

Dyirbal Ergativity¹

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1 Introduction

- (1) a. Transitive Subject (A)
ngayguna **banggul** **yaɾa-nggu** balgan
me.ACC **NCI.there.ERG** **man-ERG** hit.NFut
“man is hitting me” (60)
- b. Intransitive Subject (S)
bayi **yaɾa** walmanyu
NCI.there.ABS **man.ABS** got.up
“man got up” (67)
- c. Transitive Object (O)
ngadya **bayi** **yaɾa** balgan
I.NOM **NCI.there.ABS** **man.ABS** hit.NFut
“I hit the man” (73)

Syntactic Ergativity:

“ergativity as found in the well-known case of Dyirbal ... in which the ergative-absolutive contrast is not only one of case marking or agreement but apparently the basis of syntactic organization throughout the grammar of the language” (Dowty 1991:582)

Analyses: S and O occupy the same syntactic position, typically a “subject” position, associated with the same Case/licensing mechanism.

- Dixon (1972): S and O are generated as daughter of the sentence node, sister to VP, and both receive NOM case.²
- Marantz (1984) (also Dowty 1991, Levin 1993): thematic positions for A and O inverted (A generated as sister to V to form VP; S, O combine with this VP)
- Bittner & Hale (1996a) (also Ura 2006): A remains VP-internal; S, O raise to specifier of IP (raising motivated by Case/licensing requirements)³
- Manning (1995): S, O are grammatical subjects; A, S are subjects at the level of argument structure

¹Thank you to the audiences at the linguistics colloquia at the University of Pennsylvania (2007) and Cornell University (2007) for comments and discussion. Glosses have been added and regularized for clarity. rC indicates a retroflex consonant, Ch indicates a dental consonant, Cy indicates a palatal consonant, ng is the velar nasal, NC is noun class. Unless otherwise specified, Dyirbal examples are from Dixon (1972). Glosses for case are based on morphological patterning, not the abstract Case underlying the morphology.

²As we will see below, pronouns pattern as NOM/ACC. Dixon posits case realization rules for pronouns that refer to case and to the feature [\pm actor], where [+actor] is defined as S and A, regardless of theta-role.

³Note that Bittner & Hale take the specifier of IP to be an A-bar position in all languages.

Today:

- Syntactic Ergativity in Dyirbal is unrelated to subjecthood
- S and O do not occupy a unique syntactic position
- S and O receive distinct Cases
- S and O are unified only by both receiving a *Phasal Case*

2 Syntactic Ergativity

Relative clauses: only the absolutive can be relativized

- (2) a. S
ngadya balan dyugumbil [nyina-ngu] buʔan
I.NOM NCII.there.ABS woman.ABS sit-Rel see.NFut
“I am watching the woman who is sitting down” (100)
- b. O
ngadya nyinanyu yugu-ngga [yaʔa-nggu nudi-ngu]-ra
I.NOM sit.NFut tree-LOC man-ERG cut-Rel-LOC
“I am sitting on the tree the man felled” (102)
- c. O (instrumental applicative)
ngadya bala yugu banggul [yaʔa-nggu bagul dyugumbil-gu
I.NOM NCIV.there.ABS stick.ABS NCI.there.ERG man-ERG NCII.there.DAT woman-DAT
balgal-ma-ngu] nyiman
hit-Appl-Rel hold.NFut
“I caught hold of the stick the man was beating the woman with” (100)
- d. S (agent of antipassive)
bayi yaʔa [bagal-nga-ngu bagul yuʔi-gu] banaganyu
NCI.there.ABS man.ABS spear-APass-Rel NCI.there.DAT kangaroo-DAT return.NFut
“man who speared kangaroo is returning” (101)

Relativization is an A-bar property. What about subjecthood?

Two constructions: “control”, “coordination”

“Control” (with purposive affix): only the absolutive can be controlled PRO (Anderson 1976:17, Levin 1983:259-267, Bok-Bennema 1991:11, inter alia)

- (3) a. S
yabu nguma-nggu gigan [banagay-gu]
mother.ABS father-ERG tell.to.do.NFut return-Purp
“father told mother to return”
- b. O
yabu ngguma-nggu gigan [gubi-nggu mawal-i]
mother.ABS father-ERG tell.to.do.NFut doctor-ERG examine-Purp
“father told mother to be examined by the doctor” (Dixon 1994:169)

Is there any evidence that these involve control?⁴

Obligatorily null absolutive? → NO

- (4) Anydya bangga burubay dyulman
particle NCI.there.ERG boil.ABS squeeze.NFut
“The boil was squeezed by him,

bayi nyalngga mayi-yaray-gu.
NCI.there.ABS child.ABS come.out-begin-Purp

with the result that a male child came out” (369)

- (5) a. anydya ban midi miyanday-gu bangun bulgandu
Particle NCII.there.ABS small.ABS laugh-Purp NCII-there-ERG big.ERG
dyabil-gani-nyu
stop-repeatedly-NFut
“The small[er woman] wanted to laugh, [but] was stopped by the big[er woman]” (374)
- b. ngadya ban buʔal-i dambun
I.NOM NCII.there.ABS see-Purp Dambun.ABS
“I wanted to see Dambun” (384)

NOTE: not just overt controller. No control required:

- (6) dambun-da yanggun gindaginda-mal-bila dambun
Dambun-LOC NCII.here.ERG look.with.light-InstrAppl-bila Dambun.ABS
“This girl might shine a light on Dambun!”

nganadyi dyanydya manmay-gu yalugunggari
we.pl.NOM now shift.camp-Purp here.ALL.north

“And we might all have to move camp to the north” (386)

Indeed, Dixon (1972) gives the following to illustrate that it is “possible for the FIRST sentence in a topic chain to have an implicated VC [purposive verb]” (68) [emphasis original]

- (7) a. balan dyugumbil miyanday-gu
NCII.there.ABS woman.ABS laugh-Purp
“woman wants to laugh” (i.e. something has happened to make her want to laugh, and she will have to restrain herself to avoid doing so)
- b. bayi yaʔa yanu-li
NCI.there.ABS man go-Purp
“man has to go out” (for some reason)
- c. bayi yaʔa bangga dyugumbi-ʔu balgal-ngay-gu
NCI.there.ABS man.ABS NCII.there.DAT woman-DAT hit-APass-Purp
“something happened to enable or force the man to hit the woman” (69)

⁴cf Marantz 1984:199, who states that the construction “only superficially resembles such [control] structures”, but does not pursue the issue; and Manning 1996:66, who maintains that the construction is not control, but still proposes an absolutive subject.

Unrealized tense interpretation? → NO

Dixon 1972 (68): the purposive relates to a previous event, and is either an “intended” action, or a “natural (but perhaps unplanned) consequence”:

- (8) a. bayi yaṛa waynydyin yalu bangun dundu-nggu mandyal-i
NCI.there.ABS man.ABS go.uphill.NFut to.here NCII.there.ERG bird-ERG point.out-Purp
“man came uphill towards here, resulting in a bird’s pointing out his presence” (68)
- b. ṛulgu banggul dyurngadyurnganyu gunydyan; munandyay-gu
heart.ABS NCI.there.ERG drink.without.stopping.Redup.NFut drink.NFut vomit.Repeat-Purp
bayi
NCI.there.ABS
“He drank from the heart without pausing for breath. As a result he vomited a lot” (373)

Aside: although Dixon often translates the purposive using an English control structure, he is inconsistent:

- (9) Bala barmba banggul manggan
NCIV.there.ABS quartz.ABS NCI.there.ERG pick.up.NFut
‘the quartz was picked up by him,
baygul-i diban-da
bash-Purp rock-LOC

and bashed on a rock, (Dixon 1972:144)

- (10) Buṛan banggul barmba barmbi-ngu manggan
see.NFut NCI.there.ERG quartz.ABS glitter-Rel.ABS pick.up.NFut
‘He saw a piece of quartz glittering, picked it up,
baygul-i diban-da
bash-Purp rock-LOC

to bash it on a rock,

yagi bula-bil-i
split.ABS two-VF-Purp

so that it split into two pieces, (Dixon 1972:377)

He also translates similar constructions with tense-marked verbs using English control:

- (11) a. balan dyugumbil yanu bagum mirany-gu babil-nga-nyu
NCII.there.ABS woman.ABS go.NFut NCIII.there.DAT bean-DAT scrape-APass-NFut
“woman went to scrape beans” (74)
- b. balan dyugumbil yanu bagum mirany-gu babil-ngay-gu
NCII.there.ABS woman.ABS go.NFut NCIII.there.DAT bean-DAT scrape-APass-Purp
“woman went to scrape beans” (74)

Summary: No evidence for control based on absolutive.

“**Coordination**”: In coordination, the absolutive is shared rather than the subject.

- (12) a. S-S (agent of antipassive)
 nguma [banaga-nyu] [bural-nga-nyu yabu-gu]
 father.ABS return-NFut see-APass-NFut mother-DAT
 “Father returned and (he) saw mother” (Dixon 1994:13)
- b. S-O
 nguma [banaga-nyu] [yabu-nggu bura-n]
 father.ABS return-NFut mother-ERG see-NFut
 “Father returned and mother saw (him)” (Dixon 1994:12)

Is there any evidence that these involve coordination?

No coordinator.

Dixon (1972) refers to this construction as a *topic chain*:

“a topic chain: this entails each sentence being transformed into a form in which the common NP is topic NP (i.e. is in nominative [absolutive] case). This NP may only be stated once, at the beginning of the topic chain; optionally all or part of it may be repeated later in the chain (commonly, just the noun marker may be repeated). Thus it is quite usual to encounter a chain of a dozen sentences all ‘commenting’ on a single topic occurrence.” (71)

- (13) a. bayi walmanyu burbula.ABS
 NCI.there.ABS stand.NFut Burbula.ABS
 “Burbula stood up;
- b. gubi-nggu baṛan
 gubi-ERG punch.NFut
 the gubi punched (him);
- c. badyi-gu
 fall-Purp
 causing (him) to fall down.
- d. bangun bayi balbaliyaranyu
 then NCI.there.ABS turn.over.NFut
 And then he began to turn over
- e. walmay-gu
 stand-Purp
 in order to get up.
- f. ṛudu baṛan bari-nggu
 nape.of.neck.ABS hit.NFut tomahawk-INSTR
 The hollow in the back of (his) neck was hit [by the gubi] with a tomahawk;
- g. buga-bil-i
 dead.VF-Purp
 and as a result (he) died.” (72)

The chain may continue through direct speech:

- (14) a. nyalngga gadyi wuga ngadya gulnggan
 child.ABS PART give.Imper I.NOM breastfeed.NFut
 “A baby! Give (him to me); I’ll breastfeed (him).”

- b. *banggun gulnggan ngamundu*
 NCII.there.ERG breastfeed.NFut breast.INSTR
 She fed (the child) with her breast.
- c. *bulga-ndu banggun ‘ngaygu-nay nguri wuga ngadya wuga-li ngamundu’*
 big-ERG NCII.there.ERG my.GEN PART give.Imper I.NOM give-Purp breast.INSTR
 The big (woman) (said) ‘Give me (the child) for my turn, so that I can give (him) my breast’.”
 (371-372)

Summary: There is no evidence for coordination based on the absolutive.

Instead, both the “control” and the “coordination” appear to be topic drop (note that these verb forms are interspersed in the topic chains above).

cf topic-drop (e.g. Huang 1984).

- (15) Mandarin
- a. *Zhongguo, e difang hen da*
 China e place very big
 “(As for) China, (its) land area is very large”
- b. *e, renkou hen duo*
 population very many
 “(Its) population is very big.”
- c. *e, tudi hen feiwo*
 land very fertile
 “(Its) land is very fertile”
- d. *e, qihou ye hen hao*
 climate too very good
 “(Its) climate is also very good.”
- e. *e, women dou hen xihuan*
 we all very like
 “We all like (it).”

Summary: The syntactic ergativity to the absolutive is not based on an S/O subject, but rather the A-bar properties of topic and ability to relativize.

3 Morphological Ergativity

Dyirbal shows morphological split ergativity based on nominal-type:

- (16) Noun Class Markers: ERG/ABS
- a. A
yanggul, banggul, nganggul
 NCI.here.ERG NCI.there.ERG NCI.notvisible.ERG
- b. S
giyi, bayi, ngayi
 NCI.here.ABS NCI.there.ABS NCI.notvisible.ABS
- c. O

giyi, bayi, ngayi
 NCI.here.ABS NCI.there.ABS NCI.notvisible.ABS (45-46)

(17) Pronouns: NOM/ACC

- a. A
 ngadya bayi yaɾa balgan
 I.NOM NCI.there.ABS man.ABS hit.NFut
 “I hit the man” (73)
- b. S
 ngadya nyinanyu
 I.NOM sit.NFut
 “I sat down” (73)
- c. O
 ngayguna banggul yaɾa-nggu balgan
 me.ACC NCI.there.ERG man-ERG hit.NFut
 “Man is hitting me” (60)

More complex than just nominals vs pronouns.

Full specification

(18) “who”: ERG/NOM/ACC

A S O
 wanydyu wanya wanyuna
 who.ERG who.NOM who.ACC (53)

Optionality

(19) proper names, human common nouns: ERG/ABS or ERG/NOM/ACC

- a. A
 burbula-gu
 Burbula-ERG
- b. S
 burbula
 Burbula.ABS/NOM
- c. O
 burbula OR burbula-nya
 Burbula.ABS burbula-ACC (43)

Dialect differences

(20) “who”: ERG/ABS (Giramay)

- a. A
 wanydyu
 who.ERG
- b. S
 wanyunya
 who.ABS
- c. O
 wanyunya
 who.ABS (53)

(21) “1sg”, “2sg”: ERG/NOM/ACC (Giramay)

- a. A
 ngadya, nginda
 I.ERG you.ERG
- b. S
 ngayba, nginba
 I.NOM you.NOM
- c. O
 nganya, ngina
 me.ACC you.ACC (50)

Approach to split ergativity (Legate 2008)⁵: distinction between (i) differential abstract Case assignment in the syntax; and (ii) differential morphological realization of identical abstract Cases (i.e. syncretism)⁶

- (22) Differential Morphological case
- a. based on properties of lexical items
 - b. modifiers show case-mismatches
- (23) Differential Syntactic Case
- based on properties of the clause, properties of DP as a whole
 - modifiers do not show case-mismatches
- (24) Latin Differential Morphological case
- a. tristis regis
sad.GEN king.GEN
“of the sad king”
 - b. tristí regí
sad.DAT king.DAT
“to the sad king”
 - c. tristis puellae
sad.GEN girl.GEN/DAT
“of the sad girl”
 - d. tristí puellae
sad.DAT girl.GEN/DAT
“to the sad girl” (Calebrese 2006:[9])

Dyirbal is differential morphological case:

Noun class markers, adjectives, nouns agree in case:

- (25) a. bayi wanggal bangul yaɾa-ngu bulga-nu banggun
NCI.there.ABS boomerang.ABS NCI.there.GEN man-GEN big-GEN NCII.there.ERG
dyugumbi-ru buɾan
woman-ERG see.NFut
“woman saw big man’s boomerang” (107)

When pronouns combine with modifiers case mismatches arise:

- (26) Pronoun and relative clause
- a. nyada [waynydyi-ngu]-ru balan dyugumbil buɾan
I.NOM go.uphill-Rel-ERG NCII.there.ABS woman.ABS see.NFut
“I saw woman as I was going uphill”
 - b. nyada [waynydyi-ngu] miyandanyu
I.NOM go.uphill-Rel.ABS laugh.NFut
“I laughed as I went uphill”
 - c. ngayguna [waynydyi-ngu] banggul yaɾa-nggu buɾan
I.ACC go.uphill-Rel.ABS NCI.there.ERG man.ERG see.NFut
“man saw me going uphill” (133)

⁵For alternatives, see e.g. Silverstein 1976, Dixon 1994, Garrett 1990, Kiparsky 2004, Carnie 2005b, Alexiadou & Anagnostopoulou 2006, Aissen 2003.

⁶Cf Calabrese’s (2006) related distinction between absolute syncretism versus contextual syncretism.

- (27) Pronoun and NC marker
- a. (Mamu dialect)
 - b. ngadya giyi baninyu
I.NOM NCI.here.ABS come.NFut
“I’m the one that came.”
 - c. ngayguna giyi banggul yaɾa-nggu balgan
me.ACC NCI.here.ABS NCI.there.ERG man-ERG hit.NFut
“I’m the one the man is hitting” (63)
- (28) Pronoun and noun/adjective
- a. nginda wuygi-nggu, bam mirany babi
you.NOM old-ERG NCI.there.ABS bean.ABS slice.Imp
“you, old [person], slice the beans!” (63)
 - b. nginda bayi yaɾa bani
you.NOM NCI.there.ABS man.ABS come.Imp
“you, man, come here!”
 - c. ngayguna mambu banggul yaɾa-nggu balgan
me.ACC back.ABS NCI.there.ERG man-ERG hit.NFut
“man is hitting my back” (63)

Conclusion: Dyirbal exhibits morphological syncretism between ERG and NOM for pronouns, and between ACC and NOM for nouns.⁷

<u>Pronouns</u>	<u>Nouns</u>						
"NOM"	<table style="border-collapse: collapse;"> <tr> <td style="font-size: 2em; vertical-align: middle;">{</td> <td style="padding: 0 10px;">ERG</td> <td style="padding: 0 10px;">ERG</td> </tr> <tr> <td style="font-size: 2em; vertical-align: middle;">}</td> <td style="padding: 0 10px;">NOM</td> <td></td> </tr> </table>	{	ERG	ERG	}	NOM	
{	ERG	ERG					
}	NOM						
ACC	<table style="border-collapse: collapse;"> <tr> <td style="font-size: 2em; vertical-align: middle;">}</td> <td style="padding: 0 10px;">ACC</td> <td style="padding: 0 10px;">"ABS"</td> </tr> </table>	}	ACC	"ABS"			
}	ACC	"ABS"					

Note that pronouns show identical behaviour for syntactic ergativity, despite distinct case marking.

Btw, Dixon (1972, 1994) is explicit about this, although this doesn’t seem to have influenced analyses.

irrespective of realisational identities or differences, the unmarked syntactic identification between simple sentences is always of an S NP with an O NP (or S with S, or O with O) and *never* of an S or O NP with an A NP. (Dixon 1972:134; emphasis original)

in Dyirbal it is the function of an NP that determines its availability to grammatical operations, not its form. (Dixon 1994:16)

- (29) Topic Chains: NOM/ACC
- a. ngadya baninyu
I.NOM come.NFut
“I came here”
 - b. ngayguna banggun dyugumbi-ɾu balgan
I.ACC NCI.there.ERG woman-ERG hit.NFut
“woman hit me”

⁷See also Goddard 1982.

- c. S-O
 ngadya baninyu bangun dyugumbi-ru balgan
 I.NOM come.NFut NCII.there.ERG woman-ERG hit.NFut
 “I came here and was hit by woman”
- d. O-S
 ngayguna bangun dyugumbi-ru balgan baninyu
 I.ACC NCII.there.ERG woman-ERG hit.NFut come.NFut
 “I was hit by woman and came here” (131)

(30) Topic Chain: NOM/NOM

- a. ngadya baninyu
 I.NOM come.NFut
 “I came here”
- b. ngadya balan dyugumbil balgan
 I.NOM NCII.there.ABS woman-ABS hit.NFut
 “I hit woman” (131)
- c. *ngadya baninyu balan dyugumbil balgan
 I.NOM come.NFut NCII.there.ABS woman-ABS hit.NFut
 “I came here and hit woman”
- d. S-S (agent of antipassive)
 ngadya baninyu bagun dyugumbil-gu balgal-nya-nyu
 I.NOM come.NFut NCII.there.DAT woman-DAT hit-APass-NFut
 “I came here and hit woman” (132)

(31) Purposive

- a. ACC/NOM O-S (agent of antipassive)
 ngayuna bangga yaŕa-nggu mundan bagum mirany-gu babil-ngay-gu
 I.ACC NCI.there.ERG man-ERG take.NFut NCII.there.DAT bean-DAT scrape-APass-Purp
 “man took me to scrape beans”
- b. NOM/NOM S-S (agent of antipassive)
 ngadya yanu bagum mirany-gu babil-ngay-gu
 I.NOM go.NFut NCII.there.DAT bean-DAT scrape-APass-Purp
 “I went to scrape beans” (74)

(32) Relative Clause

- a. S
 nyada [waynydyi-ngu]-ru balan dyugumbil buŕan
 I.NOM go.uphill-Rel-ERG NCII.there.ABS woman.ABS see.NFut
 “I saw woman as I was going uphill” (133)
- b. O
 ngayguna [banggul yaŕa-nggu balga-ngu] bangun dyugumbi-ru buŕan
 me.ACC NCI.there.ERG man-ERG hit-Rel NCII.there.ERG woman-ERG see.NFut
 “woman saw me being hit by man” (100)

Furthermore, for nominals, an ergative can introduce a topic, IF the second verb is marked with *-ngura*. This suffix indicates that the topic was introduced in the ergative, and that the second event immediately follows the first.

- (33) a. bala yugu banggul yaɾa-nggu madan (baya yaɾa)
 NCIV.there.ABS stick.ABS NCI.there.ERG man-ERG throw.NFut NCI.there.ABS man.ABS
 waynydyi-ngura
 go.uphill-NGURA
 “man threw stick and then (he) [immediately] went uphill” (77)
- b. bala yugu banggul yaɾa-nggu nudin (baya yaɾa)
 NCIV.there.ABS tree.ABS NCI.there.ERG man-ERG cut.NFut NCI.there.ABS man.ABS
 bagul nyalngga-gu bunjul-nga-ngura
 NCI.there.DAT child-DAT spank-APass-NGURA
 “man cut tree [until (he) stopped to] spank the boy” (78)

Nominative pronouns in A position also use this suffix: (cf the topic chain examples above, involving S nominative pronouns)

- (34) ngadya bala yugu madan (ngadya) waynydyi-ngura
 I.NOM NCIV.there.ABS stick.ABS throw.NFut I.NOM go.uphill-NGURA
 “I threw stick and then (I) [immediately] went up hill” (77)

Revised Generalization: In Dyirbal the A-bar properties of topic and ability to relativize show syntactic sensitivity to nominative and accusative Case (regardless of morphological realization).

Note: sensitivity is to Case, not theta-role or merged position; subject of transitive behaves differently from subject of antipassive.

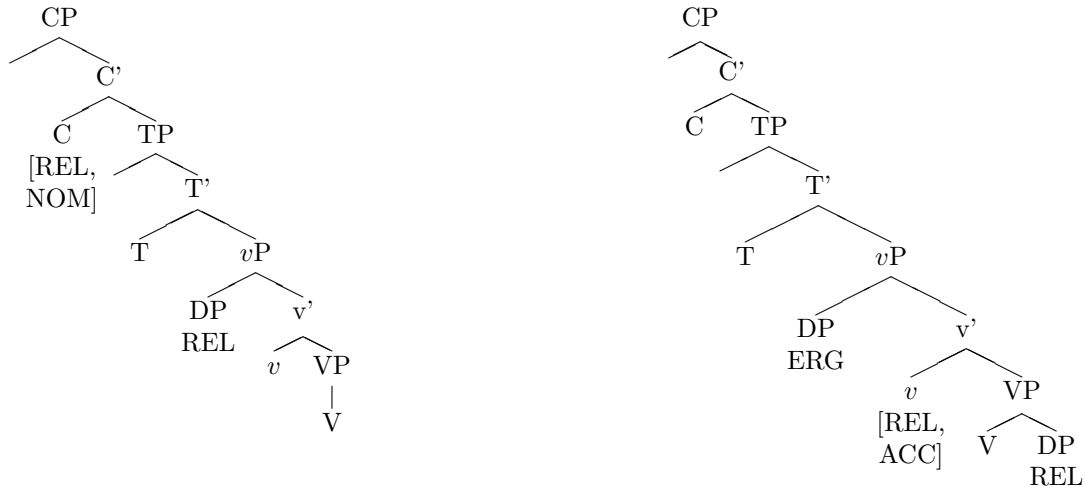
- (35) a. *bala yugu banggul yaɾa-nggu madan waynydyin
 NCIV.there.ABS stick NCI.there.ERG man-ERG throw.NFut go.uphill.NFut
 “man threw stick and then (he) went uphill” (78)
- b. baya yaɾa baninyu bagun dyugumbil-gu balgal-nga-nyu
 NCI.there.ABS man.ABS come.NFut NCII.there.DAT woman-DAT hit-APass-NFut
 “man came here and hit woman” (130)

4 An Analysis

Ingredients for an analysis:

- Abstract nominative Case and abstract accusative Case are the *Phasal Cases*, associated with the phase heads, C and *v* (during the syntax, they may be passed down to the head of their sisters, T and V) (Chomsky 2005)
- A-bar features are associated with the phase heads, C and *v*.
- Agree (Chomsky 1998)

Proposal: The topic feature and the relativization feature in Dyirbal are *bundled* with Case on the phase heads (cf Chomsky 1998:40 on ϕ features).



Assuming Agree (Chomsky 2000 and subsequent), feature checking is based on closest c-command; the presence/absence of subsequent movement is an independent property.

= proposed analysis is neutral wrt syntactic position of arguments and word order in Dyirbal.

- (36) a. bayi wangal bangul yaɾa-nɟu bulga-nu bangun
 NCI.there.ABS boomerang.ABS NCI.there.GEN man-GEN big-GEN NCII.there.ERG
 dyugumbi-ɾu buɾan
 woman-ERG see.NFut
 “woman saw big man’s boomerang”
- b. bayi yaɾa-nɟu dyugumbi-ɾu buɾan wangal bangun
 NCI.there.ABS man-GEN woman-ERG see.NFut boomerang.ABS NCII.there.ERG
 bangul bulga-nu
 NCI.there.GEN big-GEN
 “woman saw big man’s boomerang” (107)

5 Conclusions and Implications

- syntactic ergativity in Dyirbal is A-bar sensitivity to the phasal Cases (nominative and accusative)
- additional support for ABS = NOM & ACC
- additional support for split ergativity as differential morphology
- evidence for syntactic sensitivity to abstract Case

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