

A Non-coreference Rule in Odia¹

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Abstract In Odia, in a specific range of constructions, the subject’s possessor (Pos.S) and the object (O) are prevented from being coreferent. Whereas saying “Babula’s_{<i>} s teacher likes him_{<i>}.” is usually no problem, the same is sometimes impossible. The Non-coreference Rule precludes coreference of Pos.S and O, and it applies only where the subject (S) and the object (O) are marked with the same morphological case and situated within the same clause. Outside of Odia, instances of the Non-coreference Rule, i.e. constraints precluding coreference of Pos.S and O, have been reported from languages of the Americas (the “genitive effect” of Aissen 1997). The grammatical underpinning of the Non-coreference Rule is accounted for by following Aissen (1997) to looking up the relative proximate-obviate ranking among the referents of noun phrases in a clause. The instances of the Non-coreference Rule in the two language sets differ fundamentally with respect to what kinds of clausal environments non-coreference occurs in. This cross-linguistic contrast derives from the typologically opposed characters in the morphosyntax of the languages, namely, dependent marking (Odia) vs. head marking (the languages of the Americas). Finally, parallelisms holding between the Non-coreference Rule and the Person-Case Constraint are sketched.

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1 Goals

This article describes a Non-coreference Rule in Odia, of a kind hitherto unknown for this or any other Indo-Aryan language, and accounts for its properties from a cross-linguistic perspective.

In Odia, in a range of constructions, the subject's possessor (Pos.S) and the object (O) are prevented from being co-referent. Whereas usually as in (1), saying “Babula's_{<i>} teacher likes him_{<i>}.” with ‘him’ referring to Babula is no problem, the same is impossible under certain other circumstances as in (2).^{2,3,4,5}

- (1) *maani-ra saar niscaya taa-ku bhala paa-uch-aanti.*
Mani-GEN sir certainly her-OBJ like-PROG-3PL
Mani's_{<i>} teacher[NOM] certainly likes her_{<i>} [OBJ].

- (2) *maani-ra saaran-ku niscaya taa-ku bhala laag-uch-i.*
Mani-GEN sir-OBJ certainly her-OBJ like-PROG-3SG
Mani's_{<i>} teacher[OBJ] certainly likes her_{<*i>} [OBJ].

The rule that is precluding coreference in sentence (2) is specified in (3). Let us call it the *Non-coreference Rule*. The present article is to bring this rule to light. Note that whereas the rule exerts effect (non-coreference) on the pair of Pos.S and O, it looks up (Conditions ① and

² Odia pronunciation *a* [ə], *aa* [a], *D,L,T* = retroflex, *~* = vowel nasalization.

Abbreviations CLA = classifier, CP = conjunctive participle, FUT = future, GEN = genitive, GER = gerund, INF = infinitive, LOC = locative, (n) = noun, NOM = nominative, O = object, OBJ = objective, PAST = past, PL = plural, Pos.S = possessor of the subject, PROG = progressive, RGER = root gerund, S = subject, SG = singular, (v) = verb, 1/2/3 = 1st/2nd/3rd person.

Unacceptability/impossibility is indicated by *star and shading.

³ The basic word order in Odia is SVO in a clause, and AN in a noun phrase. OSV is a readily available alternative for a clause, as in (8) below.

⁴ In the translations of the examples, coreference is indicated by a pair of <i>'s, and non-coreference, by the starred and shaded <*i> for the second occurrence. Note also that the 3rd person pronoun (e.g. *taa-ku* ‘he-OBJ’) does not distinguish gender (To be more general, there is no grammatical category of gender in Odia.), and the translations and glosses for it in the following will use whichever sounds more appropriate of ‘he/him’ and ‘she/her’.

⁵ Notes on verb agreement in Odia. The verb in (1) is plural (PL) because a person who is being respected by the speaker is grammatically plural even if he/she is referentially single. The verb in (2) is 3rd person singular (3SG) because it is agreeing with no NP and therefore is in the unmarked form. Generally, a verb can agree only with a nominative NP, and never with an oblique-case NP.

②) the features of the pair of S and O.

(3) *The Non-coreference Rule* (Odia)

Pos.S and O cannot be co-referent, if both Conditions ① and ② obtain.

① *Same Case*:

S and O are marked with the same morphological case.

② *Clause Mates*:

S and O are situated within the same clause.

(in the sense to be made precise in section 3).

Looking outside of Odia, instances of the Non-coreference Rules, i.e. grammatical constraints precluding coreference of Pos.S and O, have been reported from languages of the Americas (the “genitive effect” of Aissen 1997) . What matters is the relative proximate-obviate ranking between the referents of noun phrases in a clause (Aissen 1997).

On the other hand, the versions of the Non-coreference Rules in the two language groups differ fundamentally with respect to the sorts of environments in which they take effect. In Odia, non-coreference effect occurs only in highly marked types of clauses, for example, oblique-subject constructions, such as (1), whereas ordinary transitive clauses are immune from it, as in (2). Just complementarily to this, in the Americas, non-coreference effect occurs in least marked types of clauses, such as direct voice or active voice depending on language; where these are not allowed a marked voice is used, such as inverse voice or passive voice. I derive this cross-linguistic contrast from the typologically opposed characters in morphosyntax of the languages, namely, dependent marking (Odia) vs. head marking (languages of the Americas). A cross-linguistic commonality is the Non-coreference Rule, in Odia and in the Americas, apply where the S and O are not distinguished by morphological case.

The following parts of this article are organized as this. Sections 2 and 3, respectively, illustrate Conditions ① and ② of the Non-coreference Rule. Section 4 accounts for the Non-coreference Rule as for its grammatical underpinnings and typological characteristics. Section 5 sketches parallelisms holding between the Non-coreference Rule (i.e. the restricted distribution of coreference) and the Person-Case Constraint (i.e. the restricted distribution of 1st and 2nd person pronouns). Section 6 concludes.

2 Condition ①

Section 2 illustrates Condition ① of the Non-coreference Rule (specified in (3)). *Same Case*: Non-coreference of Pos.S and O is forced only if S and O are marked with the same morphological case. Such a configuration obtains with two species of case frame: [OBJ-OBJ] (which we examine in section 2.1) and [GEN-GEN] (section 2.4).

2.1 [OBJ-OBJ]

Sentences (1) and (2), repeated below, respectively, are cases in which the constraint has and has not taken effect. (1) is an ordinary type of transitive clause. In this there is no problem with Pos.S and O being coreferent: *taa-ku* ‘her-OBJ’ and *maani-ra* ‘Mani-GEN (female name)’ can refer to the same person that is Mani. Sentence (2) is an oblique-subject construction of similar meaning. Here, O (*taa-ku* ‘her-OBJ’) cannot corefer with Pos.S (*maani-ra* ‘Mani-GEN’). Incidentally, sentence (2) and also all those example sentences in this article that are ruled out by the Non-coreference Rule turn good if Pos.S and O are taken as non-coreferent⁶: for example, sentence (2) becomes good if *taa-ku* ‘her-OBJ’ refers to someone other than Mani. I omit indicating this possibility.

- (1) *maani-ra saar niscaya taa-ku bhala paa-uch-aanti.*
Mani-GEN sir certainly her-OBJ like-PROG-3PL
Mani’s_{<i>} teacher[NOM] certainly likes her_{<i>} [OBJ].
- (2) *maani-ra saaran-ku niscaya taa-ku bhala laag-uch-i.*
Mani-GEN sir-OBJ certainly her-OBJ like-PROG-3SG
Mani’s_{<i>} teacher[OBJ] certainly likes her_{<*>} [OBJ].

The causes and consequence of the choice of cases in sentences (1) and (2) are as follows. In an ordinary transitive clause such as (1) with verb *bhala paa-* ‘like’, S is nominative (NOM), i.e. without a visible case marker, and O, objective (OBJ): [NOM-OBJ]. This configuration does not fit Condition ① of the Non-coreference Rule, and therefore does not trigger the Non-coreference Rule to impose non-coreference. In contrast, the verb *bhala laag-* ‘like’ in (2) is

⁶ With some qualifications, this generalization holds true even in such a relative clause containing two occurrences of the relative pronoun as Pos.S and O. See footnote 8 for details. Only that the context, i.e. the main clause part, must be changed to yield a good sentence, according to whether the two occurrence of the relative pronouns are coreferent or non-coreferent.

one of several oblique-subject predicates in Odia; it avails itself of two options for case frame: [OBJ-OBJ] or [OBJ-NOM]. (It does not appear in the ordinary transitive case frame: *[NOM-OBJ], though.) The [OBJ-OBJ] frame, occurring in (2), fits the Condition ① of (3), and therefore causes the Non-coreference Rule to take effect.⁷

The same contrast between [NOM-OBJ] and [OBJ-OBJ] clauses can also be observed between (4) and (5). The verb in (4), *darkaara kar-* ‘need’, selects for a NOM subject. The verb in (5), *darkaara he-* ‘need’, selects for an OBJ subject. (Or, it can take a genitive-case (GEN) subject, not shown in this article.) Coreference of Pos.S and O is admitted in (4), and banned in (5).

(4) *gunu-ra maalika ebe aau taa-ku darkaara kar-u naah-anti.*
 Gunu-GEN owner now any.more him-OBJ need(n) PROG not-3PL
 Gunu’s_{<i>} employer[NOM] doesn’t need him_{<i>} [OBJ] any more.

(5) *gunu-ra maalikan-ku ebe aau taa-ku darkaara ha-u ni.*
 Gunu-GEN owner-OBJ now any.more him-OBJ need(n) happen-PROG not.3SG
 Gunu’s_{<i>} employer[OBJ] doesn’t need him_{<*i>} [OBJ] any more.

⁷ One may wonder whether the case frame [NOM-NOM], two instance of unmarked case, counts as “marking with the same case” for the purpose of Condition ① of the Non-coreference Rule, to trigger non-coreference between Pos.S and O. I leave settling this issue for the future research. Some excuse for this strategy follows.

Indeed, [NOM-NOM] arises in Odia. In normal transitive clauses as in (i), O can be nominative (NOM) as well as objective (OBJ) if it is inanimate.

(i) *baabulaa { pisi-Ti | pisi-Ti -ku | sei-Taa | taa-ku } aaN-il-aa.*
 Babula PC-CLA PC-CLA-OBJ that-CLA it-CLA-OBJ bring-PAST-3SG
 Babula[NOM] brought { the PC | that } [NOM|OBJ].

However, as in (ii), a person O is preferably marked objective, and a person *pronominal* O is necessarily marked objective (*taa-ku* ‘her-OBJ’) leading to a [NOM-OBJ] configuration only.

(ii) *baabulaa { ? jhiai-Ti | jhia-Ti -ku | * seiTaa | taa-ku } aaN-il-aa.*
 Babula PC-CLA PC-CLA-OBJ that-CLA her-OBJ bring-PAST-3SG
 Babula[NOM] brought { the girl | her } [NOM|OBJ].

Discussing the Non-coreference Rule, this article focuses on the situations where the O (intended to be coreferent with Pos.S) refers to a person. This limitation in the scope of discussion is motivated on two scores. First, supposedly it is theoretically justified: I assume that Pos.S being a person constitutes a canonical type of situation. Second, it is necessitated by practice: on the present stage of my research, only person situations are getting me a robust enough set of judgements to make a generalization over and an analysis of. So, the case frame [NOM-NOM] does not come into play as far as the present article’s discussion goes. See Aissen (1997) for a discussion of the situations in which the referent shared by Pos.S and O is inanimate such as a book.

2.2 It is the distribution, and not the directionality, of coreference that matters

The Non-coreference Rule, as it is formulated in (3), concerns the distribution of coreference. It does *not* concern which way anaphoric dependency is directed (whether Pos.S is dependent on O, or O is dependent on Pos.S, for the determination of reference): on this score it is distinct from Condition C of the Binding Theory, which does concern the direction of anaphoric dependency (van Hoek 1997, Safir 2004), and which is at work also in Odia (but not dealt with in this article). As a reflection of this feature, it does not matter what sort of lexical items (pronoun, full noun, or relative pronoun) are deployed for the two coreferent positions in a clausal structure. Thus, given a sentence in which effect of the Non-coreference Rule is in place, that effect persists after a full noun is replaced by a pronoun (though admittedly getting somewhat less robust). Going from sentence (2) to (7), there is not (much) difference: coreference was excluded in (2) and it is (quite) excluded in (7). (Note for comparison that coreference was possible in (1) and it is also possible (6).)

(6) (Mani_{<i>} is a good child, so . . .)
taa-ra saar niscaya taa-ku bhala paa-uch-aanti.
her-GEN sir certainly her-OBJ like-PROG-3PL
Her_{<i>} teacher[NOM] certainly likes her_{<i>} [OBJ].

(7) (Mani a good child, so . . .)
taa-ra saaran-ku niscaya taa-ku bhala laag-uch-i.
her-GEN sir-OBJ certainly her-OBJ like-PROG-3SG
Her_{<i>} teacher[OBJ] certainly likes her_{<?? i>} [OBJ].
(cf. Her_{<i>} teacher[OBJ], certainly she_{<i>} [OBJ] likes.)

Incidentally, as indicated in parenthesis in the bottom line of (7), the same word sequence, with coreference of the two pronouns, can felicitously mean something reverse to what is originally intended but actually precluded: it can rightly mean ‘She *i* likes her *i* teacher.’ This interpretation does not involve the violation of the Non-coreference Rule. This alternative interpretation is not robustly available, but that is because it involves an OS order of clausal constituents. Generally, an OS order is degraded where S and O are in the same case, to degrees ranging from instance to instance. In particular, with the verb *bhala-laag-* ‘like’ as in (9), it is deeply impossible. (In contrast, if S and O are marked with distinct cases, as they

normally are in this language, OS order is easily available as in (8). See also fn.2.)

- (8) *e pilaa-Ti-ku niscaya saar bhala paa-ib-e.*
this kid-CLA-OBJ certainly sir like-FUT-3PL

OS order: Lit. This child[OBJ], the man[NOM] will like certainly.

- (9) *e pilaa-Ti-ku niscaya saaran-ku bhala laag-ib-a.*
this kid-CLA-OBJ certainly sir-OBJ like-FUT-3SG

OS order: Lit. * This child[OBJ], the man[OBJ] will like certainly.

SO order: This child[OBJ] will like the man[OBJ] certainly.

What is worth noting with regard to the data in (7) is that the Non-coreference Rule is so robust that if it comes into effect as it does here, it overrides a word order rule, coercing an interpretation implicating a word order that would otherwise be impossible as in (9).

The same asymmetry that we have seen between (6) and (7) is also found between (10) and (11), with a pair of relative pronouns in place of a pair of 3rd person pronouns. In fact, it is all the more distinctly observed. As is known in the linguistic literature widely (Srivastav 1991 a.o.), a relative clause in Indo-Aryan languages can contain two instances of the relative pronoun, and in such a relative clause the two instances of the relative pronoun can refer to distinct persons, resulting in a “doubly-headed” relative clause ((i) and (ii) in footnote 8 are instances of this type.). What is worth pointing out (for Odia) and also relevant to the discussion of the Non-coreference Rule is the fact that two occurrences of the relative pronoun are allowed to be coreferent as long as no independent constraint applies to exclude that (Yamabe 1998), as they are in (10). The relative clauses of (10) and (11) both contains *jaa-ra* ‘whose(R)-GEN’ as Pos.S, and *jaa-ku* ‘who(R)-OBJ’ as O. In (10), the relative clause has the case frame [NOM-OBJ]. Here, the Non-coreference Rule (specified in (3)) is inert, leaving coreference between Pos.S and O intact, and so the whole sentence is fine. In (11) the relative clause has [OBJ-OBJ]. Here, the Non-coreference Rule gets activated, precluding coreference of Pos.S and O in the relative clause, and as a consequence the whole sentence is ill-formed.⁸

⁸ For the word sequences comprising the relative clause parts of (9) and (10), the non-coreference interpretation of two occurrences of the relative pronoun is potentially available, as shown in (i) and (ii), respectively. Particularly notable in connection to the Non-coreference Rule is the contrast in acceptability between the ill-formed (10) and the well-formed (ii). (i) and (ii) has replaced the matrix clause part: there needs to be an NP (or a pair of NPs) in the matrix clause that refers back to the referents of the two relative

- (10) *jaa-ra saar aadou jaa-ku bhala paa-u naah-aanti.*
 who(R)-GEN sir at.all who(R)-OBJ like-PROG not-3PL
sei pilaa niscaya badmaas he-ith-ib-a.
 that kid certainly naughty become-PERF-FUT-3SG

Lit. Who(R)'s<*i*> teacher[NOM] doesn't like who(R)<*i*> [OBJ],
 that child will certainly be naughty.

The child whose<*i*> teacher doesn't like him<*i*> at all will certainly be naughty.

- (11) *jaa-ra saaran-ku aadou jaa-ku bhala laag-u ni.*
 who(R)-GEN sir-OBJ at.all who(R)-OBJ like-PROG not.3SG
sei pilaa niscaya badmaas he-i-th-ib-a.
 that kid certainly naughty become-PERF-FUT-3SG

Lit. Who(R)'s<*i*> teacher[OBJ] doesn't like who(R)<*> [OBJ],
 that child will certainly be naughty.

* The child whose<*i*> teacher doesn't like him <*i*> at all will certainly be naughty.

Contrasting (11) and the following (12) brings out the same interpretation reversal that we have observed by contrasting the two interpretations of example (6); and for that matter, the judgements obtained here are more stable and clear than there. In (11) and (12), the relative

pronouns in the relative clause.

- (i) *jaa-ra baapamaa aadou jaa-ku bhala paa-u naah-aanti.*
 who(R)-GEN parents at.all who(R)-OBJ like-PROG not-3PL
sei pilaa-maaane saangare kheL-i paar-ib-e kemiti?
 that kid-PL.CLA together play-CP can-FUT-3PL how

Lit. Who(R)'s<*i*> parents[NOM] don't like who(R)<*k*> [OBJ],
 how could those children<*i+k*> play together?

Given that some child's<*i*> parents don't like another child<*k*> at all,
 how could those children<*j+k*> play together?

- (ii) *jaa-ra saaran-ku aadou jaa-ku bhala laag-u ni.*
 who(R)-GEN sir-OBJ at.all who(R)-OBJ like-PROG not.3SG
sei pilaa-maaane saangare kheL-i paar-ib-e kemiti?
 that kid-PL.CLA together play-CP can-FUT-3PL how

Lit. Who(R)'s<*i*> parents[OBJ] don't like who(R)<*k*> [OBJ],
 how could those children<*i+k*> play together?

Given that one child's<*i*> parents don't like another child<*k*> at all,
 how could those children<*j+k*> play together?

clauses are made of the exactly same word sequence, and in addition, in both the two occurrences of the relative pronouns are coreferent. The relative clause of (12) felicitously means something reverse of what that of (11) intends but is not fit to mean. With the relative clause part of (12) being fine, the whole sentence of (12) is fine.

- (12) *jaa-ra saaran-ku aadou jaa-ku bhala laag-uch-i.*
 who(R)-GEN sir-OBJ at.all who(R)-OBJ like-PROG-3SG
sei pilaa bhala paaTha paDh-ib-a kemiti ?
 that kid good lesson study-FUT-3SG how

Lit. Who(R)'s<*i*> teacher[OBJ], who(R)<*i*> [OBJ] doesn't like at all,
 how that child will study properly? (OS order)

How would the child who<*i*> doesn't like his<*i*> teacher at all study properly?

In contradistinction to all the examples thus far, the constraint effect of the Non-coreference Rule is circumvented if Pos.S and O are both lexicalized by an identical proper name. Thus, coreference of Pos.S and O is fine, not only in (13), a [NOM-OBJ] sentence, but also in (14), an [OBJ-OBJ] sentence.

- (13) *maani-ra saar niscaya maani-ku bhala paa-uch-aanti.*
 Mani-GEN sir certainly Mani-OBJ like-PROG-3PL
 Mani's<*i*> teacher[NOM] certainly likes her<*i*> [OBJ].

- (14) *maani-ra saaran-ku niscaya maani-ku bhala laag-uch-i.*
 Mani-GEN sir-OBJ certainly Mani-OBJ like-PROG-3SG
 Mani's<*i*> teacher[OBJ] certainly likes Mani<*i*> [OBJ].

I presume that in sentences such as (14), the constraining effect of the Non-coreference Rule is got around by way of an interpretive route that is only available to proper names. Each mention of a proper name in a sentence can pick up its referent from the world, and thereby need not pay attention to another noun phrase for the purpose of the determination of its reference. In contrast, for a pronoun (3rd person pronoun or relative pronoun), the determination of its referent can only be achieved by referencing a coreferent noun phrase occurring in the same text, either locally within the same sentence or more globally within the same discourse. If this referencing process occurs within a clause, the Non-coreference Rule interferes.

2.3 In clauses with a complex predicate

The examples thus far all contained a single verb. Let us now turn to the sentences in which two verbs together make up a compound verbs. Here also, the Non-coreference Rule does the same work, and the same asymmetry due to the absence vs. presence of its effect can be observed. Sentence (15) has an ordinary case frame: [NOM-OBJ]. Here, Pos.S and O can be coreferent: *taa-ku* ‘him-OBJ’ and *maNTu-ra* ‘Mantu-GEN’ can refer to the same person that is Mantu. Sentence (16) contains the dative-subject verb *aas-* ‘can, know how to’ taking the complement verb *paDh-* ‘teach’. With the former verb bringing in the OBJ case on its subject and the latter verb bringing in another instance of OBJ on its object, the sentence has the [OBJ-OBJ] frame. Here, Pos.S and O cannot be coreferent: *taa-ku* ‘him-OBJ’ cannot refer with Mantu.

- (15) *maNTu-ra saar Thik baabhe taa-ku paDhe-i paar-u naah-aanti.*
 Mantu-GEN sir right manner him-OBJ teach-CP can-PROG not-3PL
 Mantu’s_{<i>} teacher[NOM] cannot teach him_{<i>}[OBJ] properly.

- (16) *maNTu-ra saaran-ku Thik baabhe taa-ku paDhe-i aas-u ni.*
 Mantu-GEN sir-OBJ right manner him-OBJ teach-CP can-PROG not.3SG
 Mantu’s_{<i>} teacher[OBJ] cannot teach him_{<?*i>}[OBJ] properly.

(17) and (18) are another pair of sentences exhibiting the same contrast. Sentence (17) is a normal transitive clause with the verb *ne-* ‘take’, with the case frame [NOM-OBJ]. Here, Pos.S and O are allowed to refer the same person that is Rina. Sentence (18) has a complex verb made of the matrix verb *paD-* ‘have to’ and the complement verb *ne-* ‘take’. The subject is OBJ because *paD-* ‘have to’ is an oblique-subject predicate, and the object is OBJ because it is the object of *ne-* ‘take’, resulting in the case frame [OBJ-OBJ]. Here, Pos.S and O are prevented from referring to the same person.

- (17) *rinaa-ra baapaa aaji taa-ku haspiTaal ne-b-e.*
 Rina-GEN father today her-OBJ hospital take-FUT-3PL
 Rina’s_{<i>} father[NOM] will take her_{<i>} [OBJ] to the hospital today.

- (18) *rinaa-ra baapaan-ku aaji taa-ku haspiTaal ne-baa paai~ paD-ib-a.*
 Rina-GEN father-OBJ today her-OBJ hospital take-INF fall-FUT-3SG
 Rina’s_{<i>} father[OBJ] will have to take her_{<??i>} [OBJ] to the hospital today.

2.4 [GEN-GEN]

The observations thus far might suggest that whether coreference is possible or impossible is keyed to whether the subject's case is nominative (NOM) or objective (OBJ). As a matter of fact it is not true, as I am going to illustrate in 2.4. For one thing, even if S is OBJ, coreference is still permitted if O is in another oblique case, namely, genitive (GEN). Conversely, even if S is not OBJ, coreference is prevented if S and O are both in another oblique case, namely, GEN. The Odia grammar is so constituted that one can conveniently and convincingly demonstrate this generalization. S can be OBJ (as in the examples above) or GEN, depending on the verb. O can also be OBJ (as above) or GEN, depending on the verb. Further, a handful of verbs offer alternative choice between the two cases (Yamabe 1995). This last feature is going to provide the discussion of the non-Coreference Rule with variation of minimal pairs of example clauses.

The sentences in (19) have the case frame [OBJ-GEN]. OBJ on S comes from the matrix verb (*aas-* 'can' in (19a) and *paD-* 'have to' in (19b)), just as it was in (16) and (18), respectively. GEN on O originates from the embedded verb (*prasansaa kar-* 'praise'). In these sentences, coreference of Pos.S and O is not precluded. (The verb *pasansaa kar-* can alternatively govern its object in OBJ, as in (20) below.)

- (19) a. *maNTu-ra saaran-ku kintu taa-ra prasansaa kar-i aas-il-aa ni.*
Mantu-GEN sir-OBJ however he-GEN praise(n) do-CP come-PAST-3SG not
Mantu's<*i*> teacher[OBJ], however, didn't know how to praise him<*i*> [GEN].
- b. *baabulaa-ra saaran-ku sesa-re taa-ra prasansaa kar-ibaa paai~ paD-ib-a.*
Babula-GEN sir-OBJ end-LOC he-GEN praise(n) do-INF fall-FUT-3SG
Babula's<*i*>teacher[OBJ] will have to praise him<*i*> [GEN].

The sentences in (20) have the case frame [GEN-OBJ]. In (20a), S is GEN because the matrix verb *th-* 'is supposed to' takes its subject in GEN. (This verb can alternatively take its subject in NOM, which I omit showing.) In (20b), S is GEN because the use of the root gerund form (RGER) for the embedded verb (*kar-aa* 'do-RGER') leads to GEN (rather than NOM) on S. In these sentences also, coreference of Pos.S and O is fine.⁹

⁹ Care is in order while making examples involving a genitive subject. Because a possessor-head sequence normally contains a GEN-affix attached on the possessor as in (14)-(17), if the head also get

- (20) a. *nabina saara-nka caakara-Ti-ra aaji seThi taan-ku*
 Nabin sir-'s servant-CLA-GEN today there he-OBJ
prasansaa kar-ibaa-ra th-il-aa.
 praise(n) do-GER-GEN be-PAST-3SG

Mr Nabin's_{<i>} servant[GEN] was supposed to praise him_{<i>} [OBJ] there today.

- b. *nabina saara-nka caakara-Ti-ra aaji seThi taan-ku*
 Nabin sir-'s servant-CLA-GEN today there he-GEN
samaalocanaa kar-aa Thik he-l-aa ni.
 criticism do-RGER right become-PAST-3SG not

Mr Nabin's_{<i>} servant[GEN] criticizing him_{<i>} [OBJ] was not good.

Changing the case on the object from OBJ in (20) to GEN in (21), to have both S and O marked with GEN, the non-coreference effect comes back. In (21a), Pos.O and O cannot refer to the same person. (21b) is another example of [GEN-GEN] which shows the same effect.

- (21) a. *nabina saara-nka caakara-Ti-ra aaji seThi taanka-ra*
 Nabin sir-'s servant-CLA-GEN today there he-GEN
prasansaa kar-ibaa-ra th-il-aa.
 praise(n) do-GER-GEN be-PAST-3SG

Mr Nabin's_{<i>} servant[GEN] was supposed to praise him_{<*i>} [GEN] there today.

- b. *nabina saara-nka caakara-Ti-ra aaji seThi taanka-ra*
 Nabin sir-'s servant-CLA-GEN today there he-GEN
samaalocanaa kar-aa Thik he-l-aa ni.
 criticism do-RGER right become-PAST-3SG not

Mr Nabin's_{<i>} servant [GEN] criticizing him_{<*i>} [GEN] was not good.

The variable O mentioned in the Non-coreference Rule ranges over not only the object of a verb (something acted on in the action named by the verb), such as OBJ and GEN objects

attached with a GEN-affix, then the result is an immediate repetition of GEN-marked nouns: **maNTu-ra* (GEN) *saaranka-ra* (GEN), **rinaa-ra* (GEN) *saaranka-ra* (GEN). This is something that is banned by a species of dissimilatory constraint (a member of the Case OCP family).

The sentences in (20) and (21) have got around this case dissimilatory effect thanks to the first noun taking an adnominal form (glossed as -'s), which is distinct from the GEN form, more specifically, it is genitive form minus *-ra*. Compare *saaranka* ('s) *caakara-Ti-ra* (GEN) found in (20) and (21), and the eschewed **saaranka-ra* (GEN) *caakara-Ti-ra* (GEN). The option of the adnominal form is available for plural nouns (e.g. *saar* 'sir') but not for singular nouns (e.g. *maNTu* 'Mantu'). Note from footnote 5, a respected person is grammatically plural, even if he/she is referentially single.

thus far, but also over some instances of possessor of the object of a verb. In sentence (22a), where the object noun is bare ('car-Ø'), its possessor counts as O of the Non-coreference Rule, and works to trigger non-coreference effect. Presumably, the bare noun (*gaaDi* 'car') here has get incorporated into the verb to make a compound verb with it (something like *gaaDi cal-* 'do car-driving', as is shown for certain object-verb sequences in Hindi by Mohanan 1994 and Dayal 2011), and as a side effect of the incorporation the possessor of the object noun has become an immediate constituent of the clause, resulting the [GEN-GEN] marking on the clausal two constituents. In contradistinction, in (22b), where the object noun is suffixed with a classifier or a case marker or both, non-coreference is not imposed. This suggests that in this sentence the object noun is not incorporated, and accordingly its possessor remains within the NP it heads. Coreference is not forced in (22c) either, where the possessor (*taanka* 'his') is not marked with GEN (*-ra* '-GEN'), but in the adnominal form (i.e. without *-ra* '-GEN').

- (22) a. *nabina baabunka caakara-Ti-ra se dina seThi*
 Nabin Mr's servant-CLA-GEN that day there
taanka-ra gaaDi cale-ibaa-ra th-il-aa.
 he-GEN car drive-GER-GEN be-PAST-3SG
 Mr Nabin's_{<i>} servant[GEN] was supposed to drive
 his_{<*>} [GEN] car-Ø there that day.
- b. *nabina baabunka caakara-Ti-ra se dina seThi*
 Nabin Mr's servant-CLA-GEN that day there
taanka-ra { gaaDi-Ti | gaaDi-ku | gaaDi-Ti-ku } cale-ibaa-ra th-il-aa.
 he-GEN car-CLA car-obj car-CLA-OBJ drive-GER-GEN be-PAST-3SG
 Mr Nabin's_{<i>} servant[GEN] was supposed to drive
 his_{<i>} [GEN] car-{CLA|OBJ|CLA-OBJ} there that day.
- c. *nabina baabunka caakara-Ti-ra se dina seThi*
 Nabin Mr's servant-CLA-GEN that day there
taanka gaaDi cale-ibaa-ra th-il-aa.
 his car drive-GER-GEN be-PAST-3SG
 Mr Nabin's_{<i>} servant[GEN] was supposed to drive
 his_{<i>}['s] car-Ø there that day.

The same pattern as is observed with the N +V combination *gaaDi* 'car' + *cal-* 'drive' in (22) is also observed with *ghara* 'house' + *jhaD-* 'sweep'.

3 Condition ②

Section 3 illustrates Condition ② of the Non-coreference Rule (in specified (3)). *Clause Mates*: Non-coreference of Pos.S and O comes into effect only if S and O are situated within the same clause.

3.1 Non-reduced clauses

The examples we have seen thus far containing two verbal roots are complex clauses due to containing two verbs, but they are of the kind that have undergone a certain degree of reduction in syntactic structure (variously called as “clause union” Sridhar 1977; “clause reduction” Aissen & Perlmutter 1983; “restructuring” Burzio 1984, Wurmbrand 2001). Such species of complex clauses count as a single clause for the purpose of Condition ② of the Non-coreference Rule, and accordingly non-coreference effect occurs in it, as we have seen. In contrast, there is another family of complex clauses, to be taken up in this section, that have not undergone a comparable degree of structural reduction. These complex clauses are free from the application of the Non-coreference Rule so long as the two coreferent positions are separated by a clause boundary. (The reduced and *unreduced* clausal boundaries, respectively, are henceforth indicated by single brackets [] and by double brackets [[]].)

iccha *he-* ‘want to’ in (23) and *darkaara* ‘need to’ in (24) are instances of predicates taking a *non-reduced* type of complement clause. The subject can be OBJ, or alternatively GEN. Either option can, among others, lead to the same-case configuration: [OBJ-OBJ] in (a), and [GEN-GEN] in (b). In (23) and (24), S and O are marked with the same case but are regarded to be situated in separate clauses for the purpose of Condition ②, and accordingly coreference of Pos.S and O is permitted. Compare (23) with (16) and (18); (24) with (21).

- (23) a. *baabulaa-ra saaran-ku kintu [[taa-ku paDhe-ibaa paai~]]*
 Babula-GEN sir-OBJ however him-OBJ teach-INF
icchaa he-l-aa ni.
 desire(n) happen-PAST-3SG not
 Babula’s<*i*> teacher[OBJ] didn’t want [[to teach him<*i*> [OBJ]]], though.
- b. *nabina saara-nka caakara-Ti-ra sabubeLe*
 Nabin sir-’s servant-CLA-GEN always
 [[taanka-ra samaalocanaa kar-ibaa paai~]] *icchaa he-uch-i.*
 him-GEN criticism do-INF desire(n) happen-PROF-3SG
 Mr Nabin’s<*i*> servant[GEN] always wants [[to criticise him<*i*> [GEN]]].

- (24) a. *rinaa-ra baapaan-ku aaji* [[*taa-ku haspitaal ne-baa*]] *darkaara*.
 Rina-GEN father-OBJ today her-OBJ hospital take-GER necessity
 Rina's<*i*> father[OBJ] needs [[to take her<*i*> [OBJ] to hospital]] today.
- b. *nabina saara-nka caakara-Ti-ra sasabubeLe*
 Nabin sir-'s servant-CLA-GEN always
 [[*taanka-ra prasansaa kar-ibaa*]] *darkaara*.
 him-GEN praise(n) do-GER necessity
 Mr Nabin's<*i*> servant[GEN] always needs [[to praise him<*i*> [GEN]]].

3.2 Tests

Whether a matrix predicate projects a reduced or a non-reduced sentence structure can be probed by three tests.

Test I: *Lexical Integrity*. In the effect of reduction (*aas-* 'can, know how' in (25a), *paD-* 'have to' in (25b)), the verb of the complement clause must be linearly contiguous to that of the matrix clause; and without reduction (*icchaa he-* 'want to' in (26a), *darkaara-* 'need to' in (26b)), the complement-clause verb and the matrix-clause verb can be intervened by a full word such as an adjunct. < > indicates where an adjunct can or cannot occur.

- (25) a. *gunu-ku <aadou> [se gaaDi-Ti cale-i] <*aadou> aas-u ni*.
 Gunu-OBJ at.all that car-CLA drive-CP at.all come-PROG not.3SG
 Gunu doesn't know how [to drive that car] at all.
- b. *Baapi-ku <puNi> [seThiki jibaa paai~] <*puNi> paD-il-aa*.
 Babula-OBJ again there go-INF again fall-PAST-3SG
 Bapi again had [to go there].
- (26) a. *gunu-ku <aadou> [[se ghara-Ti jhaaD-ibaa paai~]] <aadou>*
 Gunu-OBJ at.all that house-CLA sweep-INF at.all
icchaa he-l-aa ni.
 desire(n) happen-PAST-3SG not
 Gunu didn't want [[to sweep that room]] at all.
- b. *baapi-ku <puNi> [[seThiki j-ibaa]] <puNi> darkaara*.
 Bapi-OBJ again there go-GER again necessity
 Bapi again needs [[to go there]].

Test II: *Case Concord*. With reduction the complement clause cannot license a nominative

item as its dependent; and *without* reduction the complement can license a nominative item if other conditions are met. A case in point is the adjunct phrase *samaste ekaasangare* ‘all together’ (Yamabe 2016). Consider the situation in which the adjunct phrase semantically goes with the complement verb (rather than with the matrix verb). In a sentence that does not involve structural reduction such as (28) *samaste* ‘all’ can be NOM, agreeing with the never-pronounced subject of the complement-clause subject which itself bears the case feature NOM; and it can alternatively be OBJ, agreeing the main clause subject which is visibly OBJ. In contrast, in a sentence with reduced structure such as (29), *samaste* ‘all’ can only be OBJ agreeing with the subject of the whole sentence, because the complement clause lacks its subject for it to agree with.

- (27) *pilaa-maan-an-ku* [*sethi* { *samastan-ku* | **samaste* } *eka saangare*
 kid-CLA.PL-OBJ there all-OBJ all.NOM together
kaama karibaa paai~] *paD-ib-a*.
 work(n) do-INF fall-FUT-3SG

The workers will have [to work all {OBJ | *NOM} together there].

- (28) *pilaa-maan-an-ku* [[*sethi* { *samastan-ku* | *samaste* } *eka saangare*
 kid- CLA.PL-OBJ there all-OBJ all.NOM together
kaama karibaa paai~]] *icchaa he-l-aa ni*.
 work(n) do-INF desire(n) become-PAST-3SG not

The workers didn’t want [[to work all {OBJ | NOM} together there]].

Test III: *Case OCP*. With reduction, as in (29), a sequence of two NPs in the same case is precluded, calling for a piece of overt expression occurring in between; without reduction, as in (30), such a sequence is permitted. (For more on the Case OCP in Odia, see Yamabe 2017, 2021, 2023.)

- (29) *saaaran-ku* [* (*Thik baabhe*) *maNTu-ku paDhe-i*] *aas-u ni*.
 sir-OBJ right way Mantu-OBJ teach-CP can-PROG not.3SG

The teacher(OBJ) can’t [teach Mantu(OBJ) properly].

- (30) *saaaran-ku* [[*maNTu-ku paDhe-ibaa paai~*]] *icchaa ha-u ni*.
 sir-OBJ Mantu-OBJ teach-INF desire(n) happen-PROG not.3SG

The teacher(OBJ) doesn’t want [[to teach Mantu(OBJ)]].

These three tests combined serve to divide the matrix predicates into two classes, as

summarized in (31). Class A are matrix predicates for which one or more of the tests speak for the reduction property, bringing in acceptability (marked by * and shading in the table)). Class B are those for which none does so. Class A predicates make a sentence that count as reduced for the purpose of Condition ② of the Non-coreference Rule, so that S and O contained in the sentence can lead to the non-coreference effect. Class B predicates make a sentence that counts as non-reduced in the relevant sense, so that non-coreference effect does not arise.

(31) Matrix predicates that do (A) and do not (B) involve structure reduction

Class	Matrix predicate	Test	I: <i>Lexical Integrity</i>	II: <i>Case Concord</i>	III: <i>Case OCP</i>
A	<i>aas-</i> ‘can’		*	*	*
	<i>paD-</i> ‘have to’		*	*	
	<i>Thi-</i> ‘be supposed to’		*		*
	RGER + <i>Thik he-</i> ‘-ing is good’			*	*
B	<i>icchaa he-</i> ‘want to’				
	<i>darkaara</i> ‘need to’				

3.3 Transitive matrix predicates

In those complex sentences we looked at thus far, the matrix verbs were intransitive. Let us now have a look at complex sentences whose matrix verb is transitive. In parallel to the intransitives, there are two classes of transitives: A. structure-reducing, and B. non-reducing). The classification can be probed by means of the tests mentioned in 3.2, and is reflected in the contrasting behavior with respect to the Non-coreference Rule. In (32), the matrix verb *de-* ‘allow, let’ is structure-reducing¹⁰, and accordingly, Pos.S (*gunu-ra* ‘Gunu-GEN’) and O (*taa-ku* ‘him-OBJ’) of the complement verb *piT-* ‘beat’ cannot corefer. In (33), in contrast, the matrix verb *kah-* ‘tell, order’ is not structure-reducing, and accordingly, coreference of the same NPs are possible.

¹⁰ For a comparable classification of the Hindi cognates of these two verbs (‘allow’ and ‘tell’), see Butt (2014) and Butt & Gillian Ramchand (2005).

- (32) *prinsipaal-jaNaka gunu-ra saaran-ku ethara aau*
 pincipal-CLA Gunu-GEN sir-OBJ this.time any.more
 [*taa-ku piT-ibaa paai~*] *de-l-e ni.*
 him-OBJ beat-INF give-PAST-3PL not

The principal didn't allow Gunu's<*i*> teacher[OBJ] [to beat him<*> [OBJ]] any more.

- (33) *prinsipaal-jaNaka gunu-ra saaran-ku aaji*
 pincipal-CLA Gunu-GEN sir-OBJ today
 [[*taa-ku piT-ibaa paai~*]] *kah-il-e.*
 him-OBJ beat-INF tell-PAST-3PL

The principal told Gunu's<*i*> teacher[OBJ] [[to beat him<*i*> [OBJ]]] today.

The structure-reducing and *non*-structure reducing features of *de*- 'allow' (32) and *kah*- 'tell' (33), respectively, can be brought out by means of the above-mentioned tests. The results of the tests are summarized in (34).

(34)

Class	Matrix predicate	Test	I: <i>Lexical Integrity</i>	II: <i>Case Concord</i>	III: <i>Case OCP</i>
A	<i>de</i> - 'allow'		*	*	
B	<i>kah</i> - 'tell'				

How Test II (*Case Concord*) works is exemplified below. In the 'tell'-sentence (35), *samaste* 'all' can be NOM, getting in concord with the null subject of the non-reduced embedded clause. In the 'allow'-sentence (36), it does not avail itself of this option, because the embedded clause missing its syntactic subject position.

- (35) *maalika-jaNaka pilaa-maanan-ku [sethi { samastan-ku | *samaste }]*
 owner-CLA kid-CLA.PL-OBJ there all-OBJ all.NOM
ekaa saangare kaama kar-ibaa paai~] *de-l-e ni.*
 Together work(n) do-INF give-PAST-3PL not

The owner didn't allow the workers [to work all{OBJ|*NOM} together] .

- (36) *maalika-jaNaka pilaa-maanan-ku [[sethi { samastan-ku | samaste }]*
 owner-CLA kid-CLA.PL-OBJ there all-OBJ all.NOM
ekaa saangare kaama kar-ibaa paai~]] *kah-il-e.*
 together work(n) do-INF tell-PAST-3PL

The owner told the workers [[to work all{OBJ|NOM} together]] .

4 Explaining the grammatical underpinnings

Section 4 discusses the commonalities and contrasts between the Non-coreference Rule in Odia, on the one hand, and those in languages of the Americas, on the other.

4.1 Cross-linguistic commonalities

Outside Odia, instances of the Non-coreference Rule, i.e. grammatical constraints preventing Pos.S and O from being coreferent, have been reported from languages of the Americas. Aissen (1997) calls them “genitive effect.” Example (37a) is from Tzotzil (Mayan, VOS); (37b), from Navajo (Athabaskan, SOV); (37c), from Mapudungun (unclassified, south central Chile and Argentina, SVO). In these examples, Pos.S and O cannot be coreferent, and therefore the interpretation indicated by the English translation is not available. (The pronouns for 3rd persons are regularly non-overt in the languages in (37), these languages, and PRO’s in the examples are such. Abbreviations in (37): ICP=incompletive, ENC=enclitic, PSR=possessor, IND=indicative, OBV=obviative, SBJ=subject.)

- (37) a. Ta s-sa’ PRO y-ajnil li Manvel-e.
 ICP A3-seek him/he A3-wife the Manuel-ENC
 * ‘Manuel’s_{<i>} wife is looking for him_{<i>} .’ (Aissen 1997: (36a))
- b. Ashkii bizhé’é PRO yi-yii † tsá.
 boy his-father him/he saw
 * ‘The boy’s_{<i>} father saw him_{<i>} .’ (Hale *et al.* 1977: 405, modified)
- c. Ñi fotüm langüm-f-i-Ø PRO.
 3.PSR son.of.man kill-OBV.P-IND-3.SBJ him/he
 ‘His_{<?? i |j>} son killed him_{<i>}’ (Zúñiga 2013: 344, modified)

In Americas, non-coreference effect occurs in least marked types of clauses in grammatical system, such as direct voice or active voice depending on language. In case non-coreference effect occurs, a marked voice is resort to, such as inverse voice or passive voice. To approximate this restriction and alternative strategy by means of English sentences, it would be grammatically impossible to say “Manuel’s_{<i>} wife hit him_{<i>}” (as shown in (37)) and the intended state-of-affairs could only be rendered as “Manuel_{<i>} was hit by his_{<i>} wife.” Constraints precluding coreference of Pos.S and O, along with alternative constructions similar to the above for expressing the intended state-of-affairs, are reported for the following

languages as well as for the above-mentioned two: Jacaltec (Mayan, Craig 1977: 177, 220, cited in Woodford 1991:507), Chuj, Cho’l (both Mayan, Deals *et al.* 2023: 44), Ojibwe (Algonquian, Rhodes 1993, cited in Aissen 1997:713 and Oxford 2019:986-987), Plains Cree (Algonquian, Wolfart 1973, cited in Aissen 1997:712). In a similar vein, coreference of Pos.S and O is reportedly “dispreferred” for Upper St’át’imcets, Salish (Davis 2009: 4).

The grammatical mechanism underlying this constraint is accounted for in Aissen (1997). The arguments of present article to follow builds on the basic pieces of idea found there. A key notion is to look up the relative ranks along the proximate-obviate dimension that are assigned to the referents of the multiple noun phrases occurring in the same clause (more exactly, within a certain stretch of discourse). In unmarked situations, the person mentioned in Pos.S is more proximate than the person mentioned in S [Pos.S > S], for one thing, and for another, the person mentioned in S is more proximate than the person mentioned by O [S > O]. Now, where Pos.S and O refer to the same person [Pos.S=O], there is inevitably bound to be a deviation from an unmarked constellation in either of these points, leading to some degree of marked-ness.

4.2 Typological contrasts

The Non-coreference Rule in Odia (specified in (3)) is attached with Condition ①: Its application is confined to those situations where S and O are marked with the same case. In other words, in Odia, the above-mentioned marked-ness is fatal exclusively where the two arguments of the clausal predicate are *not distinguished* by way of morphological case. Ordinary transitive clauses are not like that: S and O *are* distinguished by morphological case, with S being NOM, and O being OBJ or GEN. So, ordinary transitive clauses are immune to the effect of the Non-coreference Rule. Let us now re-phrase the original Condition ① *Same Case* (in (3)) as Condition ①' *Case Non-distinctness* (in (38)). As I am going to argue, this rewording offers a key to understanding the source of the differences found between the instances of the Non-coreference Rule in Odia and the Americas.

- (38) Condition ①' *Case Non-distinctness* :
S and O are not distinguished by morphological case.

Between the languages of the Americas and Odia, a fundamental difference can be

pointed out as to what sort of clausal constructions the non-coreference constraint effect occurs in. In the Americas, the effect occurs in the least marked constructions, such as active and direct, whereas in Odia it occurs in the highly marked constructions such as oblique-subject constructions. Nonetheless, both types of situations share Condition ①'. The cross-linguistic contrast just mentioned can be traced back to the opposed typological characters in morphosyntax, namely, dependent marking (Odia) vs. head marking (the languages of the Americas).

Those languages of the Americas, as can be seen in examples in (37), are characterized as head-marking. Thus, in a clause, the relation between the verb and the arguments are mainly marked on the verb, rather than on the arguments. Therefore, in normal types of clauses, Condition ①' holds. Opposed to this, Odia is characterized as dependent marking. Thus, in a clause, the relation between the verb and the arguments are mainly marked on the argument NPs. So, in normal types of clauses Condition ①' does not hold. In special types of constructions such as some species of oblique-subject constructions, the dependent-marking nature of this languages is exerted to such an extreme degree that the two arguments are each assigned a case marker for a reason: S is case-marked for one reason, e.g. being an experiencer, and O is so for another, e.g. being someone acted on. It can farther happen by chance that the two case marked used are the same, leading a situation of Condition ①'. In the Americas, a situation specified by Condition ①' obtains in basic types of clauses “by default,” because they regularly contain no case marker. In Odia, a Condition ①' situation obtains in marked types of clauses, because they can have multiple case marker that can “by chance” be the same.

5 Parallelisms to the Person-Case Constraint

The Person-Case Constraint (PCC), in its universal format, dictates that, if a clause contains two or more arguments, then the lower of them cannot be 1st or 2nd person.¹¹ The Odia

¹¹ In its original formulations (For an overview, see Anagnostopoulou 2017 a.o.), the PCC is something that takes effect in a ditransitive clause, i.e. in a clause with an indirect and a direct object, and prevents the direct object (i.e. the syntactically *lower* object) from being 1st or 2nd person. This article uses this term in an extended sense, to subsume transitive clauses as well as ditransitive clauses. In a transitive clause, i.e. in the clause with S and O, it prevents O (i.e. the syntactically *lower* argument) from being 1st or or 2nd person. Indeed, all the examples in this article are of this kind.

version of PCC is as specified in (39) (Yamabe 2014,2018,2020b, 2022). It is phrased in a way remarkably parallel to the Non-coreference Rule (specified in (3)), in sharing Conditions ① and ②. A typologically notable feature of the Odia version of PCC is that it exerts effect on phonologically full pronouns.¹²

(39) *The Person-Case Constraint* (Odia)

O cannot be 1st or 2nd person, if both Conditions ① and ② obtain.

① *Same Case*:

S and O are marked with the same morphological case.

② *Clause Mates*:

S and O are situated within the same clause.

(in the sense made precise in Section 3 for the Non-coreference Rule).

Section 5 illustrates how the PCC works parallelly to the Non-coreference Rule. The former comes into force in the same ranges of circumstances as the latter. More concretely, those sentences in Sections 2 and 3 which do *not* admit coreference of Pos.S and O do *not* admit the 1st or 2nd person pronouns for O, either; and conversely, those which do admit coreference of Pos.S and O do admit the 1st and 2nd person pronouns, too. Examples for the PCC are arranged in correspondence with the examples for the Non-coreference Rule in Section 2 and 3.

5.1 Condition ①

Just as the Non-coreference Rule applies only if S and O are marked with the same clause, the PCC also applies only if S and O are marked with the same case. In (40a), an ordinary transitive construction with the case frame [NOM-OBJ], the PCC does not apply: O can be 1st person (*mo-te* ‘me-OBJ’) and 2nd person (*tuma-ku* ‘you-OBJ’). In (40b), an oblique-subject construction with [OBJ-OBJ], it does apply: it prevents O from being 1st or 2nd person. The

It is also worth noting that the PCC in Odia (along with the Non-coreference Rule) takes effect in a clause with two internal arguments, rather than any two arguments. So, its effect is observed in transitive unaccusatives, i.e. oblique-subject constructions, but not in ergative transitives, i.e. nominative-subject construction.

¹² As far as known in the literature for other languages than Odia, the domain of PCC effect is restricted to phonologically reduced pronominal items like clitic pronouns or verbal agreements. Indeed, the definition of the PCC usually incorporates this restriction (cf. Anagnostopoulou 2017 a.o.).

numbers (e.g. “<(1)”) at the tails of the following examples refer to the corresponding Non-coreference Rule examples.

- (40) a. *saar niscaya { maani-ku | taa-ku | mo-te | tuma-ku } bhala paa-uch-anti.*
 sir certainly Mani-OBJ her-OBJ me-OBJ you-OBJ like-PROG-3SG
 The teacher[OBJ] likes {Mani| her| me| you}[OBJ], certainly. <(1)
- b. *saaran-ku niscaya { maani-ku | taa-ku | *mo-te | *tuma-ku } bhala laag-uch-i.*
 sir-OBJ certainly Mani-OBJ her-OBJ me-OBJ you-OBJ like-PROG-3SG
 The teacher[OBJ] likes {Mani| her~| *me| *you}[OBJ], certainly. <(2)
 (cf. { *Mani/ *She/ I/ You}[OBJ] like(s) the teacher[OBJ], certainly.)

Instead, the word sequence in (40b) with the 1st and 2nd person pronouns can convey the meaning indicated in the parenthesis at the bottom line of (40b) in parentheses. Recall from the discussion of examples (7) and (11) that the Non-Coreference Rule subverts the word-order restriction illustrated in (9) that rules out the OS order. It is worth noting here in relation to example (40b) that the PCC also subverts the same word-order restriction. As indicated in parenthesis in (40b), PCC effect is in force forces the interpretation ‘I/You like the teacher’ which implicates the OS order that is otherwise impossible.

In examples (a) to (d) of (41), both S and O are in an oblique case: they are (a) [OBJ-OBJ], (b) [OBJ-GEN], (c) [GEN-OBJ], (d) [GEN-GEN]. The PCC applies in (a) and (d), where S and O are in the same case: O cannot be 1st or 2nd person. It fails to apply in (b) and (c), where S and O are case-distinct: O can be 1st and 2nd person.

- (41) a. *lipi-ku ethara { saaran-ku | taan-ku | mo-te | tuma-ku }*
 Lipi-OBJ this.time sir-OBJ him-OBJ me-OBJ you-OBJ
prasansaa kar-ibaa paai~ paD-ib-a.
 praise(n) do-GER-GEN fall-PAST-3SG
 Lipi[OBJ] will have to praise {the teacher| him~| *me| *you}[OBJ]
 this time. <(16), (18)
- b. *lipi-ku ethara { saaranka-ra | taanka-ra | mo-ra | tuma-ra }*
 Lipi-OBJ this.time sir-GEN him-GEN me-GEN you-GEN
prasansaa kar-ibaa paai~ paD-ib-a.
 praise(n) do-GER-GEN fall-PAST-3SG
 Lipi[OBJ] will have to praise {the teacher|him~| me| you}[GEN]
 this time. <(19)

- c. *lipi-ra kaali seThi {saaran-ku | taan-ku | mo-te | tuma-ku }*
 Lipi-GEN today there sir-OBJ him-OBJ me-OBJ you-OBJ
prasansaa kar-ibaa-ra th-il-aa.
 praise(n) do-GER-GEN be-PAST-3SG
 Lipi[GEN] was supposed to praise {the teacher| him~| me| you}[OBJ]
 there yesterday. <(20)
- d. *lipi-ra kaali seThi {saaranka-ra | taanka-ra | mo-ra | tuma-ra }*
 Lipi-GEN today there sir-GEN him-GEN me-GEN you-GEN
prasansaa kar-ibaa-ra th-il-aa.
 praise(n) do-GER-GEN be-PAST-3SG
 Lipi[GEN] was supposed to praise {the teacher| him|*me|*you}[GEN]
 there yesterday. <(21)

Again similar to the Non-coreference Rule as it did in (22), the PCC regards the possessor of certain object nouns as O for the purpose of Condition ①, as in (42). Specifically, it does so only if the object noun is bare. In (42a), it does apply (car-Ø). It ceases to apply, as in (42b), if the object gets attached with some affix or another (car-CLA-OBJ). It also ceases to apply, as in (42c), if the possessor of the object is not marked by GEN, but is in the adnominal form (without *-ra* ‘-GEN’).

- (42) a. *baabulaa-ra se dina seThi {saaranka-ra| taanka-ra| *mo-ra| *tuma-ra }*
 Babula-GEN that day there sir-GEN him-GEN me-GEN you-GEN
gaaDi cale-ibaa-ra th-il-aa.
 car drive-GER-GEN be-PAST-3SG
 Babula[GEN] was supposed to drive {the teacher’s| his|*my|*your}[GEN] car-Ø.
- b. *baabulaa-ra se dina seThi {saaranka-ra| taanka-ra| mo-ra| tuma-ra }*
 Babula-GEN that day there sir-GEN him-GEN me-GEN you-GEN
gaaDi-Ti-ku cale-ibaa-ra th-il-aa.
 car drive-GER-GEN be-PAST-3SG
 Babula[GEN] was supposed to drive {the teacher’s| his|my|your}[GEN] car-CLA-OBJ.
- c. *baabulaa-ra se dina seThi {saaranka | taanka | mo | tuma }*
 Babula-GEN that day there sir’s his my your
gaaDi cale-ibaa-ra th-il-aa.
 car drive-GER-GEN be-PAST-3SG
 Babula[GEN] was supposed to drive {the teacher’s| his|my|your}[-’s] car-Ø.

5.2 Condition ②

Just as with the Non-coreference Rule, the PCC applies only in situations where S and O are contained in the same clause, and the range of such situations includes complex sentences of reduced structure but excludes those of non-reduced structure (Yamabe 2014). This is illustrated by the [OBJ-OBJ] complex sentences in (42). In (43a), *de-* ‘allow’ is structure-reducing (cf. table in (34)), and accordingly the PCC comes into force. In (43b), *kah-* ‘tell’ is not structure-reducing, and so the PCC remains inactive.

- (43) a. *prinsipaal se saaran-ku kintu* [{ *maNTu-ku* | *taa-ku* | **mo-te* | **tuma-ku* }
 principal that sir-OBJ however Mantu-OBJ him-OBJ me-OBJ you-OBJ
piTibaa paai~] *de-b-e ni.*
 beat-INF give-FUT-3PL not

The principal won’t allow the teacher[OBJ] [to beat {Mantu| him|*me|*you}[OBJ]],
 though. <(32)

- b. *prinsipaal se saaran-ku aaji* [[{ *maNTu-ku* | *taa-ku* | *mo-te* | *tuma-ku* }
 principal that sir-OBJ today Mantu-OBJ him-OBJ me-OBJ you-OBJ
piTibaa paai~]] *kah-il-e.*
 beat-INF tell-PAST-3PL

The principal told the teacher[OBJ] [[to beat {Mantu| him| me| you}[OBJ]]]
 today. <(33)

The same contrast is illustrated for the [GEN-GEN] complex sentences in (44). In (44a), *th-* ‘be supposed to’ is structure-reducing (cf. table in (31)), and accordingly the PCC comes into force. In (43b), *icchaa he-* ‘want to’ is not structure-reducing, and so the PCC remains inactive.

- (44) a. *baabulaa-ra aaji seThi* [{ *saaranka-ra* | *taanka-ra* | **mo-ra* | **tuma-ra* }
 Babula-GEN today there sir-GEN him-GEN me-GEN you-GEN
prasansaa kar-ibaa-ra] *th-il-aa.*
 praise(n) do-GER-GEN be-PAST-3SG

Babula[GEN] was supposed to praise {the teacher|him|*me|*you}[GEN]
 there today. <(21)

- b. *baabula-ra sabubeLe* [[{ *maalikana-ra* | *taanka-ra* | *mo-ra* | *tuma-ra* }
 Babula-GEN always owner-GEN him-GEN me-GEN you-GEN
samalocanaa kar-ibaa paai~]] *icchaa he-uch-i.*
 criticism do-INF desire(n) happen-PROF-3SG

Babula[GEN] always wants [[to criticise {the employer|him|me|you} [GEN]]].
 < (23b), (24b)

5.3 Capturing the parallelisms

Given that the Non-coreference Rule and the PCC coincide as for the conditions for application, it is suggested that they are underpinned by a common machinery. The observed coincidence can be captured, if the accounts given in Section 4 for the Non-coreference Rule are extended to cover the PCC. Namely, that will be assuming that the 1st and 2nd persons are normally more proximate than 3rd persons, and that this holds owing to their inherent properties, related to lexical meanings ($1,2 > 3$). (For comparison recall this. We assumed in Section 4 in relation to the Non-coreference Rule that the referent of Pos.S is normally more proximate than that of S, and this holds owing to the structural positions they assume on occurring in a sentence.) This much assumed, a reasoning goes on as follows. O being 1st or 2nd person inevitably leads to the contradiction with the fact that S is normally proximate than O ($S > O$). (This account is to attribute to the cause of the effect to the PCC to that of the Non-coreference effect, the same contradiction. Pos.S being coreferent with O inevitably leads to the contradiction with the fact S is normally proximate than O.)

Similarities have been long recognized in literature between the hierarchy-based constraint applying among 3rd persons (of which the Non-coreference is a subtype¹³) on the one hand, and the hierarchy-based constraints applying between local participants (1st and 2nd persons) and non-local participants (3rd persons) (of which the PCC is an instance) on the other. The literature is divided with respect to the views on the syntactic nature of the two families of constraints: there is one group of views (Foley & Toosarvandani 2022, Clem 2022) which (tend to) unify the two sets of constraints, and explain as their effect arising by an overarching syntactic machinery: there is another group (Givón 1994, Aissen 1997, Oxford 2023) which (tend to) differentiate them, and explain their effect arising through distinct, though widely overlapping, sets of machinery¹⁴. The present article is not ready to put forward a decisive

¹³ Another subtype of the hierarchy-based constraint applying among 3rd persons is the one applying between animate NPs, on the one hand, and inanimate NPs or the like, on the other hand, whereby it can be assumed that the former normally outrank the latter on the proximate-obviate scale (animate > inanimate or like). Odia attests to an instance of this subtype, and, similarly to the Non-Coreference Rule and the PCC, it also subject to Conditions ① and ② (Yamabe 2020a).

¹⁴ Note that this dichotomy is quite bit a simplification. For instance, Deals & Royer (2023) argue for the syntactic machinery overarching the PCC and the nominal hierarchy effect among 3rd persons. However, what is relevant to the concern of this article, they attribute the Non-coreference Rule (the “genitive effect”) to a source separate from nominal hierarchy effect per se (pp.45-46, 49). On this score

proposal on this issue. But as far as the data available relating to the Non-coreference Rule and the PCC in Odia are concerned, there is no indication that would differentiate the two rules concerning their syntactic distribution, and this suggests that the two rules should be most conveniently collapsed under the same syntactic machinery, as in (45).

(45) *Generalizing over the Non-coreference Rule and the PCC (Odia)*

Marked-ness in proximate-obviate ranking of noun phrases is not tolerated, where both Conditions ① and ② obtain.

① *Same Case:*

S and O are marked with the same morphological case.

② *Clause Mates:*

S and O are situated within the same clause.

(in the sense to be made precise in Section 3 for the Non-coreference Rule).

In other words, marked situations with respect to proximate-obviate ranking can only be expressed if the distinction of S and O are encoded, and that can be done either morphologically by case, or syntactically by an intervening clausal boundary.

Further research is needed to make certain that there does not exist any facts that might urge us for separate treatment of the Non-coreference rule and more generally the rules concerning the hierarchy among 3rd persons, on the one hand, and the PCC and more generally the rules concerning the hierarchy between local participants and non-local participants. In the present stage of my research, there remains a notable gap in available data concerning how the Non-coreference Rule works on the indirect and direct objects of transitive predicates (such as the verbs *dekhaa-* ‘show, *de-* ‘give’), whereas some details are available concerning how the PCC Rule works on these (Yamabe 2022). Data collection work concerning the former issue is underway, and a comparison of the two rules in the context of ditransitive predicates is forthcoming.

6 Conclusion

The Non-coreference Rule precludes coreference of Pos.S and O, if S and O are marked by the same morphological case and situated within the same clause. Outside of Odia, instances

they view that the Non-coreference Rule is based on mechanism distinct from the PCC.

of the Non-coreference Rule, i.e. constraints precluding coreference of Pos.S and O, have been reported from languages of the Americas. As for the grammatical underpinning of the Non-coreference Rule, what matters is the consideration of the relative proximate-obviate ranking between the referents of noun phrases in a clause (Aissen 1997). The instances of the Non-coreference Rule in the two language sets differ fundamentally as to the sorts of clausal environments non-coreference effect occurs in: in Odia, non-coreference takes place only in highly marked types of clauses, for instance, oblique-subject constructions; in the Americas, in least marked types of clauses. This contrast derives from the typologically opposed characters in the morphosyntax of the languages, namely, dependent marking (Odia) vs. head marking (the languages of the Americas). Despite this contrast, a commonality is that the Non-coreference Rule, in Odia and in the Americas, apply where S and O are not distinguished by morphological case. The Non-coreference Rule and the PCC behave fully parallelly in Odia, as far as available data show. The available data speak for an undifferentiated account for the nominal hierarchy effect involving 3rd persons (i.e. the Non-coreference Rule) on the one hand, and that involving 1st and 2nd persons, on the other, as far as Odia is concerned.

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