

## Alignment typology revisited: ditransitives in general and in Southeastern Kiranti

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### 1. What are ditransitives?

Some typological approaches assume a denotational definition, e.g. by defining ditransitives as three-argument constructions involving physical or mental **transfer of a theme *T* to a recipient *R* by an agent *A*** (e.g., Haspelmath 2005)

*Problem:* any denotational definition makes *a priori* decisions about event classification (e.g. GIVE events vs PUT events vs COVER events). But we may want to study event classification as a typological variable, i.e. *a posteriori*.

*Alternative:* Margetts & Austin (2007) propose to survey all those three-participant events (including non-recipient events like ‘pour’, ‘cover’, ‘kick’ etc.) which in at least one language are encoded as **three-argument predicates**. Argumenthood is assessed by language-specific morphosyntactic diagnostics.

*Problem:* ‘diagnostics’ are structures that each form their own subsets of participants (a.k.a. alignment patterns), and we may want to empirically compare these subsets across structures, as has become standard in alignment typology (cf. Croft’s 2001 critique of what he calls “methodological opportunism”):

	evidence from case	evidence from agreement
Nepali A= <i>le</i> ‘ERG’	like adjunct: A=INSTR	like argument: A=S
Hindi A= <i>ne</i> ‘ERG’	like adjunct: A=INSTR	like adjunct: A≠S (no agr.)

- (1) a. *Sitā=le keṭā=lāi uṭhā-ī.* (Nepali)  
S.(FEM)=ERG boy=DAT lift.up-3sFEM.PST  
b. *Sitā=ne laḍkā=ko uṭhā-yā.* (Hindi)  
S.(FEM)=ERG boy=DAT lift.up-3sMASC.PST  
‘Sita lifted up the boy.’

*Alternative: a simple semantic criterion of argumenthood: X is an argument iff it is assigned a semantic role by a predicate, as shown by government or semantic entailments, e.g. by role specification in underspecified expressions:*

- (2) a. *Where did he go?* (→ goal argument)  
 b. *Where did he go to the grocery store/buy his food?* (→ location adjunct)

(3) Belhare (Kiranti: Sino-Tibetan; Himalayas)

- a. *pheri ne-e leŋs-e.* [B99.4.43] (→ goal argument)  
 again here-LOC [3sA-]put-PST[-3sP]  
 '[He] again put [the fruit] here.'
- b. *ne-e iŋa uŋ-he.* (→ location adjunct)  
 here-LOC beer [3sA-]drink-PST[-3sP]  
 'He drank the beer here.'

*Consequence:* this method requires detailed (and difficult!) lexical semantic analysis. But this also required for (a) determining the class of recipients (as opposed to say, animate goals) in aprioristic approaches and (b) is part of regular linguistic fieldwork anyway.

## 2. A generalized framework for alignment typology

Generalized argument roles defined by the number of arguments (as defined above); if there is more than one argument, by entailment tests in the sense of Dowty (1991), distinguishing more agent-like (A) from more patient-like (O, G) arguments (Bickel in press, Bickel & Nichols in press):

		A2
	A1	
S		T
	O	
		G

Entailments contributing to the more patient-like role G in ditransitives:

- a. undergoes a change of state (*cut **it** with sth, show **him** sth, give **him** sth.*)  
 b. relatively stationary (*load **it** with sth., fill **it** with sth.*)

## 2.1 Implications of the proposed framework

### Implication 1: A1 ≠ A2

(4) Gyarong (lCog-rtse rGyal-roñ) (Sino-Tibetan; Himalayas; Nagano 1984)

a. *nəyo-ki chigyo kəw-nasño-ch ko.*  
 2s-ERG 1d[NOM] 2>1-scold-1d AUX

‘You (s) scold us (d).’

b. *nəyo chigyo kəw-wu-ch ko.*  
 2s[NOM] 1d[NOM] 2>1-give-1d AUX

‘You (s) give (it to) us (d).’

**Implication 2:** Generalized roles are not abstractions over the lexicon (pace Van Valin & Wilkins 1996, Van Valin 2005), but independently defined and often cross-cutting the lexicon with regard to alignment. (Note that alignment is always understood here as **relative to a specific structure.**)

### Lexical classes cross-cutting intransitives re case or agreement, e.g.

- ‘active’ alignment: one class coding S like A and another class coding S like O
- ‘dative S’: most verbs coding S like A, some coding S like G (or O)

### Lexical classes cross-cutting monotransitives re case, e.g.

(5) Warlpiri (Pama-Nyungan; Australia; Simpson 1991)

a. default with ERG-NOM, aligning O=S≠A

*nya-nyi =ka=rna=palangu wawirri-jarra ngajulu-rlu*  
 see-NPST =PRS=1sA-3dO kangaroo-d[NOM] 1s-ERG

‘I see two kangaroos.’

b. some verbs with NOM-DAT, aligning A=S≠O

*nyuru~nyuru-jarri-mi=ka=lu=rla yapa ngajunyangu-ku kurdu-ku.*  
 hate~RED-INCH-PST =PRS=3pA=3sDAT person[NOM] my-DAT child-DAT

‘[Those] people hate my son.’

c. some verbs with ERG-DAT, aligning A≠S≠O

*ngarrka-ngku =ka=rla karli-ki warri-rni.*  
 man-ERG =PRS=3sDAT boomerang-DAT look.for-NPST

‘The man is looking for his boomerang.’

## (6) French

## a. default O=T

*j'ai regardé la maison.*

1s=AUX watch.PST.PTCP ART.sFEM house

'I watched the house.'

b. *j'ai donné la maison à mon fils.*

1s=AUX give.PST.PTCP ART.sFEM house to my son

'I gave the house to my son'

c. motion verbs coding O=G (à NP) or O=Adjunct (*chez, sur, etc.* NP)

*je suis allé à la maison*

1s=AUX go.PST.PTCP to ARTsFEM house

'I went to the house.'

**Lexical classes cross-cutting ditransitives re case, e.g.**

## (7) Latin class I: T=O

a. *fundere humi aquam*

pour.INF soil.LOC water.ACC

'pour water onto the soil'

b. *continere legiones uno loco*

keep.INF troops.pACC one.ABL place.ABL

'keep the troops in one place'

c. *dare alicui epistulam*

give.INF someone.sDAT letter.sACC

'give a letter to someone.'

## (8) Latin class II: G=O

a. *complere fossas aquā*

fill.INF trench.ACCpl water.ABL

'fill the trenches with water'

b. *cingere lauro comam*

crown.INF laurel.ABL head.ACC

'crown the head with laurel'

And just like a language can have a large default class of intransitives or monotransitives, there are languages that have a large default class of ditransitives:

(9) Chechen default T=O (Bickel & Nichols 2000, in prep.; Zarina Molochieva, p.c.)

- a. *as cunna aaxcha d-elira.*  
 1sERG 3s.DAT money(D)[NOM] D-give.WPST  
 ‘I gave him money.’
- b. *naanas bierashna (bierashan t’e) jurgħa d-illira.*  
 mother.ERG children.DAT (children.GEN on) bed.cover(D)[NOM] D-put.WPST  
 ‘Mother covered the children with a bed cover.’
- c. *bieras suuna (t’e) xuudar waaniira.*  
 child.ERG 1sDAT (on) porridge.NOM spill.CAUS.WSPT  
 ‘The child soiled me with porridge.’
- d. *Muusas zhwaliena ghazh tyyxira*  
 M.ERG dog.DAT stick[NOM] strike.WPST  
 ‘Musa hit the dog with a stick.’
- e. *as pianna basar tyyxira.*  
 1s.ERG wall.DAT paint[NOM] strike.WPST  
 ‘I painted the wall.’
- f. *daas k’antana urs tyyxira.*  
 father.ERG boy.DAT knife[NOM] strike.WPST  
 ‘Father stabbed the boy with a knife’
- g. *as vordana t’e jol j-oettira.*  
 1sERG cart.DAT on hay(J)[NOM] J-stack.WPST  
 ‘I stacked hay onto the cart.’

(10) Exceptional G=O patterns (very few verbs)

- a. *xica d-yzira ooxa cherma.*  
 water.INSTR D-fill.WPST 1pERG barrel(D)[NOM]  
 ‘We filled the barrel with water.’
- b. *as vorda jolaca j-oettira.* (alternates with (9g))  
 1sERG cart(J)[NOM] hay.INSTR J-stack.WPST  
 ‘I loaded the cart with hay.’

## 2.2 Advantages of the proposed framework

**Advantage 1:** The typology can code all alignment patterns of all verbs in a general and systematic way, while tracking lexical factors as well.

**Advantage 2:** The proposed way of analyzing ditransitives makes no a priori assumptions about which event types select G=O and which event types select F=O (just like classical alignment typology makes no a priori assumptions about which event types select A=S as opposed to O=S). In some languages, almost all event types select F=O (Chechen); others show splits (Latin).

At the same time, the proposed analysis makes possible a large-scale survey of three-argument verbs, which may reveal probabilistic trends across languages and their histories:

- perhaps ‘cut’-like events favor G=O more than ‘put’-like events, across languages (or perhaps only across languages with splits).
- perhaps verb-framing (in the sense of Talmy 1985) favors G=O, while verbal coding of instruments favors F=O:

(11) Latin accusative of direction: G=O

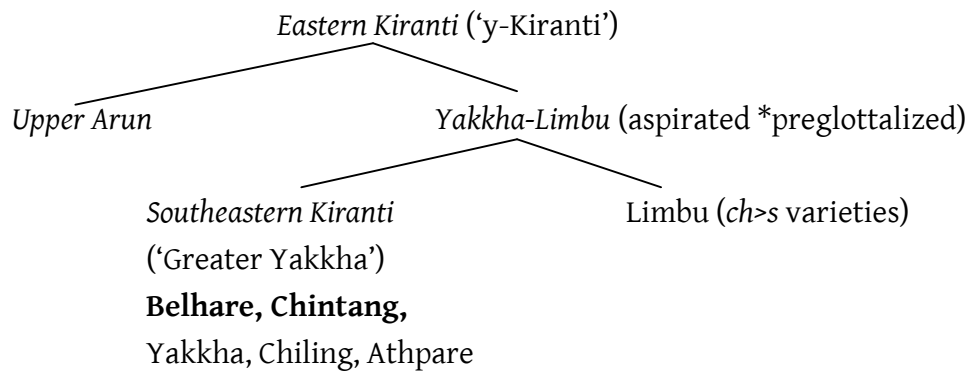
- a. *vehī Romam nave*  
sail.INF R.ACC boat.ABL  
‘sail to Rome on a boat’
- b. *complere fossas aquā*  
fill.INF trench.ACCpl water.ABL  
‘fill the trenches with water’
- c. *videre Romam*  
see.INF R.ACC  
‘see Rome’

**Advantage 3:** The proposed way of analyzing ditransitives imposes no a priori event classification but allows capturing typological variation in lexical event classification:

Event	Language-specific classification in the lexicon	
	<i>English</i>	<i>Chechen</i>
COVER WITH BED SHEET	instrumental event (‘cover G with T’)	caused motion event (‘put T onto G’)
CUT WITH KNIFE	instrumental event (‘cut G with T’)	caused motion event (‘move T into G’)

**Advantage 4:** separating generalized roles from lexical classification fits with neurolinguistic evidence that generalized roles are assigned independently of the processing of lexical information; for example, in verb-final structures, generalized roles are assigned before the verb is processed in comprehension (Bornkessel et al. 2005, Bornkessel & Schlesewsky 2006).

### 3. A case study of two Southeastern Kiranti languages



Data:

- Belhare: fieldwork data 1990-99; small dictionary (~ 1023 entries, 466 verbs; Bickel 1997), of which 45 are relatively certain three-argument verbs
- Chintang: DOBES corpus (~ 250,000 words); dictionary (~ 5555 entries, 922 verbs; Rai et al. 2007), of which 117 are relatively certain three-argument verbs<sup>1</sup>

#### 3.1 Agreement

Complex verb agreement, distinct for S, A, and P ‘primary object’, i.e. O=G

#### 3.2 Other argument-subsetting structures (Belhare data only)

(12) Belhare Raising: O=G≠T (Bickel 2004)

$[\emptyset_{i,*j}]$                       *kitab-chi*<sub>\*i,j</sub>                      *pi-ma]*    *ŋ<sub>i</sub>-khe-yu.*  
 [NOM]<sub>Primary Object</sub>    book-ns[NOM]<sub>Secondary Object</sub>    give-INF    3nsS-must-NPST  
 ‘They (\*s/he) must be given books.’

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## (13) Belhare internally-headed relative clauses: O=T≠G (Bickel 2004)

[*asenle paisa mai-khut-piu-sa*]=*na n-chitt-he*.

before money[NOM] 1sP-steal-BEN-TRANS.PERF=ART 3nsA-find-PST[-3sP]

‘They found the money that he stole from me.’

## 3.3 Case

## Chintang

NOM	- $\emptyset$	S, O, T, G, A with some experiential verbs, predicate nominals
ERG ABL	- <i>ŋa</i> ~ <i>yã</i>	<b>A (except 1, optional with 2), instruments, causes, forces, sources, ‘via’</b>
GEN	- <i>ko</i>	possessors, attributive nouns in NPs
COM	- <i>niŋ</i>	accompanying referents or situations
MED	- <i>lam(ma)</i> ~ - <i>lamŋa</i>	‘via, through, from, in (language X)’
ALL	- <i>samma</i> (< Nep.)	‘until, up to’
DIR	- <i>ni</i>	‘towards, in the direction of’
LOC	- <i>be(?)</i> ~ - <i>ba(k/?)</i> (some dem.) ~ - $\emptyset$ (spatial n.)	‘at, in, on, to’
UP	- <i>ndu</i>	‘up at, in, on, to’
DOWN	- <i>mu</i>	‘down at, in, on, to’
ACROSS	- <i>ya</i>	‘across at, in, on, to’

## Belhare (Bickel 2003)

NOM	- $\emptyset$ ~ - <i>ti</i> (some pron.)	S, O, T, G; A with some experiential verbs, predicate nominals
ERG	- <i>ŋa</i> ~ - <i>a</i>	<b>A (except 1s), instruments, causes, forces</b>
GEN	- <i>ŋahak</i> ~ - <i>hak</i>	possessors, attributive nouns in NPs
COM	- <i>lok</i>	accompanying referents or situations
ABL	- <i>etnahuj</i> ~ - <i>huj</i>	<b>‘from, after’</b>
MED	- <i>lam(ma)</i>	‘via, through, from, in (language X)’
ALL	- <i>sam(ma)</i> (< Nep.)	‘until, up to’
DIR	- <i>lej</i>	‘towards, in the direction of’
LOC	- <i>eC</i> ~ - <i>pak</i> (some dem.) ~ - $\emptyset$ (spatial nouns)	‘at, in, on, to’
UP	- <i>ttaj</i>	‘up at, in, on, to’
DOWN	- <i>pmu</i>	‘down at, in, on, to’
ACROSS	- <i>ŋya</i>	‘across at, in, on, to’



### 3.4 Alignment patterns

	case	agreement	N (verbs in Chintang) <sup>2</sup>
double object	O=G=T	O=G (agr)	13 (~ 10%)
primary object	O=G; T=INSTR	O=G (agr)	21 (~ 20%)
direct object	O=T; G=LOC/DIR	O=T (no agr)	83 (~ 70%)

#### Double object verbs denote:

- **PHYSICAL TRANSFER:** send, bring, take, move to, give, keep for, pass, feed

#### (14) Chintang

- a. *mo mo! a-cappal-ce chokt-a-ŋ=khaŋ!* [CLLDCh4R13S02.596]  
 down down 1sPOSS-sandal-ns[NOM] pass-IMP-1sP=PTCL  
 ‘Down there! Pass me my *cappal!*’
- b. *akka u-phari pidahã=o!* [CLLDCh3R02S06, mother to her child]  
 1s[NOM] 3sPOSS-half[NOM] give-IMP-eP.IMP  
 ‘Give me half of it!’
- c. *ma?mi-ŋa u-chau-ce tei? bai?-ŋa khutt-u-ce.* [Rai et al. 2007]  
 person-ERG 3sPOSS-child-ns[NOM] clothes[NOM] DEM-ABL [3sA-]bring-3P-3nsP[-PST]  
 ‘The man brought his children clothes from here.’
- d. *kina ajjoli ani-chau-ce [...] kesiyet yukt-u-m-cum* [origin\_myth.610]  
 SEQ nowadays 1piPOSS-child-ns[NOM] cassette[NOM] keep-3P-1pA-3nsP  
 ‘And then we will keep the cassette for our children...’

#### (15) Belhare

- a. *phak-ŋa u-sik-chi (ŋke) ka-liŋ-yu!* [fieldnotes]  
 pig-ERG 3sPOSS-louse-p[NOM] i[NOM] iP-[3sA-]involuntarily.transfer-NPST  
 ‘We will catch lice from the pig!’
- b. *phak-ŋa rok (ŋke) ka-so?-yu.* [fieldnotes]  
 pig-ERG disease[NOM] i[NOM] iP-[3sA-]move-NPST  
 ‘One can catch diseases from pigs.’

<sup>2</sup> Impressionistically, Belhare figures are comparable, but the relatively small size of the dictionary does not allow realistic counts.

• **MENTAL TRANSFER:** ask for, tell, show

(16) Chintang

- a. *maʔmi-ŋa u-nicha teĩ kott-e.* [Rai et al. 2007, s.v. *kott-*]  
 person-ERG 3sPOSS-ySib[NOM] village[NOM] [3sA-]tour[-3sP]-PST  
 ‘The man showed the village to his younger brother/daughter.’

(17) Belhare

- a. *unna ŋka i=cha ma-ŋ-lu-at-ni* [fieldnotes]  
 3sERG 1s[NOM] one=ADD 1sP-NEG-tell-PST-NEG  
 ‘He didn’t tell me anything.’
- b. *unna ŋka cua mai-nakt-he.*  
 3sERG 1s[NOM] water[NOM] 1sP-ask.for-PST  
 ‘She asked me for water.’

• **COVER EVENTS:** cover, bury, fence, pour, throw/spray at, soil

(18) Chintang

- a. *huĩsa-ŋa hana chatta na-bopt-e.* [Rai et al. 2007, s.v. *bopt-*]  
 3s-ERG 2s[NOM] umbrella[NOM] 3>2-cover-PST  
 ‘S/he covered you with an umbrella.’
- b. *jamma=ta kham u-lupt-a-nd-e-hẽ gonei!*  
 all[NOM]=FOC soil[NOM] 3A-stain-PST-TEL-PST-ePST EXCLAM  
 ‘He has soiled me all over with dirt!’ [CLLDCh1R11S04.221, mother about her three-year-old son]
- c. *maʔmi-ŋa cuwa u-kam-ce rept-u-ce.* [Rai et al. 2007]  
 person-ERG water[NOM] 3sPOSS-friend-ns[NOM] [3sA-]throw.at-3P-3nsP[-PST]  
 ‘The man splashed water at his friends.’

(19) Belhare

- a. *u-ma-a u-cha-chi subhak khupt-he-chi.* [fieldnotes]  
 3sPOSS-mother-ERG 3sPOSS-child-p[NOM] sheet[NOM] [3sA-]cover-PST-3nsP  
 ‘Mother covered the children with bed sheets.’
- b. *pit-chi bar hams-e-chi.* [fieldnotes]  
 cow-ns[NOM] fence[NOM] [3sA-]enclose-PST-3nsP  
 ‘He fenced the cows’.

**Primary object verbs denote:**

- **COVER EVENTS:** cover, put on, bury, surround, pour (?)

(20) Chintang

- a. *waja wacilek-ce u-lapthaŋ-ŋa komd-u-ce.* [Rai et al. 2007]  
 hen-ERG chicken-ns[NOM] 3sPOSS-wing-ERG [3sA-]cover-3P-3nsP[-PST]  
 ‘The hen covered the chicken with its wings / took them under its wings.’
- b. *a-ma-ŋa hana munjei-ŋa na-bhukt-e.* [Rai et al. 2007]  
 1sPOSS-mother-ERG 2s[NOM] shawl-ERG 3>2-cover-PST  
 ‘Mother covered you with a shawl.’
- c. *anako=na dhūwa-ŋa jamma rikt-a-nd-e* [CLLDCh1R03S02.0348]  
 1pePOSS=TOP smoke-ERG all[NOM] [3sA-]surround-PST-TEL[3sP]-PST  
 ‘Our (umbrella) has been completely covered by smoke!’
- d. *huīsa-ŋa u-kok laphok-ŋa rikt-e.* [Rai et al. 2007]  
 3s-ERG 3sPOSS-cooked.rice leaf-ERG [3sA-]wrap.up-PST[3sP]  
 ‘He wrapped up his rice in a leaf.’

(21) Belhare

- takumbhitd-e casak chuŋs-e-ŋ.* [fieldnotes]  
 shawl-LOC uncooked.rice[NOM] wrap.up-PST[3sP-1sA]  
 ‘I wrapped up the rice in a shawl.’

- **HIT&CUT EVENTS** (requiring a specific instrument): crush, cut (cf. Rai 2007), kick, hit so. by throwing sth., sieve

(22) Chintang

- a. *athomba gol-ŋa rame or-o-ŋs-e.* [CLLDCh1R13S02.1242]  
 before ball-ERG R.[NOM] throw.at-3sP-PERF-PST  
 ‘He has already hit Rame with a ball before.’
- b. *hana ara-ŋa siŋ a-hekt-o-ko.* [Rai 2007]  
 2[NOM] saw-ERG wood[NOM] 2-cut.with.saw.like.instrument-3sP-NPST  
 ‘You cut wood with a saw.’
- c. *ma?mi-ŋa calni-ŋa camacam yoŋs-e.* [dictionary]  
 person-ERG sieve-ERG uncooked.rice[NOM] [3sA-]sieve[-3sP]-PST  
 ‘The man sieved the rice.’

**Direct object verbs denote:**

- **TRANSFER:** take to, bring to, collect, hang, keep in, move, fill, push, send, pack into, serve, stick in, apply, pour, shoot/throw (*os-*, *ams-*),

## (23) Chintang

- a. *kanje hoke a-os-o-ko ei?* [CLLDCh1R09S07.1007]  
 comb[NOM] where 2-throw-3P-NPST INTERJ  
 ‘Oh, where do you throw the comb?’
- b. *i-hulak patti cha-ce paŋ-ma poreu!* [kothari\_talk.txt]  
 2sPOSS-post.office SIDE.LOC child-ns send-INF OBLIG  
 ‘You should send the children to the post office.’
- c. *thapeni kanchi=na hokko?=lo u-khatt-o-ŋs-e=naŋ?* [ctn\_talk01.215]  
 T. youngest.FEM=TOP where=PTCL 3nsA-take-3P-PERF-PST=BUT  
 ‘But where did they take *Thāpinī Kānchī* to?’
- d. *huīsa-ŋa dabai u-narek-be yokt-e.* [Rai et al. 2007]  
 3s-ERG medicine[NOM] 3sPOSS-nose-LOC [3sA-]apply-PST[3sP]  
 ‘S/he put some medicine onto his/her nose.’
- e. *huīsa-ŋa gagri-be?-ya lota-be cuwa tams-e.* [Rai & al.]  
 3s-ERG large.container-LOC-ERG small.container-LOC water[NOM] [3sA-]pour-PST[3sP]  
 ‘S/he poured water from the *gāgri* into the *lotā*.’
- f. *huīsa-ŋa cuwa gagri-be phatt-e.* [Rai et al. 2007]  
 3s-ERG water[NOM] large.container-LOC [3sA-]fill-PST[3sP]  
 ‘S/he filled the *gāgri* with water.’
- g. *huīsa-ŋa ŋaklasi dalo-be khumd-e.* [Rai et al. 2007]  
 3s-ERG banana[NOM] basket-LOC [3sA-]pack-PST[-3sP]  
 ‘S/he packed the bananas into a *dālo*.’

- **DEFORMATION** (requiring a specific direction): spread out, bend, twist in some direction

- (24) a. *huīsa-ŋa gundri mo?-ni thiŋs-e.* [Rai et al. 2007]  
 3s-ERG straw.mat[NOM] down-DIR [3sA-]spread.out-PST[-3sP]  
 ‘S/he spread out the *gundri* downhill.’
- b. *hunce-ŋa tarra to?-ni u-beŋd-e.* [Rai et al. 2007]  
 3ns-ERG wire[NOM] up-DIR 3nsA-bend-PST[-3sP]  
 ‘They bent the wire upwards.’

## 4. Discussion

### 4.1 What drives the classification?

	G [+salient]	G [-salient]
TRANSFER	G=O	T=O
COVER	G=O	
HIT&CUT	G=O	
DEFORMATION		T=O

‘Salient’ usually means ‘animate’, but not always: cf. ‘wrap up G with T’ in (20d) and (21)

Minimal pairs (Chintang):

(25) a. throw: G=O

*athomba gol-ŋa rame or-o-ŋs-e.* [CLLDCh1R13S02.1242]  
 before ball-ERG R.[NOM] throw.at-3sP-PERF-PST  
 ‘He had already hit Rame with a ball before.’

b. throw: T=O

*kange hoke a-os-o-ko ei?* [CLLDCh1R09S07.1007]  
 comb[NOM] where 2-throw-3P-NPST INTERJ  
 ‘Oh, where do you throw the comb?’

(26) a. send: G=O

*huĩsa-ŋa phe?wa u-kam hakt-e.* [Rai et al. 2007]  
 3s-ERG money[NOM] 3sPOSS-friend[NOM] [3sA-]send.to-PST[3sP]  
 ‘He sent his friend money.’

b. send: T=O

*huĩsa-ŋa phe?wa u-khim-be hajs-e.* [Rai et al. 2007]  
 3s-ERG money[NOM] 3sPOSS-house-LOC [3sA-]send-PST[3sP]  
 ‘S/he sent money home.’

(27) a. shoot: G=O

*huĩsa-ŋa wassa gurthaŋ-ŋa apt-e.* [Rai et al. 2007]  
 3s-ERG bird[NOM] bow-ERG [3sA-]shoot-3sP[PST]  
 ‘S/he shot the bird with bow and arrow.’

b. shoot: T=O

*huĩsa-ŋa goli moʔ-ni ams-e.* [Rai et al. 2007]  
 3s-ERG ball[NOM] down-DIR [3sA-]shoot[-3sP]-PST

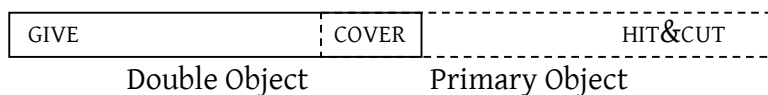
‘S/he shot the ball downhill.’

The G=O pattern seems to be etymologically linked to Proto-Tibeto-Burman \*-t, a stem augment with a ‘directive’ (probably caused motion) or applicative meaning (Wolfenden 1929, Michailovsky 1985, van Driem 1993: 215-23).<sup>3</sup> But -t also occurs in

- T=O ditransitives, with G in a locative (23c, d, f, g) or directive case (24b)
- monotransitives (e.g. *ip-t* ‘make sleep’, *cop-t* ‘see’, *cup-t* ‘close’, *pha-t* ‘help’)
- intransitives (e.g. *chip-t* ‘worry’, *huk-t* ‘bark’, *cho-t* ‘hot, burning’, *chu-t* ‘expensive’, *cu-t* ‘be many’, *hi-t* ‘be able, finish’, *nu-t* ‘good, healthy’, *pa-t* ‘grow’, *te-t* ‘return’).

#### 4.2 Consequences for semantic maps

- The minimal pairs above suggest that the denotata in semantic maps need to be more specific than usually assumed (e.g. Malchukov et al. 2007): in some languages, there are distinct ways of conceptualizing events like ‘throw’ or ‘shoot’.
- The Southeastern Kiranti (and the Chechen) data suggest that ‘cover’ events are positioned between ‘give’ and ‘hit’ events:



<sup>3</sup> 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: Ch. *lu-t* ‘tell’ > *luma* ‘to tell’ vs. *chit* ‘find’ > *chitma* ‘to find’; Belh. *hi-t* ‘be able, finish’ > *hima* ‘to be able, to finish’ vs. *hit* ‘watch’ > *hitma* ‘to watch’.

## 5. Conclusions

Avoiding denotational delimitations in the definition of ditransitives allows

- capturing the generalization that G=O alignment in Southeastern Kiranti is driven by the relative saliency of G and may have developed from an applicative function of PTB \*-t.
- discovering and typologizing language-specific principles of event classifications – here, based on saliency of G – not detectable through research on ‘give’ events alone. (Note that while language-specific principles may be widespread, they are not universal: cf. Chechen, which makes a different classification)
- extension of alignment typology to cover all argument subsets, with no arbitrary a priori delimitation of scope
- a fully consistent way of coding arguments subsets in case marking and thereby opening up an avenue for typologizing lexical valence information and event classification, despite the extreme variation in verb semantics across languages.

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