Variation in Control Structures
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“Our impression from the literature … is that control behaves cross-linguistically in much the same fashion [as in English]…” (Jackendoff and Culicover 2003: 519)

1. Introduction: The puzzle
   • Tsez (Nakh-Daghestanian) ¹
     ▪ SOV basic word order
     ▪ relatively free in root clauses
     ▪ head-final
     ▪ pro-drop (unemphatic subjects are null)
     ▪ no passive
     ▪ ergative-absolutive case system
       ergative (ERG): subject of transitive
       absolutive (ABS): subject of intransitive, direct object

   ![Diagram showing ergative and absolutive roles](image)

   • agreement
     Verb obligatorily agrees with its absolutive argument in noun class

(1) kid-bā ziya b-išer-si
   girl-ERG cow. CLASS III.ABS III-feed-PAST
   ‘The girl fed the/a cow.’

(2) kid-bā ziya b-išer-si
   girl-ERG cow. CLASS III.ABS III-feed-PAST
   ‘The girl fed the/a cow.’

(3) *kid-bā ziya y-išer-si
   girl-CLASS II-ERG cow.CLASS III. ABS. II-feed-PAST
   (‘The girl fed the/a cow.’)

But: Agreement pattern with the verbs -oqa ‘begin’, -iča ‘continue’ is different; the verb agrees with the non-absolutive argument

(4) a. kid-bā ziya biša y-oqsi
   girl-CLASS II-ERG cow. CLASS III.ABS feed.INF III-began
   ‘The girl began to feed the cow.’

b. *kid-bā ziya biša b-oqsi
   girl-CLASS II-ERG cow.CLASS III.ABS feed.INF II-began

c. *kid-bā ziya biša r-oqsi
   [girl-ERG cow.ABS feed.INF]. IV IV-began
   sentential complement.

Neither absolutive agreement (4b) nor agreement with the sentential complement (4c) is possible

Why?

2. Overview of the talk
   § 3 Solving the puzzle: A new type of Control structure
   provides evidence for a Backward Control (BC) structure in which the
downstairs subject is pronounced and the upstairs subject is a non-overt,
themetic, coindexed empty category

§ 4 Backward Control and Control Theory
   investigates consequences of BC for theories of Obligatory Control,
arguing that BC is incompatible with the base-generation analysis of
Control

§ 5 Control as movement
   argues that BC provides empirical evidence for a movement analysis of
Control resulting in the unification of Control and Raising

§ 6-8 Mapping out the variation in Control and Raising
   examines unresolved questions; demonstrates how the theory can be used to
predict cross-linguistic variation, and presents the Control and Raising
Database (under construction)

¹ABS—absolutive, CLASS + ROMAN NUMERAL—noun class, ERG—ergative, FUT—future, INF—infinitive, NMLZ—nominalizer, PAST—past, PL—plural, PRES—present, REFL—reflexive, SG—singular, VAL—validator. Roman numerals in glosses show noun class agreement (e.g., II means ‘class II agreement’).
3. Solving the puzzle: Backward Control

Proposal: the ergative NP is in the embedded clause; it is co-indexed with an absolutive empty category (EC, represented as $\Delta$) in the embedded clause, which is an instance of Backward Control.

(5) a. kid-bā ziya b-iš-r-a y-oq-si
girl-ERG cow.ABS III-feed-INF II-begin-PAST.EVID
`The girl began to feed the cow.'
b. $\Delta_i$ [ kid-bā ziya bišra] yoqsi
EC girl.ERG cow.ABS feed began

3.1 Crucial properties of Control

Control: an interpretational dependency between two argument positions in which the referential properties of an overt argument, the controller, determine the referential properties of a non-overt argument, the controllee.

- Thematic subject
- Biclausal structure
- Co-indexed arguments: one overt, one unexpressed

(6) The farmer, he tried [ $\Delta_i$ to sell the cow]
    CONTROLLER  CONTROLLEE

3.2 Main components of the analysis

- `begin` is a control predicate, it has a thematic subject position
- the puzzling construction is biclausal
- subject of complement verb (ERG) is in lower clause
- subject of `begin` is a coindexed empty category
- the puzzling construction instantiates Obligatory Control

3.3 Thematic Subject: Selectional restrictions

(7) a. t’ont’oh-ā buq bac’xo
darkness-ERG sun.ABS eat.PRES
`The sun has eclipsed.'
(lit. “Darkness eats the sun.”)
b. * t’ont’oh-ā buq bac’a bāq
darkness.ERG sun.ABS eat.INF begin.FUT
`The sun will begin to eclipse.'

Further evidence: imperative formation, obligatory volitionality/sentience of the subject (Polinsky 2000; Polinsky and Potsdam 2002)

odash `begin` has a thematic subject

3.4 Biclausal structure with overt subject in the lower clause

- validator clitic -uy ‘indeed’ (buy, ruy, yuy below)
- second-position clitic (agrees with ABS)

(8) a. kidbā buy ziya bišersi
girl.ERG VAL cow.ABS fed
`The girl indeed fed the cow.'
b. (*buy) kidbā ziya (*buy) bišersi (*buy)
   VAL girl cow VAL fed VAL

restricted to root clauses

(9) a. [kidbā (*buy) ziya bišra] enir retix
girl.ERG VAL cow.ABS feed.INF mother wants
`The mother wants [the girl to (*indeed) feed the cow].'b. [t’ekmabi (*ruy) t’et’ra] rigu yol
   [books VAL read.INF] good is
`[To (*indeed) read books] is good.'

subject in the puzzling construction cannot be followed by validator clitic—even if the second position requirement is met

(10) [kidbā (*buy) ziya bišra] yoqsi
girl.ERG VAL cow feed.INF began
`The girl (*indeed) began to feed the cow.'
the whole embedded clause can be followed by validator clitic
(11) [kidbā ziya bišra] yuy yoqsi
girl.ERG cow feed.INF VAL began
‘The girl indeed began to feed the cow.’

Further evidence: scrambling, case-marking, null complement anaphora (Polinsky 2000; Polinsky and Potsdam 2002), even quantification (3.5)

subject of embedded verb is in the complement clause of oqqa
‘begin’; the construction is biclausal

3.5 Empty category subject of ‘begin’

Proposal
(12) ∆i [kid-bā ziya bišra] y-oqsi
EC,CLASS II.ABS girl-ERG cow.ABS feed.INF II-began
‘The girl began to feed the cow.’

reflexive binding
Tsez reflexives are strictly local, no logophors
(13) a. enir [užā nesā nesir yutku roda] etin
mother boy.ERG REFL.DAT house.ABS build.INF wanted
antecedent anaphor
‘The mother wanted the boy to build himself a house.’

b. *enir [užā yutku roda] nesā nesir etin
mother boy.ERG house.ABS build.INF wanted
antecedent boundary anaphor
(‘The mother wanted for him that the boy should build a house.’)

there is a reflexive in the matrix clause of the puzzling construction; the empty category binds a local reflexive
(14) [yēsi żeć‘āj ‘agarawayo-r yutku roda]
this man.I.ERG relative-DAT house.ABS build.INF
antecedent boundary

∆i nesā nesir oqsi
EC REFL.DAT began
antecedent anaphor
‘The man began for himself (~for his own sake), to build a house for his relative.’

Further evidence: depictive licensing, local agreement, Long-Distance Agreement (Polinsky 2000; Polinsky and Potsdam 2002)

the subject of ‘begin’ is a thematic empty category

3.6 Obligatory vs. Non-Obligatory Control

Obligatory (OC) versus Non-obligatory (NOC) distinction:

What is the range of arguments that can determine the referential properties of the controllee?

(15) a. Sandy1 plans PROi,*kt to sing
b. Sandy1 thinks that PROi,i+k,k to sing would be fun

(16) properties

OC NOC
a. allows PROarb reading (no antecedent) × ✓
b. permits strict reading under ellipsis × ✓
c. paraphrasable with a pronoun × ✓
d. allows a non-local antecedent ✓ ✓
e. allows a non-c-commanding antecedent ✓ ✓

(3.6) Obligatory Control properties in Tsez

<table>
<thead>
<tr>
<th>property</th>
<th>OC</th>
<th>NOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>allows PROarb reading (no antecedent)</td>
<td>×</td>
<td>✓</td>
</tr>
<tr>
<td>permits strict reading under ellipsis</td>
<td>×</td>
<td>✓</td>
</tr>
<tr>
<td>paraphrasable with a pronoun</td>
<td>×</td>
<td>✓</td>
</tr>
<tr>
<td>allows a non-local antecedent</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>allows a non-c-commanding antecedent</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>allows for partial control reading</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

(17) *pro/ža/kid1 [kidbā ziya bišra] oqsi
pro/boy.ABS/boy.ERG girl.ERG cow.ABS feed.INF began
(‘The boy began to have the girl feed the cow.’)

pronominal paraphrase not allowed

(18) *ža/kid1 [kidbā/nelāziya bišra] oqsi
pro/boy.ABS/boy.ERG girl.ERG cow.ABS feed.INF began
(‘The girl began to feed the cow.’)

the puzzling construction is Obligatory Control
4. Re-evaluating the theory

4.1 Summary: Backward Control

(20) conclusions so far:
   i. subject of complement verb is in lower clause
   ii. subject of ‘begin’ is a thematic co-indexed empty category
   iii. the construction is Obligatory Control

(21) \[ \Delta_{i} \text{kidbā₂ ziya bišra} \text{ yoqsi} \]
    EC  girl.ERG cow.ABS feed.INF began
    ‘The girl began to feed the cow.’

\( oqa \) ‘begin’ is a Backwards Subject Control verb in which the lower co-indexed
subject is expressed and the higher one is unpronounced

(22) \( oqa \), ‘begin’, V,
    \[
    \begin{array}{c}
    \theta_1 \\
    \theta_2 \\
    \end{array}
    \]

4.2 Principles & Parameters: EC as PRO

Standard analysis of Control: EC is PRO

(23) \( \text{PRO}_i \text{kidbā₂ ziya bišra} \text{ yoqsi} \)
    PRO.II girl.II.ERG cow.ABS feed.INF II-began
    ‘The girl began to feed the cow.’

(24) crucial theoretical assumptions (Chomsky and Lasnik 1993)
   a. PRO is assigned Null Case
   b. PRO must be bound for a referential interpretation
   c. every contentful NP receives exactly one \( \theta \)-role (Theta Criterion)

Theoretical problems:
   • PRO is not bound
   • no arbitrary interpretation; \( \text{PRO}_{arb} \) interpretation is otherwise available in
     Tsez

(25) \( \text{PRO}_{arb} \text{kidbā₂ ziya bišra} \text{ yoqsi} \)
    girl.ERG cow.ABS feed.INF began
    ‘The girl began to feed the cow.’

   *Someone began to have the girl feed the cow.’

   • Condition C
   • Case: agreement facts show that EC is assigned absolutive Case, not Null Case

\( \Rightarrow \) P&P analysis of Control rules out Backward Control
   Tsez Backward Control is incompatible with the base-generation analysis

4.3 EC as a null pronoun (pro)

Proposal: EC is a silent pronominal (consistent with Tsez being pro-drop)

(26) \( \text{pro}_i \text{kidbā₂ ziya bišra} \text{ yoqsi} \)
    pro.II girl.II.ERG cow.ABS feed.INF II-began
    ‘The girl began to feed the cow.’

   *‘Someone began to have the girl feed the cow.’

Theoretical problems:
   • no alternation with an overt pronoun
   • unexplained Obligatory Control interpretation
   • Condition C

\( \Rightarrow \) the silent element is not \( pro \)

5. Analysis of Control without PRO

Proposal: Control is derived by movement

(27) crucial assumptions (Hornstein 1999, 2003, Boeckx and Hornstein 2003, among others)
   a. \( \theta \)-roles are features
   b. an NP “receives” a \( \theta \)-role by checking a \( \theta \)-feature of a verb that it
      merges with
   c. there is no upper bound on the number of \( \theta \)-roles a chain can have (no
      Theta Criterion)
   d. movement is driven by feature checking
   e. features can be strong or weak
5.1 Forward Control: Movement analysis

(28) a. The girl tried to leave.
   b. The girl tried to leave

(29) Control  
[IP The girl [VP t tried [IP t to [VP t leave]]]]
   CASE/EPP  θtry     EPP  θleave

(30) Raising  
[IP The girl [VP t is likely [IP t to [VP t leave]]]]
   CASE/EPP  theta-role  EPP  θleave

Raising and Control receive a unified analysis as instances of A-movement

Previous relevant insights:
- Bolinger 1961, 1967: the distinction between Raising and Control is elusive
- Langacker 1995: Raising and Control are not distinct
- Walenski 2002: Raising and Control are minimally different, the difference is mainly semantic

Conceptual advantages of the movement analysis
- eliminates need for Control module to specify PRO’s controller
- eliminates PRO formative and Null Case
- assimilates locality of Control to locality of A-movement
- unifies Raising and Control as instances of A-movement (difference between the two constructions has to do with selectional restrictions)

Further empirical evidence for the movement analysis:
- Japanese passives, with Direct Passive analyzed as a Control structure (Fukuda 2004)
- Psych-verbs in Chilean Spanish (Gonzalez 1991)
- Finite control (Polinsky in progress)

5.2 Movement analysis of Tsez Control

(31) a. kidbāi [Δi ziya bišra] hakarat nelsi
girl.ERG cow.ABS feed.INF attempt gave
   ‘The girl tried to feed the cow.’ (Forward)
   b. Δi [kidbāi ziya bišra] yoqsi
girl.ERG cow.ABS feed.INF began
   ‘The girl began to feed the cow.’ (Backward)

(32) a. Forward Control  
[IP girl [VP t girl [VP feed cow] try]]] SS
   ‘The girl tried to feed the cow.’
   b. Backward Control  
[IP girl [VP t girl [VP feed cow] begin]]] SS
   [IP girl [VP t girl [VP feed cow] begin]]] LF
   ‘The girl began to feed the cow.’

Forward Control vs Backward Control: overt vs covert movement

Why is movement covert?
- Tsez has covert movement elsewhere (A’-movement, Polinsky 2002, Polinsky and Potsdam 2001)
  - Lexical properties of ‘begin’, ‘continue’

(33) Stipulation:
oqa ‘begin’ has a weak external θ-role feature, which prevents overt movement

But: cross-linguistic support for it, based on similar behavior of several aspectual verbs in Tzotzil (Aissen 1994)
5.3 Summary of the analysis

<table>
<thead>
<tr>
<th>RESULT</th>
<th>WHAT THIS RESULT ACCOUNTS FOR (presented here)</th>
</tr>
</thead>
<tbody>
<tr>
<td>the verb ‘begin’ has a thematic subject (a subject θ-role)</td>
<td>idioms; selectional restrictions; imperative formation</td>
</tr>
<tr>
<td>at surface structure, ‘begin’ has no subject NP, its logical subject still in the complement clause</td>
<td>validator clitic placement; case-marking determined by the embedded predicate; scrambling; event quantification; null complement anaphora; absence of Condition C violations</td>
</tr>
<tr>
<td>at LF, ‘begin’ has a syntactic subject which can participate in covert syntax</td>
<td>licensing of reflexives; depictive interpretation; agreement and Long-Distance Agreement (all calculated at LF)</td>
</tr>
<tr>
<td>no lexical material can be introduced during the covert syntax, therefore, the weak θ-role must be checked in the covert syntax by an NP that was introduced into the derivation overtly</td>
<td>Obligatory Control pattern</td>
</tr>
</tbody>
</table>

5.4 Interim conclusions

- Control phenomena can be accounted for under a movement analysis
- Under the movement analysis, Control and Raising can receive a unified account; the difference is in selectional restrictions only
- Backward Control provides empirical motivation for such an analysis; it is minimally different from Forward Control—the raising of the controller takes place covertly, not overtly

6. Outstanding questions and predictions

- Theory-internal problems
  - Case-checking: Case is checked twice in BC
  - EPP: EPP is satisfied outside NP movement

- Lexical issues
  Is Backward Control limited to aspectual verbs?

(34) Verbs licensing Backward Subject Control

<table>
<thead>
<tr>
<th>LANGUAGE</th>
<th>ASPECTUAL VERBS</th>
<th>NON-ASPECTUAL VERBS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tsez</td>
<td>begin, continue</td>
<td></td>
</tr>
<tr>
<td>Bezhta</td>
<td>begin, continue, stop</td>
<td>anticipate</td>
</tr>
<tr>
<td>Tsaxur</td>
<td>begin</td>
<td>dare, dread</td>
</tr>
<tr>
<td>Tzotzil</td>
<td>begin, stop, continue</td>
<td></td>
</tr>
<tr>
<td>Jacaltec</td>
<td>begin</td>
<td></td>
</tr>
<tr>
<td>Jemez</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malagasy</td>
<td>begin, stop, accomplish (~finish)</td>
<td></td>
</tr>
<tr>
<td>Kabardian</td>
<td>stop, begin</td>
<td>dread, take a risk, dare, anticipate, want, hope, must, be able to</td>
</tr>
<tr>
<td>Adyghe</td>
<td>stop, begin, continue</td>
<td>anticipate</td>
</tr>
</tbody>
</table>

If aspectual semantics is not the answer, do BC verbs still form a coherent class?

Empirical work on Backward Control is necessary to answer this question.
6.3 Variation in Control and Raising

6.3.1 Backward Object Control

<table>
<thead>
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<th>Forward</th>
<th>Backward</th>
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</thead>
<tbody>
<tr>
<td>Subject Control</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Object Control</td>
<td>✓</td>
<td>?</td>
</tr>
</tbody>
</table>

The movement analysis predicts that Backward Object Control should be possible.


Korean Object Control (Monahan 2003)

(35) a. Chelswu-nun Yenghi-lul, [Δ₁ kakey-ey ka-tolok] Chelswu-TOPIC Yenghi-ACC EC store-to go-COMP seltukhaessta persuaded ‘Chelswu persuaded Yenghi to go to the store.’ (Forward Control)

b. Chelswu-nun Δ₁ [Yenghi-ka i kakey-ey ka-tolok] Chelswu-TOPIC EC Yenghi-NOM store-to go-COMP seltukhaessta persuaded ‘Chelswu persuaded Yenghi to go to the store.’ (Backward Control)

Japanese tokoro-clauses (tokoro ‘scene’)

(36) a. ??keikan-ga doroboo-o [mise-kara Δ₁ detekuru policeman-NOM thief-ACC store-from EC come.out tokoro]-o taiosita
tokoro-ACC arrested ‘The policeman caught the thief when he was coming out of the store.’ (Forward Object Control, restricted because of the Double-o Constraint operating in Japanese)

b. keikan-ga Δ₁ [mise-kara doroboo-ga detekuru polimceman-NOM thief-NOM store-from come.out tokoro]-o taiosita
tokoro-ACC arrested ‘The policeman caught him when a/the thief was coming out of the store.’ (Backward Object Control)

6.3.2 Backward Raising

<table>
<thead>
<tr>
<th></th>
<th>Forward</th>
<th>Backward</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Raising</td>
<td>✓</td>
<td>?</td>
</tr>
</tbody>
</table>

The movement analysis predicts that Backward Raising should be possible.

Backward Raising attested: Adyghe, NW Caucasian (Say 2004)

(37) a. Baseline construction: matrix verb agrees with the entire sentential complement; embedded verb is transitive with a pro object

[bombe-xem pro qewe-n-x-ew ] Ø-wəbla-γ bomb-ERG.PL explode-FUT-3SG.ABS-INF 3SG-begin-PAST [SENTENTIAL COMPLEMENT] 3SG AGR ↑

‘The bombs started exploding.’ (lit. It started that the bombs exploded it.)

b. Backward Raising: matrix verb agrees with the DP ‘bombs’ which is in the lower clause

[bombe-xem pro qewe-n-x-ew ] Δ₁ a-wəbla-γ bomb-ERG.PL explode-FUT-3SG.ABS-INF EC 3PL-begin-PAST ↑

‘The bombs started exploding.’

- The matrix verb, which is intransitive, agrees with the ergative NP
- The ergative NP is in the embedded clause, where its case is determined by the transitive verb ‘explode’
- No selectional restrictions

6.4 Alternation between Forward and Backward Control/Raising

If a language has both options for one and the same verb, what are interpretive differences between the forward and backward configurations? What determines the choice of one construction over the other?

‘When the grammar permits both backward and forward pronominalization use the backward option only if you have a reason to do so.’ (Reinhart 1976)
Languages with Forward/Backward alternations
- Subject Control: Kabardian, Adyghe
- Object Control: Korean, Japanese
- Raising: Adyghe

Kabardian (Kumaxov & Vamling 1998: 221)

(39) a. \[a-r̝i  mə-šiŋ 3SG-ABS  SUBJ.3SG-fear.INTRANS.PRES \]
   \[EC  book-ABS  SUBJ.3SG-write-INF \]
   ‘He dreads writing a book.’ (Forward Subject Control)

b. \[a-b管线 a-tʃi ล8̝i  j-tʃi-n] 3SG-ERG book-ABS SUBJ.3SG-write-INF
   \[EC  SUBJ.3SG-fear.INTRANS.PRES \]
   ‘He dreads writing a book.’ (Backward Subject Control)

Japanese: scope differences between Forward and Backward Object Control; the controller in the backward structure must take narrow scope with respect to the event described by the main verb (Fujii 2004)

Possible analysis: the choice of non-raised vs raised construction is determined by information structure (following Langacker 1995: 29-35)

7. From the puzzle to theory: Conclusions so far
- Evidence for a Backward Control structure

Tsez
(40) \[Δ管线 kib管线 ziya  bišra  yoqsi  EC  girl.ERG cow.ABS feed.INF  began \]
   ‘The girl began to feed the cow.’

- Backward Control and syntactic theory

\textbf{Backward Control and current theories: An evaluation metric}

(38)

<table>
<thead>
<tr>
<th>Should Backward Control be theoretically permitted?</th>
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<tbody>
<tr>
<td>Should</td>
</tr>
<tr>
<td>Backward Control</td>
</tr>
<tr>
<td>be theoretically permitted?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Why?</th>
<th>P&amp;P</th>
<th>Minimalism</th>
<th>HPSG</th>
<th>LFG</th>
<th>Cognitive Grammar</th>
</tr>
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<tbody>
<tr>
<td>PRO</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Cond. C</td>
<td>Cond. C</td>
<td>variation in profiled participant</td>
<td></td>
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</tbody>
</table>

Possible analysis: the choice of non-raised vs raised construction is determined by information structure (following Langacker 1995: 29-35)

**8. From the puzzle to outstanding questions: Work in progress**

8.1 Variation in Control structures

(41) **Correlates of the Forward/Backward Subject Control alternation**
- Case marking of subjects in control complements
- EPP satisfied independently of XP-movement
- Surface word order equally accommodating of overt and covert movement

\[SOV \ (head-final) \ and \ VOS/VSO \ (head-initial): \ Forward \ and \ Backward \ Control \ have \ the \ same \ surface \ realization: \]

(42) Forward Control Backward Control surface order
- \[S \ [SOV]V \] \[S \ [SOV]V \] \[S \ O \ V \ V \]
- \[V \ [VO \ S] \] \[S \ [VOS] \] \[V \ V \ O \ S \]
- \[SV[SVO] \] \[S \ V[SVO] \] \[SVVO/VSVVO \]

Possible analysis: the choice of non-raised vs raised construction is determined by information structure (following Langacker 1995: 29-35)
Languages with Backward Subject Control

<table>
<thead>
<tr>
<th>Head-final</th>
<th>Head-initial</th>
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<tr>
<td>(42a)</td>
<td>(42b)</td>
</tr>
<tr>
<td>Tsez</td>
<td>Malagasy</td>
</tr>
<tr>
<td>Bezhta</td>
<td>Jalaltec (?)</td>
</tr>
<tr>
<td>Tsaxur</td>
<td>Tzotzil (?)</td>
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<td>Kabardian</td>
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<td>Adyghe</td>
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<td>Newari (?)</td>
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<td>Mizo (?)</td>
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</tbody>
</table>

References


Alternation between Forward and Backward structures

Semantics of verbs that license backward structures

How rare are backward patterns and why?

Rare phenomena can change the outlook of linguistic theory, e.g. onset-sensitive stress (Gordon 2003)

Periphery requires as much explanation as core

Processing explanation: Backward dependencies are harder to process?

Experimental evidence: Sturt 2003; Sturt et al. 2000; Kazanina and Phillips 2004

A Grammar of Tsez


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