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The syntax of three-argument verbs in Chintang and Belhare (Southeastern Kiranti)

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1 Introduction

This chapter is a case study of three-argument verbs in the Southeastern subbranch of Kiranti, a Sino-Tibetan group of languages spoken in Nepal. The Southeastern subbranch of Kiranti is also known as the Greater Yakkha family (van Driem 2001), but 'Yakkha' coincides with the name of a language in this group for which have no data available, and using the name would risk misidentification of what our chapter can possibly cover.[1] The data that we have available for exploring ditransitives comes from two languages of the group: Chintang (ISO639.3: ctn) and Belhare (ISO639.3: byw). On Chintang, we have a relatively large text corpus (ca. 270,000 words) and lexicon (ca. 6,000 entries) available, but only the beginnings of syntactic analysis. On Belhare, we have only limited quantities of corpus data but syntactic analyses of a range of structures (cf., e.g., Bickel 2003a, 2004).[2]

Our analytical focus is on how three-argument verbs align their syntactic case assignments and how these alignments interact with the syntax of grammatical relations in complex structures. Like in many other languages, some verbs seem to favor a direct object, others a primary object

[1] Van Driem (2001) classifies Chintang as Central Kiranti, but this was apparently based on insufficient data. Chintang participates in all regular sound changes known to separate Eastern Kiranti (including its Southeastern subbranch) from Central and Western Kiranti, most notably aspiration of preglottalized proto-initials.

[2] Research on Chintang has started in 2004, with funding from the Volkswagen Foundation (DOBES Grant Nos. BI 799/1-2 and II/81 961). Research on Belhare was conducted by the first author between 1990 and 1999, with funding from the *Deutsche Forschungsgemeinschaft* (1990-1992, 1995-1998), the Max Planck Society (1992-1995), and the Swiss National Science Foundation (1998-1999). Author contributions are as follows: B. Bickel did the main analysis and write-up, M. Rai analyzed the lexical semantics based on his Chintang native speaker intuitions, N. Paudyal elicited a substantial portion of syntactic patterns; all authors contributed to the text corpus and dictionary. The first author presented a preliminary version of the analysis at the ditransitive conference in 2007 in Leipzig and would like to thank the audience for stimulating questions and comments. We are also indebted to Martin Haspelmath and Andrej Malchukov for helpful comments on a first draft. Special thanks go to our main informants Rikhi Maya Rai, Janak Kumari Rai, Lash Kumari "Renuka" Rai, Durga Kumari Rai, Ganesh Rai, and Daya Bahadur Rai for double-checking the data and helping us with their syntactic intuitions.

alignment, i.e. some verbs treat the theme argument in the same way as the sole object argument of monotransitives, while others treat the goal or recipient argument in the same way as the sole argument of monotransitives. Yet another group of verbs follows a double object alignment pattern, where all object arguments are treated alike. While direct object alignment seems to be the default in the lexicon, primary and double object alignment is favored whenever goal arguments are specially affected and central to the event. This is possibly related to historical sources in a Proto-Tibeto-Burman applicative marker.

After a methodological discussion of what we understand by ditransitives for the purpose of this study (Section 2), we first analyze alignment patterns across a number of syntactic structures (Section 3) and then (Section 4) survey the distribution of case alignment patterns in the Chintang three-argument verb lexicon.

2 Methods and definitions

The editors of the volume restrict the term 'ditransitive' to verbs used in constructions denoting a physical or mental transfer of a theme T to a recipient R by an agent A (Malchukov et al. 2009). However, in order to understand alignment patterns and alternations thereof, it is necessary to extend the purview of research to other three-argument verbs because these verbs share specific properties with transfer verbs. We will note, for example, that the subset of transfer verbs favoring primary object alignment behaves like verbs of covering and wrapping, while transfer verbs favoring direct object alignment behave like verbs of deformation. In order to understand these associations and their underlying principles, one needs to survey the entire lexicon of three-argument verbs, with no particular focus on physical or mental transfer verbs. It may turn out that transfer verbs form a kind of universal prototype for three-argument verbs, and that other predicates are extensions of this prototype, but we see this as an empirical issue and do not wish to assume it as an an *a priori* principle.

What, then, are three-argument verbs? Margetts & Austin (2007) define three-argument verbs as all those verbs denoting three-participant events (including non-recipient events like 'pour', 'cover', 'kick' etc.) which in at least one language are syntactically encoded as three-argument predicates. Lacking in-depth typologies of argumenthood syntax, however, we prefer a strictly semantic criterion of argumenthood: an NP is an argument iff it is assigned a semantic role by a predicate, as shown by semantic entailments in the sense of Dowty (1991). Obviously, this leads to a very laborious method, as it requires detailed and difficult lexical semantic analysis. But note that this is also required if one limits ditransitives to verbs assigning the role 'recipient' (as opposed to, say, 'animate goal'), and it is part of regular linguistic fieldwork and analysis anyway.

If we generalize our purview to three-argument verbs, how can the two non-agentive arguments of such verbs be distinguished? Clearly, a 'recipient' vs. 'theme' opposition is semantically too narrow, as it excludes many three-argument verbs. As an alternative, we assume the generalized role framework adopted in Bickel & Nichols (2009) and Bickel (in press): generalized argument roles are first defined by the number of arguments of the verb; then, if there is more than one argument, arguments are distinguished by Dowty-style entailment tests, distinguishing more agent-like from less agent-like arguments. Given this, one-argument verbs define one argument (S). Two-argument verbs define an agent-like (A) and a non-agent-like (O) argument.

Three-argument verbs define an agent-like (A) and two non-agent-like arguments. For these two non-agent-like arguments, we assume a basic distinction between an affected, stationary G argument (for 'goal') and a manipulated, moved T argument (for 'theme'). The relevant entailments identifying G are:[3]

(1) Entailments contributing to the more patient-like role G in ditransitives:
   a. undergoing a change of state or in experience (*give **him** sth., show **him** sth.*)
   b. causally affected by another participant (*cut **it** with sth., load **it** with sth.*)
   c. stationary relative to movement of another participant (*load **it** with sth.*)

This provides us with a general analytical tool for studying how a lexicon carves up the space of three-argument verbs in terms of case alignment: some languages — like for example the Nakh-Daghestanian language Chechen (Daniel et al. 2009, in this volume) — may be extremely homogenous, and nearly all three-argument verbs align T with O. Other languages — like English or Chintang and Belhare — have splits, with some lexical classes aligning T with O, others aligning G with O, and still others treating T, G, and O all alike. As we will see in the following sections, the alignments based on case marking are not necessarily the same as those found in other syntactic structures such as raising or passivization possibilities. This is entirely parallel to lexical splits known in classical alignment typology, as when split intransitivity ('split-S') leads to some verbs aligning S with A, others aligning S with O in some syntactic structures but not in others (cf. Bickel in press, Bickel & Nichols 2009).

Our approach to argument roles differs in some respects from well-known typologies like, for example, that of Dixon (1994): in our approach, argument roles are strictly defined by semantic entailments and are therefore fully independent of how grammatical patterns (constructions, processes) apply to roles. The application of such patterns leads to selecting sets of roles, e.g. a particular nominative case in some language selects the set of S and A since it assigned to S and A only; or a particular agreement marker selects S and A because it is triggered by S and A only. Passivization may lead to the inclusion of O in such a set, but because roles are defined purely semantically, passivization does not turn O into S – instead, it extends the definition of the argument set from {S,A} to {S, A, passivized-O}. Argument sets in this sense capture a core dimension of what is traditionally known as 'grammatical relation' (Bickel in press). Another consequence of our approach is that argument roles can in principle be associated with any grammatical treatment, including what one would traditionally take to be adjunct-like treatment. For example, if a goal argument is semantically entailed by a verb, it qualifies as an argument even if it is marked and treated like an adjunct: the goal argument of English *go* qualifies as an O argument, the goal argument of *pour* as a G argument, regardless of their optional status and adpositional marking. Likewise, if passivization makes an A argument optional, this does not mean that it is no longer an A (it still is), but only that a it does not belong to the set selected by constraints on obligatory NPs.

[3] This follows Dowty (1991), except that Dowty also discusses an 'incremental theme' property as relevant for distinguishing between the two non-agent-like arguments of three-argument verbs. This property seems to us derived from Aktionsarten on the verb phrase or clause level, and not grounded in semantic roles.

3 Alignment across syntactic structures

In what follows, we present and discuss how T and G arguments are treated across syntactic structures, beginning with case assignment and then addressing most of the issues covered by the editors' questionnaire (Malchukov et al. 2006). Except where noted, all data are from Chintang, and the generalizations made about Chintang also hold of Belhare.

3.1 Case

Table 1 contains the Chintang case paradigm. The Belhare paradigm (Bickel 2003a) has basically the same structure, except that ergatives/instrumentals and ablatives are separated (*-ŋa* ∼ *-a* 'ergative, instrumental' vs. *-huŋ* ∼ *-etnahuŋ* 'ablative'). One peculiarity of the Belhare case paradigm is that the nominative has a non-zero allomorph with a few pronominal stems (e.g. *sa-ti* 'who-NOM' vs *sa-ŋa* 'who-ERG', *sa-lam* 'who-MED' etc.).

Apart from the cases listed in Table 1, some Chintang and Belhare speakers occasionally borrow the Nepali dative marker *-lai* on O and G arguments. Our Chintang corpus contains a handful of occurrences. In line with this rare occurrence, the use of this marker is highly idiosyncratic and reflects aspects of code-switching rather than aspects of Chintang or Belhare syntax.

Label	*Form*	*Meaning*
NOM	∅	S, O, T, G, predicate nominals; with some experiential verbs, also A (experiencers)
ERG, INS, ABL	*-ŋa* ∼ *-yã*	A (but not with first person and only optionally with second person pronouns), instruments, causes, forces, sources, manners
GEN	*-ko*	possessors, attributive nouns in NPs
COM	*-niŋ*	accompanying referents (NPs) or situations (clauses)
MED	*-lam(ma)* ∼ *-lamŋa*	'via, through, from, in (e.g. language X)'
ALL	*-samma* (< Nep.)	'until, up to'
DIR	*-ni*	'towards, in the direction of'
LOC	*-be(ʔ)* ∼ *-iʔ* ∼ *-bak* ∼ ∅ (spatial nouns)	'at, in, on, to'
UP	*-ndu*	'up at, in, on, to'
DOWN	*-mu*	'down at, in, on, to'
ACROSS	*-ya*	'across at, in, on, to'

Table 1: Chintang case suffixes and their functions

The distribution of case marking reveals three distinct lexical valency classes for three-argument verbs: double object (with O, G and T all in the nominative), primary object (with O and G in the nominative, and T in the instrumental), and direct object (with O and T in the nominative and

G in the locative or directional case). The three classes are illustrated by the following Chintang data:[4]

(2) Double object (O, G, T as NOM)

a. *huĩsa-ŋa pheʔwa u-kam hakt-e.*
DEMs-ERG money[-NOM] 3sPOSS-friend[-NOM] [3sA-]send.to-PST[-3sP]
'He sent his friend money.'

b. *huĩsa-ŋa hana chatta na-bopt-e.*
DEMs-ERG 2s[-NOM] umbrella[-NOM] 3>2-cover-PST
'She covered you with an umbrella.'

c. *akka u-phari pid-a-hã=o!* [CLLDCh3R02S06.128]
1s[-NOM] 3sPOSS-half[-NOM] give-IMP-1sP.IMP
'Give me half of it!'

(3) Primary object (O and G as NOM; T as INS)

a. *a-ma-ŋa hana munjei-ŋa na-bhukt-e.*
1sPOSS-mother-ERG 2s[-NOM] shawl-INS 3>2-cover-PST
'Mother covered you with a shawl.'

b. *athomba gol-ŋa rame or-o-ŋs-e.* [CLLDCh1R13S02.1242]
before ball-INS R.[-NOM] throw.at-3sP-PERF-PST
'He has hit Rame with a ball before.'

c. *hana ara-ŋa sɨŋ a-hekt-o-ko.*
2s[-NOM] saw-INS wood[-NOM] 2sA-cut.with.saw.like.instrument-3sP-NPST
'You cut wood with a saw.'

(4) Direct object (O and T as NOM; G as LOC or DIR)

a. *akka musa-ko u-chau=ŋa hiranne musa-be=lo*
1s[-NOM] mouse-GEN 3sPOSS-child=EMPH[-NOM] H. mouse-LOC=PTCL
basa-ŋa=na u-paŋs-e-hẽ. [mouse_story.145]
DEM.PROX-ABL=PTCL 3nsA-send-PST-1sP.PST
'They sent me, a mouse child, to Hiraṇya Mouse, just like this!'

b. *huĩsa-ŋa cuwa gagri-be phatt-e.*
DEMs-ERG water[-NOM] large.container-LOC [3sA-]fill-PST[-3sP]
'S/he filled the *gāgrī* with water.

c. *huĩsa-ŋa dabai u-narek-be yokt-e.*
DEMs-ERG medicine[-NOM] 3sPOSS-ear-LOC [3sA-]apply-PST[-3sP]
'S/he put some medicine onto his/her ear.'

[4] Data without a reference to a recording session in square brackets were produced by those of us who are native speakers or were elicited from native speakers. Session labels beginning with CL are from our longitudinal child language corpus, but all sentences cited here were uttered by adults and judged as regular by other speakers. Glossing conventions are explained at the end of the chapter.

Pronouns and lexical nouns do not show any difference in the assignment of cases to O, T and G, i.e. there is no differential object marking.[5]

3.2 Agreement

By contrast to case marking, agreement morphology only shows two alignment patterns: primary object (O=G) and direct object (O=T) agreement. Primary object agreement is found with all verbs that have either primary object or double object case assignments. This is illustrated by (2) and (3) above. Direct object agreement is limited to verbs that have a direct object case alignment pattern, as found in (4).

The agreement system is not subject to a person-role constraint of the kind discussed in Haspelmath (2004). Agreement is always with the G argument, regardless of the choice between different person features between lexical nouns or pronouns:

(5) a. *huĩsa-ŋa huŋ=go hana khaŋ na-mett-e.*
DEMs-ERG DEMs=NMLZ[-NOM] 2s[-NOM] see 3>2-cause-PST
'He showed him to you.'

b. *huĩsa-ŋa hana huŋ=go khaŋ mett-e.*
DEMs-ERG 2s[-NOM] DEMs=NMLZ[-NOM] see [3sA-]cause-PST[-3sP]
'He showed you to him.'

c. *huĩsa-ŋa akka mastar khaŋ u-mett-e-hẽ.*
DEMs-ERG 1s[-NOM] teacher[-NOM] see 3sA-cause-PST-1sP
'He showed the teacher to me.'

d. *huĩsa-ŋa mastar akka khaŋ mett-e.*
DEMs-ERG teacher[-NOM] 1s[-NOM] see 3sA-cause-PST[-3sP]
'He showed me to the teacher.'

Transitive verbs can also be inflected intransitively, in which case there is no object agreement. While the resulting structure is very common throughout the Kiranti family, each language shows different semantic and syntactic properties and shares various properties with incorporation, antipassivization and agreement suspension; see Bickel et al. (2007b) for some typological discussion. For terminological convenience, we refer to all cases of intransitively inflecting transitive verbs as resulting from '**detransitivization**'.

In Chintang and Belhare, detransitivizing ditransitive verbs has the effect that both the T and the G argument must be understood as having non-specific reference. Consider the following data:

(6) a. *piʔ ghãsa pid-u-hẽ.*
cow[-NOM] grass[-NOM] give-3sP-1sA.PST
'I gave grass to the cow.'

[5] There is, however, differential subject marking insofar as in Chintang, ergatives are banned from first person pronouns and are optional on second person pronouns; in Belhare, ergatives are banned from first person singular pronouns but obligatory in all other contexts.

b. *pi?* *ghãsa* *pid-e-hẽ.*
cow[-NOM] grass[-NOM] give-PST-1sS.PST
'I gave grass to cows.'

Sentence (6a) shows agreement with both the A (1s) and the G (*pi?* 'cow') argument, while (6b) is detransitivized and only shows intransitive agreement, here with the A argument.[6] The reference of both the T and G argument in (6b) is non-specific, implying a general activity of feeding cows. As a result of this, neither of the object arguments in these structures can be specified for number or modified by, for example, a demonstrative like *bago* or *huŋgo* 'this'. Modifiers with adjectival meaning, e.g. *hariyo* 'green', which do not impose specific reference, are possible:

(7) a. * *ba=go* *pi?* *ghãsa* *pid-e-hẽ.*
DEM.PROX=NMLZ cow[-NOM] grass[-NOM] give-PST-1sS.PST
'I gave grass to this cow.'

b. * *pi?* *huŋ=go* *ghãsa* *pid-e-hẽ.*
cow[-NOM] DEM=NMLZ grass[-NOM] give-PST-1sS.PST
'I gave this grass to cows.'

c. *pi?* *hariyo ghãsa* *pid-e-hẽ.*
cow[-NOM] green grass[-NOM] give-PST-1sS.PST
'I gave green grass to cows.'

In line with this, it is impossible to use personal names or possessed NPs in detransitivized structures. In the following data, (8a) is a transitive structure; (8b) is a possible detransitivized alternative of this, while (8c) is not possible because it contains an object argument with specific reference:

(8) a. *huĩsa-ŋa* *Ɉoge* *citthi* *hakt-o-ko.*
DEMs-ERG J.[-NOM] letter[-NOM] [3sA-]send-3sP-NPST
'He sends the letter to Joge.'

b. *huŋ=go* *kam* *citthi* *hak-no.*
DEMs=NMLZ[-NOM] friend[-NOM] letter[-NOM] [3sS-]send-NPST
'He sends letters to friends.' (in general)

c. * *huŋ=go* *Ɉoge/u-kam* *citthi* *hak-no.*
DEMs=NMLZ[-NOM] J.[-NOM]/3sPOSS-friend[-NOM] letter[-NOM] [3sS-]send-NPST
Intended: 'He sends letters to Joge/his friend.' (in general)

The semantic and syntactic effects of detransitivization are the same with primary object and direct object verbs. This is shown by the following data, with the *a*-sentences containing plain transitive and the *b*-examples detransitivized forms. In each case, the detransitivized versions imply non-specific T and G arguments, and neither T or G could be modified by a demonstrative or marked as possessed:

[6] As explained in the section on glossing conventions at the end of the paper, we gloss intransitive agreement as 'S' agreement, although this agreement can be triggered by A arguments as well, if they are detransitivized.

(9) a. *(a-)kam* *(a-)gol-ŋa* *or-u-hẽ.*
(1sPOSS-)friend[-NOM] (1sPOSS-)ball-INS throw-3sP-1sA.PST
'I hit[7] (a/my) friend with (a/the/my) ball.'

b. *(*a-)kam* *(*a-)gol-ŋa* *or-e-hẽ.*
(1sPOSS-)friend[-NOM] (1sPOSS-)ball-INS throw-PST-1sS.PST
'I hit friends with balls.' (in general)

(10) a. *(a-)kam* *(a-)khim-be* *paŋs-u-hẽ.*
(1sPOSS-)friend[-NOM] (1sPOSS-)house-LOC send-3sP-1sA.PST
'I sent (a/my) friend to (a/the/my) house.'

b. *(*a-)kam* *(*a-)khim-be* *paŋs-e-hẽ.*
(1sPOSS-)friend[-NOM] (1sPOSS-)house-LOC send-PST-1sS.PST
'I sent friends home.' (in general)

3.3 Passivization

The detransitivized structures discussed in the previous section are similar to antipassives insofar as they involve intransitive verb inflection and assignment of nominative instead of ergative case to the A argument. Eastern Kiranti languages also have passive forms, where objects end up treated the same way as S arguments (nominative case, intransitive verb inflection). Typically, passives are limited to nonfinite, participial forms, which can be used both as modifiers in NPs and as main clause predicates. In either function, the forms are used relatively rarely, however.

The following data illustrate passives in Chintang for double object (11), primary object (12), and direct object (13) verbs. Participial clauses are usually, though not obligatorily, supported by a copular clitic *kha* (which also functions as a focus marker).

(11) a. *akka* *Ɉoge* *chembi* *pid-u-hẽ.*
1sNOM J.[-NOM] money[-NOM] give-3sP-1sA.PST
'I gave money to Joge.'

b. *chembi* *pi-mayaŋ=kha.*
money[-NOM] give-PASS.PTCP=COP
'Money was given (to him/her/someone[8])'.

c. *Ɉoge* *pi-mayaŋ=kha.*
J.[-NOM] give-PASS.PTCP=COP
'Joge was given it/something'.

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[7] The verb *or-* refers to a ballistic motion of a T argument towards a G argument, including a successful impact on G; English translations need to vary between 'throw' and 'hit'.

[8] Note that dropped pronouns can have any kind of reference, including indefinite reference, in these languages. Thus, a sentence like *khade* '[3sS-]go-PST' can mean 'someone went' or 's/he went'. Pronouns are not very frequent in actual discourse (see Bickel 2003b).

(12) a. *huĩsa-ŋa gol-ŋa Rame or-e.*
DEMs-ERG ball-INS R.[-NOM] [3sA-]throw-PST[-3sP]
'She hit[9] Rame with a ball.'

b. *Rame (gol-ŋa) o-mayaŋ=kha.*
R.[-NOM] ball-INS throw-PASS.PTCP=COP
'Ram was hit (by a ball).'

c. *gol (Rame) o-mayaŋ=kha.*
ball[-NOM] R.[-NOM] throw-PASS.PTCP=COP
'The ball was thrown (at Rame).'

(13) a. *Ɉoge-ŋa Anita Rikhi-be paŋs-e.*
J.-ERG A.[-NOM] R.-LOC [3sA-]send-PST[-3sP]
'Joge sent Anita to Rikhi.'

b. *Anita paŋ-mayaŋ=kha.*
A.[-NOM] send-PASS.PTCP=COP
'Anita was sent somewhere.'

c. * *Rikhi paŋ-mayaŋ=kha*
R[-NOM] send-PASS.PTCP=COP
Intended: 'Rikhi was sent someone.'

These data suggest that double object and primary object verbs allow passivization of both the T and G arguments, while direct object verbs only allow passivization of T arguments. Note that Chintang passives do not allow overt expression of A arguments (e.g. inserting *Ɉoge-ŋa* 'Joge-ERG' in any of these sentences would be ungrammatical). Some speakers suggest, however, that the forms imply a first person plural agent. We are not sure what conditions this intuition.

Belhare has basically the same pattern of participial passives, but in addition there are also two finite passives. One of these is based on the perfect tense, the other involves a special morpheme signaling adversative meaning. In either case, only the O or G argument can be passivized (cf. Bickel 2003a, 2004):

(14) Belhare

a. *Maiti-pa piu-ŋa-ha.*
M.-father [3sS-]give-INTR.PERF-PERF
'Maiti's father was given (something).'

b. *Maiti-pa lu-khaca-he.*
M.-father [3sS]-tell-ADV.PASS-PST
'Maiti's father was told off.'

The adversative passive is semantically incompatible with benefactive predicates like *pir-* 'to give'. The restriction to G arguments seems to follow from the fact that T arguments tend to be inanimate while the adversative passive signals a negative impact on an animate argument. This would be similar to what Malchukov et al. (2009) argue for Even.

[9] Cf. Note 7

3.4 Raising

In both Chintang and Belhare some matrix verbs can show agreement with the O or G argument of an embedded infinitival clause.[10] If the agreement trigger is overt, it is preferentially placed before the infinitival clause, but there is evidence from case assignment that the agreement trigger belongs to the main clause (cf. the discussion of primary-object verbs in (17) below). Therefore, we analyze the construction as raising, although at first sight, it could also be taken to reflect long-distance agreement.

The following data illustrate raising in Chintang, based on the raising predicate *kon(d)-* 'must, should'.

(15) a. *(hana) lauri-ŋa teĩ-ma a-kon-no!* [CLLDCh1R11S02.171]
(2sNOM) stick-INS beat-INF 2sS-should-NPST
'(One) should beat you with a stick!' (*not:* 'You should beat someone/him/her/it with a stick!')

b. *kitap-ce pi-ma u-kon-no.*
book-ns[-NOM] give-INF 3nsS-should-NPST
'They should be given books.' (*not* 'He should be given books.')

In (15a) the agreement trigger is O, in (15b) it is G. (15b) also demonstrates that an embedded T argument cannot be raised: even though the person and number features in the agreement marker of the matrix verb (*ukonno* 'they must', with third person nonsingular agreement) would match the number features of the lower T argument (*kitapce* 'books'), they must reflect a corresponding (but unexpressed) G argument in the embedded clause. This excludes a reading with a third person singular G argument. Like T arguments, A arguments are also excluded from raising. Therefore, in order to express the meaning intended in (16a), one needs to resort to either a construction raising the O argument as in (16b) (parallel to 15a) or to an impersonal, non-raising construction as in (16c) (similar to French *il faut*-constructions, except that Kiranti infinitives license the full range of overt arguments, with no deletion necessary). The two variants in (16b) and (16c) have the same truth values:

(16) a. * *hun-ce (hana) lauri-ŋa teĩ-ma u-kon-no.*
DEM-ns[-NOM] (2s[-NOM]) stick-INS beat-INF 3nsS-should-NPST
Intended: 'They should beat you with a stick.'

b. *hun-ce-ŋa (hana) lauri-ŋa teĩ-ma a-kon-no.*
DEM-ns-ERG (2s[-NOM]) stick-INS beat-INF 2sS-should-NPST
'They should beat you with a stick.'

c. *hun-ce-ŋa (hana) lauri-ŋa teĩ-ma kon-no.*
DEM-ns-ERG (2s[-NOM]) stick-INS beat-INF should-NPST
'They should beat you with a stick.'

[10] Agreement with an embedded S argument is impossible in Chintang, but possible in Belhare; see Bickel (2004) for discussion.

With primary object verbs, both T and G can be raised. Consider the following data, where (17a) shows a plain transitive structure while the other sentences involve raising.

(17) a. *huĩsa-ŋa gol-ŋa hana na-or-e.*
DEMS-ERG ball-INS 2sNOM 3>2-throw-PST
'He hit[11] you with a ball.'

b. *(gol-ŋa) o-ma a-kon-no.*
(ball-INS) throw-INF 2sS-should-NPST
'Someone should hit you (with a ball)'

c. *gol-ce o-ma u-kon-no.*
ball-ns[-NOM] throw-INF 3nsS-should-NPST
'Someone should throw balls (to someone/him/her).' ('Balls should be thrown')

d. *gol-ce-ŋa o-ma u-kon-no.*
ball-ns-INS throw-INF 3nsS-should-NPST
'Someone should hit them/some people with balls.' (*not:* 'Someone should throw balls (to someone/him/her).')

e. *hun-ce-ŋa gol-ce-ŋa hana o-ma kon-no.*
3-ns-ERG ball-ns-INS 2s[-NOM] throw-INF [3sS]-should-NPST
'They should throw the balls to you.'

(17b) demonstrates raising of the G argument. In (17c), the T argument is raised. Crucially, the T argument is re-assigned to the nominative case, in line with its function as a raised argument of the intransitively inflected matrix. If the T argument is not raised, it is (obligatorily) assigned the instrumental case by the embedded infinitive (as is the case in 17b). As a result, the matrix verb agreement marker *u-* '3nsS' in (17d) cannot refer to the T argument but only to an (unnamed) third person nonsingular G argument. Raising of A arguments is again impossible. Apart from raising instead the T or G argument, an alternative is the impersonal construction in (17e), parallel to (16c) above.

Direct object verbs behave differently from both double object and primary object verbs. They constrain raising to T arguments. Example (18a) shows a plain transitive main clause, the other examples show raising constructions:

(18) a. *hana akka-be na-paŋs-e.*
2s[-NOM] 1s-LOC 3>2-send-PST
'He sent you to me.'

b. *paŋ-ma a-kon-no.*
send-INF 2sS-should-NPST
'Someone should send you (somewhere).'

c. *akka paŋ-ma koi-yaʔã.*
1s[-NOM] send-INF should-1sS.NPST
'Someone should send me to you' (*not:* 'Someone should send you to me.')

[11] See Note 7.

d. *hun-ce-ŋa hana akka-be paŋ-ma kon-no.*
DEM-ns-ERG 2s[-NOM] 1s-LOC send-INF should-NPST
'They should send you to me.'

(18b) illustrates raising of a T argument, and (18c) shows that it is impossible to raise a G argument with these verbs: if the matrix verb agrees with a first person argument, this must be understood as referring to a raised first person T argument. Like before, raising of an A argument is impossible and in order to convey a meaning like 'They should send you to me', one possibility is again an impersonal construction, as shown in (18d).

3.5 Attributive and relative clauses

Like in many languages of Asia (Comrie 1998), the basic structure used for translating relative clauses in Chintang and Belhare involves a general, all-purpose attributive syntax, which is not specialized for relativization but covers all kinds of clausal (and non-clausal[12]) attributes and nominalizations:

(19) a. *khad-a=go kam*
go-PST=NMLZ friend
'the friend who went'

b. *tub-o=go kam*
[3sA-]meet-3sP=NMLZ friend
'the friend whom he met' *or* 'the friend who met him'

c. *akka Ɉoge-ŋa u-pid-a-ŋ=go pempak lims-akt-e*
1s[-NOM] J.-ERG 3sA-give-PST-1sP=NMLZ bread[-NOM] [3sS-]tasty-IPFV-PST
'The bread that Joge gave me was tasty.'

d. *akka pempak pid-u-ŋ=go duwacha ti-e.*
[2sNOM] bread[-NOM] give-3sP[-PST]-1sA=NMLZ boy[-NOM] [3sS-]come-PST
'The boy I gave the bread to came.'

e. *Kathmandu khad-a-ŋ=go khabara a-khems-e?*
K.[LOC] go-PST-1sS=NMLZ news[-NOM] 2sA-hear-PST[-3sP]
'Did you hear the news that I went to Kathmandu?'

As a result of this, there are no constraints on what can be relativized: S as in (19a), A or O as in (19b), T in (19c) and G in (19d). The same syntax is also used for what is sometimes called 'fact-S' sentences, as illustrated by (19e).

The only exception to this involves internally headed relative structures in Belhare (Bickel 2004). These are limited to relativization of S, O and T (i.e. involve syntactic ergativity), but in actual discourse they are rarely used (and unattested so far in Chintang):

[12] cf., for example, the use of *=go* after demonstrative stems in many examples.

(20) Belhare

a. *asen ma?i khoŋs-a=na nis-e-ŋ.*
yesterday man[-NOM] [3sS-]play-SBJV.PST=ARTs see-PST[3sP]-1sA
'I saw the guy who played yesterday.'

b. *tombhira-ŋa wa sei?-s-u=na chitt-he-m.*
lynx-ERG chicken[-NOM] [3sA-]kill-TRANS.PERF-3sP=ARTs meet-PST[-3sP]-1pA
'We found the chicken that the lynx had killed.' (*not:* 'We found the lynx that had killed the chicken.')

c. *asenle paisa mai-khut-piu-sa=na n-chitt-he.*
before money[-NOM] 1sP-steal-BEN-TRANS.PERF=ARTs 3nsA-find-PST[-3sP]
'They found the money that he stole from me.'

3.6 Word order

In declarative sentences all arguments normally precede the verb, and as a default, G arguments precede T arguments. This can be best seen in data like the following:

(21) *hana i-nna i-phuwa khaŋ a-mett-e.*
2sNOM 2sPOSS-elder.sister[-NOM] 2sPOSS-elder.brother[-NOM] see 2sA-cause-PST[-3sP]
'You showed your elder brother to your elder sister' (or: 'You made your elder sister look after your elder brother.')

In this example, both G and T are animate, and there is no pragmatic information available that would make a particular reading more likely than another. Yet all speakers we consulted agree that the only possible interpretation is that the elder sister is the one undergoing a change in experience, i.e. the G argument.

In all other contexts, the mutual ordering of G and T is syntactically unconstrained. This is true of double object verbs involving one inanimate and one animate argument and for all primary object and direct object verbs. An immediate consequence of this is that pronominal and quantifier binding is not limited by any specific orders of T and G. For example, the following are both possible, with no change in the truth-conditional semantics:

(22) a. *ʄoge-ŋa jamma duwacha-ce$_i$ huni$_i$-kapi pid-u-ce.*
J.-ERG all boy-ns[-NOM] 3nsPOSS-notebook[-NOM] [3sA-]give-3P[-PST]-nsP

b. *ʄoge-ŋa huni$_i$-kapi jamma duwacha-ce$_i$ pid-u-ce.*
J.-ERG 3nsPOSS-notebook[-NOM] all boy-ns[-NOM] [3sA-]give-3P[-PST]-nsP
Both: 'Joge gave every boy$_i$ his$_i$ notebook'.

While unconstrained by relational syntax, the order of arguments seems to largely follow information structure, although the relevant patterns are not very well understood in either Chintang or Belhare.[13] As far as we can determine, it seems that the immediately pre-verbal position is

[13]Part of the complexity of this results from the fact that both languages make ample use of topic and focus particles. We have not found any constraints so far as to which arguments can be marked as topic or focus, but since the exact semantics of the relevant markers is not adequately understood, we refrain from discussing this here.

associated with contrastive focus. Therefore, if the G argument is contrastively focused, it moves to the immediately preverbal position, following T arguments:

(23) a. *huĩsa-ŋa tei?-be-ko tukra Sita pid-e, Durga*
DEMs-ERG cloth-LOC-GEN piece[-NOM] S.[-NOM] [3sA-]give-PST[-3sP] D.[-NOM]
ma-pi-yokt-e.
NEG-[3sA-]give-NEG-PST[-3sP]
'He gave a piece of cloth to Sita, not to Durga.'

b. *huĩsa-ŋa Sita tei?-be-ko tukra pid-e, kagata-i?-ko tukra*
DEMs-ERG S.[-NOM] cloth-LOC-GEN piece [3sA-]give-PST[-3sP] paper-LOC-GEN piece
maha.
not
'He gave Sita a piece of cloth, not a piece of paper.'

Other focus contexts do not seem to trigger word order adjustments. For example, given a selection focus context like the following, speakers prefer keeping the basic G-T order:

(24) [Context: there was one apple and two children who want it.]
master-ŋa Durga syau pid-e.
teacher-ERG D.[-NOM] apple[-NOM] [3sA-]give-PST[-3sP]
'The teacher gave the apple to Durga'

Question contexts vary in our corpus: sometimes the question word is in the immediately preverbal position, sometimes it is not. The exact function of the preverbal position is yet to be determined. What is relatively common in interrogatives, however, is that non-questioned arguments are extraposed into a post-verbal afterthought position. This option is equally available for both G and T arguments:

(25) a. *ʤoge-ŋa them pid-e unisa?*
J.-ERG what[-NOM] [3sA-]give-PST[-3sP] 3sPOSS-younger.sibling[-NOM]
'What did Joge give to his younger sibling?'

b. *pacche sa-ŋa pid-u-k-u-ce=naŋ paisa* [CLLDCh1R02S04.1040]
then who-ERG give-3P-NPST-3nsP=but money[-NOM]
'But then, who will give money to them?'

It is also possible that both T and G arguments are extraposed, but this is relatively rare and disfavored by speakers. When both arguments are extraposed, the order is rigidly fixed and a sentence like the following can only be interpreted with *inna* 'your elder sister' as the G and *iphuwa* 'elder brother' as the T argument (cf. (21) above):

(26) *sa-ŋa khaŋ mett-e i-nna i-phuwa*
who-ERG see [3sA]-cause-PST[-3sP] 2sPOSS-elder.sister[-NOM] 2sPOSS-elder.brother[-NOM]
'Who made your elder sister look after your elder brother?' or 'Who showed your elder brother to your elder sister?'

3.7 Reflexives and reciprocals

Kiranti languages have no native reflexive or reciprocal pronouns. Reflexive meanings are traditionally expressed by special intransitive verb forms (based on a bipartite formative *-na-ce* in Chintang and on a suffixed verb stem *-chin(d)* in Belhare), but occasionally some speakers also borrow the Nepali reflexive/intensive pronoun *āphai* (re-phonologized as *appi*), either together with the native reflexive verb form or instead of it.

The following data show reflexives in Chintang:

(27) a. *u-ten-na-nc̷i̷-hẽ.*
3nsS-hit-REFL-ns.REFL-PST
'They hit themselves.'

b. *huŋ=go kitap pi-na-ce.*
DEMs=NMLZ book[-NOM] [3sS-]give-REFL-REFL[-PST]
'He gave the book to himself.'

c. *ʄoge Anita khaŋ met-na-ce.*
J.[-NOM] A.[-NOM] see [3sS-]cause-REFL-REFL[-PST]
'Joge made himself watch Anita.' (*not:* 'Joge showed Anita to herself (in the mirror.)')

As (27c) shows, it is not possible for reflexives to refer to any other argument but the A argument. Even when given a context before a mirror, speakers insist that a form like *khaŋ metnace* can only be understood as 'he makes himself watch', never as 'he showed him$_i$ to himself$_i$'. The only way of approximating something like 'he showed him$_i$ to himself$_i$ (in the mirror)' involves the non-reflexive form *khaŋ mette*:

(28) *ʄoge-ŋa Anita ʌina-be khaŋ mett-e.*
J.-ERG A.[-NOM] mirror-LOC see [3sA-]cause-PST[-3sP]
'Joge showed Anita to herself in the mirror.' (*or* 'Joge showed someone to Anita in the mirror.')

In (28) the identity of T and G is only suggested by the pragmatic context; it is not coded or entailed by the form in any way.

While only A arguments can serve as the antecedents in reflexivization, both T and G can be bound by reflexivization. In (27c), it is the G argument whose reference is bound, but when the context makes it plausible, the same verb form also supports a reading where the T argument (the person or thing watched) is bound. A sentence like the following therefore has two meanings:

(29) *ʄoge dactar khaŋ met-na-ce.*
J.[-NOM] doctor[-NOM] see [3sS-]cause-REFL-REFL[3sPST]
1. 'Joge$_i$ made himself$_i$ see the doctor.' (i.e. Joge went to see the doctor)
2. 'Joge$_i$ let the doctor examine himself$_i$.' (i.e. Joge went to get examined by the doctor)

Reciprocals involve a periphrastic construction based on the symmetrical use of verb stems before and after a formative *-ka-*. Antecedents can optionally be marked by comitatives. Chintang examples are as follows:

(30) a. *Rikhi(-niŋ) Janak(-niŋ) khaŋ-ka-khaŋ u-lus-a-ce.*
R.(-COM) J.(-COM) see-RECP-see 3nsS-AUX-PST-d
'Rikhi and Janak saw each other.'

b. *Rikhi(-niŋ) Janak(-niŋ) kalam pi-ka-pi u-lus-a-ce.*
R.(-COM) J.(-COM) pen[-NOM] give-RECP-give 3nsS-AUX-PST-d
'Rikhi and Janak gave a pen to each other.'

c. *Lakhman(-niŋ) Lokendra(-niŋ) Joge(-niŋ) mukseĩkhaŋ mei?-ka-mei? u-lus-a-ce.*
L.(-COM) L.(-COM) J.(-COM) know cause-RECP-cause 3nsS-AUX-PST-d
'Lakhman and Lokendra introduced each other to Joge.'

d. *Anita-ŋa Lokendra(-niŋ) Lakhman(-niŋ) mukseĩkhaŋ mei?-ka-mei? lu mett-u-ce.*
A.-ERG L.(-COM) L.(-COM) know cause-RECP-cause AUX [3sA-]cause-3P-3nsP[-PST]
'Anita introduced Lakhman and Lokendra to each other.'

In (30a-c), the semantic antecedent of the reciprocal is the A argument. The bound argument is in O role in (30a) and in G role in (30b). In (30c), it is unclear whether the bound argument is the T or the G argument because – as far as we can tell – the semantics of introduction is fully symmetrical in Chintang. As (30d) shows, it is also possible for the T or G argument to serve as the antecedent, but again because of the symmetrical semantics, we are not aware of a way to tell apart whether the semantic structure involves T or G as the antecedent (i.e. (30d) could just as well be semantically approximated by 'Anita introduced each other to Lakhman and Lokendra').

3.8 Summary

Table 2 summarizes the distribution of alignment patterns in syntactic structures across the three lexical valency classes that are defined by the case assignment rules of Chintang. The table also indicates estimates of the quantitative distribution of the three classes in the Chintang lexicon (including a total of 127 ditransitive verbs).[14]

Alignment patterns are represented in the table by sets of arguments, as selected by the structures listed in the first column. The subscript '1/2' restricts arguments to first or second person, the qualifier 'd-' to arguments in detransitivized clauses (as discussed in Section 3.2), and 'p-' to arguments in clauses marked as passive (Section 3.3).

The alignment patterns defined by case[15] are mostly independent of the alignment patterns in other syntactic structures, reflecting a general principle in these languages (cf. Bickel 2003b, 2004, 2006): most strikingly, the detransitivization effects of imposing non-specific reference applies equally to O, G, and T arguments, regardless of their case-marking (cf. the data in (6), (9),

[14] Our Chintang lexical database (Rai et al. 2008) includes detailed valency information and is available through the DOBES portal (`www.mpi.nl/dobes`).

[15] As noted in the explanation of our glossing conventions at the end of the chapter, ergative and instrumental are morphologically identical, but glossed according to context as 'ERG' or 'INS'.

	Direct object verbs	*Primary object verbs*	*Double object verbs*
Proportion of verbs	70%	20%	10%
Case: nominative *Case: other*	{O, T, S, $A_{1/2}$, d-A} LOC or DIR: {G}	{O, G, S, $A_{1/2}$, p-T, d-A} INS/ERG: {T, A}	{O, G, T, S, $A_{1/2}$, d-A}
Object agreement	{O, T}	{O, G}	
Detransitivization	{O, G, T}		
Passivization	{O, T}	{O, G, T}	
Raising	{O, T}	{O, G, T}	{O, G}
Reflexivization	{O, G, T}		
Reciprocalization	{O, G, T}		

Table 2: Distribution of object alignments across case-defined valency classes (columns) and syntactic structures (rows) in Chintang

and (10) in Section 3.2). Also, the different case patterns of primary and double object verbs are not replicated by the syntactic treatment of T and G arguments: despite the different case assignments, the arguments are treated alike in passivization. In raising constructions, the T argument of primary object verbs, which is marked as instrumental, can be raised, while the T argument of double object verbs, which is coded like O and G (nominative), cannot be raised. The independence of case assignment and other syntactic patterns also seems to be true of reflexivization and reciprocalization, but there are lexical and contextual constraints that need further research. The relevant entries in Table 2 are therefore tentative.

Case-marking does seem to match syntactic behavior with direct object verbs regarding agreement, passivization, and raising. This may be a correlate of their lexical default status and type frequency. The match is not a general pattern as it does not extend to primary object verbs, which pattern exactly like double object verbs with regard to agreement, passivization and raising: whether T arguments align with O arguments (as in passivization and raising) or not (as in agreement), is independent of whether T is marked as a nominative (double object verbs) or as an instrumental (primary object verbs).

These findings support the assumption made in the methodology section that the generalized argument roles T and G are strictly defined by semantic entailments and not by their syntactic behavior: the syntactic behavior of T and G varies from structure to structure. The question remains, however, whether there are any principles behind the lexical assignment of verbs to the three valency classes. We turn to this in the following.

4 Case alignment across the lexicon

The following data give an overview of the semantic range covered by the three valency classes, based on Rai et al. (2008).

4.1 Double object verbs

Double object verbs denote physical and mental transfer events such as *pid-* 'give', *chokt-* 'hand, pass, give', *lukt-* 'pour', *hakt-* 'send sth.', *khutt-* 'bring for so.', *cett-* 'feed', *kott-* 'show, take to', *lud-* 'tell', but also verbs like *yukt-* 'to keep for someone', which represent a kind of 'intended transfer':

(31) *kina ajjoli ani-chau-ce […] kesiyet yukt-u-m-cum.* [origin_myth.610]
SEQ nowadays 1piPOSS-child-ns[-NOM] cassette[-NOM] keep.for-3P-1pA-3nsP
'And then we will keep the (video) cassette for our children…'

Also included in the class of double object verbs are analytical causatives like *khaŋ mett-* 'cause to see, show, look after', as illustrated in (5), (21), (26), (27c), and (28), as well as verbs of covering such as *bopt-* 'cover', *lupt-* 'stain, soil', or *rept-* 'throw at, splash, spray'. This is shown by the data in (2) and the following:

(32) a. *aha! Monsu, huĩ i-nisa-ŋa pent kham*
INTERJ M[-NOM] DEM 2sPOSS-younger.sibling-ERG pants[-NOM] soil[-NOM]
lupt-o-ko=ta, yo. [CLLDCh4R14S03.639]
[3sA-]stain-3sP-NPST=IPFV DEM.ACROSS
'Ah! Mansu, your younger brother is staining (his) pants with soil over there.'

b. *maʔmi-ŋa cuwa u-kam-ce rept-u-ce.*
person-ERG water[-NOM] 3sPOSS-friend-ns[-NOM] [3sA-]throw.at-3P-3nsP[-PST]
'The man splashed water at his friends.'

4.2 Primary object verbs

Some verbs denoting covering events license primary object instead of double object alignment; cf. the introductory examples in (3) and the following data in (33). In the case of some verbs, e.g. *bhukt-* 'to cover', as in (33c), the instrumental is optional, and the verb is also compatible with a double object pattern.

(33) a. *waŋa wacilek-ce u-lapthaŋ-ŋa komd-u-ce.*
hen-ERG chicken-ns[-NOM] 3sPOSS-wing-INS [3sA-]cover.on.each.side-3P-3nsP[-PST]
'The hen covered the chicken with its wings / took them under its wings.'

b. *huĩsa-ŋa u-kok laphok-ŋa phept-e.*
DEMs-ERG 3sPOSS-cooked.rice[-NOM] leaf-INS [3sA-]wrap-PST[-3sP]
'He wrapped up his rice in a leaf.'

c. *ʄoge-ŋa u-chau teiʔ(-yã) bhukt-e.*
J.-ERG 3sPOSS-child[-NOM] clothes(-INS) [3sA-]cover-PST[-3sP]
'Joge covered his child with clothes.'

Primary object verbs also include events of destructive impacts like *or-* 'throw at, hit so. by throwing sth.', *apt-* 'hit so. by shooting sth.', *dapt-* 'hit so. or sth. with a hammer-like instrument', *hekt-* 'cut with a saw-like instrument', *tɨŋs-* 'kick so. or sth. with sth.'; cf. e.g. the examples in (3).

4.3 Direct object verbs

Direct object verbs cover a similar range of meanings as double object verbs, specifically verbs of physical transfer. This is shown by the introductory examples in (4) and the following:

(34) a. *kaŋge hokke a-os-o-ko ei?* [CLLDCh1R09S07.1007]
comb[-NOM] where[LOC] 2sA-throw-3sP-NPST INTERJ
'Oh, where do you throw the comb?'

b. *i-hulak patti cha-ce paŋ-ma poreu!* [kothari_talk.306]
2sPOSS-post.office SIDE.LOC child-ns send-INF OBLIG
'You should send the children to your post office.'

c. *thapeni kanchi=na hokko-iʔ=lo u-khatt-o-ŋs-e=naŋ?* [ctn_talk01.215]
T. youngest.F[-NOM]=TOP where-LOC=PTCL 3nsA-take-3sP-PERF-PST=but
'But where did they take *Ṭhāpenī Kānchī* to?'

d. *huĩsa-ŋa ŋaklasi dalo-be sumd-e.*
DEMs-ERG banana[-NOM] basket-LOC [3sA-]pack-PST[-3sP]
'S/he packed the bananas into a *dālo*.'

Apart from this kind of event, direct object verbs also cover verbs of spatial deformation like *thɨŋs-* 'spread out in some direction' or *beŋd-* 'bend or twist in some direction':

(35) a. *huĩsa-ŋa gundri moʔ-ni thɨŋs-e.*
DEMs-ERG straw.mat[-NOM] down-DIR [3sA-]spread.out-PST[-3sP]
'S/he spread out the *gundri* downhill.'

b. *hun-ce-ŋa tarra toʔ-ni u-beŋd-e.*
DEM-ns-ERG wire[-NOM] up-DIR 3nsA-bend-PST[-3sP]
'They bent the wire upwards.'

4.4 Discussion

From the quantitative distribution in Table 2, direct object alignment appears to be the default valency pattern for three-argument verbs. Deviations from this, i.e. valency patterns that align O with G (primary object verbs) and possibly also T (double object verbs) are found when the G argument is heavily affected and central to the event. This is the case under three conditions: (i) when the G argument is covered or enclosed by T; (ii) when it is a beneficiary of recipient; and (iii) when it undergoes a physical impact. We take these up in turn.

Under the first condition, the G argument is covered or enclosed by T. This is illustrated by verbs like *bopt-* 'to cover' in (2); *bhukt-* 'to cover' in (3); *lupt-* 'to stain' or *rept-* 'to throw at, splash' in (32); or *komd-* 'to cover on each side', *phept-* 'to wrap, surround', or *bhukt-* 'to cover' in (33). These cases include both double object and primary object verbs. The difference between the two patterns is not entirely clear. Since primary object verbs have the T argument in the instrumental case, one is tempted to locate the difference between double object and primary object verbs in the conceptualization of T argument as a true instrument, but this explanation is unlikely given the fact that verbs of covering occur in both valency patterns (e.g. *bopt-* is a double object verb, while

komd- is a primary object verb). Moreover, at least some verbs (e.g. *bhukt* ‘ to cover’) alternate between the two patterns and this raises the possibility that information structure is a relevant criterion as well.

Under the second condition, the G argument is a beneficiary or recipient. This exclusively covers double object verbs and can be seen in verbs like *hakt-* ‘to send’, *pid-* ‘to give’ in (2) or *yukt-* ‘to keep for’ in (31). We are not aware of primary object verbs with a beneficiary or recipient G argument.

Under the third condition, the G argument undergoes physical impact, possibly destruction. This is evidenced by verbs like *or-* ‘to hit by throwing’ or *hekt-* ‘to cut with a saw-like instrument’ in (3). As far was we can tell, all these verbs include a primary object case pattern.

Direct object verbs differ from all these three conditions in so far as their G argument is not heavily affected and plays a less central role in the event. The G argument is basically limited to purely spatial goal specifications. This is illustrated by transfer verbs like *paŋs-* ‘to send’, *yokt-* ‘to apply’ in (4) or *os-* ‘to throw’, *khatt-* ‘to take to’ in (34) as well as by the deformation verbs in (35) (*thɨŋs-* ‘to spread out in a certain direction’, *beŋs-* ‘to bend in a certain direction’). It is less obvious in verbs like *phatt-* ‘to fill’ (4) or *sumd-* ‘to pack’ (34), but given the fact that the direct object pattern is the lexical default, we should probably not expect this class to be homogenous semantically.

There is some evidence that double object and primary object verbs are etymologically related to Proto-Tibeto-Burman **-t*, a stem augment usually reconstructed as a ‘directive’ or applicative marker by specialists (Wolfenden 1929; Michailovsky 1985; van Driem 1993: 215-23).[16] In several cases, there are minimal pairs in the modern languages. In these minimal pairs, stems with *-t* (∼ *-r* between vowels) show G=O(=T) alignment. Stems without *-t* show G≠O=T alignment and contain a reflex of the Proto-Tibeto-Burman causative augment **-s*:

(36) root *o-* ‘throw’

a. *o-t-*: G=O
athomba gol-ŋa rame ***or****-o-ŋs-e.* [CLLDCh1R13S02.1242]
before ball-INS R.[-NOM] [3sA-]throw.at-3sP-PERF-PST
‘He had already hit Rāme with a ball before.’

b. *o-s-*: G≠O
*kaŋge hokke a-****os****-o-ko ei?* [CLLDCh1R09S07.1007]
comb[-NOM] where[-LOC] 2sA-throw-3P-NPST INTERJ
‘Oh, where do you throw the comb?’

(37) root *hak-* ‘send’

a. *hak-t-*: G=O
huĩsa-ŋa phe?wa u-kam ***hakt****-e.*
DEMs-ERG money[-NOM] 3sPOSS-friend[-NOM] [3sA-]send.to-PST[-3sP]

[16] Augments can be distinguished from root-final coronals because they behave differently; for example, augments only surface before vowels inside words, while root-finals also occur before consonants: Chintang *lu-t-* ‘tell’ > *luma* ‘to tell’ vs. *chit-* ‘find’ > *chitma* ‘to find’; Belhare *hi-t-* ‘be able, finish’ > *hima* ‘to be able, to finish’ vs. *hit-* ‘watch’ > *hitma* ‘to watch’.

'He sent his friend money.'

b. *haŋ-s-*: G≠O
huĩsa-ŋa phe?wa u-khim-be ***haŋs****-e.*
DEMs-ERG money[-NOM] 3sPOSS-house-LOC [3sA-]send-PST[-3sP]
'She sent money home.'

(38) root *ap-* 'shoot'

a. *ap-t-*: G=O
huĩsa-ŋa wassa gurthaŋ-ŋa ***apt****-e.*
DEMs-ERG bird[-NOM] bow-INS [3sA-]shoot-PST[-3sP]
'He shot the bird with bow and arrow.

b. *am-s-*: G≠O
huĩsa-ŋa gucca mo?-ni ***ams****-e.*
DEMs-ERG marble[-NOM] down-DIR [3sA-]shoot-PST[-3sP]
'She shot the marble downhill.'

However, apart from minimal pairs like these, the synchronic distribution of *-t* cannot be predicted by the difference between G=O and G≠O alignments because the augment is also found on direct object verbs (e.g. *phat-t-* 'to fill' and *yok-t-* 'to apply' in (35), *sum-d-* 'to pack' in (34), or *beŋ-d-* 'to bend' in (35)). Moreover, the *-t*-augment is also found in monotransitive (e.g. *ip-t-* 'to make sleep', *cop-t-* 'to see', *cup-t-* 'to close', *pha-t-* 'to help') and even in intransitive stems (e.g. *chɨp-t-* 'to worry', *huk-t-* 'to bark', *cho-d-* 'to be hot, burning', *chu-d-* 'to be expensive', *cu-d-* 'to be many', *hi-d-* 'to be able, to finish', *nu-d-* 'to be good, healthy', *pa-d-* 'to grow', *te-d-* 'to return'). If these are all indeed reflexes of the same etymon, the original function of *-t* may have been more general than the alignment of G with O. It is also possible, however, that not all instances of *-t* in the synchronic lexicon go back to the same source. The current state of the art in comparative Tibeto-Burman does not allow a firm conclusion on these possibilities, and we must leave it to further research to elucidate the history of *-t* and its relationship to G=O alignment.

5 Conclusions

In this chapter we chose to survey the syntax and semantics of all kinds of three-argument verbs and not limit ourselves to transfer verbs with recipients. The definition we adopted for three-argument verbs is based on semantic entailments in the spirit of Dowty (1991).

These methodological decisions have made it possible to discover two key aspects in the grammar of ditransitives in Chintang and Belhare: First, the lexical difference between G=O and G≠O alignments is to a large extent driven by a notion of affectedness and saliency and may have developed from an applicative function of the Proto-Tibeto-Burman augment **-t*. Second, the mapping of G and T arguments into object relations in syntax is largely independent of the cases they are assigned: even instrument-marked T arguments of primary object verbs and locative-marked G arguments of direct object verbs behave in some respects like O arguments of monotransitives. This independence of case and grammatical relations reflects a general Tibeto-Burman feature which has been established previously for subject relations (Bickel 2003b, 2004, 2006).

Glossing conventions

Interlinear glossing basically follows the Leipzig Glossing Rules, with the addition of the following abbreviations: ART 'article', DIR 'directional', INTERJ 'Interjection', MED 'mediative', PTCL 'particle (with discourse function)', SEQ 'sequential'.

The use of S, A, and P in the glosses of agreement markers follows Kirantologist tradition and is different from the way we define the argument roles S, A, and O. The agreement glosses refer to argument sets as selected by the relevant agreement markers, i.e. the arguments triggering a specific kind of agreement morphology, while argument roles refer to the entailments of the lexical stem, independent of their treatment by the agreement system or any other part of the grammar (cf. Section 2).

When markers are multifunctional, we gloss them by their meanings as disambiguated by syntactic or morphological contexts. For example, ergatives and instrumentals are marked by the same underspecified suffix, but we use the gloss 'ERG' when the suffix occurs on an A argument and 'INS' for all other uses. Similarly, the first person exclusive marker *-hẽ* is glossed as 'first person singular' ('1s') if does not co-occur with a dual or plural affix. See Bickel et al. (2007a) for an analysis of morpheme meanings in Chintang verb conjugation.

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