## Bare objects in Uzbek and their anaphoric accessibility

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Bare direct objects, namely nouns lacking determiners, overt quantifiers, and case- and number-marking, have been central to the research on noun incorporation in Turkic languages (Kornfilt 1997, Aydemir 2004, Öztürk 2005, Kamali 2015, Seidel 2019 for Turkish; Baker 2014 for Sakha; Lyutikova & Pereltsvaig 2015 for Tatar; Levy-Forsythe 2018, Türker 2019, Levy-Forsythe & Kagan 2020 for Uzbek). In the literature, there is growing empirical disagreement on one of the defining properties of incorporation: the anaphoric potential of bare objects, i.e., their (in)ability to antecede anaphoric pronouns. Thus, the common position that Turkish bare objects completely lack anaphoric potential (Öztürk 2005, Aydemir 2004, Ketrez 2005) has more recently been challenged (Bliss 2004, Kamali 2015, Seidel 2019). There are similarly divergent views on whether Uzbek bare objects are anaphorically accessible (Levy-Forsythe 2018) or inaccessible (Türker 2019). This paper presents empirical evidence from the first grammaticality judgment study on this topic in Uzbek, showing that bare direct objects are accessible for anaphoric uptake by covert, i.e., phonologically null, anaphora.

Noun incorporation refers to a formation of a closely associated unit between a noun in the direct object position and its verbal predicate (Mithun 1984, Baker 1988, van Geenhoven 1998, Dayal 2015, a.o.). Given the cross-linguistically attested morpho-syntactic and/or semantic deficiency of incorporated objects, their anaphoric inaccessibility may seem an expected property, ascribed to the inability to introduce discourse referents. However, there has been an increased recognition that bare objects in incorporating languages present a more complex picture of anaphoric uptake by exhibiting various levels of accessibility to both covert and overt anaphora (van Geenhoven 1998 for West Greenlandic; Dayal 1999, 2011 for Hindi; Asudeh & Mikkelsen 2000 for Danish; Farkas & de Swart 2003, Yanovich 2008 for Hungarian; Modarresi 2014, Krifka & Modarresi 2016 for Persian). Moreover, research has indicated that the type of the event denoted by the incorporated verbal construction may influence the anaphoric potential of incorporated nouns (Dayal 2011 for Hindi; Seidel 2019 for Turkish).

To investigate the anaphoric potential of bare direct objects in Uzbek, we replicated an earlier acceptability judgment study from Turkish by Seidel (2019). The design of the experiment consisted of four conditions organized in a 2x2 factorial design. We manipulated the anaphoric expression (*pro* vs. *bu* 'this' + N) and the verb type (usage vs. creation). A total of 48 critical items were created, 12 items for each context including usage verbs, cf. (1a), and creation verbs, cf. (1b). Each context sentence was followed by a target sentence, containing the anaphoric expression, cf. (2a) and (2b).

- (1) a. Umar o'tgan hafta shahar markaz-i-da **do'kon och-di**.

  Umar last week city center-POSS.3SG-LOC shop open-PST.3SG
  'Umar did **shop-opening** in the center of the city last week.'
  - b. Tahmina oʻtgan hafta shahar markaz-i-da **doʻkon qur-di**.

    Tahmina last week city center-POSS.3SG-LOC shop build-PST.3SG 'Tahmina did **shop-building** in the center of the city last week.'
- (2) a. *pro* mijoz-ga toʻla e-di. b. **bu doʻkon** mijoz-ga toʻla e-di. pro client-DAT full COP-PST.3SG this shop client-DAT full COP-PST.3SG 'It was full of clients.'

In addition to the critical items, we added 24 filler sentences that were either partly grammatical, incongruent, or ungrammatical. The grammatical and ungrammatical conditions were used as control items. All items were distributed onto four lists, each of which was balanced with respect to each verb type and type of anaphoric expression. The items were presented in a pseudo-randomized order, showing only one item at a time. Participants (n=92; mean age: 31) received a web-based questionnaire and were asked to rate sentence pairs on a

scale from 1 (very bad) to 7 (very good) with regard to the naturalness of the link of the context sentence and the target sentence.

Figure 1 presents the results of the acceptability judgment task in Uzbek in comparison to the results of Seidel (2019) for Turkish. Our data shows that anaphoric uptake of bare objects in Uzbek is acceptable. Statistical analysis reveals that contexts with overt anaphoric expressions are rated significantly better than contexts with covert anaphora (b=1.28, SE=0.20, t=6.37). We do not find any effect of verb type (b=0.07, SE=0.18, t=0.36).

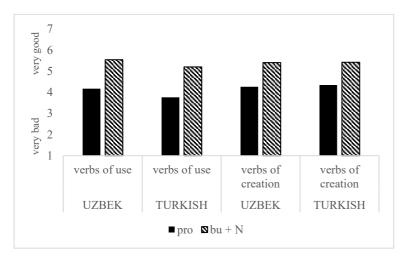


Figure 1. Mean acceptability scores for the anaphoric uptake of bare objects in Uzbek and Turkish. Turkish data adopted from Seidel (2019).

Our findings indicate that Uzbek bare objects are visible to covert anaphora regardless of the verb type. Overall, the anaphoric accessibility of Uzbek bare objects patterns with that reported in Turkish, a closely-related language (Bliss 2004, Kamali 2015, Seidel 2019). However, we also observe a minor micro-variation. In Turkish, the objects' anaphoric potential is dependent on the type of the incorporating verb, i.e., it is higher in creation contexts than in usage contexts (Seidel 2019), whereas in Uzbek it is stable across the verb types. As expected, contexts containing definite noun phrases are more acceptable than those with null subject pronouns. This finding supports the view that, unlike regular indefinites, incorporated objects do not introduce referents into the discourse immediately; rather, they achieve their anaphoric uptake via complex event formation (Farkas & de Swart 2003, Dayal 2011, Krifka & Modarresi 2016).

We conclude from our results that bare direct objects in Uzbek are accessible. We could not confirm that their anaphoric potential is dependent on event types, suggesting that further research may take into account other event types, such as destruction verbs (i.e., *kitob yirtmoq* 'book-ripping').

## **Selected References**

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