingly, like *-ki* the copied conjunction *pero* not only joins clauses contrastively (12a), but also functions as a connector in discourse, marking a change in topic (Sakel 2007b: 570-571;

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<sup>10</sup> Note that Sakel (2004, 2007b) treats Mosestén as a separate language belonging to a two-member family, Mosestenan. However, as outlined in Sakel (2004: 1-2), the sister lect Chimane is mutually fully intelligible with one of two Mosestén dialects and at least partially intelligible with the other, so that it makes more sense to speak of one language with dialectal variation. This is reflected in the approach taken by glottolog.org, which I follow here. Sakel’s description is largely of the Covendo dialect of Mosestén.

[12b]). Furthermore, it frequently occurs in combination with *-ki*, thus resembling *-ki* in its structure even more (12c).

(12a) Mositén(-Chimané) (isolate, Bolivia)

*me' jímě mö' pero mö' maj-jo-' me'*

so close 3F.SG **but.Sp** 3F.SG much-VJ-F.SBJ so

“This (water-source) is closer, but that one has more (water).” (Sakel 2007b: 571, ex.12)

(12b) Mositén(-Chimané) (isolate, Bolivia)

*pero me' nash ats-i yok-min-tyi' dyai'-dye'=in jãe'mã aiweses*

**but.Sp** so FOC come-VI.M.SBJ other-ASS-L.M strange-NR[M]=PL so sometimes.Sp

*waeñae-i=in*

lie-VI.M.SBJ=PL

[Thus you want to study here with us, but it needs to be equal (reciprocally). Like you—or like us—I will teach you and we[INCL] will study well, equally: you and also us.] “But other strangers have come, and sometimes they have lied.” (Sakel 2007c: 33, ex.6c)

(12c) Mositén(-Chimané) (isolate, Bolivia)

*tyiñe-tyi' pero-ki pen'-ki jai'ba-i*

semi.red-L.M **but.Sp-CO** side-CO white-VI.M.SBJ

“It (the peanut) is semi-red, but one side is white.” (Sakel 2007b: 571, ex. 14)

Thus, in Mositén *pero* appears to be the Spanish form grafted on to the functional specifications of inherited *-ki*—an instance of relexification that was facilitated by the shared function of marking contrast.<sup>11</sup>

#### 4.4 Totonac in contact with Spanish: the preposition *hasta* “until”

In Totonac, like Zoque an indigenous language of Mexico, the preposition *ásta* can be shown to be the relexification of an indigenous preposition by Spanish *hasta* “until”. As in Spanish, *ásta* expresses spatial and temporal extension up to a point (13a, b), but it can also express a temporal extension from a point (13c, d), similar to the Even postposition *istala* (Section 3.1). As such, it has a “function of delimitation (without indication of direction)” (Stolz & Stolz 1996: 105).<sup>12</sup> The

<sup>11</sup> It should be noted that Sakel (2007c: 32-33) analyses *pero* not as a case of relexification, but as having extended its functions in analogy with the polyfunctionality of *-ki*. I return to this alternative analysis in Section 5.

<sup>12</sup> Funktion der Begrenzung (ohne Richtungsangabe)

complementizer *xni/akfni* that accompanies *ásta* in the temporal expressions occurs frequently by itself and forms temporal clauses with a general meaning of ‘when’ (Beck 2004: 102).

(13a) Upper Necaxa Totonac (Totonacan, Mexico)

*wa:má ka:'lakchikni' ma:pa'hsí: wa:tzá: makachín ásta wa:'jnanú:*  
 this village order/authority here come.up **until.Sp** there  
*makacha:n*

go.up.to/there[limit, border]

“this village has jurisdiction, (its jurisdiction) comes up to here and goes over to there” (Beck 2011: 62)

(13b) Papantla Totonac (Totonacan, Mexico)

*Juan i(x)-lhtata-ma hasta xni chita't*  
 Juan PST-sleep-PROG **until.Sp** when arrive.2.CPL

“Juan was sleeping until you arrived.” [Juan estuvo durmiendo hasta que llegaste] (Levy 1990: 140, ex.566)

(13c) Papantla Totonac (Totonacan, Mexico)

*Juan na-lhtatá hasta xni na-chita'na*  
 Juan FUT-sleep **until.Sp** when FUT-arrive.2.ICPL

“Juan will sleep as soon as you arrive.” [Juan va a dormir apenas llegues.] (Levy 1990: 140, ex. 571; example discussed by Stolz & Stolz 1996: 105)

(13d) Upper Necaxa Totonac (Totonacan, Mexico)

*ásta akfni (i)f-ta-ftú tʃitʃi-ní ásta akfni (i)f-taknú:*  
**until.Sp** when PST-INCH-out heat-AGNR **until.Sp** when PST-go.into

“from when the sun rose until the sun set” (Beck 2004: 106, ex.222b)

The closely related language Tepehua has an inherited preposition *tus* “which marks its complement as the spatial or temporal extent of the state or event” (Watters 1988: 478; [14a]).

This marks a spatial extent UP TO a limit and thus corresponds to English ‘until’ or Spanish *hasta*, and it also marks the extent FROM a temporal limit (14b, c).

(14a) Tepehua (Totonacan, Mexico)

*'a-t tus kin-áaqa:*  
 go-PFV PREP 1POSS-house

“X went to/as far as my house.” (Watters 1988: 478, ex.18b)

(14b) Tepehua (Totonacan, Mexico)

*ka-ć'an-a: tus Junio*

IRR-plant-FUT PREP June

“(S/he) will plant from June on.” (Watters 1988: 480, ex.23, translation adapted<sup>13</sup>)

(14c) Tepehua (Totonacan, Mexico)

*ka-k-tapa:ca:-ya: tus miś-tuhun*

IRR-1SBJ-work-FUT PREP CLAS-seven

“I will work from next week/beginning a week from now.” (Watters 1988: 481, ex.24, translation adapted)

These data make it highly likely that speakers of Totonac grafted the form of the Spanish preposition *hasta* onto the meaning of an indigenous preposition with the same semantic range as Tepehua *tus*. A contender for this indigenous item might be Totonac *ma:ski*, the meaning of which encompasses ‘even’, ‘until’, and ‘even though’ (Beck 2011: 398); *ásta*, too, can “function as an adverb (meaning roughly ‘even’)” (Beck 2004: 106).

#### 4.5 Domari in contact with Arabic: the preposition *žamb* “next to”

A final case of clear relexification, which also concerns adpositions, is found in the Jerusalem variety of Domari, an Indo-Aryan language spoken in the Near East (Matras 2007). This dialect of Domari, which has undergone extensive contact-induced changes from Arabic, has retained only seven inherited lexemes to express spatial relations (Matras 2012: 293). Of these, four (*atun* “above”, *agir* “in front of”, *axar* “below”, *paši* “behind”) are “genuine prepositions”, one (*bara* “outside”) is “adverbial in nature and follow[s] the noun in the locative case”, one (*ćanč-* “next to”) functions like a relational noun in that it takes possessive marking (15a), and the last (*mandž* “inside”) can function both as a postposed adverbial and a relational noun (ibid). In addition to these inherited adpositions, Jerusalem Domari has copied a large number of prepositions from Arabic: a “non-exhaustive overview” lists 23 different lexemes (Matras 2012: 294). One of these is *žamb* “next to”; however, rather than being used as a preposition as in Arabic (15b), this is inserted into the same possessive construction as its Domari synonym (15c).

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<sup>13</sup> Watters translates these examples with “X won’t plant until June” (ex.23) and “I won’t work until a week from now” (ex. 24).

(15a) Jerusalem Domari (Indo-European, Israel)

*wēs-r-om    čanč-is-ma            šibbāk-ki*  
sit-PST-1SG **next.to**-3SG.OBL-LOC window-ABL  
“I sat next to the window.” (Matras 2012: 307)

(15b) Levantine Arabic (Afro-Asiatic, Lebanon)

*žanb    el-beyt*  
**next.to** ART-house  
“next to the house” (Edith Koub Hreich<sup>14</sup>, pers.comm. 03/04/2020)

(15c) Jerusalem Domari (Indo-European, Israel)

*žamb-is-ma                    kury-oman-ki*  
**next.to.Ar**-3SG.OBL-LOC house-1PL-ABL  
“next to our house” (Matras 2012: 307)

Here the speakers of Jerusalem Domari have merely inserted the Arabic form into the Domari construction, filling it with the Domari functional specifications, rather than copying the Arabic preposition as a preposition. This is not due to the general structure of the language: as mentioned above, Jerusalem Domari has four inherited lexemes that function as simple prepositions (e.g. “behind” exemplified in [16a]), and it has copied both form and function of a large number of Arabic simple prepositions (e.g. “with” illustrated in [16b]).

(16a) Jerusalem Domari (Indo-European, Israel)

*paši    kury-a-ki*  
**behind** house-OBL.F-ABL  
“behind the house” (Matras 2012: 293)

(16b) Jerusalem Domari (Indo-European, Israel)

*ama gar-om    maʕ    xāl-om    kury-a-ki            ʕammān-a-ta*  
1SG go.PST-1SG **with.Ar** uncle-1SG house-OBL.F-ABL Amman-OBL.F-DAT  
“I went with my uncle’s family to Amman.” (Matras 2012: 304)

In addition to the fairly clear cases discussed above, three further potential candidates for relexification were found: one involving the Bantu language Koti of Mozambique (Schadeberg 1997), one involving Romani (Matras 2009a: 149), and the third concerning Molise Slavic spoken

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<sup>14</sup> I am grateful to Edith Koub Hreich for providing the Arabic example.

in Italy (Marra 2012). Koti is closely related to the neighbouring language Makuwa, with which it shares the verbal subject and object markers, the structure of the noun class system, and tonal correspondences; the lexicon, in contrast, appears to be approximately equally of Swahili and Makuwa origin. This provides some indication that Koti relexified large parts of its lexicon with Swahili forms, maintaining the Makuwa grammatical specifications (cf. Dimmendaal 2001: 360-361). As for Romani, this has copied the word *tajša* from medieval or dialectal Greek *taixiá* “tomorrow”. However, in Romani *tajša* has a meaning of both ‘yesterday’ and ‘tomorrow’, a semantic feature shared with Indo-Aryan *kal* which is cognate to the replaced Romani form *kal(iko)* that also covered both senses of ‘yesterday’ and ‘tomorrow’ (Matras 2009a: 149). Thus, Romani *tajša* could be analysed as the grafting of the Greek form onto the Romani semantic specifications—although it could also be a case of extension by analogy, a type of change discussed in Section 5. Finally, Molise Slavic, an offshoot of Croatian that has been spoken in southern Italy since the 15<sup>th</sup> century, has copied six prepositions from the local variety of Italian, of which three—*sendza* “without”, *dopa* “after, behind”, and *kurta* “close (to)”—might be the result of relexification. This is seen in the fact that these govern genitive case (17a), like their translational equivalents in Standard Croatian (Marra 2012: 270-271), rather than the nominative case found with nominal complements in Italian. In the case of *sendza* and *dopa* the functional pivot that would have let speakers identify the model-language and recipient-language items is likely the fact that in Italian these prepositions govern pronominal complements with the preposition *di* “of”, which has genitive-like functions (17b).

(17a) Molise Slavic (Indo-European, Italy)

*sendza storc-e*

without.It table-GEN.SG.F

“without the table”<sup>15</sup> (Marra 2012: 271)

(17b) Italian (Indo-European, Italy)

*non esco senza di voi*

NEG go.out.PRS.1SG without of 2PL

“I’m not going out without you.” (Peyronel & Higgins 2006: 65)

To summarize the findings, I identified instances of clear or potential relexification in nine different situations of ordinary language contact: Lamunxhin Even-Sakha in northeastern Siberia,

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<sup>15</sup> Note that in a grammar sketch of Molise Slavic with appended vocabulary (Sammartino 2004), ‘table’ is given as *stolica* (p.389), so that the genitive singular form would be expected to be *stolice* (cf. feminine declensions in pp 58-62).

Zoque-Spanish and Totonac-Spanish in Mexico, Quechua-Spanish in Ecuador and Colombia, Mosestén-Spanish in Bolivia, Jerusalem Domari-Arabic in Israel, Molise Slavic-Italian in Italy, Romani-Greek in Europe, and Koti-Swahili in Mozambique. In all nine cases, the relexification involves a form from the sociopolitically or economically dominant language that is grafted onto the semantic and combinatorial properties of the subordinate recipient language. Four out of the nine instances concern the relexification of adpositions, involving eight forms—three postpositions in Lamunkhin Even, one preposition in Totonac, one in Jerusalem Domari, and three in Molise Slavic—and two (Zoque and Mosestén) concern conjunctions.

One important fact should be noted at this point: I have been able to identify relexification in those cases where the form in the recipient language differs from its model, either in its semantic specifications (e.g. Imbabura Quechua/Inga *-dor*, which expresses habitual action in addition to being an agent nominalizer, as in Spanish), or in its syntactic specifications (e.g. Domari *žamb*, which functions as a relational noun instead of preposition, as in Arabic), or both (e.g. Lamunkhin Even *dili-*, which expresses both ‘until’ and ‘since’, instead of only ‘until’, and governs locative and ablative case, and not dative). While these cases might appear to differ from each other at the level of outcome, I hold that the process that led to these different-looking results was the same, namely the grafting of the phonological representation of the model form onto the lemma of the recipient language; the seeming difference in outcome is merely a function of the difference between model-language and recipient-language lemmata.

## 5. Relexification - or simply extension by analogy?

Given the data presented in Sections 3 and 4, one might well wonder whether these aren't rather cases of extension of functions of the copied item in analogy with functions covered by the recipient-language item. This, and not relexification, is the explanation suggested by Sakel (2007c: 32-33) for the expression of both contrast and topic change of the copied conjunction *pero* in Mosestén, as pointed out in footnote 11. Similarly, Matras (2009a: 149) appears to consider the process that led to the copying of Greek-derived *tajša* as compatible with extension by analogy: “...the word ACQUIRES new meanings through its association with a concept represented by an inherited Romani word-form” (my emphasis).

Both relexification and extension by analogy have in common the fact that there is some overlap in meaning or function between the model language item and the recipient language item that enables speakers to identify one with the other—and yet the two are undoubtedly distinct processes of change. In extension by analogy<sup>16</sup>, both the form and the semantic and syntactic

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<sup>16</sup> It should be noted that extension by analogy is generally considered to be a language-internal process (cf. Hock & Joseph 1996: 160, Campbell 1999: 89). In language contact situations it is mostly applied to the extension of the



specifications of a model-language item are copied; due to some overlap in semantics or function of the copy with a recipient-language item, the meaning or function of the copy are broadened to encompass those of the inherited lexeme. For instance,

the word *maziwa* (class 6) ‘milk’ [...] probably entered proto-Sabaki [the ancestral language of Swahili spoken in East Africa] through contact with a cattle-keeping people speaking a South Cushitic language. It replaced the Proto-Bantu word \**ma-béede* (class 6), which had the primary sense ‘breasts’ [...]. Following this pattern of polysemy, the loanword *maziwa* subsequently acquired the sense ‘breasts’....

(Schadeberg 2009: 79).

In relexification, a copied form is grafted onto the semantic and syntactic specifications of an inherited item which, crucially, shares some feature with the copy, thus letting speakers equate the two items (cf. Muysken 1981: 62). Relexification is thus a one-step process, while extension by analogy is a two-step process—and it is the data from Lamunkhin Even that let us establish that here, at least, we are indeed dealing with relexification, and not extension by analogy.

For extension by analogy to occur a certain amount of time is required between the initial copying of the model-language item together with its semantic and functional specifications and the ultimate result of extension of these specifications to achieve analogy with the recipient-language equivalent. Yet none of the postpositions of Sakha origin in Lamunkhin Even are established copies: with the exception of *bīs-* they are used much less frequently and by fewer speakers than the Even counterparts (cf. Table 1). It is thus highly likely that they were introduced into Lamunkhin Even quite recently, from which it follows that there has not yet been enough time for extension by analogy to take place. Yet the semantic and syntactic specifications already encompass the full range of those of the Even counterpart—supporting the analysis of relexification.

A further argument in favour of relexification over analogous extension is provided by the Sakha relational noun *tus-* with which Even *ǰugu-* was arguably relexified. The Sakha form conveys a beneficiary meaning when carrying dative case marking, a function that is absent from the relexified form in Lamunkhin Even. This absence of the beneficiary function cannot be explained via extension by analogy, since it is a narrowing in function. The restriction in function of this copy matches exactly the function of the Even relational noun *ǰugu-*, which like *tus-* in Lamunkhin Even expresses only ‘about’ and not ‘for’. This narrowed function of *tus-* is thus in perfect accordance with the Sakha form alone having been grafted onto the semantic and syntactic specifications of *ǰugu-*, which do not encompass expression of a beneficiary.

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meaning of a recipient-language item in analogy with polysemy of a model-language item (Aikhenvald 2006: 23), such as the extension of the 3PL pronoun in Silesian Polish to cover polite address in analogy with the German polite 2PL pronoun *Sie* (which is homophonous with the 3PL pronoun; Johanson 2008: 73).

While the data from the cross-linguistic survey are not as conclusive as the Lamunkhin Even data, the relexification of Jerusalem Domari *čanc̣*- “next to” with Arabic-derived *žamb* provides further support for the analysis of relexification. If this had been simply copied from Arabic with its syntactic specifications intact, we would expect it to function as a simple preposition in Domari. As mentioned in Section 4.5, Domari has four inherited items and numerous Arabic copies that all function as simple prepositions, so that there are no syntactic reasons that would have precluded the copying of yet another Arabic preposition as a simple preposition. That *žamb* instead functions like a relational noun speaks in favour of the Arabic form having been grafted onto the syntactic specification of the inherited item, which is the sole marker of spatial relations in this lect to behave exclusively like a relational noun.

Thus, although an analysis in favour of relexification rather than extension by analogy cannot be conclusively supported for all of the items discussed in Section 4, the arguments adduced here show that relexification is at the very least a plausible interpretation of the data. This type of change is thus not restricted to extraordinary situations of contact, but should be taken into considerations in ordinary language contact as well.

## 6. Discussion

### 6.1 Relexification and other types of contact-induced change

In what way does the process of relexification described in Sections 3 and 4 differ from other types of contact-induced change that have been described in the literature? The survey revealed some interesting cases of copied forms that resemble relexification in that they do not carry the model-language meaning or syntactic functions, but that differ from relexification in that there is no evidence that the structural or semantic specifications were provided by the recipient language. For example, the term for ‘French’ in Maori is *Wīwī* and originates in French *oui, oui* “yes, yes”. However, “there is not [sic] indication that it ever meant ‘yes’ in Maori, or that it was used as a name in French. In other words, only the morph has been borrowed, without its meaning” (Tadmor 2007: 322). There is also no evidence that the Maori word for ‘yes’, *āe*, was ever used with a meaning of ‘French’ and that the French form was later grafted onto this. This example thus falls into the category of ‘pseudo-loanwords’ (Miller 1998: 123, citing Miura 1985 for the term), of which other examples are German *Handy* “mobile phone” and the French noun *footing* “jogging”, both making use of English-derived forms (Curnow 2001: 427).

A different kind of contact-induced change involving the copying of form without concomitant meaning or function is exemplified by the Spanish-derived preposition *ashta* in Mosestén. As described for Totonac in Section 4.4, in Mosestén *ashta* expresses not only an extension up to a point in time like the Spanish model *hasta* “until”, but also from a timepoint onwards (Sakel 2007c: 38-39). However, in contrast to the Totonac example, there is no evidence that any

inherited item has such a function of delimiting events in time without specifying the direction of this limit (Sakel 2007b: 579 n.14). This can therefore not be taken as an instance of relexification of a Mosestén lexeme with Spanish *hasta*, but must be considered an innovation by Mosestén speakers (see Chamoreau [2012: 69-71] for a similar innovation in Purepecha using Spanish-derived *entre* in a comparative construction).

A rather intriguing example of the copying of form without model-language semantic or syntactic specifications, but without evidence for relexification, comes from Katanga Swahili (previously known as Shaba Swahili), a language of wider communication in the Copperbelt of the DRC. This has copied *non* from French ‘no’—but uses it as a quotative marker (Rooij 2007: 131). In this function it accompanies a finite form of the verb *-sema* ‘say’ (Rooij 1996: 136-137). Rooij (2000: 453) suggests that this form should “be regarded as a calque of Shaba Swahili (*(h)apana* [= “no”], because as far as [he] know[s] *non* is not used as a marker of quoted speech with emphatic meaning in metropolitan French”. However, I have been unable to find any evidence to support this suggestion. In de Rooij’s corpus of Katanga Swahili itself, (*(h)apana* is used as a quotative only once, versus 91 examples of *non* in this function (Rooij 2000: 454). In Kivu Swahili and Kisangani Swahili, both also spoken in the DRC, the quotative marker is *ase(me)* ‘s/he may say’ (Nassenstein 2015: 187, n.80). Similarly, in Luba-Katanga, a substrate language of Katanga Swahili, the quotative is *amba* ‘saying’ (Beckett 1951: 129). Lastly, in his comprehensive survey of quotative markers in Africa, Güldemann (2008) does not mention any quotative derived from a negation marker. While the example of Katanga Swahili *non* is thus clearly an instance of copied form without contents, it seems unlikely to be an example of relexification, but must be considered an innovation by Katanga Swahili speakers.

Another type of contact-induced change described in the literature that has features in common with relexification is paralexification (cf. Lefebvre 2008). Paralexification is the “addition of a word form to a lexical entry” (Mous 2001: 113), resulting in pairs of words that share semantic and syntactic specifications. Thus, the process itself is identical to that operating in relexification (also demonstrated by the fact that Mous [2001: 121] applies the concept to Media Lengua): a word form of one language gets added to the equivalent lexical entry in another language and gets filled with the functional specifications of the recipient-language counterpart. However, paralexification is not restricted to the copying of forms from a contact language, but is also applied to the use of archaic vocabulary, derivations, circumlocutions, or modifications of existing forms (Mous 2001: 118-119). Thus, while it encompasses cases of relexification such as those discussed here, the term paralexification covers a much wider range of phenomena.

As mentioned in the introduction, Gardani (2020) proposes to distinguish MAT copying from both PAT copying and MAT&PAT copying, with MAT copying referring solely to the copying of form without function. This suggests that his MAT copying might be identical to what I have here

labelled relexification. However, in Gardani's definition MAT copying includes cases where the copy shares the same semantic and syntactic functions as the recipient-language item it possibly replaces (Gardani 2020: 266). This terminology is therefore again broader, since no distinction is made between cases of what I have here identified as relexification, cases where evidence of the contribution of the recipient-language semantics and function is lacking, since the recipient-language item shares the meaning and function with the model-language item (such as the Sakha postpositions *biha* and *suptu* in Lamunkhin Even, cf. Section 3.3), and cases of pseudo-loans or innovations involving copied forms, such as those discussed above.

Interestingly, the 'mirror image' of relexification is known as well, namely model-language semantics that are filled into a recipient-language form. This type of change is discussed by Haugen (1950: 214) under the term 'semantic loan'. He exemplifies this with American Portuguese *humoroso*: this has a meaning of 'humorous', whereas the word in Iberian Portuguese means only 'capricious'. An even more encompassing phenomenon of this kind is what Ross (2001, 2007) has termed 'metatypy', a process that involves large-scale restructuring of both the syntactic and the semantic organization of a recipient language in line with those of the model language. To a certain extent, metatypy can be compared in its far-reaching impact on the recipient language to the kind of relexification proposed by Muysken (1981) for the mixed language Media Lengua, while the 'semantic loan' defined by Haugen is comparable to the relexification of individual items identified in Sections 3 and 4. Crucially, semantic loans and metatypy fall under what is traditionally considered 'selective', 'schematic', or 'PAT' copying, indicating that the processes involved in relexification might be mirror images of those involved in structural copying as well.

## 6.2 The role of pivot-matching in relexification

Since in relexification the model-language phonological representation is grafted onto the semantic and functional specifications of a recipient-language lexeme, it can only take place in those cases where the element copied from the model language has some semantic overlap with an item in the recipient language, thus letting speakers identify the two items (Muysken 1981). This is in line with Sebba's (1998) concept of 'congruence' in code-switching, which postulates that "[a]n element of language L<sub>1</sub> (morpheme, word or phrase) may be replaced by a congruent element from the other language, L<sub>2</sub>, if one exists", where speakers construe categories as being congruent that "have a similar syntactic function" and "similar semantic properties" (p.8; see also Backus & Dorleijn 2009: 90).

The identification of equivalent structures has also been shown to be crucial for structural copying. For instance, Gast & van der Auwera (2012: 389-395) identify ‘interlingual identification’ as an important process in contact-induced grammaticalization, and Matras & Sakel (2007a: 830) determine ‘pivot-matching’ as the keystone of PAT copying. Pivot-matching “involves identifying a structure that plays a pivotal role in the model construction, and matching it with a structure in the replica language, to which a similar, pivotal role is assigned in a new, replica construction”. In the absence of a match between the model-language and recipient-language constructions there will be no PAT copying and MAT is copied instead (Matras & Sakel 2007a: 846-847). As shown by the Lamunihin Even case study, this also holds for copying of forms: where there is no congruence between items (such as the Sakha postpositions *ila* and *keriete* and the relational nouns *onnu-* and *usta-*, which all lack postpositional equivalents in Even), the model-language lexemes are copied with both their phonological form and their semantic and functional contents, i.e. relexification cannot take place. One might thus be tempted to postulate that the existence of a semantic or functional pivot leads to partial copies: either only the meaning or structure are copied (PAT) or only the form is copied without semantic and structural specifications (relexification), whereas if a pivot is lacking, both form (MAT) and structure (PAT) are copied. Further cross-linguistic investigation is required to ascertain whether this hypothesis is valid.

While all the instances of relexification discussed in Sections 3 and 4 involve some amount of semantic overlap between the model-language item and the recipient-language translational equivalent (as far as can be determined from the often rather meagre descriptions), in some cases there is evidence for a functional pivot that further enhances identification of the items. This is the case for the Sakha-derived postpositions in Lamunihin Even, where the overlap in the uses of the Sakha dative and the Even locative case and the Sakha instrumental and Even prolicative, respectively, allows the syntactic specifications to be matched (Section 3.3). It can also be identified for the Molise Slavic Italian-derived prepositions *sendza* and *dopa*, where the occurrence of the genitive-like preposition *di* with pronominal complements in Italian may have functioned as a pivot for the identification with the Croatian genitive case (Section 4.5). However, such functional pivots do not seem to be a necessary feature of relexification, since they can be identified in only a minority of cases. The crucial aspect of congruence in relexification is thus the semantic similarity of items.

Interestingly, although there is a tendency in the examples discussed in this paper for the recipient-language item to be polysemous, while the model-language item isn’t (e.g. the adpositions that mean both ‘until’ and ‘since’ in Lamunihin Even and Totonac, while the model-language items only mean ‘until’, or the Quechua suffix that functions as both an agent nominalizer and a habitual in contrast with the Spanish equivalent that functions only as an agent

nominalizer), the polysemy of the recipient-language element is not a prerequisite for relexification to take place: thus, the Lamunxhin Even relational noun *elge-* and the Sakha form *bīs-* that relexified it both mean simply ‘between’, and the Domari relational noun *čanč-* simply means ‘next to’, like the Arabic form *žanb* with which it is relexified. This constitutes another difference from the pivot-matching involved in PAT copying, where the polysemy of the model-language item has been identified as a crucial feature (Matras & Sakel 2007a: 852). In relexification, when the model-language item has more meanings than the recipient-language item, the relexified lexeme will cover only the restricted recipient-language meaning. This is shown by the Sakha relational noun *tus-*, which is used in Lamunxhin Even only with its meaning of ‘about’, and not to mark a beneficiary<sup>17</sup>. This can be explained by the fact that the Even equivalent *čugu-* has no function to mark beneficiaries, so that this function could not be projected onto the Sakha form (cf. Muysken 1981: 62).

It has been suggested that typological similarity between languages enables copying (e.g. Field 2002: 41, Aikhenvald 2006: 32). For instance, Ross (2001: 156) suggests that “close structural similarity (but not necessarily a close relationship) between lects” might “foster” metatypy, whereas “great structural difference may impede it”. Similarly, Law (2013) shows that the close genealogical relationship and hence structural similarity of Mayan languages has enabled what he calls ‘interlingual conflation’, namely the “collapse” of distinctions between different languages, thus facilitating the copying of bound morphology. However, neither overall typological congruence nor relatedness of the contact languages appears to play a role in relexification. With the exception of the potential relexification involving Swahili and Koti (Section 4.5), none of the language pairs identified here are closely related, and although Sakha and Lamunxhin Even are indeed typologically quite similar, other pairs of languages identified in Section 4, such as Quechua and Spanish or Domari and Arabic, are structurally very different. Nevertheless, the examples discussed in Sections 3 and 4 all involve model-language items that have a recipient-language counterpart: prepositions and relational nouns, conjunctions, derivational suffixes, and adverbs. This demonstrates that relexification takes place when there is local congruence between the languages. In addition, the cases identified here share the fact that it is an item of the sociopolitically or economically dominant language that relexifies a lemma of a subordinate or minority language.

Pseudo-loanwords, innovative constructions based on copied lexemes, and paralexification demonstrate the creativity of bilingual speakers, who can use their joint repertoires to achieve their communicative goals, as also discussed in detail by Matras (2009a: 240-243) for so-called

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<sup>17</sup> Of course, this statement needs to be viewed with some caution, since absence of evidence is not evidence of absence, especially not when conclusions are based on a relatively small corpus. Nevertheless, this fits with the overall expectations for relexification.

PAT copying. This potential for cross-language creativity indicates that in the minds of bilingual speakers the boundaries between lects are porous, in accordance with the model of bilingual language selection proposed by Blanco-Elorrieta & Caramazza (2021). In this model, the selection of particular items in bilingual speech production depends solely on their activation levels, which in turn depend on a combination of factors: frequency of items in the respective lects, proficiency of the speaker in each lect, temporal effects (i.e. which item and its associated features were used most recently), the intended meaning, and the communicative context. In particular, it is proposed that the semantic space is shared between lects, but allowing for the possibility of only partial overlap of semantic features between translation equivalents. Depending on the activation level of either lect, a phonological form from one lect can thus be assigned to the semantic features of the other lect “so long as the demands of the slot in which they will be inserted are met (e.g., conceptual equivalence across languages)” (Blanco-Elorrieta & Caramazza 2021: 8). This is exactly the process at play in the cases of relexification discussed in this paper.

## 7. Conclusions

I hope to have shown in this paper that relexification, namely the grafting of model-language forms onto recipient-language contents, is a type of contact-induced change that is not restricted to the ‘exceptional’ contact situations that lead to the development of mixed languages, but that it can take place in ordinary language contact as well. This kind of change is one of many that involve the copying of form without concomitant semantic or syntactic specifications, indicating that this type of change merits as much attention as the copying of structural patterns without concomitant form.

Of course, relexification will only be able to occur in those cases where the recipient language has an item that is equivalent to the form transferred from the model language, since it is the contents of the inherited item that fills the form of the copied item. Given this constraint, it is not easy to estimate the impact of relexification on language change, since it is hard to quantify how often lexemes are copied to ‘fill a gap’ vs. copies that coexist with or replace inherited items. However, an indication can be obtained from the World Loanword Database (<https://wold.clld.org>), which includes information on lexical copies in 41 languages distributed across the world. Out of 64,289 total items included in the dataset<sup>18</sup>, there is information on the “effect” of the copying process on the recipient language for 16,979 items (with the vast majority of the cases with no information on the effect being those where there is “no evidence” for copying). Of these, there is “no

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<sup>18</sup> Zip-archive ‘wold-v3.0’ downloaded from <https://zenodo.org/record/3537579> on 17.04.2020; the relevant data are found in the folder ‘cldf’ in the file ‘forms.csv’. I thank Robert Forkel for having provided me with the summary statistics.

information” on the effect of the copy for 33% (5591 items), 5838 items (34%) were “insertions”, 3169 items (19%) “coexist” with the inherited item, and 2381 items (14%) have “replaced” the inherited lexeme. Thus, the number of events in which a lexeme was copied even though the recipient language had or has an equivalent term is equal to the number of events in which an item was copied to ‘fill a gap’. Similarly, Poplack et al. (1988: 61) find that very few copies from English into Canadian French (counting both nonce and established copies) can be attributed to “lexical need”—rather, the majority are “luxury copies”, i.e. items that are copied even though the recipient language has an equivalent form (Poplack 2017: 398). These findings indicate that relexification can potentially have quite a considerable impact on language change.

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### **Abbreviations used in glosses:**

ABL - ablative; ACC - accusative; AGNR - agent nominalizer; ALL - allative; AM - associated motion; Ar - Arabic; ART - article; ASS - associative relation marker; CAUS - causative; CLAS - classifier; CO - contrastive marker; COM - comitative; COND - conditional; CPL - completive; CVB - converb; DAT - dative; DECL - declarative; DIST - distal demonstrative; DP - discourse particle; DR - downriver relation; EVID - evidential; F - feminine; FOC - focus; FR - frustrative; FUT - future; GEN - genitive;



GER - gerund; HAB - habitual; HESIT - hesitant; ICPL - incompletive; IMP - imperative; IN - inessive; INCH - inchoative; INDF - indefinite; INF - infinitive; INS - instrumental; IPF - imperfect; IPFV - imperfective; IRR - irrealis; It - Italian; L - linker; LOC - locative; M - masculine; NEG - negative; NR - nominalizer; OBJ - object; OBL - oblique; PF - perfect; PFV - perfective; POSS - possessive; PREP - preposition; PRFL - reflexive possessive; PROG - progressive; PROL - prolativ; PROX - proximal demonstrative; PRS - present; PST - past; PTCP - participle; PTL - particle; QUAL - qualitative (demonstrative); R - Russian; RE - reflexive and reciprocal; RF - reference and indefinite marker; SBJ - subject; SBJV - subjunctive; Sp - Spanish; SS - same-subject; TEMP - temporal (converb); VI - verbal stem marker; VJ - verbal stem marker; VK - verbal stem marker; VY - verbal stem marker; Y - Sakha (Yakut)

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### **German summary**

In Studien zum Sprachkontakt wird oft zwischen zwei Hauptarten von Transfer unterschieden: Transfer von linguistischen Formen (oft zusammen mit modellsprachlicher Bedeutung oder Funktion) und Transfer ausschliesslich von strukturellen und semantischen Mustern, ohne dazugehörige Form. Relativ selten wird die sogenannte Relexifikation besprochen, bei der eine Form ohne dazugehörige modellsprachliche semantische oder syntaktische Spezifikation auf ein äquivalentes empfängersprachliches Lemma aufgepropft wird. Es wird angenommen, dass Relexifikation eine Rolle bei der Entwicklung von Misch- oder Kreolsprachen gespielt haben könnte, aber wie hier gezeigt wird, kann sie auch in mehreren Situationen normalen Sprachkontakts nachgewiesen werden. Dieser Transfertyp stellt das Gegenstück von Musterübertragung ohne Form dar und steht im Einklang mit neuen Modellen zur Sprachselektion bei Zweisprachigkeit.



### **French summary**

Deux types de transferts majeurs sont connus dans l'étude des contacts de langues : le transfert de formes (souvent avec leur sens ou leur fonction grammaticale) et le transfert de schèmes sémantiques ou structuraux, sans forme concomitante. Un type de changement moins souvent discuté est la relexification. Celle-ci comprend le transfert de formes greffées sur le lemme dans la langue receveuse sans les spécifications sémantiques ou structurelles de la langue modèle. La relexification aurait joué un rôle dans le développement des langues mixtes ou des créoles, mais comme argumenté ici elle peut aussi être identifiée dans plusieurs cas de contacts ordinaires. Ce type de changement représente l'inverse du transfert de schèmes sans forme et est en accord avec des modèles récents de sélection lexicale chez des bilingues.