

# Kazakh DP Reciprocals and Reciprocal Shift

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## 1 Introduction

The goal of this talk is to provide an analysis of the two strategies of DP reciprocal formation in Kazakh (Turkic; Kipchak)<sup>1</sup>. In particular, we are interested in the formation of bipartite reciprocal phrases which are split by a postposition or case marker.

Bipartite reciprocal constructions split by an adposition (P) or case marker (K) are common cross-linguistically. Examples from Telugu, Icelandic, and Hebrew with linear order Rec1 P/K Rec2 are given below.

- (1) *Telugu* (Messick and Raghotham, 2024, p. 3)  
vallu okhalla-ni okallu tittu-konn-aa-ru  
3PL.NOM one-ACC one.NOM scold-VR-PST-3PL  
'They scolded each other.'

- (2) *Icelandic* (Messick and Harðarson, 2023, p. 2)  
Þeir höfðu talað hvor um annan  
they.NOM.M.PL had talked each.NOM.M.SG about other.ACC.M.SG  
'They had talked about each other.'

- (3) *Hebrew* (Landau, 2025, p. 4)  
ha-yeladim xiku ze et ze  
the-children imitated.3PL this ACC this  
'The children imitated each other.'

Kazakh DP reciprocals can be a single word, formed from reduplication of the numeral *bir* 'one' followed by a possessive marker and a case marker.

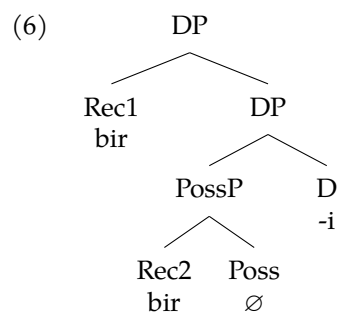
<sup>1</sup>All uncited data in this paper is from four native speakers of Xinjiang Kazakh. One of them, Merlin Balkhash, is an author of this paper.

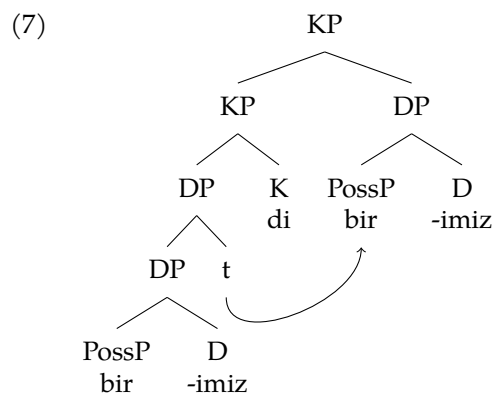
- (4) Non-shifted  
Biz bir-bir-imiz-di kór-di-k.  
1PL one-one-1PL.POSS-ACC see-PST-1PL  
'We saw each other.'

Or, a bipartite construction, where each instance of *bir* has its own possessive and case markers (cf. Section 1.2).

- (5) Shifted  
Biz bir-imiz-di bir-imiz kór-di-k.  
1PL one-1PL.POSS-ACC one-1PL.POSS see-PST-1PL  
'We saw each other.'

We will follow Landau (2025) in claiming that (5) is the result of "reciprocal shift". We will refer to reciprocals like in (4) as "non-shifted" and those like in (5) as "shifted". We will argue, following Landau (2025), that the non-shifted reciprocal has an asymmetric structure (6), while the shifted reciprocal is derived via movement to avoid a symmetric structure (7).





Specifically, we will argue that reciprocal shift is the result of the merger of two DPs as sisters, which creates a labeling issue. This labeling issue is then resolved via movement of one of the DPs.

#### Main Ideas

- Reciprocal shift in Kazakh is the result of two DPs merging as sisters
- When two DPs merge as sisters, it creates a labeling issue resolved by movement (Landau, 2025)

## 1.1 Basic Data

The Kazakh DP reciprocal is formed from reduplication of the numeral *bir* ‘one’. The reciprocal is followed by a possessive marker that agrees in person with the antecedent and is assigned case like any other noun/pronoun, similar to Turkish reciprocal DPs (Atlamaz and Öztürk, 2023).

- (8) a. Biz bir-bir-imiz-di kór-di-k.  
1PL one-one-1PL.POSS-ACC see-PST-1PL  
‘We saw each other.’ [1PL]
- b. Sen-der bir-bir-iń-di kór-di-ń-der.  
2-PL one-one-2.POSS-ACC see-PST-2-PL  
‘You saw each other.’ [2PL]
- c. Siz-der bir-bir-ińiz-di kór-di-ńiz-der.  
2.FRM-PL one-one-2.FRM.POSS-ACC see-PST-2.FRM-PL  
‘You (formal) saw each other.’ [2PL.FRM]
- d. O-lar bir-bir-i-n kór-di.  
3-PL one-one-3.POSS-ACC see-3-PL.PST  
‘They saw each other.’ [3PL]

The Kazakh reciprocal is an anaphor that is subject to traditional descriptions of Condition A of binding theory. For example, while it can occur as the subject of an embedded clause (9), it cannot be bound by the matrix subject as the object of the embedded clause (10).

- (9) O-lar bir-bir-i náttje shyǵarý-dy dep sene-di  
3-PL one-one-3.POSS result achieve-PST COMP believe-PST  
‘They believed that each other would succeed.’

- (10) \*O-lar Aidyn bir-bir-i-n kór-di dep sene-di  
3-PL Aidyn one-one-3.POSS-ACC see-PST COMP believe-PST  
Intended: ‘They believed that Aidyn saw each other.’

Kazakh exhibits a second possibility, in which the two instances of *bir* are more separated and each followed by their own possessive marker. The “first” *bir* takes the case marker assigned by the local verb/postposition while the “second” *bir* matches its antecedent in case (more data relevant to case matching will be shown in Section 1.2). As far as we are aware, there are no truth conditional differences between the two reciprocal types.

- (11) a. Biz bir-imiz-di bir-imiz kór-di-k.  
1PL one-1PL.POSS-ACC one-1PL.POSS see-PST-1PL  
‘We saw each other.’ 1PL
- b. Sen-der bir-iń-di bir-iń kór-di-ń-der.  
2-PL one-2.POSS-ACC one-2.POSS see-PST-2-PL  
‘You saw each other.’ 2PL
- c. Siz-der bir-ińiz-di bir-ińiz  
2.FRM-PL one-2.FRM.POSS-ACC one-2.FRM.POSS  
kór-di-ńiz-der.  
see-PST-2.FRM-PL  
‘You (formal) saw each other.’ 2PL.FRM
- d. O-lar bir-i-n bir-i kór-di.  
3-PL one-3.POSS-ACC one-3.POSS see-PST  
‘They saw each other.’ 3PL

While the examples above show both DP reciprocals as complements of verbs, the following examples with postpositions/possessive structures illuminate some facts about the linear order. Namely, in the cases with reciprocal shift, the postposition/possessum must intervene between the two instances of *bir*.

- (12) a. O-lar bir-bir-i úshin ómir súr-ip júr.  
3-PL one-one-3.POSS for life live-CONVB walk
- b. O-lar bir-i úshin bir-i ómir súr-ip júr.  
3-PL one-3.POSS for one-3.POSS life live-CONVB walk
- c. ??O-lar bir-i bir-i úshin ómir súr-ip júr.  
3-PL one-3.POSS one-3.POSS for life live-CONVB walk  
'They live for each other.'

- (13) a. Men kitap-ter-di bir-bir-i-niń qas-y-na  
1SG book-PL-ACC one-one-3.POSS-GEN side-3.POSS-LOC  
qoi-dy-m.  
place-PST-1SG
- b. Men kitap-ter-di bir-i-niń qas-y-na  
1SG book-PL-ACC one-3.POSS-GEN side-3.POSS-LOC  
bir-i-n qoi-dy-m.  
one-3.POSS-ACC place-PST-1SG
- c. \*Men kitap-ter-di bir-i-n qas-y-na  
1SG book-PL-ACC one-3.POSS-ACC side-3.POSS-LOC  
bir-i-niń qoi-dy-m.  
one-3.POSS-GEN place-PST-1SG

The previous examples are all from Kazakh speakers from Xinjiang. From checking with two speakers of Kazakh from Kazakhstan, the shifted reciprocal doesn't seem to be as freely available. However, both DP reciprocals still appear to be used in Kazakhstani Kazakh.<sup>2</sup>

- (14) a. Top-ta-ǵy-lar-dyń bári men siaqty sportshy  
group-LOC-GI-PL-GEN all 1SG like athlete  
bol-ǵan-dyq-tan, bir-bir-imiz-di jaqsy  
be-PST.PTCP-NMLZ-ABL one-one-1PL.POSS-ACC good  
túsine-miz.  
understand-1PL  
'Since everyone in the group is an athlete like me, we understand each other well.'

- b. Tilektes dos bolý úshin, eń aldy-men,  
willing friend become for the.most before-COMM  
bir-imiz-di bir-imiz tyńda-y-ǵa  
one-1PL.POSS-ACC one-1PL.POSS listen.to-INF-ASP  
úren-y-imiz qajet.  
learn-INF-1ST.PL.POSS need.to  
'To become willing friends, first of all, we need to learn to listen to each other.'

This talk is focused on analyzing reciprocal shift in Xinjiang Kazakh, but we will assume there are no important differences between Xinjiang and Kazakhstani Kazakh.

## 1.2 Case Matching

Kazakh reciprocal shift shows parallels with Icelandic (Messick and Harðarson, 2023) and Telugu (Messick and Raghotham, 2024) among other languages in that the second reciprocal part matches the antecedent in case. Examples for accusative and genitive case are shown below. Examples for the other cases can be found in Appendix B.

- (15) **Accusative**
- a. Oqýshi-lar muǵalim-dar-di **bir-bir-i-ne**  
student-PL teacher-PL-ACC **one-one-3.POSS-DAT**  
tan-ys-tyr-dy.  
acquaint-RECP-CAUS-PST
- b. Oqýshi-lar muǵalim-dar-**di bir-i-ne bir-i-n**  
student-PL teacher-PL-**ACC one-3.POSS-DAT one-3.POSS-ACC**  
tan-ys-tyr-dy.  
acquaint-RECP-CAUS-PST  
'The students introduced the teachers to each other.'
- (16) **Genitive**
- a. Biz-diń **bir-bir-imiz-ge** jiber-gen  
1PL-GEN **one-one-1PL.POSS-DAT** send-PST.PTCP  
hat-ymyz mynaý.  
letter-1PL.POSS DEM
- b. Biz-**diń bir-imiz-ge bir-imiz-diń**  
1PL-**GEN one-1PL.POSS-DAT one-1PL.POSS-GEN**  
jiber-gen hat-ymyz mynaý.  
send-PST.PTCP letter-1PL.POSS DEM  
'These are the letters that we sent to each other.'

<sup>2</sup>Examples from [Sub-corpus of the national corpus of the Kazakh language](https://qazcorpora.kz/eng/) (https://qazcorpora.kz/eng/)

### 1.3 Kazakh Possessive Suffix

We have been referring to the marker on the Kazakh reciprocal as the possessive marker. However, while we call it a possessive marker, it generally behaves like an agreement marker on nominals. The most obvious examples involve possession.

- (17) a. Men-iń aty-m Aidyn.  
1SG-GEN name-1SG.POSS Aidyn  
'My name is Aidyn.'
- b. O-nyń it-i súkimdi.  
3-GEN dog-3.POSS cute  
'His/her dog is cute.'

But, the possessive marker can also appear on nominalized verbs with genitive subjects.

- (18) a. Keshke qaida bar-atyn-yń-di ait  
Evening where go-PART-2.POSS-ACC say.IMP  
'Tell me where you are going to in the evening!' (Mukhamedova, 2015, p. 231)
- b. Men Aisha-nyń erteń Almaty-ǵa bar-atyn-y-n  
1SG Aisha-GEN tomorrow Almaty-DAT go-PRSP-3.POSS-ACC  
ait-ty-m.  
say-PST-1SG  
'I said that Aisha was going to Almaty tomorrow.' (Ótött-Kovács, 2024, p. 2)

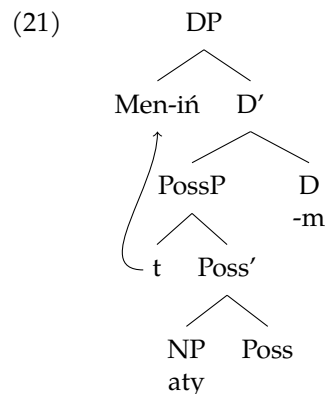
As well as on reflexives.

- (19) a. Ózim qazaq-pyn.  
self-1SG.POSS Kazakh-1SG  
'I myself am a Kazakh.' (Mukhamedova, 2015, p. 250)
- b. Siz óz-ińiz-di kór-di-ńiz.  
2.FRM self-2.FRM.POSS-ACC see-PST-2.FRM  
'You saw yourself/yourselves.'
- c. Bala óz-i-n ur-dy.  
child self-3.POSS-ACC hit-PST  
'The child hit himself.'

And also in nominal compounds.

- (20) a. qazaq til-i  
Kazakh language-3.POSS  
'the Kazakh language' (Mukhamedova, 2015, p. 231)
- b. sý bógen-der-i  
water reservoir-PL-3.POSS  
'the water reservoirs' (Mukhamedova, 2015, p. 71)

In general, the possessive suffix appears to be an agreement morpheme that attaches to nominals, agreeing with a higher DP. This DP can be inside the same nominal structure, such as a possessor in a complex DP, or higher in the clause, such as the antecedent of an anaphor. We follow Otött-Kovács (2023) in assuming this possessive morpheme heads a DP that takes a PossP complement. The structure for a possessive such as in (17a) is given below.



That is, the possessive morpheme is an instance of D. Interestingly, in the shifted reciprocal there are two possessive markers, one for each instance of *bir*. The non-shifted one has a single possessive marker. We take this to indicate that the shifted reciprocal consists of two full DPs, while the non-shifted reciprocal is a single DP.

## 2 Constituency

The goal of this section is to show that both the non-shifted and shifted reciprocals form a constituent.

## 2.1 Topicalization

The constituency test we apply here is *topicalization*. Moving the target item to the beginning of the sentence will make it the topic of the sentence. The example in (22b) shows that it is possible to move the whole standard reciprocal structure to be the topic position. Hence, the standard structure should be considered a constituent.

### (22) non-shifted reciprocal topicalization

- a. O-lar          bir-bir-i-ne          tartý usyn-dy.  
3-PL-NOM one-one-3.POSS-DAV gift offer-3-PL.PST  
'They sent each other a gift.' [no topicalization]
- b. **Bir-bir-i-ne,**          o-lar          tartý usyn-dy.  
one-one-3.POSS-DAV 3-PL-NOM gift offer-3-PL.PST  
'To each other, they sent a gift.' [reciprocal topicalized]

Similarly, moving the whole structure of the shifted reciprocal structure to the front is acceptable as well (23b). However, moving either component of it as a topic will incur an unacceptable or ungrammatical state. (23c) moves the left component and it is slightly better than moving the right component as in (23d). It implies that either (1) the order of two components matters (23d) and it will cause ungrammaticality if their order is reversed; and (2) the structure is asymmetric in some way such that the "first" *bir* can be moved by itself but the second cannot.

### (23) shifted reciprocal topicalization

- a. O-lar          bir-i-ne          bir-i          tartý  
3-PL-NOM one-3.POSS-DAV one-3.POSS-NOM gift  
usyn-dy.  
offer-3-PL.PST  
'They sent each other a gift.' [no topicalization]
- b. **Bir-i-ne**          **bir-i,**          O-lar          tartý  
one-3.POSS-DAV one-3.POSS-NOM 3-PL-NOM gift  
usyn-dy.  
offer-3-PL.PST  
'To each other, they sent a gift.' [reciprocal topicalized]
- c. ?**Bir-i-ne,**          O-lar          bir-i          tartý  
one-3.POSS-DAV 3-PL-NOM one-3.POSS-NOM gift  
usyn-dy.  
offer-3-PL.PST  
**Intended:** 'To the other one of them, they each sent a gift.'

- d. \***Bir-i,**          O-lar          bir-i-ne          tartý  
one-3.POSS-NOM 3-PL-NOM one-3.POSS-DAT gift  
usyn-dy.  
offer-3-PL.PST  
'To each of them, the other one of them sent a gift.'

We conclude from topicalization that both reciprocal structures are constituents.

## 2.2 Phonological Focus

Standard Kazakh sentences put the *sentential accent* (bold capitals in examples below) on the final accentuable syllable as in (24a)<sup>3</sup>. Different from moving the target item to the beginning of the sentence in topicalization cases, Kazakh exhibits sentential emphasis (or phonological focus) by moving the target item to the position that precedes the predicate and placing the sentential accent on the target. Hence, here examples (24b), (24c), and (24d) respectively puts focus on the subject, the direct object, and the indirect object. An item can't be focused unless in the predicate-preceding position (24e).

- (24) a. Men          saǵan          tartý-(dy)          usyn-**GAN**-myn.  
1SG-NOM 2SG-DAV gift-(ACC) offer-PST-1SG  
'I have sent you a gift.' [standard order]
- b. Saǵan          tartý-(dy)          **MEN**          usyn-gan-myn.  
2SG-DAV gift-(ACC) 1SG-NOM offer-PST-1SG  
'It is **me** who has sent you a gift, not someone else.' [subject focus]
- c. Men          saǵan          TARTÝ-(**DY**)          usyn-gan-myn.  
-NOM 2SG-DAV gift-(ACC) offer-PST-1SG  
'It is (**the**) **gift** that I have sent you, not something else.' [direct object focus]
- d. Men          tartý-(dy)          SAǴAN          usyn-gan-myn.  
1SG-NOM gift-(ACC) 2SG-DAV offer-PST-1SG  
'It is **you** whom I sent the gift to, not someone else.' [indirect object focus]
- e. ?Men          SAǴAN          tartý-(dy)          usyn-gan-myn.  
1SG-NOM 2SG-DAV gift-(ACC) offer-PST-1SG  
**Intended:** 'It is **you** whom I sent the gift to, not someone else.'

<sup>3</sup>Here the agreement suffix is not accentuable, so the accent moves to the preceding syllable.

The standard reciprocal construction can be focused<sup>4</sup>. According to Kazakh phonology (Vajda, 1994), when the focused phrase contains multiple suffixes (prosodic phrase nesting), moving the accent along suffixes will lead to subtle meaning differences (25b and 25c). This might be irrelevant here but we will come back to this point soon for the shifted reciprocal structure. However, it is appropriate to conclude that the standard reciprocal structure is a syntactic constituent as a whole, which is reflected in its phonological accentability.

- (25) a. O-lar        bir-bir-i-ne                tartý usyn-DY.  
3-PL-NOM one-one-3.POSS-DAV gift offer-3-PL.PST  
'They sent each other a gift.'
- b. O-lar        tartý-dy BIR-BIR-I-NE                usyn-dy.  
3-PL-NOM gift-ACC one-one-3.POSS-DAV offer-3-PL.PST  
'It is **each other** that they sent a gift to, not someone else.'
- c. O-lar        tartý-dy BIR-BIR-I-NE                usyn-dy.  
3-PL-NOM gift-ACC one-one-3.POSS-DAV offer-3-PL.PST  
'It is **to each other** that they sent a gift, not somewhere else.'

In contrast, when the shifted reciprocal structure is focused, it shows more complexity. In the non-focused form (26a), the dative suffix on the first 'bir' is assigned a phrasal accent as well. Thus when the whole shifted reciprocal structure is the focus of the sentence, both the phrasal accent and the sentential accent are at the same position (26b). As mentioned in (24e), a focus at the wrong position will lead to semantic infelicity, the whole structure should be considered a constituent. In the meantime, moving the focus onto the second 'bir' is also possible (26c) with the first 'bir' retaining its phrasal accent, although such movement will incur a subtle difference on the meaning.

- (26) a. O-lar        bir-i-NE                bir-i                tartý usyn-DY.  
3-PL-NOM one-3.POSS-DAV one-3.POSS gift offer-3-PL.PST  
'They sent each other a gift.'
- b. O-lar        tartý-dy BIR-I-NE                BIR-I                usyn-dy.  
3-PL-NOM gift-ACC one-3.POSS-DAV one-3.POSS offer-3-PL.PST  
'It is **to the other one of them** who they **each** sent a gift.'
- c. O-lar        tartý-dy BIR-I-NE                BIR-I                usyn-dy.  
3-PL-NOM gift-ACC one-3.POSS-DAV one-3.POSS offer-3-PL.PST  
'It is **each of them** who sent a gift to **the other** (one of them).'

<sup>4</sup>Please ignore the obligatory accusative marking of the direct object here, which is not the focus of the study.

Additionally, it is possible for the second 'bir' to be the focus alone (27a) yet the case in (27b) shows that the same process is not allowed. Especially, the structure in (27c) is unacceptable even if a native speaker allows scrambling reading since there is structural ambiguity. It is hard for Kazakh speakers to differentiate whether the sentence is scrambled or the whole focus part is syntactically ungrammatical. Such a case is also too similar as well to the standard reciprocal structure on the perceptive aspect. Besides, although (27b) avoids structural ambiguity, switching positions of two components is only a bit more acceptable than (27c).

- (27) a. O-lar        bir-i-NE                tartý-dy BIR-I                usyn-dy.  
3-PL-NOM one-3.POSS-DAV gift-ACC one-3.POSS offer-3SG.PST  
'It is **each of them** who sent a gift to **the other** (one of them).'
- b. ?O-lar        bir-i                tartý-dy BIR-I-NE                usyn-dy.  
3-PL-NOM one-3.POSS gift-ACC one-3.POSS-DAT offer-3SG.PST
- c. \*O-lar        tartý-dy BIR-I                BIR-I-NE                usyn-dy.  
3-PL-NOM gift-ACC one-3.POSS one-3.POSS-DAV offer-3SG.PST  
**Intended:** 'It is **to the other one of them** who they **each** sent a gift.'

In sum, the phonological test in the primary sense, depicts each reciprocal structure as a complete syntactic constituent, with the shifted one rejecting position switching of its two components.

### 3 Analysis

This section argues that the shifted reciprocal is derived from movement to SpecPP/SpecKP in the general case (Messick and Harðarson, 2023), and that this movement is driven by labeling (Landau, 2025).

#### 3.1 Labeling

Landau (2025) examines Hebrew data similar to the shifted reciprocal in Kazakh that inspires his symmetry breaking analysis. In Hebrew, there are reciprocals of the form *ze ... ze* 'this ... this' and *exad ... ha-šeni* 'one ... the second'. Case markers intervene between the two reciprocal parts.

- (28) *Hebrew* (Landau, 2025, p. 4)
- a. ha-yeladim xiku                ze et ze  
the-children imitated.3PL this ACC this  
'The children imitated each other.'

- b. ha-yeladim xiku exad et ha-šeni  
the-children imitated.3PL one ACC the-second  
'The children imitated each other.'

Examples with prepositions work mostly the same, but for these the second type of reciprocal is *(ha-)exad ... ha-šeni* '(the) one ... the second'.

(29) *Hebrew* (Landau, 2025, p. 4)

- a. ha-yeladim sixku ze im ze  
the-children played.3PL this with this  
'The children played with each other.'
- b. ha-yeladim sixku exad im ha-šeni  
the-children played.3PL one with the-second  
'The children played with each other.'

However, Landau also shows that in Substandard Hebrew, *(ha-)exad ... ha-šeni* '(the) one ... the second' can be both shifted and non-shifted. Importantly, in the non-shifted variant, the first determiner is ungrammatical.

(30) *Substandard Hebrew* (Landau, 2025, p. 40)

- a. hem tamid ahavu (ha-)exad et ha-šeni.  
they always loved.3PL the-one ACC the-second
- b. hem tamid ahavu et (\*ha-)exad ha-šeni.  
they always loved.3PL ACC the-one the-second  
'They have always loved each other.'

A non-shifted option is not available for the *ze ... ze* 'this ... this' reciprocal, however.

(31) *Substandard Hebrew* (Landau, 2025, p. 40)

- a. hem tamid ahavu ze et zo.  
they always loved.3PL this.SG.M ACC this.SG.F
- b. hem tamid ahavu et ze zo.  
they always loved.3PL ACC this.SG.M this.SG.F  
'They have always loved each other.'

This informs Landau's analysis of reciprocal shift as being a symmetry issue. Essentially, when two things of the same size are merged, one of them must move to resolve a labeling issue.

Landau (2025) assumes the following labeling algorithm.

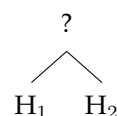
(32) *Labeling Algorithm (LA)*

The label of a syntactic object  $\{\alpha, \beta\}$  is:

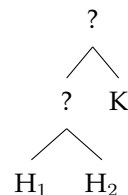
- a. **Probing:**  $\alpha$ , if it bears the feature that acts as a probe for the merging operation creating  $\{\alpha, \beta\}$ .
- b. **No probing:**  $\beta$ , if neither  $\alpha$  nor  $\beta$  is a probe and  $\alpha$  is an incomplete syntactic object (=a copy in a chain).

Essentially, this says that a syntactic object is formed from the merger of two other syntactic objects and receives the label of the object that selected the other one, or the label of the object that doesn't move if there was no c-selection between the two objects. This means that there is indeterminacy in the labeling of symmetric structures (head-head or phrase-phrase) until movement occurs.

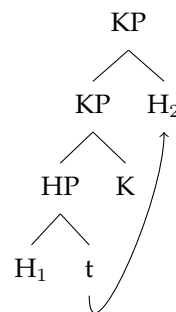
a. Merge( $H_1, H_2$ )



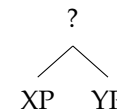
a'. Merge( $?, K$ )



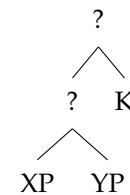
c. Merge( $?, H_2$ )



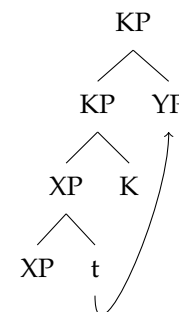
a'. Merge( $XP, YP$ )



b'. Merge( $?, K$ )

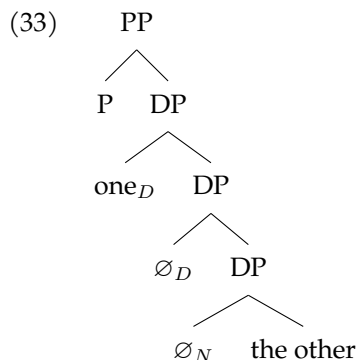


c'. Merge( $?, YP$ )



The derivation proceeds as shown above. Two heads or phrases are merged and unable to be labeled. The derivation goes on with delayed labeling. The P merges with this unlabeled unit, but still nothing can be labeled. Finally, one head/phrase moves to a higher position, allowing the highest phrase to be labeled HP/XP by c-selection. Then the lowest phrase can be labeled, as there is an incomplete syntactic object. Finally, the middle phrase is labeled PP, since its sister is HP/XP and its mother is PP, so the only possibility for labeling is PP.

Landau argues this is what takes place in standard Hebrew reciprocals (though Hebrew has prepositions not postpositions). He argues that the *ze ... ze* 'this ... this' reciprocal consists of two D elements and the (*ha-*)*exad ... ha-šeni* 'the one ... the second' reciprocal consists of two DPs. These symmetrical structures give rise to reciprocal shift. Meanwhile, the substandard Hebrew dialect has a variant without reciprocal shift, because that reciprocal has an asymmetric form, with 'one' as D and 'the other' as a DP.

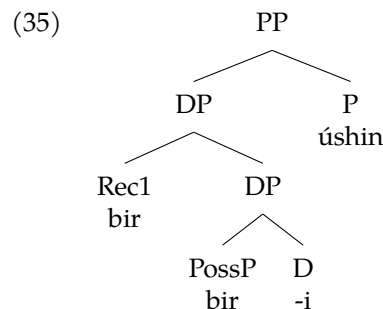


In general, Landau proposes the following typology for reciprocals.

	Head-Head	Phrase-Phrase	Head-Phrase Phrase-Head
[K/P Rec1 Rec2] (HIRP)	✗	✗	✓
[Rec1 K/P Rec2] (HMRP)	✓	✓	✗

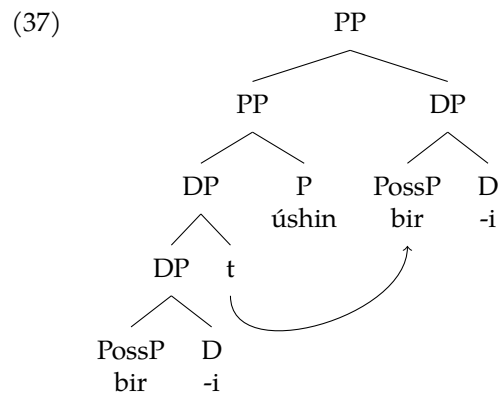
Landau's approach and the data he shows is rather interesting. We think that looking at the Kazakh data provides an even stronger argument for Landau's claims. In Kazakh the possessive suffixes tell us whether we're dealing with a head and a phrase or two phrases. So, the structure for the reciprocal in (34) below should be similar to Landau's structure for substandard Hebrew.

(34) O-lar bir-bir-i úshin ómir súr-ip júr  
 3-PL one-one-3.POSS for life live-CONVB walk  
 'They live for each other.'



Meanwhile, the structure for (36) should have two DPs as sisters.

(36) O-lar bir-i úshin bir-i ómir súr-ip júr  
 3-PL one-3.POSS for one-3.POSS life live-CONVB walk  
 'They live for each other.'



Here, when the two reciprocal parts have the same amount of structure, one of them must move. So far, reciprocal shift seems to target SpecKP/SpecPP. The following examples show that Kazakh reciprocal shift might also target SpecCP.

- (38) a. Olar bir-bir-i náttje shyǵarý-dy dep sene-di  
 3PL one-one-3.POSS result achieve-PST COMP believe-PST
- b. Olar bir-i náttje shyǵarý-dy dep bir-i  
 3PL one-3.POSS result achieve-PST COMP one-3.POSS  
 sene-di  
 believe-PST  
 ‘They believed that each other won.’

Since there is no consistent target site, the movement is probably driven by something other than a feature on K/P/C attracting the reciprocal part.

### 3.2 Coordinate Structure Constraint (CSC)

We have been assuming the shifted Kazakh reciprocal is derived via movement. However, an alternative would be that the two reciprocal parts in the split construction are merged in different positions, with one working as a distributor and the other working as a reciprocator. Such an analysis is proposed for Greek (Paparounas and Salzmann, 2024), where one reciprocal part functions as an argument and the other as a floated quantifier in the vP domain. We do not think a similar analysis is possible for Kazakh, due to the topicalization data shown earlier and the coordination data shown here.

Kazakh allows coordination of DPs (39a) with a single case marker on the second conjunct or coordination of KPs (39b).

- (39) a. O-lar Murat jáne Aidyn-dy kór-di.  
 3-PL Murat and Aidan-ACC see-3-PL.PST  
 ‘They saw Murat and Aidyn.’
- b. O-lar Murat-ty jáne Aidyn-dy kór-di.  
 3-PL Murat-ACC and Aidan-ACC see-3-PL.PST  
 ‘They saw Murat and Aidyn.’

The standard reciprocal structure is allowed in both cases.

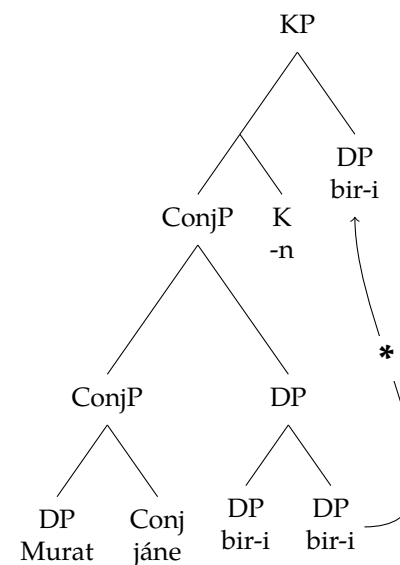
- (40) a. O-lar Murat jáne bir-bir-i-n kór-di.  
 3-PL Murat and one-one-3.POSS-ACC see-3-PL.PST  
 ‘They saw Murat and each other.’
- b. O-lar Murat-ty jáne bir-bir-i-n kór-di.  
 3-PL Murat-ACC and one-one-3.POSS-ACC see-3-PL.PST  
 ‘They saw Murat and each other.’

The shifted reciprocal structure, however, is only allowed when both conjuncts are case marked (41b).

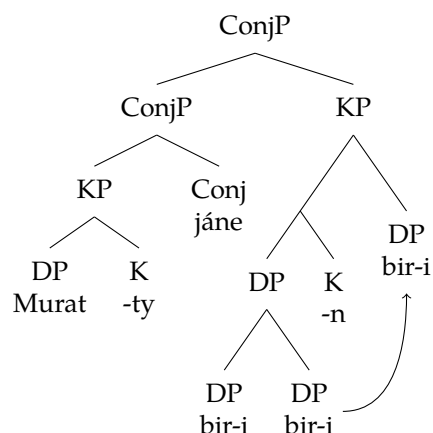
- (41) a. \* O-lar Murat jáne bir-i-n bir-i  
 3-PL Murat and one-3.POSS-ACC one-3.POSS-NOM  
 kór-di.  
 see-3-PL.PST  
 ‘They saw Murat and each other.’
- b. ?O-lar Murat-ty jáne bir-i-n bir-i  
 3-PL Murat-ACC and one-3.POSS-ACC one-3.POSS-NOM  
 kór-di.  
 see-3-PL.PST  
 ‘They saw Murat and each other.’

This follows straightforwardly from the CSC if reciprocal shift in Kazakh is derived via movement. In (41a) *bir-i* cannot shift because it would be moving out of a DP conjunction whereas it can shift in (41b) because it is a coordination of KPs and the only movement is internal to the conjunct.

Reciprocal shift blocked in (41a)



## Reciprocal shift in (41b)



### 3.3 Case Matching

Depending on the assumptions we take regarding phases, all these target positions are phase edges. Following Messick and Harðarson (2023, p. 17) we will assume that case matching with the antecedent is in some way dependent on the Phrase Impenetrability Condition (PIC). So, the shifted reciprocal part can only match with the antecedent in case if it moves to the phase edge, presumably to be visible to the antecedent. We also assume Messick and Harðarson’s analysis of case matching as the result of Feature Transmission (Kratzer, 2009). In particular, Messick and Harðarson use the following definitions of Predication and Feature Transmission.

- (42) a. *Predication (Spec-Head agreement)*  
When a DP occupies the specifier position of a head that carries a  $\lambda$ -operator, their  $\varphi$ -features and case features unify.
- b. *Feature Transmission*  
The  $\varphi$ -features and case features of a bound DP are unified with the  $\varphi$ -features and case features of the verbal functional head that hosts its binder.

## 4 Conclusion

We have provided an overview of DP reciprocal constructions in Xinjiang Kazakh. Aside from providing novel data, we have argued that Kazakh shows

evidence for Landau’s (2025) theory of reciprocal shift as a symmetry breaking operation. Furthermore, we argue that Kazakh also shows support for the relation between case matching, the PIC, and Feature Transmission proposed by Messick and Harðarson (2023).

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## A Reciprocal Word Order

- (43) a. Men kitap-ter-di bir-bir-i-niñ qas-y-na  
1SG book-PL-ACC one-one-3.POSS-GEN side-3.POSS-LOC  
qoi-dy-m.  
place-PST-1SG
- b. Men kitap-ter-di bir-i-niñ qas-y-na  
1SG book-PL-ACC one-3.POSS-GEN side-3.POSS-LOC  
bir-i-n qoi-dy-m.  
one-3.POSS-ACC place-PST-1SG
- c. \*Men kitap-ter-di bir-i-n qas-y-na  
1SG book-PL-ACC one-3.POSS-ACC side-3.POSS-LOC  
bir-i-niñ qoi-dy-m.  
one-3.POSS-GEN place-PST-1SG

- d. \*Men kitap-ter-di bir-i-niń bir-i-n  
 1SG book-PL-ACC one-3.POSS-GEN one-3.POSS-ACC  
 qas-y-na qoi-dy-m.  
 side-3.POSS-LOC place-PST-1SG
- e. ?Men kitap-ter-di bir-i-n bir-i-niń  
 1SG book-PL-ACC one-3.POSS-ACC one-3.POSS-GEN  
 qas-y-na qoi-dy-m.  
 side-3.POSS-LOC place-PST-1SG
- f. \*Men kitap-ter-di qas-y-na bir-i-niń  
 1SG book-PL-ACC side-3.POSS-LOC one-3.POSS-GEN  
 bir-i-n qoi-dy-m.  
 one-3.POSS-ACC place-PST-1SG
- g. \*Men kitap-ter-di qas-y-na bir-i-n  
 1SG book-PL-ACC side-3.POSS-LOC one-3.POSS-GEN  
 bir-i-niń qoi-dy-m.  
 one-3.POSS-ACC place-PST-1SG  
 ‘I put the books next to each other.’

- b. Men sen-der-den bir-iń-niń ángime-iń-di  
 1SG 2-PL-ABL one-2.POSS-GEN story-2PL.POSS-ACC  
 bir-iń-nen esti-di-m  
 one-2.POSS-ABL hear-PST-1SG  
 ‘I heard their stories from each other.’

(46) **Locative**

- a. O-lar-da bir-bir-i-niń hat-i bar  
 3-PL-LOC one-one-3.POSS-GEN letter-3.POSS EXIST
- b. O-lar-da bir-i-niń hat-i bir-i-nde  
 3-PL-LOC one-3.POSS-GEN letter-3.POSS one-3.POSS-LOC  
 bar  
 EXIST  
 ‘They have each other’s letters.’

**B Case Matching**(44) **Dative**

- a. Men o-lar-ǵa bir-bir-i-n  
 1SG 3-PL-DAT one-one-3.POSS-ACC  
 tan-ys-tyr-dy-m.  
 acquaint-RECP-CAUS-PST-1SG
- b. Men o-lar-ǵa bir-i-n bir-i-ne  
 1SG 3-PL-DAT one-one-3.POSS-ACC one-3.POSS-DAT  
 tan-ys-tyr-dy-m.  
 acquaint-RECP-CAUS-PST-1SG  
 ‘I introduced them to each other.’

(45) **Ablative**

- a. Men sen-der-den bir-bir-iń-niń ángime-iń-di  
 1SG 2-PL-ABL one-one-2.POSS-GEN story-2PL.POSS-ACC  
 esti-di-m  
 hear-PST-1SG