

Properties

- Adverbs show number and gender agreement.
- The agreeing adverbs are always based on adjectives.
- The verbal complex agrees with the nominative subject.
- The adverb **does not** agree with the verb.
- The adverb agrees with the nominative object.
- This is despite the fact that the adverb is clearly modifying the verb, not the object.

1.3 Cross-linguistic Comparison

1.3.1 Agreeing Adverbs

- Adverbs are generally not expected to show agreement inflection (cf. e.g., Anderson 1985, Alexiadou 1997, Evans 2000).
- Adverbs are generally fall under the category of indeclinable elements.
- However, a typological survey established that agreeing adverbs do exist in a few languages (Evans 2000).
- In Pitjantjatjara, for example, adverbs take the ergative case in transitive clauses (Evans 2000, Bowe 1991); see (4).

(4) *mijma-ŋku=ŋi ɹawa-ŋku mai u-ŋkupai*
 woman-ERG=1.SG.OBJ continually-ERG food.ABS give-PST
 ‘The woman continually gave me food.’ (Evans 2000, p. 715)

- In Daghestanian, adverbs agree with either the agent (e.g., in Archi) or the patient (e.g., in Avar) (Evans 2000, Kibrik 1979).
 - In the Archi example in (5) the adverb *dītaru* ‘early’ agrees in (feminine) class II and singular number with *buwa* ‘mother’, the agent of the overall predicate.
 - (It cannot agree with *dez* ‘me’ since dative NPs are generally not available for agreement).

(5) *buwa dez dītaru x̄oalli barfi*
 mother:II:SG:NOM 1:II:SG:DAT early:II:SG bread:III:SG:NOM bake:GER:III:SG
 erdi
 AUX:II:SG
 ‘Mother was baking me the bread early.’ (Kibrik 1979, p. 70)

- In the Avar example in (6) the adverb *xar* ‘here’ agrees in (non-human) class III and plural number with *‘icalgi* ‘apples’, the patient of the overall predicate

(6) $\dot{r}ex$ xar $dedebe$ $‘icalgi$ $ro\dot{s}un$
 3:II:SG:ERG here:III:PL father:III:PL:DAT apple:III:PL:NOM buy:III:PL
 $ro‘a$
 AUX:III:PL
 ‘She was buying father the apples here.’ (Kibrik 1979, p. 76)

1.3.2 The Resultative Connection

- Closer to home, Ledgeway (2011) analyzes agreeing adverbs in South Italian dialects and proposes a connection to **resultative adjectives**.
- In a larger discussion on resultatives, Washio (1997) and Levinson (2010) look at pairs as in (7).

- (7) a. He tied the shoelaces loose/loosely.
 b. Janet braided her hair tight/tightly.

- They note that these pairs are semantically almost indistinguishable.
- But there are some differences.
 - Manner adverbs (*loosely, tightly*) are generally analyzed as predicates of events.
 - Levinson calls the adjective version (*loose, tight*) a **pseudo-resultative** and argues that it is not a predicate of events, unlike the manner adverbs.
 - Levinson also identifies pseudo-resultatives in Finnish, Norwegian and Romance and shows that they have special morphology that sets them apart from both resultatives and manner adverbs.
- More on this in section 3.
- First — agreeing adverbs in Urdu, Sindhi and Punjabi.

2 Agreeing Adverbs in Urdu, Sindhi and Punjabi

2.1 Urdu

2.1.1 Adverbs

Adverbs in Urdu take several different forms.

- Adverbs can be simple words (8a).
- They can be expressed via a case marked NP (8b) (this is a very common strategy).
- They may be based on a noun or adjective (8c) and be realized with masculine oblique inflection.
- None of these types agrees with another element of the clause — as is generally expected for adverbs.

- (8) a. *lɑrki* *gɑri* **roz** *cɑlɑ-ti* *hɛ*
 girl.F.SG.NOM car.F.SG.NOM daily drive-IMPF.F.SG be.PRES.3.SG
 ‘The girl drives a/the car daily.’
- b. *lɑrki* *gɑri* **d^hɪyan=se** *cɑlɑ-ti* *hɛ*
 girl.F.SG.NOM car.F.SG.NOM care.M.SG=INST drive-IMPF.F.SG be.PRES.3.SG
 ‘The girl drives a/the car with care.’
- c. *lɑrki* *gɑri* **pahl-e** *cɑlɑ-ti* *hɛ*
 girl.F.SG.NOM car.F.SG.NOM first-M.SG.OBL drive-IMPF.F.SG be.PRES.3.SG
 ‘The girl drives a/the car first.’

2.1.2 Agreeing Adverbs

- When adverbs are based on adjectives they may retain the gender and number agreement morphology of the adjective and agree with an element in the clause.
- In (9a) the adverb modifies the verbal predication, but does not agree with the verb — it agrees with the object.

- (9) a. *lɑrka* **gɑri** **acc^h-i** *cɑlɑ-tɑ* *hɛ*
 boy.M.SG.NOM car.F.SG.NOM good-F.SG drive-IMPF.M.SG be.PRES.3.SG
 ‘The boy drives a/the car well.’
- b. * *lɑrka* *gɑri* **acc^h-ɑ** *cɑlɑ-tɑ* *hɛ*
 boy.M.SG.NOM car.F.SG.NOM good-M.SG drive-IMPF.M.SG be.PRES.3.SG
 ‘The boy drives a/the car well.’
- c. *lɑrki* *gɑri=ko* **acc^h-ɑ** *cɑlɑ-ti* *hɛ*
 girl.F.SG.NOM car.F.SG=ACC good-M.SG drive-IMPF.F.SG be.PRES.3.SG
 ‘The girl drives the car well.’

- Agreeing adverbs do agree with the subject of transitive agentive verbs (9b).
- When the object is overtly case marked, the adverb shows default masculine singular agreement (9c).
- This agreement pattern is in line with the overall agreement pattern found for the Urdu verbal complex.

2.1.3 Verbal Agreement

- Agreement patterns in Urdu are complex, with the verbal complex showing agreement for person, number and gender (Mohanani 1994).
 - The verbal complex (VC) agrees with the subject when that subject is nominative/unmarked (10a).
 - When the subject is overtly case marked, the VC agrees with the object (10b).
 - When the object is also overtly case marked, the VC reverts to default agreement: masculine singular (10c).

- (10) a. **lɑrki** xat **lɪk^h-ti** **hɛ**
 girl.F.SG.NOM letter.M.SG.NOM write-IMPF.F.SG be.PRES.3.SG
 ‘The girl is writing a/the letter.’
- b. lɑrki=ne **xat** **lɪk^h-a** **hɛ**
 girl.F.SG=ERG letter.M.SG.NOM write-PERF.M.SG be.PRES.3.SG
 ‘The girl wrote a/the letter.’
- c. lɑrki=ne gɑri=ko cɑlɑ-ya hɛ
 girl.F.SG=ERG car.F.SG=ACC drive-PERF.M.SG be.PRES.3.SG
 ‘The girl drove the car.’

- The agreeing adverbs follow the general verb agreement pattern in the language.

2.2 Sindhi

2.2.1 Standard Adverbs

The data for Sindhi mirror that for Urdu.

- Adverbs can be simple words (11a).
- They can be expressed via a case marked NP (11b) (this is a very common strategy).
- They may be based on a noun or adjective (11c) and have masculine oblique inflection.
- None of these types agrees with another element of the clause.

- (11) a. ^hlɑkiri gɑfi **roz** hɑlɑ-ɛ t^hi
 girl.F.SG.NOM car.F.SG.NOM daily drive-PRES.3.SG be.PRES.F.SG
 ‘The girl drives a/the car daily.’

- b. $c^h\text{lokiri}$ $gadi$ $d^h\text{yan=sañ}$ $hala-\epsilon$ t^hi
 girl.F.SG.NOM car.F.SG.NOM care.M.SG=INST drive-PRES.3.SG be.PRES.F.SG
 ‘The girl drives a/the car with care.’
- c. $c^h\text{lokiri}$ $gadi$ $pehr-eñ$ $hala-\epsilon$ t^hi
 girl.F.SG.NOM car.F.SG.NOM first-M.SG.OBL drive-PRES.3.SG be.PRES.F.SG
 ‘The girl drives a/the car first.’

2.2.2 Agreeing Adverbs

- Sindhi shows an identical overall pattern to Urdu.
- In (12a) the ‘good’ is acting as an adverb in that it is modifying the verbal predication.
- However, it agrees with the object and not the subject (12b).

(12) a. $c^h\text{okiro}$ $gadi$ $su\check{t}^h-i$ $hala-e$ t^ho
 boy.M.SG.NOM car.F.SG.NOM good-F.SG drive-PRES.3.SG be.PRES.M.SG
 ‘The boy drives a/the car well.’

b. * $c^h\text{okiro}$ $gadi$ $su\check{t}^h-o$ $hala-e$ t^ho
 boy.M.SG.NOM car.F.SG.NOM good-M.SG drive-PRES.3.SG be.PRES.M.SG
 ‘The boy drives a/the car well.’

c. $c^h\text{okiri}$ $gadi=k^he$ $su\check{t}^h-o$ $hala-e$ t^hi
 girl.F.SG.NOM car.F.SG=ACC good-M.SG drive-PRES.3.SG be.PRES.F.SG
 ‘The girl drives the car well.’

- And as in Urdu, Sindhi uses masculine singular default agreement morphology when the object is marked and therefore unavailable for agreement (12c).

2.2.3 Verbal Agreement

- Like Urdu Sindhi also shows agreement for person, number and gender at verbal complex level.
- Agreement patterns are identical to Urdu (discussed above) though the morphology involved differs.

(13) a. $c^h\text{okiri}$ $xatu$ lik^h-e t^hi
 girl.F.SG.NOM letter.M.SG.NOM write-PRES.3.SG be.PRES.F.SG
 ‘The girl writes a/the letter.’

b. $c^h\text{okiri-a}$ $xatu$ lik^h-yo $ah\epsilon$
 girl.F.SG-OBL letter.M.SG.NOM write-PERF.M.SG be.PRES.3.SG
 ‘The girl wrote a/the letter.’

c. $c^h\text{okiri-a}$ $gadi=k^he$ $hala-yo$ $ah\epsilon$
 girl.F.SG-OBL car.F.SG=ACC drive-PERF.M.SG be.PRES.3.SG
 ‘The girl drove the car.’

2.3 Punjabi

Punjabi shows exactly the same patterns (despite differences in morphology and lexical items).

2.3.1 Standard Adverbs

- (14) a. *kṛi* *gadi* **roz** *calañ-di* ϵ
 girl.F.SG.NOM car.F.SG.NOM daily drive-IMP.F.SG be.PRES.3.SG
 ‘The girl drives a/the car daily.’
- b. *kṛi* *gadi* **d^hīyan=naI** *calañ-di* ϵ
 girl.F.SG.NOM car.F.SG.NOM care.M.SG=INST drive-IMP.F.SG be.PRES.3.SG
 ‘The girl drives a/the car with care.’
- c. *kṛi* *gadi* **pahl-añ** *calañ-di* ϵ
 girl.F.SG.NOM car.F.SG.NOM first-M.SG.OBL drive-IMP.F.SG be.PRES.3.SG
 ‘The girl drives a/the car first.’

2.3.2 Agreeing Adverbs

- (15) a. *mũnda* **gadi** **cañg-i** *calañ-da* ϵ
 boy.M.SG.NOM car.F.SG.NOM good-F.SG drive-IMP.M.SG be.PRES.3.SG
 ‘The boy drives a/the car well.’
- b. * *mũnda* *gadi* *cañg-a* *calañ-da* ϵ
 boy.M.SG.NOM car.F.SG.NOM good-M.SG drive-IMP.M.SG be.PRES.3.SG
 ‘The boy drives a/the car well.’
- c. *kṛi* *gadi=nũ* *cañg-a* *calañ-di* ϵ
 girl.F.SG.NOM car.F.SG=ACC good-M.SG drive-IMP.F.SG be.PRES.3.SG
 ‘The girl drives the car well.’

2.3.3 Verbal Agreement

- (16) a. **kṛi** *xat* **lk^h-di** ϵ
 girl.F.SG.NOM letter.M.SG.NOM write-IMP.F.SG be.PRES.3.SG
 ‘The girl is writing a/the letter.’
- b. *kṛi=ne* **xat** **lk^h-ya** ϵ
 girl.F.SG=ERG letter.M.SG.NOM write-PERF.M.SG be.PRES.3.SG
 ‘The girl wrote a/the letter.’
- c. *kṛi=ne* *gadi=nũ* *cala-ya* ϵ
 girl.F.SG=ERG car.F.SG=ACC drive-PERF.M.SG be.PRES.3.SG
 ‘The girl drove the car.’

2.4 Resultatives

- Ledgeway posits a connection between agreeing adverbs and resultatives.
- In Urdu, Sindhi and Punjabi the equivalent of resultatives do indeed look very similar.
- Resultative semantics are expressed via Adj-V complex predicates (Ahmed et al. 2012).
- (17)–(19) provides some examples.

(17) a.	laṛke=ne	pani	ṭ^hand-a	k-iyā	
	boy.M.SG.OBL=ERG	water.M.SG.NOM	cold-M.SG	do-PERF.M.SG	
	‘The boy cooled the water.’				Urdu
b.	laṛke=ne	caī	ṭ^hand-i	k-i	
	boy.M.SG.OBL=ERG	tea.F.SG.NOM	cold-F.SG	do-PERF.F.SG	
	‘The boy cooled the tea.’				Urdu
(18) a.	c ^h okir-e	pani	t^hadh-o	kā-yo	
	boy.M.SG-OBL	water.M.SG.NOM	cold-M.SG	do-PERF.M.SG	
	‘The boy cooled the water.’				Sindhi
b.	c ^h okir-e	cañheñ	t^hadh-i	kā-i	
	boy.M.SG-OBL	tea.F.SG.NOM	cold-F.SG	do-PERF.F.SG	
	‘The boy cooled the tea.’				Sindhi
(19) a.	mũṇḍe=ne	pani	ṭ^hand-a	kit-a	
	boy.M.SG.OBL=ERG	water.M.SG.NOM	cold-M.SG	do-PERF.M.SG	
	‘The boy cooled the water.’				Punjabi
b.	mũṇḍe=ne	ca	ṭ^hand-i	kit-i	
	boy.M.SG.OBL=ERG	tea.F.SG.NOM	cold-F.SG	do-PERF.F.SG	
	‘The boy cooled the tea.’				Punjabi

- The adjective agrees with the object, as with agreeing adjectives.
- However, the adjective also modifies the object and describes its resulting state.
- The modification is not of the verbal predication.

2.5 Interim Summary — Pseudo-Resultatives

- Like Southern Italian, Urdu, Sindhi and Punjabi have agreeing adverbs that seem to be connected to original resultatives.
- The Urdu, Sindhi and Punjabi agreeing adverbs are:
 - distinct from other manner adverbs in the languages
 - distinct from resultatives in their semantics

⇒ Appear to be *pseudo-resultatives* in Levinson’s sense.

3 Resultatives and Pseudo-Resultatives

This section looks at further features of the existing analyses and data.

3.1 Italian Resultatives and Agreeing Adverbs

3.1.1 Basic Data – Agreeing Adverbs

- Ledgeway (2011) points out agreeing adverbs in Southern Italian dialects.
- Examples (20a) and (20c) show agreement with the object ('health problems') and subject ('I'), respectively (Ledgeway 2011, 10).
- In (20b) the adjective is in the masculine singular. This is the **default** form and actually signals the absence of agreement.

- (20) a. tu li sa canusciri **buoni** li disturbi di **saluti**
 you them.M know know.INF good.MPL the.MPL complaints.M of health
 'you can recognize health problems expertly' Eastern Sicilian
- b. Maria ma tu chi dici ca ficimu **bonu** [...]?
 Maria but you what you.say that we.did good.MSG
 'Maria, do you think we acted correctly?' Eastern Sicilian
- c. havi tri ghiorna ca mi preparu, ma **bona nisciu**, averu?
 it.has 3 days that me= I.prepare but good.FSG I.come.out true
 'I've been preparing for 3 days, but I'll do alright, won't I?' Eastern Sicilian

- The agreeing adverbs are all based on adjectives.
- The effect is one of manner modification of the event.
- In other Italian dialects the equivalent adverbs carry the *-ment* suffix.

3.1.2 Undergoer Agreement

- Ledgeway shows that agreeing adverbs only agree with the underlying UNDERGOER.
- They never agree with agents.
- That is, semantic role properties are relevant, not grammatical function.
- In (21) and (20c) the agreement is with the subject. In both cases, this is an Undergoer (subject of an unaccusative verb).

- (21) Campài tantu tempu **mala**
 I.lived so.much time bad.FSG
 'I lived badly for such a long time. Reggio Calabria

- (22) a. Anna miscava **buonu** 'i carte
 Anna shuffled good.MSG the.PL cards.F
 'Anna shuffled the cards well.' (Anna shuffles well) Cosenza
- b. Anna miscava **bone** 'i carte
 Anna shuffled good.FPL the.PL cards.F
 'Anna shuffled the cards well. (the cards are shuffled well) Cosenza

- In (22a) and (20a) the agreement is with the objects, both Undergoers.
- **Subject vs. Object-Oriented Modification**
 - When the agreement is with the object, the agreeing adverb is object-oriented.
 - When the agreement is with the subject, the agreeing adverb is subject-oriented.
 - When the clause is transitive and the adjective shows default agreement, the adjective is subject-oriented (cf. (22a) vs. (22b)).

3.1.3 The Resultative Connection

- Ledgeway posits a synchronic, derivational relationship between originally resultative adjectives and the agreeing adverbs.
- For example, he explains the data in (22) as follows
- The agreeing adverb in (22b) is taken to be derived via movement from an underlying resultative construction as in (23).

(23) Anna miscava **bone** ['i carte [RESULTP bone]]

- This analysis explains the difference in word order between resultatives and agreeing adverbs.
- The agreeing adverbs are taken to show agreement because the originally resultative adjective agrees with its complement in base position, the UNDERGOER in ResultP.
- Non-agreeing adjectives are taken to be base-generated in the higher adverb position (ModP, following Cinque 1999).

(24) Anna miscava [**buonu** [VP 'i carte]]

- Because they never enter into a direct relationship with the UNDERGOER, there is no agreement relation.

3.1.4 Discussion

- Ledgeway’s analysis does not explain why there is default agreement morphology on the adjective.
- Ledgeway also has little to say about the semantic connection between the two constructions.
- **Note:** Ledgeway wants to see things in terms of an emerging active/stative vs. nom/acc split and interprets the Italian data as documenting an ”emergence” of split intransitivity.
 - The Urdu, Sindhi and Punjabi data involve split-ergativity and therefore complicate his alignment discussion.
 - The pseudo-resultative data appears to simply confirm the importance of understanding verb classes and lexical semantics for syntactic phenomena.

3.2 Pseudo-Resultatives

3.2.1 Adjectives with Adverbial Semantics

- Recall that Washio (1997) and Levinson (2010) look at pairs as in (25).

(25) a. He tied the shoelaces loose/loosely.
 b. Janet braided her hair tight/tightly.
- They note that these pairs are semantically almost indistinguishable.
- In particular, Washio provides a reason why you have ambiguity in English with respect to (26).

(26) He tied the shoelaces loose.

Although it still seems possible to regard the adjective *loose* [in (26)] as specifying the state of the shoelaces, it can also be regarded as describing *the way* he tied his shoelaces, that is, he did it without much force. This is natural because in an activity like tying the shoelaces, the manner (with or without force) determines the resulting state (tight or loose); and it is typical of cases like this that the adjectives can alternate with adverbs with virtually no difference in meaning: ... (Washio 1997, 17)

- Levinson calls the adjective version (*loose, tight*) a **pseudo-resultative** and argues that it is not a predicate of events, unlike the manner adverbs.
- She takes the adjective to be predicating of a created result/object and sees the pseudo-resultatives as only applying to root creation verbs (verbs which entail the creation of an entity denoted by the root of the verb).

3.2.2 Discussion

- The data from Urdu, Sindhi and Punjabi as well as Italian show that pseudo-resultatives in these languages are not confined to root creation verbs.
 - Urdu, Punjabi and Sindhi: ‘drive’ is not a root creation verb (in fact, it is a causative of ‘walk’)
 - Italian: ‘shuffle (cards)’ is not a root creation verb.
- Levinson does not pick up on the Undergoer connection noted by Ledgeway directly.

4 Further South Asian Data

Questions:

- Does the **Undergoer** generalization hold for our South Asian languages?
- Do pseudo-resultatives always express **manner** adverbs and does the semantic connection posited by Washio hold?
- Do the **agreement** effects differ systematically according to **subject- vs. object orientation** as in Italian?
- Are there any **word order** effects similar to those of Italian?
- Is the relationship between resultatives and pseudo-resultatives a **synchronic or a historical** one?

4.1 Undergoer Sensitivity

- In our South Asian languages, agreement of pseudo-resultatives is indeed limited to Undergoers.
- Note, we use Undergoer in the same broad sense as Ledgeway, i.e., Proto-Patient (Dowty) or in the RRG notion of Undergoer.
- Pseudo-resultatives can in fact agree with a subject, but only with
 - subject of an unaccusative verb
 - subject of a passivized clause.
- Crucially, the pseudo-resultative does not agree with
 - subject of an unergative (see below)
 - subject of agentive transitive (examples seen above).

Urdu

- (27) a. **garī** (lar̥ke=se) **acc^h-i** cala-yi ja-ti
 car.F.SG.NOM boy.M.SG.OBL=INST good-F.SG drive-PERF.F.SG go-IMPF.F.SG
 hε
 be.PRES.3.SG
 ‘A/The car is driven well (by the boy).’ (passive)
- b. **roṭī** acc^h-i **pak-ti** hε
 bread.F.SG.NOM good-F.SG bake-IMPF.F.SG be.PRES.3.SG
 ‘(The) Bread bakes well.’ (unaccusative)
- c. ye lar̥ki acc^h-a hans-ti hε
 this girl.F.SG.NOM good-M.SG laugh-IMPF.F.SG be.PRES.3.SG
 ‘This girl laughs well/nicely.’ (unergative)

Punjabi

- (28) a. **gadi** (kʊri=toñ) **cañg-i** cala-yi jañ-di
 car.F.SG.NOM girl.F.SG.OBL=INST good-F.SG drive-PERF.F.SG go-IMPF.F.SG
 ε
 be.PRES.3.SG
 ‘A/The car is driven well (by the girl).’ (passive)
- b. **roṭī** cañg-i **pak-di** ε
 bread.F.SG.NOM good-F.SG bake-IMPF.F.SG be.PRES.3.SG
 ‘(The) Bread bakes well.’ (unaccusative)
- c. e kʊri cañg-a has-di ε
 this girl.F.SG.NOM good-M.SG laugh-IMPF.F.SG be.PRES.3.SG
 ‘This girl laughs well/nicely.’ (unergative)

Sindhi

- (29) a. (c^hokire=k^hã) **gadi** suṭ^h-i hala-ije t^hi
 boy.M.SG.OBL=ABL car.F.SG.NOM good-F.SG drive-PASS.SG be.PRES.F.SG
 ‘The car is driven well (by the boy).’ (passive)
- b. **mani** suṭ^h-i **pac-e** t^hi
 bread.F.SG.NOM good-F.SG bake-PRES.3.SG be.PRES.F.SG
 ‘The bread bakes well.’ (unaccusative)
- c. hi c^hokiri suṭ^h-o k^hil-e t^hi
 this girl.F.SG.NOM good-M.SG laugh-PRES.3.SG be.PRES.F.SG
 ‘This girl laughs well/nicely.’ (unergative)

4.2 Manner Modification of Pseudo-Resultatives

All the examples we have been able to find or think of involve manner modification.

- Corpus study of HUTB (???)
- Annotation of new Urdu corpus (8000 sentences total, 1300 currently annotated)
- Examples in existing written grammars (Trumpp 1872, Kellogg 1893, Cummings and Bailey 1912, McGregor 1972)
- Overall very few examples can be found in existing resources and corpora.

We here provide a representative collection of relevant examples.

- (30) a. *larki* **gana** **acc^h-a** *sun-ti* *he*
 girl.F.SG.NOM song.M.SG.NOM good-M.SG listen-IMPF.F.SG be.PERS.3.SG
 ‘The girl listens to the song very well.’ Urdu
- b. *larki* **gazal** **acc^h-i** *sun-ti* *he*
 girl.F.SG.NOM song.F.SG.NOM good-F.SG listen-IMPF.F.SG be.PERS.3.SG
 ‘The girl listens to the gazal (type of song) very well.’ Urdu
- (31) a. **kuri** **ok^h-i** *ga-i*
 girl.F.SG.NOM difficult-F.SG go-PERF.F.SG
 ‘The girl walked with difficulty.’ Punjabi
- b. **kuryā** **kaṭ^hiy-ā** *ai-ṡa*
 girl.F.PL.NOM together-F.PL come-PERF.F.PL
 ‘The girls came together.’ Punjabi
- c. **g^hori** **baṛ-i** **sohn-i** *ṡor-di* *ε*
 mare.F.SG.NOM big-F.SG pretty-F.SG walk-IMPF.F.SG be.PRES.3.SG
 ‘The mare walks well/prettily.’ (Cummings and Bailey 1912, II,35) Punjabi
- (32) *mōnda* **kahani** *boht-i* **cang-i** *lik^h-da* *ε*
 boy.M.SG.NOM story.F.SG.NOM much-F.SG good-F.SG write-IMPF.M.SG be.PRES.3.SG
 ‘The boy writes a/the story very well.’ Punjabi
- (33) *hua* **xatu** *ḡad^ho* **suṡ^h-o** *lik^h-ε* *t^hi*
 she letter.M.SG.NOM much/very.M.SG good-M.SG write-PRES.3.SG be.PRES.F.SG
 ‘She writes a letter very well.’ Sindhi

4.3 Agreement and Available Readings

- Washio posits that there is a close connection between resultatives and pseudo-resultatives because in both cases the adjective is modifying the resulting subevent.
 - When the adjective predicates directly of the object, it is providing information about the resulting state of the object (resultative).
 - But the result state of the object is part of the overall resulting subevent so the adjective is also modifying the overall subevent.

⇒ This semantic overlap opens the door for adverbial manner readings of result adjectives.

- Accordingly you expect to find variation as in English.

- (34) a. He tied the shoelaces loose/loosely.
 b. Janet braided her hair tight/tightly.

- Our South Asian languages also show variation.
- However, the adjective always has to agree with the Undergoer.

4.3.1 Same Agreement and Position but Semantic Variation

- The adjective always agrees with the Undergoer.
- Get either resultative or pseudo-resultative reading.

- (35) roṭi acc^hi pak-i
 bread.F.SG.NOM good.F.SG bake-PERF.F.SG
 ‘The bread baked well/nicely.’ (pseudo-resultative)
 ‘The bread came out well.’ (resultative)

Urdu

4.3.2 No Agreement: Only Pseudo-Resultative

- If one has a context in which there is no Undergoer, there is no agreement.
- Only the pseudo-resultative meaning obtains.
- The adverb is subject-oriented.

- (36) amra ravi=se acc^ha bol-ti he
 Amra.F.SG.NOM Ravi.M.SG=INST good.M.SG speak-IMP.F.SG be.PRES.3.SG
 ‘Amra speaks nicely to Ravi.’

4.3.3 Agreement Variation: Difference in Meaning

- In (37) the absence/presence of agreement signals a difference in interpretation.
- In (37a) the oblique inflection signals a straightforward adverb expressing the manner of the overall baking.
- In (37b) the agreeing version gives rise to the pseudo-resultative manner modification.

- (37) a. roti **es-e** pak-i ke sb heran ho
 bread.F.SG.NOM such-M.SG.OBL bake-PERF.F.SG that all surprised be
 gα-ε
 go-PERF.M.PL
 ‘The bread baked in such a way that everyone was surprised.’ Urdu
 (manner of baking)
- b. roti **es-i** pak-i ke k^ha-i na
 bread.F.SG.NOM such-F.SG bake-PERF.F.SG that eat-PERF.F.SG not
 gα-i
 go-PERF.F.SG
 ‘The bread baked in such a way that (no one) was able to eat it.’ Urdu
 (pseudo-resultative manner modification)

4.4 Summary

- The **Undergoer** generalization found for Italian holds for our South Asian languages.
- Do pseudo-resultatives always express **manner** adverbs and the semantic connection posited by Washio appears to hold.
- There are **agreement** effects but they indicate true adverb vs. pseudo-resultative manner readings.
- We did not find **word order** effects similar to those of Italian.
- Issue to be resolved (but not in this talk): so far not clear whether the relationship between resultatives and pseudo-resultatives is **synchronic** as posited by Ledgeway or **diachronic**.
- Current assumption: diachronic process by which the pseudo-resultatives will lose agreement and take on adverb morphology as in (37a).

5 Analysis

5.1 Our Basic Proposal

- We suggest that the connection between resultative adjective and agreeing manner adverb (pseudo-resultative) follows naturally from analyses previously posited for resultative adjectives in Urdu.
- The analyses are very close and involve an ADJUNCT for pseudo-resultatives and a PREDLINK for resultative adjectives.
- The semantic overlap identified by Washio leads to the reinterpretation of a PREDLINK as a manner ADJUNCT.
- That is, an originally resultative construction with a fully-fledged adjective had its semantics shifted towards manner modification.
- The adjectival inflection is retained (we assume it will be lost over time).
- Given the crosslinguistic data, it seems that the semantic overlap applies crosslinguistically so that the same forces of syntactic and semantic reanalysis can be seen at play across languages.

5.2 Resultative Adjectives — PREDLINK

5.2.1 Basic Analysis

- We follow Ahmed et al. (2012).²
- Adj-V combinations as in (38) have traditionally been seen as complex predicates.
- However, there is little structural evidence for this.
 - The adjective is not contained within the verbal complex (VC).
 - The adjective is not a licensed/selected argument of any other element in the clause.
- Ahmed et al. (2012) thus posit the c-structure in (39).
- We also assume a verb frame augmentation approach (cf. Christie 2010).
- The possibility of augmenting a verb’s predicate-argument frame is governed by lexical semantic factors (cf. Wechsler 1995, 2005).

(38) larke=ne cai tʰand-i k-i
 boy.M.SG.OBL=ERG tea.F.SG.NOM cold-F.SG do-PERF.F.SG
 ‘The boy cooled the tea.’ (lit. ‘The boy did the tea cool.’)

²Also see our Complex Predicate Reference Bank: <http://ling.uni-konstanz.de/pages/home/pargram-urdu/main/Resources.html#CP>

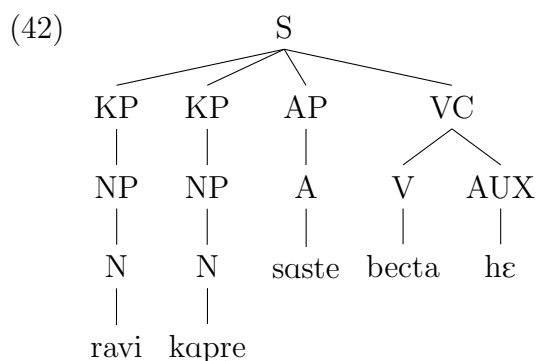
5.2.3 Note: PREDLINK vs. XCOMP

- Resultatives have traditionally been analyzed as containing an XCOMP rather than a PREDLINK within LFG (and the equivalent in HPSG), as first proposed by Simpson (2006) (e.g., Christie 2010, also Müller (2002) and references therein for HPSG).
- However, if predicatives are treated as a PREDLINK (Butt et al. 1999), then resultatives should also be analyzed in terms of a PREDLINK.
- One advantage of the PREDLINK proposal is that no embedded syntactic subject is predicted.
- Under the XCOMP proposal, *cai* ‘tea’ in (40) would function as an embedded subject within the resultative XCOMP; however, (39) is monoclausal and *cai* ‘tea’ shows no evidence of subjecthood (via the tests established for Urdu/Hindi by Mohanan (1994)).

5.3 Pseudo-resultatives (Agreeing Adverbs)

- Pseudo-resultatives are analyzed along much the same lines.
- The major difference is that the adjective does not give rise to a PREDLINK but to a clause-level adjunct.
- (42) and (43) provide a c-structure and an f-structure for (1), repeated here as (41).

(41) ravi kapre sast-e bec-ta he
 Ravi.M.SG.NOM clothes.M.PL.NOM cheap-M.PL sell-IMP.F.M.SG be.PRES.3.SG
 ‘Ravi sells clothes cheap.’ Urdu
 (he sells them cheaply, the clothes are not inherently cheap)



$$(43) \left[\begin{array}{l} \text{PRED} \\ \text{SUBJ} \\ \text{OBJ} \\ \text{ADJUNCT} \end{array} \left[\begin{array}{l} \text{'bec<SUBJ OBJ>'} \\ \left[\begin{array}{l} \text{PRED 'ravi'} \\ \text{NUM sg} \\ \text{PERS 3} \\ \text{GEND masc} \end{array} \right] \\ \left[\begin{array}{l} \text{PRED 'kqpra'} \\ \text{NUM pl} \\ \text{PERS 3} \\ \text{GEND masc} \end{array} \right] \\ \left\{ \left[\begin{array}{l} \text{PRED 'sast'} \\ \text{MOD-TYPE manner} \end{array} \right] \right\} \end{array} \right]$$

- This analysis continues to see the adjective as staying an adjective at c-structure.
- The difference lies in the f-structural analysis.
- The adjective is now functioning as an ADJUNCT.
- Information about Undergoer status is lexical semantic and is part of the lexical specification of the verb.
- If the Undergoer argument is nominative, the adjective will agree with it.

5.3.1 Intransitives

- Recall the contrast between unaccusatives and unergatives in (44) (these correspond to the unaccusative and unergative examples in (27b) and in (27c), respectively).
- Recall that pseudo-resultative agreement only occurs with unaccusatives.

- (44) a. **roṭi** acc^h-i **pak-ti** hε
bread.F.SG.NOM good-F.SG bake-IMPF.F.SG be.PRES.3.SG
‘(The) Bread bakes well.’ (unaccusative) Urdu
- b. ye laṛki acc^h-a hans-ti hε
this girl.F.SG.NOM good-M.SG laugh-IMPF.F.SG be.PRES.3.SG
‘This girl laughs well/nicely.’ (unergative) Urdu

- (45) and (46) show the corresponding f-structure analyses.

$$(45) \left[\begin{array}{l} \text{PRED} \quad \text{'pak<SUBJ>'} \\ \\ \text{SUBJ} \quad \left[\begin{array}{l} \text{PRED} \quad \text{'roṭi'} \\ \text{NUM} \quad \text{sg} \\ \text{PERS} \quad 3 \\ \text{GEND} \quad \text{fem} \end{array} \right] \\ \\ \text{ADJUNCT} \quad \left\{ \left[\begin{array}{l} \text{PRED} \quad \text{'acc}^h \\ \text{MOD-TYPE} \quad \text{manner} \end{array} \right] \right\} \\ \text{LEX-SEM} \quad \text{unacc} \end{array} \right]$$

$$(46) \left[\begin{array}{l} \text{PRED} \quad \text{'hans<SUBJ>'} \\ \\ \text{SUBJ} \quad \left[\begin{array}{l} \text{PRED} \quad \text{'laṛki'} \\ \text{NUM} \quad \text{sg} \\ \text{PERS} \quad 3 \\ \text{GEND} \quad \text{fem} \end{array} \right] \\ \\ \text{ADJUNCT} \quad \left\{ \left[\begin{array}{l} \text{PRED} \quad \text{'acc}^h \\ \text{MOD-TYPE} \quad \text{manner} \end{array} \right] \right\} \\ \text{LEX-SEM} \quad \text{unerg} \end{array} \right]$$

- The analyses show the LEX-SEM feature used in the Urdu ParGram grammar to register syntactically relevant lexical semantic features at f-structure.
- We use this feature to check for agreement.
- It is straightforward to control for pseudo-resultative agreement, given a lexical entry such as the one in (47) for feminine singular 'acc^{hi}'.
- The entry uses a local variable to instantiate the inside-out path to a specific adjunct, as well as inside-out functional constraints to drive agreement with unaccusative verbs only.

$$(47) \quad \text{acc}^hi \quad A \quad \left\{ \begin{array}{l} (\uparrow \text{PRED}) = \text{'acc}^h \\ (\uparrow \text{MOD-TYPE}) = \text{manner} \\ (\text{ADJUNCT } \uparrow) = \% \text{ADJ-IO} \\ (\% \text{ADJ-IO SUBJ NUM}) =_c \text{sg} \\ (\% \text{ADJ-IO SUBJ GEND}) =_c \text{fem} \\ (\% \text{ADJ-IO LEX-SEM}) =_c \text{unacc} \\ | (\% \text{ADJ-IO LEX-SEM}) =_c \text{unerg} \end{array} \right\}.$$

6 Summary and Conclusions

- The South Asian languages Urdu, Sindhi and Punjabi contain pseudo-resultative agreeing adjectives.
- They seem to follow the same overall pattern as that identified crosslinguistically.
- Like Ledgeway, we propose a close connection between resultatives and pseudo-resultatives.
- At the level of c-structure the analysis is the same for both types.
- The overlap of meaning between specifying the result state of an Undergoer and modifying the overall result subevent opens up the possibility for a manner adverbial meaning of resultative adjectives.
- This subtle but significant difference is captured at the level of f-structure in a difference of the **functional** contribution: PREDLINK vs. ADJUNCT
- The agreement is a reflex of the original resultative structure.
- We assume that it will be lost over time.
- Agreement variation coinciding with a stronger directly adverbial reading in conjunction with no agreement is already underway.

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