

Object cross-reference in Leko

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1 Introduction¹

During the second half of the sixteenth century both civilian and missionary expeditions went in search of gold and converts into the lowland Moxos area, in Bolivia. They used the paths that had been followed by the Incas a century before to cross the Andean eastern slopes, a rough mountainous zone where the ‘Chunchos’ lived. The term *chuncho* was used as a cover term for any ‘uncivilized’ and thus ‘dangerous’ group of lowland Indians. Today, it reflects the general disdain that highland people, from Spanish, Aymara or Quechua background, feel for lowland Indians. The Leko were one of these ethnic groups that were contacted by the Spaniards early after the conquest, but nevertheless scarcely any information, ethnological or linguistic, can be found in the sources.² The major published source on the language, apart from the small word lists in Lázaro de Ribera (Palau & Saíz 1989), Wedell (1853), Cardús (1886), Brinton (1946) and Montaña Aragón (1987), is a

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² This is the case with almost all of the indigenous languages in this area. At the beginning of the previous century Schuller (1917, xcii) wrote: “All those Indian languages of central, eastern, and northern Bolivia have not yet been studied methodically and systematically. No corner of South America is less known than the *habitat* of the Moseño (close neighbours of the Leko – SvdK) and adjoining parts, especially as far as the native Indian languages are concerned. Of all these Indian languages, we possess vocabularies, accompanied by short grammatical sketches, of Tacana, Cavineño and Leco only.” Since then, the situation has not improved, and although Schuller forgot to mention La Cueva’s (1893) description of Yuracare, the only serious linguistic work on one of these unknown languages in the last century has been done on Cayuvava (Key 1967). By now, almost all of the ethnic groups have been incorporated into mainstream Bolivian lowland culture and have shifted to the use of Spanish for daily interaction, with the effect that almost all the languages of this region are by now extinct or moribund. Only recently there is both political and scientific attention for the lowland Bolivian languages as a result of the growing self-consciousness of the different ethnic groups, the ensuing territorial claims, and the policy of bilingual education (Crevels 2002).

Christian doctrine composed by the missionary Andrés Herrero in the beginning of the nineteenth century. The Leko doctrine has been published by Lafone Quevedo (1905, a reinterpreted version is presented in van de Kerke 1999), who used it as the major source for a short grammatical sketch of the language. His work has remained the only serious analysis of Leko, since no other linguistic study of the language has been undertaken in the last century.

In Grimes (1988), Leko, classified as an isolate, was reported to be dead. However, Montaña Aragón (1987) reported a number of speakers in the region of Atén and Apolo in the province of Franz Tamayo and along the river Mapiri in the province of Larecaja, both in the Andean foothill region (the eastern slopes), to the north of La Paz, Bolivia. In 1994, responding to an appeal in Adelaar (1991) to investigate the possibility that speakers of the Leko language might still survive, I undertook a fieldwork trip to Bolivia. A thorough search in the region of Atén and Apolo was in vain, but I contacted some elderly men and women on the Mapiri river, who spoke a language that, on the basis of the existing data, could be characterized as Leko.

Short visits in the following years produced much more language data. Collecting these data was a time-consuming affair, since the informants, most of them male and over 60 years of age, had not spoken the language for over 40 years. The reader should keep in mind that Leko is a moribund language: all the language data were produced by elderly people who stopped speaking the language in their youth and learned it in a situation of diglossia with Spanish as the language of prestige. One of the major problems is the fact that the last Leko speakers who are willing to speak the language live dispersed along the river. When they are brought together they do not feel free or are not able to enter into spontaneous conversation with each other in Leko. So, until recently, all my data were the result of elicitation. It was only in 2001 that an informant, whom I contacted in 2000, was able and willing to tell me a number of stories in Leko. So, we have to accept that there is still a lot we do not know and probably never will know about Leko. Partial analyses of some striking characteristics of Leko have been presented in van de Kerke (1998, 2000 and 2002) and the purpose of the current article is to present an overview of the role of object cross-reference in this understudied Bolivian *pie de monte* language. It will be shown that Leko heavily depends on object cross-reference markers to take the place of full referential NPs. In this sense they act like pronominal elements, but the problem is that their use is not unconstrained and not fully predictable. It will be shown that the realization of the object cross-reference markers is the result of an intricate interaction between semantic, syntactic, and pragmatic factors.

In (1) an example of a well-formed sentence is given. Since Leko is a pro-drop language, the realization of the personal pronoun *chera* ‘we’ is optional. The verbal root *du-* ‘speak’ is modified by one of the derivational verbal suffixes *-kama* ‘to be able’, which is followed by the tense marker *-te* and the first person plural marker *-an*. The direct object of ‘to speak’ is *burua*. This is the name which the Leko speakers on the Mapiri river sometimes use to refer to their own language. Normally they use the term *dialecto* ‘dialect’, like other people along the river who are aware of the existence of the language. Then follows the verbal root *da-* ‘to want’, which is modified by the negation marker *-in*, the main tense and the first person plural marker. It selects an infinitival complement marked by *-ch*. Note that neither the direct object nor the infinitival complement is marked for case.³

- (1) *(chera) du-kama-te-an burua da-in-te-an du-ch*
 we speak-be.able-MT-1PL Leko want-NEG-MT-1PL speak-INF
 ‘We were able to speak Leko, but we do not want to speak (it).’

Leko has different cross-reference paradigms to mark person of subject and object on the verb. In some cases subject marking fuses with the marking of tense, in not yet fully understood ways, but in the present tense paradigm the suffixes used as subject markers can be easily recognized. In (2) the subject pronouns are added for convenience, but they may be dropped, as I have argued above:

- (2) *era du -no -to:* ‘I speak’
iya du -no -te -n ‘you speak’
kibi du -no -te ‘he speaks’
chera du -no -te -an ‘we speak’
heka du -no -te -noh ‘you.PL speak’
kibi-aya du -no -aya -te ‘they speak’

For all persons the verbal root *du-* is followed by, what I will argue below is, a nominalizing element *-no*. The suffix *-te* is nothing but an auxiliary element marking Main Tense and functions as a landing site for the person marker: 3rd

³ The following abbreviations are used: CAU = causative, COM = comitative, DAT = direction/benefactive, DES = desiderative, DUR = durative, GEN = genitive, HOR = hortative, HSAY = hearsay, INF = infinitive, (IN)TR = (in)transitive, LOC = location, MT = main tense, NEG = negation, NOM = nominalizer, O = object, PL = plural, POT = potential, PP = past participle, PST = past tense, Q = question marker, REC = reciprocal, SG = singular, TOP = topicalizer, and VOC = vocative.

person is zero marked, 2PL by *-noh*, 1PL by *-an*, 2SG by *-n*. Since we do not find *-te* in 1SG, I assume that the marker *-o*, that we find in other paradigms for 1SG expression, has been fused with *-te* into *-to:*.

Object cross-reference is realized by means of a prefix on the verb. In (3) we find the root of the verb *sohich* ‘to look at’, followed by the durative marker *-cha*, and the tense and person markers presented in (2). The object marker consists of a (C)V sequence. The vowel, in almost all cases, is a copy of the first vowel of the root. The preceding consonant is /y/ in the case of first person, and /d/ in the case of third person singular objects. Second person singular objects are marked by the mere realization of the vowel. In the plural the preceding consonant is /ch/ for first person and /h/ for second and third person, as shown below:

(3)	<i>era</i>	<i>o-</i>	<i>soh -cha -no -to:</i>	‘I am looking at you’
	<i>iya</i>	<i>yo-</i>	<i>soh -cha -no -te -n</i>	‘you are looking at me’
	<i>kibi</i>	<i>do-</i>	<i>soh -cha -no -te</i>	‘he is looking at him’
	<i>chera</i>	<i>ho-</i>	<i>soh -cha -no -te -an</i>	‘we are looking at you.PL’
	<i>heka</i>	<i>cho-</i>	<i>soh -cha -no -te -noh</i>	‘you.PL are looking at us’
	<i>kibi-aya</i>	<i>ho-</i>	<i>soh -cha -no -aya -te</i>	‘they are looking at them’

What kind of arguments trigger object cross-reference marking is the central issue that will be addressed in the following section. Apart from the paradigm in (3), there is a slightly different paradigm for the marking of dative/ benefactive ‘objects’. Instead of a harmony vowel, the dative/benefactive objects contain a fixed /i/ vowel followed by a nasal /n/, as shown in (4):

(4)	1O	<i>yV-</i>	1DAT	<i>yin-</i>
	2O	<i>V-</i>	2DAT	<i>in-</i>
	3O	<i>dV-</i>	3DAT	<i>din-</i>
	1PL.O	<i>chV-</i>	1PL.DAT	<i>chin-</i>
	2PL.O	<i>hV-</i>	2PL.DAT	<i>hin-</i>
	3PL.O	<i>hV-</i>	3PL.DAT	<i>hin-</i>

It is noteworthy that, with the exception of the 3rd person, the object cross-reference markers are also used to derive nominal possessive forms. In (5), the paradigms of both inalienable and alienable nouns are presented. The main difference is the fact that in combination with inalienable possessed nouns the person marker is attached to the noun, while in combination with alienable possessed nouns the person marker is followed by *-moki*, the genitive and purposive case marker:

- (5) *yo- bora-aya* ‘my friends’ *yo-moki kuchi-aya* ‘my dogs’
o- bora-aya ‘your friends’ *o-moki kuchi-aya* ‘your dogs’
ko- bora-aya ‘his/her friends’ *ko-moki kuchi-aya* ‘his/her dogs’
cho- bora-aya ‘our friends’ *cho-moki kuchi-aya* ‘our dogs’
ho- bora-aya ‘your.PL friends’ *ho-moki kuchi-aya* ‘your.PL dogs’

Note that *-aya* marks plurality on nominal elements: cf. *bora-aya* ‘friends’ in (5) and *kibi-aya* ‘they’ in (2). This is one reason to assume that Leko heavily relies on nominalization of verbs, cf. *sohchanoayate* in (3), where one finds *-aya* after what I therefore analyze as a nominalizing element *-no*. Further evidence for such an analysis is the fact that we may find the derived verb with *-no* as an adjectival relative clause modifying a noun, and even as an independent nominal phrase followed by a case marker, as shown in (6):

- (6) a. *chilchis-no (yobas)-ki di-min -a -te*
 dance-NOM (man)-DAT 3O-see-PP-MT
 ‘I have seen the dancing (man)/dancer.’
 b. *soboto-ki di-min -a ka-te henwai kis-no-ki*
 soboto-DAT 3O-see-PP be-MT spider kill-NOM-DAT
 ‘He has seen the soboto (a giant flying insect) who killed spiders.’

In (6a) the noun *yobas* ‘man’ is optional, while in (6b) one sees that heavy relative clauses may be dislocated. The last obvious reason to analyse *-no* as a nominalizer is that we then have an explanation for the fact that the possessive markers in (5) are, with the exception of the third person marker, identical to the object markers presented in (4).

3 Object cross-reference

These two features of Leko, the nominal possessive and the verbal object cross-reference systems as presented in (4) and (5), are very striking, cf. the first line of the Herrero doctrine (the first two lines are copied from Lafone Quevedo, the last three represent my reinterpretation):

- (7) *Yachipaique aya yebanocui Dios nem?*
 ¿Hijos mi os decidme Dios hay?
ya-atspai-ki-aya ye-eba-noku-i Dios ne-no-n
 1SG-child-GEN-PL 1O-tell-HOR-VOC God be-NOM-Q
 ‘My children, tell me, does God exist?’

Lafone Quevedo (1905: 51) correctly analysed /i/ or /y/ for first person possessive in *yatspaiki* and /ye/ as the first person object marker ‘me’ in *yebanocui*: ‘I o y es partícula inicial de primera, el *me*, del romance’ (‘I or y is the initial particle for first person, the *me*, from romance’ (translation mine – SvdK)). While he observed the paradigmatic character of the nominal person marking system, he did not notice the small number (some six or seven) of other object cross-reference markers that occur in the text, and by consequence he was not aware of the fact that the paradigms of possessive and object marking are almost identical.

Although the data that were provided to me by my informants made me aware of the existence of object marking from the beginning of my fieldwork, the exact operation of the process remained quite unclear. Object marking is also operative in the process of textual cohesion, i.e. topicalization, and elicited data do not give much evidence on such pragmatic conditions. It was only in 2001 that I was able to tape a number of spontaneously produced texts with Cerilo Figueredo from Karura. The analysis of object marking that will be presented below is mainly based on one of these texts, *Tomaku*, the Bear Story. This tale has a wide distribution all over the Andes and is also known by other groups who live in the Andean foothill region, cf. the Asheninca version in Weber (1987).

3.1 The distribution of cross-reference markers in *Tomaku*, the Bear Story

This version of the story is about half an hour long. Although the data presented below are based on rough and impressionistic counting, the tendencies are clear. As one can imagine, there is quite some Spanish in the text, but the purely Spanish phrases have been left out of the computation. The text contains 1800 words, in some 300 simple and complex expressions. These expressions contain 400 verb forms based on 103 verbal roots. 26 of these roots are Spanish loan verbs that are the target for object cross-reference marking just as easily as Leko roots. Of these 26 Spanish roots, 17 (65%) were used only once in the text. Of the remaining 77 verbal roots, 5 were clearly shared with Quechua/Aymara: *tapusich* ‘ask’, *lamkasich* ‘work’, *yampasich* ‘help’, *yatesich* ‘learn’, *kuch* ‘give’. Of these 77, 26 (only 35%) occurred once.⁴

⁴ This is the same, at face value, counter-intuitive fact that I encountered in the analysis of texts of bilingual Quechua speakers. Both Quechua and Leko rely on rich verbal derivation to express complex meanings, something that is achieved in Spanish by lexical means (the total number of lexical verbs is higher). It might be the case that when these speakers, faced with the problem of having to express a com-

Of the total of 400 verb forms, some 170 are based on an intransitive root (40%). From the remaining 230 based on a transitive root, 135 contain an object cross-reference marker (60%). Some 25 of these are dative markers (20%), half of them realized on the verb *moch* ‘to say’. The important point is that the remaining 110 object markers represent half of the 205 transitive verb forms on which an object cross-reference could have been realized. So, although we see that object cross-reference is an important process in the language, it does not seem to be a purely syntactic process, which one would expect to be exceptionless. Below I will address the question which factors may condition the absence or presence of a cross-reference marker.

3.1.1 Object cross-reference

The main target for object cross-reference is a patient argument of a transitive action verb, as shown in (8):

- (8) *yo-noko* (*era-iki*) *ye-ke-l-a* *ka-te*
 1SG-brother (1SG-DAT) 1O-hit-PP be-MT
 ‘My brother has beaten me up.’

Other viable targets are the goal/recipient argument of the following ditransitive verbs: *kuch* ‘to give’, *ebach* ‘to tell’, *tapusich* ‘to ask’, *kontestasich* ‘to answer’, and the objects of a class of, what I call, directional verbs like *dach* ‘to want’, *sohich* ‘to look at’. The Spanish loan verb *bostasich* ‘to like’ is also a, somewhat deviant, member of this class:

- (9) *on* *kathi* (*era-iki*) *yo-bostas-in-te*
 that chicha (1SG-DAT) 1O-like-NEG-MT
 ‘I don’t like that chicha (maize beer).’

Note that the argument in the scope of the cross-reference marker, if it is lexically realized, must be marked with the case marker *-ki* and normally refers to an animate, preferably human, entity.

3.1.2 Dative cross-reference

The verbs *duch* ‘to speak’, *chosich* ‘to lie’, *somduch* ‘to chat’, *koschoch* ‘to annoy’, *osaich* ‘to abuse’ are second-place verbs, the second argument of

plex meaning are not able to do so with the means provided within the Quechua/Leko system, switch to their second language and make use of a more specific lexical entry stored in their Spanish lexicon.

which must refer to an animate entity which is also obligatorily marked with *-ki*. Just like the verb *moch* ‘to say’, one would expect these verbs to behave like *ebach*, *tapusich* and *kontestasich* that refer to the preferably human goal argument by means of an object marker, but in reality they are always found with a dative cross-reference marker. I assume that these verbs subcategorize for a dative.

Arguments which are often analyzed as a special case of datives, and which almost always refer to an animate entity, are benefactives and malefatives. Such secondary affected persons may be case-marked with *-ki*, but this occurrence is in free variation with the purposive/genitive case marker *-moki*. I therefore analyze *-ki* in these cases as a reduced form of *-moki*. In this way, we may account for the fact that these arguments have the status of an adjunct and are referred to by means of the set of dative cross-reference markers. In fact, one may find a dative marker on almost any verb as an ethical dative marker, cf. (10):

- (10) *on kuchi senen tanta yin-k'o-aka-te*
 that dog all bread 1DAT-eat-PP-be-MT
 ‘That dog ate all the bread, to my detriment.’

3.2.1 Object cross-reference in causative constructions

Object cross-reference marking often occurs in causative constructions, because these are inherently transitive. The morpheme */ki-/* functions both as a lexical verb with the meaning ‘to make’ and as a causative suffix (incorporated verb). The object of the lexical verb normally does not refer to animate entities (unless the subject refers to gods, parents and their like), but Leko has a large number of postural elements that combine with the auxiliary *kach* ‘to be’ or *kich* ‘to make, to do’:

- (11) *bar* ‘flat’ *bar kach* ‘lie flat’ *bar kich* ‘lay flat’
cha ‘seated’ *cha kach* ‘sit’ *cha kich* ‘set’
thes ‘standing’ *thes kach* ‘stand.INTR’ *thes kich* ‘stand.TR’
lewa ‘hanging’ *lewa kach* ‘hang.INTR’ *lewa kich* ‘hang.TR’

The combinations with *kach* are intransitive. The combinations with *kich* are transitive and by consequence viable targets for object marking, realized on the lexical verb, cf. (12b):

- (12) a. *thaq-te cha ka-cha-no-te*
 stone-LOC sit be-DUR-NOM-MT
 ‘He is sitting on the stone.’
 b. *thaq-te cha di-ki-a ka-te*
 stone-LOC sit 3O-make-PP be-MT
 ‘He made him sit on the stone.’

Given the paradigmatic alternation between *kach* and *kich*, it is clear that Leko easily allows nominal elements that in Spanish combine with *hacer* ‘make’ to be combined with *kich*, as shown in (13):

- (13) *hacer caso kaso kich* ‘obey’
hacer daño dañu kich ‘cause damage’
hacer bulla bulla kich ‘make noise’

Object markers are realized on the main verb, which is a reason not to analyze these combinations as cases of noun incorporation:⁵

- (14) *carambas heka dañu yi-ki-a ka-te-s misi-aya*
 damn you damage 1O-make-PP be-MT-PL cat-PL
 ‘Damn, you have caused me trouble, you cats.’ (Bear Story)

When *-ki*, as a causative suffix, is attached to a lexical verb, the object marker is realized to the left of the derived verb:

- (15) a. *hachu hete-cha-no-te*
 sugarcane carry-DUR-NOM-MT
 ‘He is carrying sugarcane.’
 b. *hachu he-hete-ki-cha-no-te*
 sugarcane 3O-carry-CAU-DUR-NOM-MT
 ‘He is making them carry sugarcane.’

⁵ A special case is found in the combination of the Spanish loan *faltaskich* ‘hacer falta’, which selects a dative marker which precedes the whole verb:

- (i) *choswai-ki din-faltas-ki-in-mono-te k’och*
 woman-DAT 3DAT-lack-CAU-NEG-HSAY-MT food
 ‘He did not let the woman be short of food, one says.’ (Bear Story)

These object marking facts also gave me the clue that apart from *-ki*, *-tar* is an element with a causative function. When the verb *koschoch* is realized as an intransitive verb with the meaning ‘to be annoyed’, the affected person has to be referred to by means of a dative marker. However, when it is combined with the suffix *-tar*, the affected element is realized by means of an object marker, just as we found in the causative *-ki* derivations:

- (16) a. *din-koscho-a-mono ka-te fuerte polo-aya*
 3DAT-annoy-PP-HSAY be-MT strong puma-PL
 ‘The pumas really annoyed him, it is said.’ (Bear Story)
 b. *tomako tomako osito osito on do-koscho-tar-no-aya*
 that 3O-annoy-CAU-NOM-PL
 ‘Tomaku, Tomaku, little bear, bear, they made him annoyed.’
 (Bear Story)

3.2.2 Object marking in other higher verb constructions

In the text no realization of the verb *dach* refers to the lexical verb ‘to want’ with a direct object. All instances refer to the modal verb that selects an infinitival sentential object. Leko seems to allow both for a same subject as well as a disjoint interpretation of the embedded subject, although no object marker is realized:

- (17) *ha-ache-ki-ne da-in-mono-te ni ubus-ich hekor*
 3PL-dad-GEN-TOP want-NEG-HSAY-MT not leave-INF outside
 a. ‘Their father did not want them to go outside.’ (reading in Bear Story)
 b. ‘Their father did not want to go outside.’ (possible reading in Spanish)

In the text I found another example that shows that there is an unambiguous way to express the meaning of (17a) in Leko, with an extra causative on the embedded verb. This might, in fact, be the only correct way:

- (18) *korwa-ra chu-ubus-ki-ch da-in mo-no-mono-te*
 door-LOC 1PL.O-leave-CAU-INF want-NEG say-NOM-HSAY-MT
 ‘It is said that she (the mother) said: he does not want to let us leave the door.’ (Bear Story)

A completely different picture emerges in constructions with the Spanish loan verb *dejasich* ‘to let’, which seems to be an object control verb both in Leko and in Spanish:

- (19) *on oso-n de-dejas-in-mono-te ubus-ich hekor*
 that bear -TOP 3O-let-NEG-HSAY-MT leave-INF outside
 ‘The bear did not let him/them go outside.’ (Bear Story)

3.2.3 Object cross-reference in small clause constructions

I have also encountered object cross-reference markers in what may be analyzed as small clause constructions:

- (20) *a-paus-a-te (u-)us*
 2O-forget-PP-MT (2SG-)name
 ‘I have forgotten your name.’ (Bear Story)

Of course, an expression like *apausate* is correct: ‘I forgot you’. So one could argue that (20) is nothing else than a special case of this object construction. I think it is preferable to assume that we encounter a small clause construction here: ‘I forgot you (with respect to) your name’. A similar analysis may be relied on to account for the contrast in (21):

- (21) a. *heka ya-awantas-in-kama-te-noh*
 you 1O-stand-NEG-be.able-MT-2PL
 ‘You cannot endure me.’
 b. *heka-n ni ber puñete ya-awantas-in-kama-te-noh*
 You-TOPnot one punch 1O-stand-NEG-be.able-MT-2PL
 ‘You cannot endure me one punch.’ (Bear Story)

As we see in the first line, the Spanish loan verb *aguantar* ‘endure’ may be combined with an object marker. However, in the second line we find the verb also in construal with *ber puñete* ‘a punch’, so we end up with two objects unless we assume a small clause: [I punch].

3.3 The relation between case, animacy and object cross-reference

Discussing (1) above, I stated that direct objects in Leko are not overtly marked with Case. This is in accordance with the fact that *henwai* ‘the spider(s)’, the direct object of *kisich* ‘to kill’ in (6b), is not case marked. However, in relation with (8), I later argued that the main target for object cross-reference was a patient argument of a transitive verb that had to be marked with the case marker *-ki*, exemplified by the object of the verb *minich* ‘to see’ in the very same sentence (6b), repeated here for convenience:

- (6b) *soboto-ki di-min-a ka-te henwai kis-no-ki*
 soboto-DAT 3O-see-PP be-MT spider kill-NOM-DAT
 ‘He has seen the soboto (large flying insect) who killed spiders.’

This contradiction has to be explained and I will argue that it is not a fortuitous fact that the argument that is case marked is cross-referred to by means of an object marker on the verb, while the object without a case marker is not.

In van de Kerke (2000), the case marker *-ki* was analyzed as the ‘dative’ marker. It is in particular used to mark indirect objects, the animate third argument of ditransitive verbs. To account for the fact that the object of verbs like *sohich* ‘to look at’ and *dach* ‘to want, to like’ are realized with *-ki* and are referred to by means of an object marker, I argued that both these and the third argument of the ditransitives might be analyzed as directional arguments. We might push this argument a little further and argue that the second argument of *minich* ‘to see’ is also a directional argument, but I think that one would push it too far if one would like it to hold for the patient argument of a verb as well. This would be in line with the fact that in (6b) the object of *kisich* ‘to kill’ is not case marked and not referred to by an object marker, but (8) and (22) show that this argumentation cannot be correct:

- (22) *ya-yanas-cha-a-ra di-kis-kam ho animal-ki*
 1O-gain-DUR-PP-LOC 3O-kill-be.able this animal-DAT
 ‘When he is beating me, let’s kill him, that animal.’ (Bear Story)

This also holds for an alternative analysis that one could suggest on the basis of (6b): objects of embedded verbs cannot be case marked and cross-referred to. The embedded verb *yayanaschara* ‘when he is beating me’ in (22) carries a cross-reference marker and the personal pronoun *era-iki* ‘me-dat’ could have been realized just as in (8), if Leko were not a pro-drop language. Given the fact that, prototypically, directional arguments represent animate entities, one might hypothesize that it is preferable to analyze *-ki* as an animacy marker, which would also entail that such arguments are the target for object cross-reference marking. This cannot be the full story since the objects in (6b) are both animates. There must be other ways to differentiate between such objects and I want to conjecture that we find here an interaction with definiteness and referentiality/topicality, two other factors in the definition of what I will call *saliency*. In (6b), the speaker tells about the fierceness of one ‘soboto’, who is the topic of the story, while the ‘spiders’ are not individuated and are only presented as a heap of victims. The saliency spectrum goes from low (an indefinite non-referential/non-topical inanimate) to high (a first or second

person, who is by definition definite, referential and topical). The latter are, in principle, always marked with *-ki* and cross-referred to by an object marker, the first never are. It is in between these two extremes that the speaker can make choices in his presentation.

When the story tells about how Tomaku's mules are eaten by pumas, and the speaker goes into detail on how Tomaku fights with one of these pumas, almost kills him and then ties him with a lasso, we encounter case and cross-reference markers. After all, he seizes a group of ten to force them to do the job of carrying firewood home, but then we do not find *-ki* marked on the object, nor an object marker on the verb:

- (23) *polo-ki-n ber puñete di-ki-a di-kis-bats-a-mono-te...*
 puma-DAT-TOP one punch-3O-do PP-3O-kill-almost-PP-HSAY-MT
 ... *polo-ki-n bar di-ki-a-mono ka-te lehleh ka-cha-no...*
 puma-DAT-TOP flat 3O-make-PP-HSAY be-MT shiver be-DUR-NOM
 ... *laso-ra de-hep-ka-a-mono on polo-ki...*
 lasso-LOC-3O-grab-be-PP-HSAY that puma-DAT
 ... *polo hep-ki-a-mono diez polos hep-ka-a-mono ka-te...*
 puma grab-CAU-PP-HSAY ten pumas grab-be-PP-HSAY be-MT
 'He gave the puma a punch, he almost killed him, it is said; he laid him flat, that puma, it is said; he was shivering; with a lasso he tied him, that puma. Pumas he grabbed, it is said, (a group of) ten pumas he grabbed, it is said.' (Bear Story)

In the last line *polo* 'the pumas' is animate and forms the topic of the story, but it is an indefinite and non-referential nominal phrase. This also suggests the reason why we do not find a case and an object marker in the following fragment:

- (24) *on-da ber nasion-ne kondenado k'o-cha-no-mono ch'aya*
 that-LOC one nation-TOP condemned eat-DUR-NOM-HSAY people
 'There is another nation, one says, where the condemned is eating people.' (Bear Story)

Since *ch'aya* 'people', the object of the verb *k'och* 'to eat', is introduced for the first time, it is by definition not specific (people and not *the* people) and non-referential. The object is not marked with *-ki*, with the consequence that it is not referred to by means of an object marker. In the whole Tomaku text, the noun *ch'aya* occurs three times in object position, but it is never referred to by means

of an object marker, since it is by implication an indefinite. This does not prevent it to be case marked with *-ki*, as we may conclude from another story:

- (25) *baykia hep'aq-ne cho ki-no ch'aya-ki thah-no atspai-ki...*
 big ant-TOP itch CAU-NOM people-DAT bite-NOM child-DAT
... thah-no yobas-ki-as thah-no on hep'aq
 bite-NOM man-DAT-also bite-NOM that ant
 'The big ant (type) makes one itch, it bites people, children; it bites, it also bites men, that ant.' (Ant Story)

In this fragment we see that *ch'aya* 'people' is treated in the same way as *atspai* 'child' and *yobas* 'man'. As objects of the verb *thahich* 'to bite', they are case-marked but these nouns are not referential and thus cannot be referred to by means of a cross-reference marker. A comparable case is found in the following fragment:

- (26) *chera hote-te-an ho lal-da dañino-aya soboto on-ne...*
 we with-MT-1PL this earth-LOC harmful-PL insect that-TOP
... on soboto-n kis-no-te k'eso-ki kis-no-te henwai-ki...
 that insect-TOP kill-NOM-MT snake-DAT kill-NOM-MT spider-DAT
... kibi kel-mo-cha-a-ra k'eso-i hap k'eso-i...
 he beat-REC-DUR-PP-LOC snake-COM hap snake-COM
... on-chka do-soh-in-kama-te ni ha-ka on animal-ki...
 that-near 3O-look-NEG-be.able-MT not who-as that animal-DAT
 'We have in this region harmful creatures, one is the *soboto*; that *soboto* kills snakes, it kills spiders; at the moment it is fighting with a snake, with a *hap* snake from nearby no one can look at him, at that animal.' (Soboto Story)

Just as in the preceding example we see that generic NPs like *k'eso* 'snake' and *henwai* 'spider' may receive a case marker, but there is no object cross-reference on the verb. The case for the *soboto* is completely different. In the first line it is introduced as a generic NP, and it then becomes the topic of the story. It is still generic in interpretation, but it may be referred to by means of a subject pronoun in the third line. It is so salient that it is referred to by means of an object cross-reference marker when it is presented in the last line as the object of the verb *sohich* 'to look at'.

Generally, human third persons are much more individuated. When they are introduced in the text and become the subject of discussion (topic), they are normally cross-referred to by means of an object marker, but not always:

- (27) *ne-no taaqber yobas, ber yobas-ne choswai-hote taaq-te...*
 be-NOM PST one man one man-TOP woman-with PST-MT
... on yobas-ki, kibi nos lamkas-no taaq-te,...
 that man-DAT he far work-NOM PST-MT
...ko-moki choswai-nenu-no taaq-te ki-ich-ra...
 3SG-GEN woman-TOP-send NOM-PST.MT 3SG-field-LOC
 ‘Once there was a man, that man used to be with a wife (married), that man, he used to work far away, his wife used to send (him) to his/her field.’ (Bear Story)

In the third line of (27) the direct object *yobas* of the verb *nunich* ‘to send’ should have been cross-referred to by an object marker on that verb. The referent is human, it is the topic of the story and is marked with *-ki* case. However, this fragment represents the introduction of the story and in the first line the stage is set for ‘a man’, of whom we are immediately informed that he has ‘a wife’. So, both of them are viable topics for further information. It is in this unclear situation that the speaker wants to create a very complicated expression by fronting the direct object, then adding extra information to facilitate a good interpretation of what follows, then realizing that the subject of the clause picks up information that has recently been given and therefore has to be topicalized. Given this clash, it might be the case that not all conditions for cross-reference were fulfilled, possibly by a locality constraint.

The reverse situation is presented in (28). In other texts, I encountered instances of highly salient inanimate objects marked with *-ki*, but in the whole Tomaku story not one inanimate object is marked with *-ki*. I found only one clearcut case of an inanimate object that is referred to by means of an object cross-reference marker, presented in (28). The few other cases involved body parts which are by nature almost as animate as the body they are part of.

- (28) *ber mesa chika-la phel-a mesa-te sok’och chika-la soncho-no...*
 one table very-well lay-PP table-LOC food very-well smell-NOM
...hichis-cho-no tomaku on do-k’o-a-mono ka-te...
 hunger-DES-NOM that 3O-eat-PP-HSAY be-MT
 ‘There was a table very well laid out, on the table food, very well it smelled. He felt hungry, tomaku; he ate it, it is said.’ (Bear Story)

In the first line of (28), *sok’och* ‘food’ is introduced as an indefinite. Then follows the reason for the subsequent ‘eating’ event, and although the noun is not repeated we know that ‘the food’ is topicalized and definite, since it is referred to by means of an object marker.

4 Conclusion

The present overview has shown that Leko heavily depends on object cross-reference markers to take the place of full referential NPs. In this sense they act like pronominal elements, but the problem is that their use is not unconstrained and not fully predictable. The constraints are syntactic/semantic but also pragmatic. Object cross-reference is restricted to the patient argument of transitive and the goal argument of ditransitive verbs. Syntactically, this is visible in the strong coincidence between *-ki* and object marking, since the latter may only occur when an argument with *-ki* is realized or could have been realized. With the ditransitives, object cross-reference with the goal is almost obligatory since this argument almost always refers to a human entity. It is with the patient argument of normal transitive verbs that we find variation which is induced by an animacy hierarchy in combination with a definiteness effect. We may rely for Leko, just as for so many other languages, on a hierarchy as in (29):

(29) human (1ps, 2ps > 3ps definite) > animate definite > inanimate definite

In combination with topicalization this boils down to a saliency hierarchy: speaker and addressee are always salient. Third persons, either human or animate may be highlighted and become salient, just as inanimates but normally to a rather low degree. So we see the higher end of the hierarchy exemplified by a human object in (6a) and an animate object in (6b), both marked with *-ki* and cross-referred to by an object marker. The lower end is exemplified by an indefinite animate object in (6b), an abstract and a sentential object in (1), all of them without case-marking and without cross-reference marking on the verb.

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