Неоформленные прямые дополнения
в узбекском языке и их анафорическая доступность[*]

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В статье представлено первое экспериментальное исследование анафорического потенциала неоформленных прямых дополнений в узбекском языке. Результаты исследования суждений о приемлемости показывают, что беспадежные существительные в позиции прямого дополнения, анализируемые нами как псевдоинкорпорированные, доступны для дискурсивной анафоры. Статья преследует три цели: (i) рассмотреть растущие эмпирические разногласия в литературе относительно анафорической доступности неоформленного прямого дополнения; (ii) сформулировать анализ полученных данных и усовершенствовать анализ псевдоинкорпорации в узбекском языке; (iii) внести вклад в исследование феномена инкорпорации существительных посредством исследования тюркского языка, недостаточно изученного в рамках генеративной грамматики.

Ключевые слова: дискурсивная анафора, неоформленное прямое дополнение, псевдоинкорпорация, исследование приемлемости, узбекский язык, тюркские языки.

"BOOK" WANTS TO BE PICKED UP:
BARE OBJECTS IN UZBEK AND THEIR ANAPHORIC ACCESSIBILITY[*]

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This paper presents the first experimental study of the anaphoric potential of bare objects in Uzbek. The results of the acceptability judgment study indicate that Uzbek bare nouns in the direct object position, analyzed as pseudo-incorporated, are accessible to discourse anaphora. The paper has three aims: (i) to address growing empirical disagreement in the literature with regards to the anaphoric accessibility of bare objects; (ii) to formulate an analysis of the data and to refine the analysis of pseudo-incorporation in Uzbek; (iii) to contribute to the research of noun incorporation by investigating a Turkic language that is understudied in the generative framework.

Keywords: discourse anaphora, bare object, pseudo-incorporation, acceptability judgment study, Uzbek, Turkic languages.

1. Introduction

Within the cross-linguistic study of (object) noun incorporation, there is growing empirical disagreement on one of the defining properties of the phenomenon: the anaphoric potential of bare objects, i.e., their (in)ability to antecede anaphoric pronouns ([Dayal 2011] for Hindi, [Farkas, de Swart 2003] and [Yanovich 2008] for Hungarian, [Espinal, McNally 2011] for Spanish and Catalan). This debate occurs in the literature on incorporation in Turkic languages. 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, 2020a, 2020b]. Bare objects in Tatar are shown to have anaphoric potential [Lyutikova, Pereltsvaig 2015] while divergent views exist on whether Uzbek bare objects are anaphorically accessible [Levy-Forsythe 2018; Levy-Forsythe, Kagan 2020] or inaccessible [Türker 2019].

In this paper, we present empirical evidence from the first acceptability judgment study in Uzbek conducted on this topic, showing that bare objects, i.e., nouns lacking determiners, overt quantifiers, and case- and number-marking, are accessible for anaphoric uptake by covert anaphora (1).

(1)   a. *Guli   kecha   uy-da   **kitob**   o'qi-di.*
         Guli   yesterday   home-LOC   book   read-PST.3SG
         'Guli did book-reading at home yesterday.'

      b. ***pro*** *yuz   betli   e-di.*
         hundred   pages   COP-PST.3SG
         'It was hundred pages long.'

We compare our results to those from an earlier study by E. Seidel [2019, 2020a, 2020b] on Turkish, placing our discussion into a broader context of the study of noun incorporation.

The paper is organized as follows. Section 2 provides relevant background on the cross-linguistic study of bare direct objects with a specific focus on Turkic languages and the research on noun incorporation. Section 3 discusses our acceptability judgment study, laying out our hypotheses and predictions, followed by the description of methods and results. Section 4 presents the discussion of our findings. Section 5 concludes the paper and suggests directions for future research.

2. Theoretical background

2.1. Differential Object Marking

Research interest in bare direct objects in Turkic languages originates from the discussion of 'differential object marking' (DOM), i.e., a cross-linguistic phenomenon of case-marking alternation, whereby some direct objects receive overt morphological marking while others do not [Bossong 1985].[1]

DOM in Turkic languages presents a rather consistent picture and primarily follows the Referentiality Scale (2) [Aissen 2003; Bossong 1985; Enç 1991; von Heusinger, Kornfilt 2005; Sinnemäki 2014; Kornfilt, von Heusinger 2017].[2] In particular, objects higher on the scale appear with the accusative suffix, while objects lower on the scale remain unmarked.

(2)   Referentiality Scale:
       Personal pronoun > Proper name > Definite NP > Indefinite specific NP >
       Non-specific NP [Silverstein 1976; Comrie 1989; Aissen 2002, a.o.]

In Uzbek, this renders the following contrast for singular objects (3). All definite direct objects, including personal pronouns, proper names, nouns preceded by demonstratives/ universal quantifiers, and definite nouns, obligatorily carry the accusative suffix *-ni* (3a). Objects can also contain the indefinite articles *bir* and *bitta*, glossed below as '*a*', which give rise to an indefinite reading (3b) [von Heusinger, Klein 2013]. Such objects may either carry case marking or occur unmarked. As a rule, the presence of the accusative marker indicates specificity while its absence signals the object's non-specificity. Finally, (3d) exemplifies a type of a direct object that obligatorily lacks case-marking and does not contain an indefinite article. Due to indefiniteness and generally assumed non-referentiality, bare nouns in the direct object position are considered lowest on the Referentiality Scale.

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[1] DOM is reported in Turkic languages such as Azerbaijani [Key 2012; Kornfilt, von Heusinger 2017], Bashkir [Bossong 1998], Chuvash and Kazakh [Serdobolskaya, Toldova 2006], Kyrgyz [von Heusinger, Kornfilt 2017], Sakha [Baker, Vinokurova 2010; Podobrayev 2013], Tatar [Lyutikova, Pereltsvaig 2015; Lyutikova, Ibatullina 2015], Turkish [Erguvanlı-Taylan 1984; Knecht 1986; Enç 1991; Kelepir 2001; von Heusinger, Kornfilt 2005; Öztürk 2005], Tuvan [Muravyova 1992], Uyghur [Asarina 2011; Shklovsky, Sudo 2014], Uzbek [Serdobolskaya, Toldova 2006; Guntsetseg et al. 2008; von Heusinger, Kornfilt 2017; Levy-Forsythe 2018; Türker 2019; Kagan 2020].

[2] Research suggests that in Turkish and Uzbek, DOM is additionally triggered by the animacy, topicality, and affectedness of direct objects [Guntsetseg et al. 2008; Niyazmetova 2009; Dalrymple, Nikolaeva 2011; Laszakovits 2014; Krause, von Heusinger 2019; Kızılkaya et al. under review].

(3)   a. Definite

     Anvar   **kitob-ni**   *o'qi-di.*
     Anvar   book-ACC   read-PST.3SG
     'Anvar read the book.'

   b. Indefinite specific

     Anvar   **bir / bitta**   **kitob-ni**   *o'qi-di.*
     Anvar   a   book-ACC   read-PST.3SG
     'Anvar read a (specific) book.'

   c. Indefinite non-specific

     Anvar   **bir / bitta**   **kitob**   *o'qi-di.*
     Anvar   a   book   read-PST.3SG
     'Anvar read a (non-specific) book.'

   d. Bare noun

     Anvar   **kitob**   *o'qi-di.*
     Anvar   book   read-PST.3SG
     'Anvar read (a) book(s).' / 'Anvar did book-reading.'

In this study, we focus on bare objects illustrated in (3d).

2.2. Anaphoric accessibility of bare objects

2.1.1. Noun incorporation

For a number of world languages, including those in the Turkic group, a consistent trend exists to treat bare objects as undergoing '(object) noun incorporation', i.e., formation of a closely associated verbal unit via integration of a noun in the direct object position into its verbal predicate.

Starting with D. Massam's [2001] seminal work, the literature distinguishes between two types of noun incorporation.

True Incorporation (aka *canonical, classical, syntactic incorporation*)[3]**:** a morpho-phonological and/ or a morpho-syntactic fusion of a noun with a minimal nominal structure (N⁰s) into a verb, yielding an incorporated verbal unit [Kroeber 1909; Sapir 1911; Sadock 1980; Mithun 1984; di Sciullo, Williams 1987; Baker 1988; Rosen 1989; van Geenhoven 1998]. Different versions of

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[3] This analysis also appears in the literature under other terms as 'head-incorporation', 'syntactic head-movement', and 'head-movement' account of noun incorporation (see [Massam 2001; Scalise, Guevara 2005; Öztürk 2005; Borik, Gehrke 2015; Rosen 1989]).

true incorporation have been proposed to take place in Turkish [Mithun 1984; Knecht 1986; Kornfilt 2003; Aydemir 2004] and to a limited extend in Uzbek [Levy-Forsythe, Kagan 2020].

Pseudo-Incorporation (aka *pseudo noun incorporation, semantic incorporation*): a more distant morpho-syntactic interaction between a noun with a reduced but phrasal nominal structure (NPs or even NumPs) and its verbal predicate, characterized by persistent semantic properties of incorporation [Massam 2001; Dayal 2003, 2011, 2015; Farkas, de Swart 2003; Espinal, McNally 2011; Baker 2014; Modarresi 2014; Krifka, Modarresi 2016; Borik, Gehrke 2015]. In more recent years, research on Turkic languages suggests that this phenomenon is typical for Turkish [Öztürk 2005, 2009; Kamali 2015; Seidel 2019, 2020a, 2020b], Sakha [Baker 2014], Tatar [Lyutikova, Pereltsvaig 2015], and Uzbek [Levy-Forsythe 2018; Levy-Forsythe and Kagan 2020].

It is generally agreed that across languages, the two kinds of incorporated constructions exhibit a range of morpho-syntactic and semantic properties that do not pertain to 'regular direct object constructions', i.e., constructions that contain a fully transitive verb and a non-incorporated referential DP complement (see Table 1).

Table 1. Cross-linguistic properties of (pseudo-)incorporation identified in Uzbek
(based on [Dayal 2011, 2015; Levy-Forsythe 2018]).

Properties	Uzbek bare objects
Reduced morpho-syntax	Bare objects' functional architecture is reduced, i.e., NP and not DP.
Obligatory narrow scope	Bare objects are scopally inert and cannot receive a wide-scope interpretation.
Number-neutrality	Bare objects are morpho-syntactically singular but are compatible with both semantically singular and plural interpretations.
Name-worthiness *— Institutionalization* *— Gaps* *— Non-compositionality*	The entire *noun + verb* construction is interpreted as a conceptual whole. — interpretation of the activity as recognizable, culturally familiar, or habitual — impossibility of certain nominal-verb combinations — idiomatic interpretation of incorporated structures
Atypical discourse anaphora[4]	Bare objects' anaphoric potential contrasts with that of regular direct objects, and is characterized by both: — accessibility to covert and overt pronouns — accessibility to singular and plural pronouns

[4] This property has been discussed in the (pseudo-)incorporation literature under various terms, including 'discourse transparency / translucency' [Farkas, de Swart 2003; Modarresi 2014; van Geenhoven 1998], 'discourse anaphora' [Asudeh, Mikkelsen 2000; Dayal 2015], and '(non)referentiality' [Nilsson 1985; Schroeder 1999; Ketrez 2005; Öztürk 2005; Kamali 2015].

In this paper, we assume that bare objects in Uzbek are pseudo-incorporated, as argued by [Levy-Forsythe 2018 and Levy-Forsythe, Kagan 2020], and focus on a particular property of bare objects, namely their 'atypical discourse anaphora'.

2.2.2. Discourse anaphora

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 ([Sadock 1980; van Geenhoven 1998; Bittner 1994] for West Greenlandic, [Dayal 2011] for Hindi, [Asudeh, Mikkelsen 2000] for Danish, [Farkas, de Swart 2003; Yanovich 2008] for Hungarian, [Baker 2016] for Mapudungun, [Modarresi 2014; Krifka, Modarresi 2016] for Persian).

For instance, [Farkas, de Swart 2003] investigate the anaphoric potential of pseudo-incorporated objects in Hungarian. They argue that pseudo-incorporated nouns in Hungarian are number-neutral and 'discourse translucent' rather than 'discourse transparent', since they can only be picked up by covert but not overt pronouns (4). [Farkas, de Swart 2003] therefore conclude that the nature of the anaphoric expression affects the discourse transparency of pseudo-incorporated nouns.

(4) Hungarian [Farkas, de Swart 2003: 136]

    a. *János* **_beteget_** *vizsgált*   *a*   *rendelőben.*
        János   patient.ACC examine.PST   the   office.IN
        'János **patient**-examined in the office.'

    b. *pro* *Túl* *sulyosnak*   *találta*   **_pro_** */* [?? *őt*]   *és*   *beutaltatta*
        too   severe.DAT   find.PST   he.ACC   and   intern.CAUS.PST

        pro *a*   *korházba.*
        the   hospital.IN
        'He found **him** too sick and sent him to hospital.'

Based on [Farkas, de Swart 2003], F. Modarresi [2014] claims that pseudo-incorporated nouns in Persian show properties of discourse transparency since pseudo-incorporated nouns in Persian are accessible through covert and overt

pronouns. She argues that pseudo-incorporated nouns introduce number-neutral discourse referents, but depending on world-knowledge, the referent can be picked up by overt singular or plural pronouns (5).

(5) Persian [Modarresi 2014: 68, 81]

    a. *mæn*   ***mobile***   *khærid-æm.*
       I   cell.phone   bought-1SG

       *Gozasht-æm-∅ / -esh / *-eshoon*   *roo-ye-miz.*
       put-1SG   -it   -them   on-EZ-table
       'I bought a **cell phone**. I have put **it** / *them on the table.'

    b. *Mæryæm*   ***havij***   *khærid.*
       Maryam   carrot   bought.3SG

       Sepæs   *khoord-∅ / *-esh / -eshoon-kærd.*
       then   cut   -it   -them-did.3SG
       'Maryam bought **carrots**. Then she cut *it / **them**.'

In contrast to [Farkas, de Swart 2003 and Modarresi 2014], V. Dayal [2011] claims that the number neutrality of pseudo-incorporated nouns in Hindi depends on the aspectual properties of the event. She argues that pseudo-incorporated nouns are not inherently number-neutral but rather that they are semantically singular. According to [Dayal 2011], the number-neutral interpretation of the pseudo-incorporated noun is a result of an interaction with aspectual operators, such as atelic predicates. Consider the examples in (6) and (7).

(6) Hindi [Dayal 2011: 159; the glosses were modified]

    a. *anu-ne*   *apne*   *beTe*   *keliye*   ***laRkii***   *cun*   *lii.*
       Anu-ERG   self.GEN   son   for   girl   choose   take.PFV
       'Anu has **girl**-chosen for her son.'

    b. *us-ne*   ***us-ko***   *ek*   *sone-kaa*   *cen*   *diyaa*   *hai.*
       she-ERG   her-DAT   one   gold-GEN   necklace   give.PFV   be.PRS
       'She has given **her** a gold necklace.'

(7) Hindi [Dayal 2011: 159; the glosses were modified]

    a. *anu-ne*   *do*   *saal*   *tak*   *apne*   *beTe*   *ke-liye*   ***laRkii***   *dekhii.*
       Anu-ERG   two   year   till   self.GEN   son   for   girl   see.PFV
       'Anu **girl**-saw for her son for two years.'

b. *vo   hamesha   #**us**-se / **laRkii**-se ek   hii   savaal   puchtii thii.*
  she   always   her-INSTR   girl-INSTR one EMPH question   ask.IPFV be.PST
  'She always asked #**her** / **the girl** the same question.'

In case of a telic reading, the pseudo-incorporated noun *laRkii* 'girl' in (6a) can be referred back to by a singular pronoun, as in (6b). On the contrary, in case of an atelic reading, the pseudo-incorporated noun *laRkii* 'girl' in (7a) cannot be picked up by a singular pronoun, as shown in (7b). This is because the activity of looking at the same prospective bride repeatedly during a two-year interval conflicts with world knowledge. According to [Dayal 2011] a reading where individuals vary with sub-events of bride-looking is compatible with a definite noun phrase as a continuation for (7a).

In the literature on Turkic languages, there exists a considerable disagreement concerning the ability of bare objects to support discourse anaphora.

For instance, the example (8) reflects that the literature offers contradicting statements on whether bare objects in Turkish are accessible to overt pronouns. Thus, while some scholars have argued that bare objects' anaphoric uptake is completely ungrammatical (8a), others have claimed that it is grammatical with both singular and plural anaphora (8b) [Ketrez 2005; Bliss 2004].

(8) Turkish
  a. *Ali   **kitap**   oku-du,   sonra *o-nu   kütüphane-ye   geri ver-di.*
    Ali   book   read-PST.3SG then   it-ACC library-DAT   back give-PST.3SG
    'Ali did book-reading then (he) returned *it to the library.'
    [Ketrez 2005: 27]

  b. *Ali   **muz**   al-dı.   **On-u** / **On-lar-ı** buzdolabın-a   koy-du.*
    Ali   banana   buy-PST.3SG it-ACC   it-PL-ACC   fridge-DAT   put-PST.3SG
    'Ali bought a banana / bananas. He put it / them in the fridge.'
    [Bliss 2004: 24]

As shown in (9), bare objects in Tatar, a cognate language, are reported to antecede overt pronouns.

(9) Tatar [Lyutikova, Pereltsvaig 2015: 308]
  a. *Sin anarga   **kitap**   ala   ala-sıŋ.*
    you that.DAT book   take.IPFV can.PRS-2SG
    'You can buy him a book.'

  b. *Häm **a-nı**   matur   it-ep   ter-ep   büläk   it-ergä   bula*
    and that-ACC beautifully make-CONV wrap-CONV gift   make.INF   be.PRS
    'You can wrap it beautifully and give it to him as a gift.'

Next, there exists an empirical disagreement about bare objects' accessibility to covert anaphora. One line of work suggests that Turkish bare objects do not license covert anaphora (10a–b) [Ketrez 2005; Dede 1986]. Other scholars, however, argue the opposite (10c) [Erguvanlı-Taylan 1984; Schroeder 1999].

(10) Turkish

a. *Ali* **kitap** *oku-du, sonra* ***pro** *kütüphane-ye geri ver-di.*
Ali   book   read-PST.3SG then   library-DAT   back give-PST.3SG
'Ali did book-reading then (he) returned *it to the library.'
[Ketrez 2005: 27]

b. *Ali* **kitap** *oku-yor.* ***pro** *Çok   ilginç.*
Ali   book   read-PRS   very   interesting
'Ali does book-reading. *It is very interesting.' [Dede 1986: 162]

c. *Ali   kaçgündür* **resim** *yap-ıyor-du   nihayet   bugün* **pro**
Ali   how.many day picture make-PROG-PST.3SG   finally   today

bitir-di.
finish-PST.3SG
'Ali was picture-painting for days, finally he finished it today.'
[Erguvanlı-Taylan 1984: 23]

There are similarly divergent views on whether Uzbek bare objects are anaphorically accessible. Thus, [Türker 2019] claims that such objects lack referential interpretation and cannot serve as antecedents for pronouns. This point is illustrated in (11a) exemplifying the ungrammaticality of (covert) possessive pronominal anaphora. For contrast, direct objects marked with the accusative case are shown to be fully referential (11b).

(11) Uzbek [Türker 2019: 80]

a. *Hasan   olma   ye-di.* [#]**Rang-i** *   yashil   edi.*
Hasan   apple   eat-PST   color-3POSS   green   was
'Hasan ate apple.' Int.: 'It was green.'

b. *Hasan   olma-**ni** *   ye-di.* **Rang-i** *   yashil   edi.*
Hasan   apple-ACC   eat-PST   color-3POSS   green   was
'Hasan ate the apple. It was green.'

[Levy-Forsythe 2018] and [Levy-Forsythe, Kagan 2020] argue the contrary. According to them, bare objects in Uzbek are discourse transparent and are

accessible for overt pronouns (12a), the possessive pronominal clitic (12b), and covert pronouns (12c). In addition, they show that, unlike non-incorporated objects, bare objects exhibit a unique ability to antecede both singular and plural anaphora. The latter point is evident from the fact that the first two types of anaphoric expressions (12a–b) are sensitive to number specification and carry morphological signs of number agreement.

(12) Uzbek [Levy-Forsythe, Kagan 2020: 55]
      Context:
      *Anvar **rasm** chiz-di.*
      Anvar   picture   draw-PST.3SG
      'Anvar drew (a) picture(s).'

    a. Overt pronominal anaphora
      *Men **u-ni** / **ular-ni** tezda sotdim.*
      I   it-ACC   them-ACC   quickly   sold.PST.1SG
      'I sold it / them quickly.'

    b. Possessive pronominal anaphora
      *Narx-**i** / narx-lar-**i** ancha baland.*
      price-POSS.3SG   price-PL-POSS.3SG   quite   high
      'Its price is quite high. / Their prices are quite high.'

    c. Covert anaphor
      *Ra'no **pro** sotib oldi.*
      Rano   buy.CVB   take.PST.3SG
      'Rano bought it / them.'

The cross-linguistic research suggests that apart from those discussed above, at least two more factors may influence anaphora resolution: lexical semantics of the incorporating verb and grammatical role parallelism.

It is well acknowledged that lexical semantics of verbs plays a crucial role in the phenomenon of object incorporation. For instance, [Chung, Ladusaw 2004] show for Chamorro that incorporation is limited to verbs of possession, which obligatorily incorporate their objects. [Espinal, McNally 2011] indicate that in Spanish and Catalan, pseudo-incorporation is restricted to the so-called *'have'-predicates*. [Van Geenhoven 1998] reports on two types of verbs in West Greenlandic, intensional verbs, which are inherently incorporating, and extensional verbs, which alternate between incorporating and non-incorporating instances.

[Dayal 2011] demonstrates that there are different lexical entries for incorporating and non-incorporating verbs in Hindi. [Lyutikova, Pereltsvaig 2015] for Tatar, and [Levy-Forsythe, Kagan 2020] for Uzbek, claim that the type of incorporation involved in the language depends on whether the bare object appears in a light or a regular ('heavy') verb construction. On the other hand, however, the interaction between lexical semantics of the incorporating verb and the anaphoric accessibility of the incorporated object have received little attention. [Dayal 2011] covers this point in her work on Hindi, arguing that the anaphoric accessibility of a pseudo-incorporated noun depends on the lexical semantics of the verb, namely, its aspectual properties.

The second factor — namely the influence of grammatical role parallelism on anaphora resolution, i.e., the idea that hearers tend to prefer to connect a subject anaphor to an antecedent in the subject position and an object anaphor to an antecedent in the object position [Smyth 1994; Stevenson et al. 1995; Chambers, Smyth 1998] — was not traditionally discussed in the literature on object incorporation. [Seidel 2019, 2020a, 2020b], the first to empirically examine the anaphoric accessibility of pseudo-incorporated objects in Turkish, considers the effect of grammatical role parallelism and lexical semantics of the incorporating verb in two separate studies.

In her first study, E. Seidel investigates overt pronouns in the object position, showing that pseudo-incorporated nouns prefer a singular uptake in the subsequent discourse, irrespective of the type of the anaphoric expression, cf.:

(13) Turkish [Seidel 2020b: 281]

   Context:

   *Ahmet bugün Taksim meydanın-da **hırsız** yakala-dı.*
   Ahmet today Taksim Square-LOC thief catch-PST.3SG
   'Ahmet did thief-catching at the Taksim Square yesterday.'

  a. Target sentences including overt pronouns in singular and plural

   On-u */* ***On-lar-ı*** *rezil* *et-ti.*
   he-ACC he-PL-ACC embarrass do-PST.3SG
   'He embarrassed the him / them.'

  b. Target sentences including definite nouns in singular and plural

   Hırsız-ı */* ***Hırsız-lar-ı*** *rezil* *et-ti.*
   thief-ACC thief-PL-ACC embarrass do-PST.3SG
   'He embarrassed the thief / the thieves.'

In her second study (see (14)), she investigates covert pronouns in the subject position and shows that (i) bare objects support anaphoric uptake with covert pronouns, and (ii) continuations with adnominal demonstratives are preferred over continuations with covert pronouns. She also examines different event types (usage events *vs.* creation events) and demonstrates that the accessibility of the pseudo-incorporated object varies depending on the event type. In particular, anaphoric reference to bare objects in creation events is more acceptable than it is to bare objects in usage events. Consequently, [Seidel 2019] argues that, in contrast to usage events, in creation events the discourse referent is "cumulatively created" out of the event, which is why the anaphoric expression refers to the result argument of the event.

(14) Turkish [Seidel 2020a: 263]

    a. Context sentence including a usage verb

        *Nurten geçen   gün ofis-de   **mektup**   **oku-du.***

        Nurten   last   day   office-LOC   letter   read-PST.3SG

        'Nurten did letter-reading at the office yesterday.'

    b. Context sentence including a creation verb

        *Nurten geçen   gün çalışma odasın-da **mektup**   **yaz-dı.***

        Nurten   last   day   office.room-LOC   letter   write-PST.3SG

        'Nurten did letter-writing at the office yesterday.'

    c. Target sentences including a covert pronoun and a demonstrative NP

        pro */* ***Bu   mektup***   *üç   sayfa-ydı.*

               this   letter   three pages-PST.3SG

        'It / This letter was three pages long.'

Overall, this empirical debate raises a natural question as to whether and how native speakers of Uzbek actually resolve discourse anaphora in reference to bare objects. In light of findings in Turkish, a closely related language, another question that requires examination is whether the anaphoric potential of bare objects may be influenced by the internal semantics of the event. In the next section, we present an acceptability judgment study conducted among native Uzbek speakers to investigate these issues.

3. Acceptability judgment study

3.1. Hypotheses and predictions

Based on the literature discussed above, we hypothesize that:

I. Pseudo-incorporated or bare objects are less accessible than their non-incorporated counterparts [Farkas, de Swart 2003; Krifka, Modarresi 2016; Levy-Forsythe 2018; Seidel 2019].

II. Covert pronouns refer to highly accessible referents whereas adnominal demonstratives refer to less accessible referents [Ariel 1990]

III. Pseudo-incorporated objects in creation events are more accessible than pseudo-incorporated objects in usage events [Seidel 2019].

In accordance with the hypotheses above, we predict that covert pronouns referring to bare objects in Uzbek are less acceptable than adnominal demonstratives referring to bare objects. Additionally, according to Seidel (2019, 2020a, 2020b), we predict an effect of verb type, namely that covert pronouns referring to bare objects in creation events are more acceptable than covert pronouns referring to bare objects in usage events.

3.2. Method and procedure

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*+N '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. (15a), and creation verbs, cf. (15b). Each context sentence was followed by a target sentence, containing the anaphoric expression, cf. (16a) and (16b).

(15) a. *Gulruh o'tgan hafta libos-lar salon-i-da **uzuk taq-di.***
      Gulruh last week dress.PL salon-POSS.3SG-LOC ring put.on-PST.3SG
      'Gulruh did **ring-putting on** in the dress salon last week.'

   b. *Kamola o'tgan hafta fabrikada **uzuk** **ishla-di.***
      Kamola last week factory ring make-PST.3SG
      'Kamola did **ring-making** in the factory last week.'

(16) a. ***pro*** *kumush-dan* *e-di.*
         silver-ABL   COP-PST.3SG
     '**It** was silver.'

    b. ***bu***   ***uzuk***   *kumush-dan*   *e-di.*
       this   ring   silver-ABL   COP-PST.3SG
     '**This ring** was silver.'

In addition to the critical items, we added 24 control filler sentences that were either grammatical, incongruent (i.e., sentences with agreement violation in number), or ungrammatical (i.e., sentences with ungrammatical case endings). These items were added in order to ensure that participants were attentive to the task and served as exclusion criteria. The grammatical items were constructed in such a way that the covert pronoun in the target sentence always referred to the subject of the context sentence.

All items were distributed onto four lists, each of which was balanced with respect to verb type and type of anaphoric expression. The items were presented in a pseudo-randomized order, showing only one item at a time. The results from 80 participants (mean age: 32.43 years, 38 women, 42 men, 0 of unknown gender) entered the statistical analysis.[5] Participants 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. Written informed consent was obtained from all participants prior to the experiment.

3.3. Data analysis and results

We fitted a linear mixed effects analysis in order to assess the relationship between type of anaphoric expression (*pro vs. bu* + N 'this' + N) and verb type (usage *vs.* creation), using the lme4 package [Bates et al. 2015] in R [R Core Team 2017] with the score as the dependent variable and the anaphoric expression and verb type as the predictors. Variability due to participant and item were taken into account by including them as random intercepts, as well as by-participant and by-item random slopes for the effects of anaphoric expression and verb type.

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[5] Originally, we collected data from 124 participants. However, we had to exclude 44 participants from our analysis due to incorrect answers to control items. In particular, participants were excluded (i) when they rated ungrammatical sentences higher than 3, and / or (ii) when they rated grammatical sentences lower than 4.

Figure 1 presents the predicted means by the linear mixed effect model. Our data show that anaphoric uptake of bare objects in Uzbek is acceptable (mean > 4).[6] Statistical analyses reveal that contexts with overt anaphoric expressions are rated significantly better than contexts with covert anaphora ($b = 1.14$, $SE = 0.19$, $t = 6.00$, $p < 0.01$). We find no significant effect of verb type ($b = 0.12$, $SE = 0.19$, $t = 0.62$, $p > 0.05$) nor a significant interaction of verb type and anaphoric expression ($b = 0.03$, $SE = 0.24$, $t = 0.13$; $p > 0.05$).
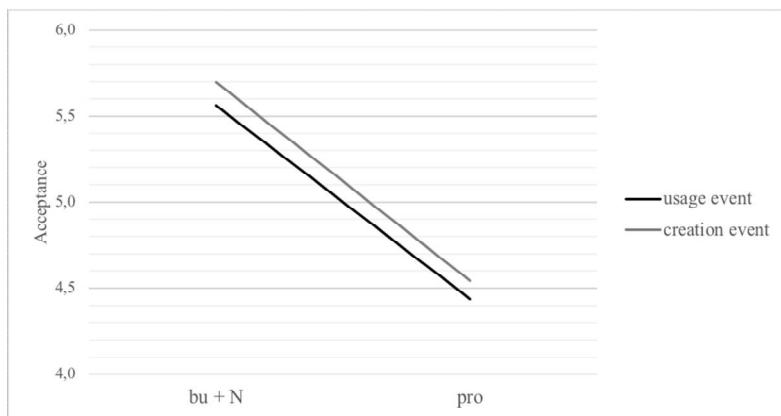
Figure 1. Predicted means showing the effect of anaphoric expression on verb type

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 [Bliss 2004; Kamali 2015; Seidel 2019, 2020a, 2020b]. However, we also observe a minor micro-variation (see Figure 2). In Turkish, the objects' anaphoric potential is dependent on the event type of the incorporated object, i.e., the accessibility for the incorporated object is higher in creation events than in usage events [Seidel 2019, 2020a, 2020b]. In Uzbek, the accessibility for the incorporated object is stable across both event types. As expected, contexts containing $bu + N$ ('this' + N) are more acceptable than those with covert subject pronouns.

These findings support the view that, unlike regular non-incorporated direct objects, (pseudo-)incorporated objects do not introduce referents into the discourse immediately. Rather, they achieve their anaphoric uptake indirectly, via complex event formation [Farkas, de Swart 2003; Dayal 2011; Krifka, Modarresi 2016].

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[6] Compare the observed mean values in Figure 2 for the critical conditions and the control conditions. Sentences with continuations including the adnominal demonstrative were rated as good as the grammatical control conditions.
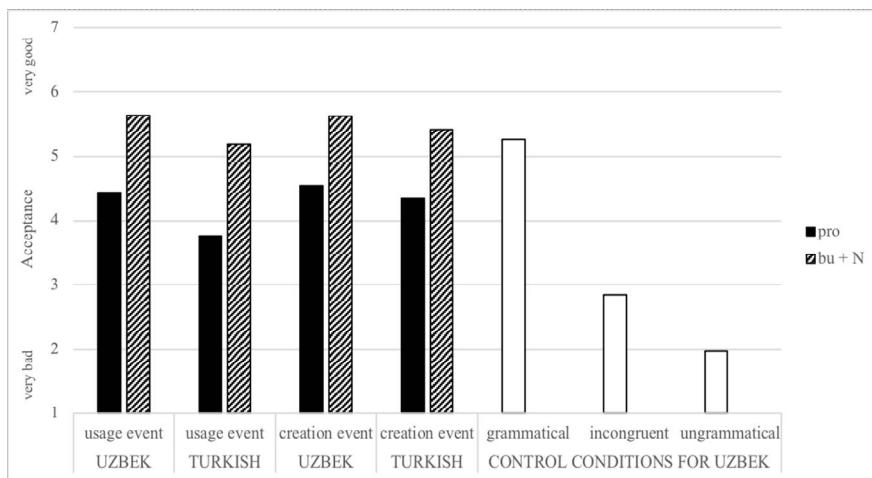
Figure 2. Observed means for the anaphoric uptake of bare objects in Uzbek in comparison to Turkish, including means for control items. Turkish data adopted from [Seidel 2019]

4. Discussion

We propose to treat complex event formation in Uzbek pseudo-incorporation in line with Krifka, Modarresi's [2016] account of pseudo-incorporation in Persian. In particular, following their analysis, formulated in terms of Discourse Representation Theory (DRT) [Kamp, Reyle 1994] in (17), we suggest that Uzbek bare objects are event-dependent definites. Crucially, however, bare objects' interpretation remains indefinite within the verbal phrase and is dependent on the Davidsonian event argument that undergoes existential closure (EC) (see (17a)). Thus, the bare object *kitob* 'book' in (17a) is interpreted as a function that identifies the unique 'book' of the reading event, introducing a discourse referent, i.e., x_2, for it. Due to its occurrence in a subordinated structure, i.e., $\exists[x_2 \mid ...]$, accessibility of this referent to anaphora is indirect. Anaphoric uptake of an embedded discourse referent requires an extra step, namely the Abstraction & Summation operation (17b) (see [Yanovich 2008; Krifka, Modarresi 2016]).

(17) *Guli   **kitob**   o'qidi.   **pro**   yuz   betli   e-di.*
      Guli   book   read.PST.3SG   hundred   page   COP-PST.3SG
      'Guli did book-reading. It was hundred pages long.'

   a. $K_0 + [Guli_1 \text{ EC } [_{vP} t_1 \text{ } kitob \text{ } o'qidi]]$
      $= [x_1 \mid x_1 = \text{GULI}, \exists[e_3 x_2 \mid x_2 = \text{BOOK-OF}(e_3), \text{READ}(x_1, x_2, e_3)]] = K_1$

   b. $K_1 + [pro \text{ } yuz \text{ } betli \text{ } edi]$
      $= [x_1 \mid x_1 = \text{GULI}, \exists[e_3 x_2 \mid x_2 = \text{BOOK-OF}(e_3), \text{READ }(x_1, x_2, e_3)]]$
      $\xi_4 = \Sigma x_2 \text{ } [x_2 \text{ } e_3 \mid x_2 = \text{BOOK-OF}(e_3), \text{READ }(x_1, x_2)], \text{100-PAGES-LONG }(\xi_4)]$

Anaphora to bare objects are analyzed as 'E-type' pronouns, namely "pronouns with quantifier antecedents that do not c-command them", which explains the restricted nature of anaphoric uptake (Krifka, Modarresi 2016: 878). The possibility of both singular and plural anaphoric uptake of bare objects is enabled via the availability of multiple reading events (17a).

The proposed analysis accounts for the atypicality of discourse anaphora in reference to bare objects in Uzbek. In particular, it explains why: (i) bare objects' anaphoric uptake is possible, yet more restricted than that of non-incorporated regular direct objects; and (ii) anaphoric reference to bare objects is characterized by number-neutrality.

5. Conclusion and future research

We conclude from our results that bare direct objects in Uzbek are anaphorically accessible. We could not confirm that their anaphoric potential is dependent on event types, suggesting that future research may take into account other event types, i.e. destruction verbs (i.e., *kitob yirtmoq* 'book-ripping'). The present investigation did not take into account the comparison between covert and overt pronouns. Therefore, we suggest conducting a forced choice task including both conditions within one experiment. Future studies should also investigate anaphoric reference to different types of full-fledged direct objects by considering different types of anaphora (covert *vs.* overt).

Abbreviations

1, 3 — 1st, 3rd person; ABL— ablative; ACC — accusative; CAUS — causative; COMPL — complementizer; CONV/CVB — converb; COP — copula; DAT — dative; EMPH — emphatic particle; ERG — ergative; EZ — ezafe; GEN — genitive; IPFV — imperfective; INF — infinitve; INSTR — instrumental; LOC — locative; PFV — perfective; PL — plural; POSS — possessive; PROG — progressive; PRS — present; PST — past; SG — singular.

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