



- d. aXn-ē-qa                      i-w-č'-u-mē,      sjo      gi-b-Ril-na  
 lair-IN-ALL                      3-enter-PF-LIM    bear.3    3-begin.PF-ATR  
 mīr                      hāʔ-a.                      **DOWN- and LEFTWARD**  
 growl                      3-do-IPF  
 When the bear<sub>i</sub> got into the lair, it<sub>i</sub> began to growl.

Likewise with a **relative clause**:

- (9) a. a-b-īni                      darman-in                      malhammadī-s                      kumag  
 3-bring.PF-AOBL    medicine-ERG    Muhammad-DAT    help.4  
 h-id<sub>j</sub>-aʔ-īn.  
 NEG-do.PF-A  
 The medicine brought by him(self) didn't help Muhammad
- b. malhammad-ē                      a-b-īni                      darman-in                      kumag  
 Muhammad-DAT    3-bring.PF-AOBL    medicine-ERG    help.4  
 h-id<sub>j</sub>-aʔ-īn.  
 NEG-do.PF-A  
 The medicine brought by Muhammad<sub>i</sub> didn't help (him<sub>i,j</sub>)

With **argument clauses**, however, upward ellipsis is normally impossible in Tsakhur:

- (10) a. zābit-ē                      amīr                      ha-w-ʔ-u                      esker-ā-ši-s,  
 officer-ERG    order.3    3-do-PF                      soldier-PL-OBLPL-DAT  
 mašin-ē-qa                      gi-w-ʔar-as.  
 lorry-IN-ALL    PL-get-POT  
 The officer ordered the soldiers to get in the truck.
- b. zābit-ē                      amīr                      ha-w-ʔ-u,                      esker-ā-r  
 officer-ERG    order.3    3-do-PF                      soldier-PL-NOMPL  
 mašin-ē-qa                      gi-w-ʔar-as.  
 lorry-IN-ALL    PL-get-POT  
 The officer ordered (someone) that the soldiers should get in the truck.  
 \*The officer ordered the soldiers to get in the truck.

In **Adyghe** (West Caucasian, the Circassian branch), with all kinds of subordinate clauses, adjuncts and complements alike, both upward and downward vertical ellipsis is available (first noticed for Kabardian complement clauses in Kumaxov, Vamling 1998: 101):

**Complement subordinate clause (-n-ew infinitive)**

- (11) a. [pšaše-m                      wered                      qə-ʔ<sub>w</sub>e-n-ew]                      \_\_\_                      faj  
 girl-ERG                      song                      DIR-sing-POT-ADV                      want
- b. \_\_\_ faj                      [pšaše-m                      wered                      qə-ʔ<sub>w</sub>e-n-ew]  
 want                      girl-ERG                      song                      DIR-sing-POT-ADV  
 (She)<sub>i,j</sub> wants the girl<sub>i</sub> to sing a song
- c. pšaše-r                      faj                      [ \_\_\_                      wered                      qə-ʔ<sub>w</sub>e-n-ew]  
 girl-ABS                      want                      song                      DIR-sing-POT-ADV
- d. [ \_\_\_                      wered                      qə-ʔ<sub>w</sub>e-n-ew]                      pšaše-r faj  
 song                      DIR-sing-POT-ADV                      girl-ABS    хочет  
 The girl<sub>i</sub> wants to sing a song// wants her<sub>j</sub> to sing a song

- (12) a. [ \_\_\_ pjəs'me-r ə-txə-n-ew] mə çəfə-r faj  
 letter-ABS 3SG-write-POT-ADV this man-ABS want  
 This man wants to write a letter // him/her to write a letter.
- b. [mə çəfə-m pjəs'me-r ə-txə-n-ew] \_\_\_ faj  
 this man-ERG letter-ABS 3SG-write-POT-ADV want  
 This man wants to write a letter. // He/she wants this man to write a letter.

**Adjunct subordinate clause (-n-ew infinitive; meaning of purpose)**

- (13) a. č'ale-m pče-r qə-ʔ<sub>w</sub>ə-jə-hə-ɸ [ \_\_\_ wəne-m jə-ha-n-ew]  
 boy-ERG door-ABS DIR-PRV-3SG-open-PST house-ERG 3SG-enter-POT-ADV
- b. [ \_\_\_ wəne-m jə-ha-n-ew] č'ale-m pče-r qə-ʔ<sub>w</sub>ə-jə-hə-ɸ  
 house-ERG 3SG-enter-POT-ADV boy-ERG door-ABS DIR-PRV-3SG-open-PST  
 The boy opened the door to enter the house // for someone to enter the house.
- c. \_\_\_ pče-r qə-ʔ<sub>w</sub>ə-jə-hə-ɸ [č'aler wəne-m jə-ha-n-ew]  
 door-ABS DIR-PRV-3SG-open-PST boy-ABS house-ERG 3SG-enter-POT-ADV
- d. [č'ale-r wəne-m jəhanew] \_\_\_ pče-r qə-ʔ<sub>w</sub>ə-jə-hə-ɸ  
 boy-ERG house-ERG 3SG-enter-POT-ADV door-ABS DIR-PRV-3SG-open-PST

The boy opened the door to enter the house. // He/she opened the door for the boy to enter the house.

**Adjunct subordinate clause (the temporal ze-\_\_\_-m converb)**

- (14) a. [pšaše-m ə-š qə-ze-λeɸ<sub>w</sub>ə-m], \_\_\_ qe-ɸə-ɸ  
 girl-ERG 3SG-brother DIR-REL-see-ERG DIR-cry-PST
- b. \_\_\_ qe-ɸə-ɸ [pšaše-m ə-š qə-ze-λeɸ<sub>w</sub>ə-m]  
 DIR-cry-PST girl-ERG 3SG-brother DIR-REL-see-ERG  
 (She)<sub>i,j</sub> cried, when the girl<sub>j</sub> saw her brother
- c. pšaše-r qe-ɸə-ɸ [ \_\_\_ ə-š qə-ze-λeɸ<sub>w</sub>ə-m]  
 girl-ABS DIR-cry-PST 3SG-brother DIR-REL-see-ERG
- d. [ \_\_\_ ə-š qə-ze-λeɸ<sub>w</sub>ə-m] pšaše-r qe-ɸə-ɸ  
 3SG-brother DIR-REL-see-ERG girl-ABS DIR-cry-PST  
 The girl<sub>i</sub> cried, when she<sub>i,j</sub> saw her brother.

**Relative clauses**

- (15) a. \_\_\_ qə-ɸ<sub>w</sub>etə-ɸ [çəf-ew šak<sub>w</sub>e-m šx<sub>w</sub>enč'ə-r  
 DIR-find-PST man-ADV hunter-ERG gun-ABS  
 ze-r-jə-š'a-ɸe-r]  
 REL-3SG-3SG-sell-PST-ABS
- b. [çəf-ew šak<sub>w</sub>e-m šx<sub>w</sub>enč'ə-r ze-r-jə-š'a-ɸe-r]  
 man-ADV hunter-ERG gun-ABS REL-3SG-3SG-sell-PST-ABS  
 \_\_\_ qə-ɸ<sub>w</sub>etə-ɸ  
 DIR-find-PST  
 He<sub>i,j</sub> found the man who had sold the gun to the hunter<sub>i</sub>

**Shapsug dialect of Adyghe**

Informants often produce left- & upward ellipsis of an NPs spontaneously, especially when the matrix clause conveys new and unexpected information:

- (16) we žər-žərew qa-q'w-a. \_\_\_ faj-ep [rwəslan-e wered q-jə-q'w-e-n-ew]  
 you SELF DIR-say-IMP \_\_\_ want-NEG Ruslan-ERG song DIR-3-say-POT-ADV  
 Sing yourself! Ruslan doesn't want to sing.
- (17) wə-žak'e wə-ps. \_\_\_ me-x'əne-x [p:šaše-me wə-z-a-λeκwə-g'e]  
 2-beard 2-shave \_\_\_ 3-fear-PL girl-ERG.PL 2-REL-3PL-see-INSTR  
 Shave your beard. The girls get frightened when they see you.

**The phenomenon is apparently related to polysynthesis:**

- (18) Kadiweu, Waikuru family, Brazil (Sandalo 1997)  
 \_\_\_ y-owo-God [me y-ema:n João Maria]  
 3ERG-know-TRNS COMP 3ERG-love John Mary  
 John<sub>i</sub> knows that he<sub>i</sub> loves Mary  
 lit. (He<sub>i</sub>) knows that John<sub>i</sub> loves Mary
- (19) Navajo, Na-Dene Family, North America, in head-internal relative clauses (Hale 1983):  
 [ada'a'da'a ashkii at'ééd yiyiiltsa'ne'e] \_\_\_ yidoots'os  
 yesterday boy girl 3O-3S-see.REL 3O.3S.kiss  
 a. He/she<sub>i</sub> will kiss the girl which the boy<sub>j</sub> saw yesterday  
 b. He<sub>i</sub> will kiss the girl which the boy<sub>i</sub> saw yesterday
- (20) Passamaquoddy, Algonquian (Brüning 2005):  
 Litahasu ['-tahcuwi-tkon-ku-l Susehp hesis-ol  
 thinks.3 must.arrest-INV-OBV Joseph his.elder.brother-OBV  
 not nucihqonket]  
 this policeman  
 lit: He<sub>i</sub> thinks that Joseph<sub>i</sub>'s older brother the policeman must arrest him<sub>i</sub>
- (21) Nootka (Nuuchahnulth), Wakashan (Davis, Wojdak 2004):  
 wawaaʔiš [ʔen čatšiλwɨʔas-(ħuk) Christine sapnii ʔamiiλik]  
 is.saying that knead-(3ABS) Christine bread tomorrow  
 Christine is saying that she is gonna knead bread tomorrow, lit. (She<sub>i</sub>)-is-saying that Christine<sub>i</sub> is  
 gonna knead bread tomorrow

**The problem with Principle C**

- (22) Principle C of the Binding Theory (Chomsky 1981; Reinhart 1983):  
 Referential expression is free (=not bound)

- (23) a. \*John<sub>i</sub> sees John<sub>i</sub>  
 b. \*John<sub>i</sub> knows, that I see John<sub>i</sub>  
 c. \*He<sub>i</sub> sees John<sub>i</sub>  
 d. \*He<sub>i</sub> knows, that I see John<sub>i</sub>  
 e. \*pro<sub>i</sub> sees John<sub>i</sub>  
 f. \*pro<sub>i</sub> knows that I see John<sub>i</sub>

Within a single clause Principle C is valid:

Shapsug dialect

- (24) pro lene Ø-j-epλə  
 Lena 3-3-look  
 He is looking at Lena  
 \*Lena is looking at herself

- (25) mwərat:-e    mwərat:    (j)ə-λeκ<sub>w</sub>ə-κ  
 Murat-ERG    Murat    3-see-PST  
 Murat<sub>i</sub> saw Murat<sub>\*i/j</sub>

No binding:

- (26) [rwəslan-e    jə-haʒe]    rwəslan    q-je-šq'a-ʒə-κ-ep  
 Ruslan-ERG    3-dog    Ruslan    DIR-3-know-RFC-PST-NEG  
 Ruslan's<sub>i</sub> dog didn't recognize Ruslan<sub>i</sub>

**The subordinate clause is really embedded in Adyghe**

Evidence from Negative Concord argues for a usual embedded structure of polypredicative constructions. Negative pronouns must be licensed by the negative form of the verb (27). Negative verb can license a negative pronoun in the same (27a, 28b) or in an embedded clause (28a), but not in the superordinate clause (28c, 29b).

- (27) a. zjə    qe-κ<sub>w</sub>a-κ-ep  
 nobody    DIR-go-PST-NEG  
 Nobody came
- b. \*zjə    qe-κ<sub>w</sub>a-κ  
 nobody    DIR-go-PST-NEG
- (28) a. [zjə    qe-κ<sub>w</sub>a-κ-ew]    s-š<sub>w</sub>ešə-r-ep  
 nobody    DIR-go-PST-NEG    1SG-think-DYN-NEG  
 I think that nobody came
- b. [zjə    qe-mə-κ<sub>w</sub>a-κ-ew]    s-š<sub>w</sub>ešə  
 nobody    DIR-NEG-go-PST-ADV    1SG-think  
 I think that nobody came
- c. \*[a-r    qe-mə-κ<sub>w</sub>a-κ-ew]    zjə    š<sub>w</sub>ešə  
 he-ERG    DIR-NEG-go-PST-ADV    nobody    think  
 Nobody thinks that he came
- (29) a. zjə    feja-κ-ep    [a-r    səmeʒ'ə-n-ew]  
 nobody    want-PST-NEG    he-ABS    sick-POT-ADV  
 Nobody wanted him to fall ill
- b. \*zjə    feja-κ    [a-r    mə-səmeʒ'ə-n-ew]  
 nobody    want-PST    he-ABS    NEG-sick-POT-ADV  
 Nobody wanted him not to fall ill

**Free pronouns: no Principle C violation of the (23d) type**

(30), cf. (11)

- a. [pšaše-m    wered    qə-ʔ<sub>w</sub>e-n-ew]    a-r    faj  
 girl-ERG    song    DIR-sing-POT-ADV    she-ABS    want
- b. a-r    faj    [pšaše-m    wered    qə-ʔ<sub>w</sub>e-n-ew]  
 she-ABS    want    girl-ERG    song    DIR-sing-POT-ADV  
 (She)<sub>i</sub> wants the girl<sub>j</sub><sub>\*i</sub> to sing a song

(31), cf. (13)

- a. **a-š'** pče-r qə-ʔ<sub>w</sub>ə-jə-hə-ɛ [č'alər wəne-m jə-ha-n-ew]  
**he-ERG** door-ABS DIR-PRV-3SG-open-PST boy-ABS house-ERG 3SG-enter-POT-ADV
- b. [č'ale-r wəne-m jə-ha-n-ew] **a-š'** pče-r qə-ʔ<sub>w</sub>ə-jə-hə-ɛ  
 boy-ERG house-ERG 3SG-enter-POT-ADV **he-ERG** door-ABS DIR-PRV-3SG-open-PST

He/she opened the door for the boy to enter the house.

\*The boy opened the door to enter the house.

(32), cf. (12b)

[mə çəfə-m pjəs'me-r ə-txə-n-ew] a-r faj  
 this man-ERG letter-ABS 3-write-POT-ADV he-ABS want  
 He/she wants this man to write a letter.

\*This man wants to write a letter.

### Semantic Binding of whatever there is in the “elliptic gaps”

Semantic binder must not c-command the bound anaphoric pronoun:

- (33) jə-he je-še [NP[NP šak<sub>w</sub>e pepč] jə-š<sub>w</sub>əz]  
 3SG-dog 3SG-know hunter every 3SG-wife

His<sub>i,j</sub> dog knows every hunter<sub>i</sub>'s wife

- (34) \_\_\_ faj [a zə-m š'ətχ<sub>w</sub>ə-n-x-ew]  
 \_\_\_ want he one-ERG praise-POT-PL-ADV

1) He wants that they praise only him.

2) Only he wants them to praise him

- (35) \_\_\_ je-šə [ekzamen-ew st<sub>w</sub>ədent pepč ə-tə-ke-r]  
 \_\_\_ 3SG-know exam-ADV student every 3ERG-give-PST-ABS

He/she knows which exam every student passed.

Every student<sub>i</sub> knows which exam he/she<sub>i</sub> passed.

- (36) a. sabəj pepč g<sub>w</sub>əš'əʔe je-s-tə-kaɛ [ž'eg<sub>w</sub>aɛ \_\_\_]  
 kid every word 3SG-1SG-give-PST toy

qə-fe-s-š'efə-n-ew]

INV-BEN-1SG-buy-POT-ADV

I promised to every kid<sub>i</sub> to buy him/her<sub>i,j</sub> a toy.

- b. \_\_\_ g<sub>w</sub>əš'əʔe je-s-tə-kaɛ [ž'eg<sub>w</sub>aɛ sabəj pepč  
 \_\_\_ word 3SG-1SG-give-PST toy kid every

qə-fe-s-š'efə-n-ew]

INV-BEN-1SG-buy-POT-ADV

I promised to him<sub>i,j</sub> to buy a toy for every kid<sub>i</sub>

Shapsug dialect:

- (37) \_\_\_ qe-k<sub>w</sub>e-štə-x [zewəžjə čale-me z-j-a-p-q'<sub>w</sub>e-rem]  
 DIR-go-FUT-PL all boy-ERG.PL REL-3-PL-2-call-CONV

All the boys<sub>i</sub> will come when you call them<sub>i,j</sub>.

They will come when you call all the boys.

(38) Semantic binding (e.g. bound anaphora) requires syntactic binding (i.e. coindexing + c-command)

(Bach, Partee 1980, Reinhart 1983:122–137; Heim, Kratzer 1998: 264; Büring 2005: 89–92)

- (39) a. The secretary  $he_i$  hired, thinks that  $Domingo_i$  is despotic.  
 b. \*The secretary  $he_i$  hired, thinks that *each of the tenors<sub>i</sub>* is despotic.  
 c. *Each of the tenors<sub>i</sub>* thinks that the secretary  $he_i$  hired is despotic.
- (40) a. *Which girl<sub>i</sub>* told Sue that  $she_i$  got a detention?  
 b. \* $She_i$  didn't know, *which girl<sub>i</sub>* got a detention.

Brüning (2005: 105) claims explicitly that in Passamaquoddy the Principle (38) is NOT violated:

- (41) w-itapih-il      litahasu      [ma-te      wen      olomi-ye-w]  
 3-friend-OBV    think.3      NEG-EMPH    someone    go.3-NEG  
 His friend thinks that nobody left.  
 \*Nobody<sub>i</sub>'s friend thinks that  $he_i$  left.

No relevant data yet from Navajo, Nootka, Kadiweu, or any other polysynthetic language.

**Free pronouns** cannot be semantically bound from below:

- (42) a-r              me-g<sub>w</sub>əʒe      [sabəj    pepč    š<sub>w</sub>əhaftən qə-r-a-tə-n-ew]  
 he-ABS          DYN-hope      kid      every    gift      DIR-3SG-3PL-give-POT-ADV  
 He<sub>i,\*j</sub> hopes, that they will give a gift to every kid<sub>j</sub>

**Personal pronouns** cannot either:

- (43) \_\_\_ š<sub>w</sub>ə-faj    [zeč'e-m-jə      qə-š<sub>w</sub>ə-š'ətχ<sub>w</sub>ə-n-x-ew]  
 \_\_\_ 2PL-want    all-ERG-COH      DIR-2PL-praise-POT-PL-ADV  
 You want everyone to praise you  
 \*You all want that they praise you

**Referential expressions** cannot be semantically bound at all:

- (44) mwərat      zə-r      mwərat      jəpλə  
 Murat          only-ABS    Murat      look  
 can only mean:  
 Only Murat<sub>i</sub> looks at Murat<sub>j,\*i</sub>  
 \*Only Murat looks at himself

Referential expressions cannot be semantically bound at all (Reinhart 1983); counterexamples from Thai and Zapotec (Lee 2003); NOT found in Adyghe).

- (45) Rome de Rome est le seul monument,  
 Et Rome Rome a vaincu seulement (*J. du Bellay*)  
 Rome is the only monument of Rome  
 (there are no other monuments of Rome;  
 \*there are no other cities that are monuments of themselves)  
 and only Rome defeated Rome  
 (nothing else defeated Rome;  
 \*no other city defeated itself, e.g. Paris didn't defeat Paris etc.)

## Possible explanations

### i) Control?

Unrestricted Control?

Backward Control in Tsez (Polinsky, Potsdam 2002):

- (46) [kid-bā zija b-iš-r-a] j-oq-si  
girl-ERG cow.ABS 3-eat-CAUS-INF 2-begin-PRF  
The girl began to feed a cow.

### ii) Raising?

There are several verbs in Adyghe that very probably allow Backward Raising (Polinsky 2007), but this cannot account for the “raising” into a thematic position.

### iii) Movement?

(Beljaeva, Minor 2005)

No restrictions at all:

Complex NP Constraint

Shapsug dialect

- (47) a. rwəslan šeg<sub>w</sub>əʁe [p:šaš-ew [əg<sub>w</sub>ə je<sup>?</sup><sub>w</sub>ə-re-m] p:jəsmew  
Ruslan hope girl-ADV like-DYN-ERG letter

qə-f-jə-txə-n-ew]

DIR-BEN-3-write-POT-ADV

Ruslan hopes that the girl who he likes writes a letter.

- b. \_\_\_\_ šeg<sub>w</sub>əʁe [p:šaše [rwəslane əg<sub>w</sub>ə je<sup>?</sup><sub>w</sub>ə-re-m] p:jəsmew  
hope girl Ruslan like-DYN-ERG letter

qə-f-jə-txə-n-ew]

DIR-BEN-3-write-POT-ADV

- i) Ruslan hopes that the girl who he likes writes a letter  
ii) He hopes that the girl who Ruslan likes writes a letter  
iii) The girl who Ruslan likes hopes to write a letter

Likewise with semantic binding:

- (48) a. zewəže čale-xe šeg<sub>w</sub>əʁe-x [p:šaš-e-x-ew [a-g<sub>w</sub>ə je<sup>?</sup><sub>w</sub>ə-xe-m] p:jəsmew-xe  
all boy-PL hope girl-PL-ADV 3PL-like letter-PL

qə-fe-r-a-txə-n-ew]

DIR-BEN-3-3PL-write-POT-ADV

All the boys hope that the girls that like them write letters.

- b. \_\_\_\_ šeg<sub>w</sub>əʁe-x [p:šaše-xe [zewəže čele a-g<sub>w</sub>ə je<sup>?</sup><sub>w</sub>ə-xe-m] p:jəsmew-xe  
hope girl-PL-ADV all boy 3PL-like letter-PL

qə-fə-r-a-txə-n-ew]

DIR-BEN-3-3PL-write-POT-ADV

All the boys hope that the girls that like them write letters.

They hope that the girls that like all the boys write letters

### iv) Ellipsis?

(49) Everyone wants PRO to win ≠ Everyone wants everyone to win

(50) \*All the boys hope that all the girls...

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