

Weak Crossover and Obviation

Author(s): Amy Dahlstrom

Proceedings of the Twelfth Annual Meeting of the Berkeley Linguistics Society (1986), pp. 51-60

Please see “How to cite” in the online sidebar for full citation information.

Please contact BLS regarding any further use of this work. BLS retains copyright for both print and screen forms of the publication. BLS may be contacted via <http://linguistics.berkeley.edu/bls/>.

The Annual Proceedings of the Berkeley Linguistics Society is published online via [eLanguage](#), the Linguistic Society of America's digital publishing platform.

Weak crossover and obviation
Amy Dahlstrom
Smithsonian Institution

Weak crossover refers to a class of antecedent-anaphor pairings which are ungrammatical in many languages, including English. In the Algonquian language Cree, comparable constructions are fully grammatical. The grammaticality of the Cree constructions is due to two factors: the lack of a VP node, and the system of obviation, which often disambiguates third person reference. The first section of the paper describes the obviation system; the second briefly reviews weak crossover in English before presenting the Cree constructions.

1. Obviation

Obviation is a grammatical opposition found in Algonquian languages in which a single third person (= proximate) is distinguished from all other third persons (= obviative). The proximate third person is referred to by unmarked third person forms, while obviative forms receive special marking. The proximate third person is thus conspicuous by being the only unmarked third person. This is illustrated below (taken from Bloomfield 1934, p. 90).

- (1) awa pe·yak na·pe·sis
 this one boy
 o·hta·wiya e·-okima·wiyit,
 his father obv be chief obv
 misatimwa ite· e·-aya·yit,
 horse obv where be obv
 e·kote· aya·w;
 there be 3

'A certain boy [prox] whose father [obv] was chief was there where the horses [obv] were;'

In the above example, the boy is proximate and his father and the horses are obviative. na·pe·sis 'boy' has no suffix, while the nouns referring to his father and the horses bear an obviative suffix -a. The verb aya·w 'be' displays unmarked third person singular inflection, while the verbs with obviative subjects have an obviative suffix -yi- in addition to the third person suffix -t. (Verbs in subordinate clauses take different inflectional endings from those in main clauses.)

Obviation plays a number of roles in Cree grammar. Within a fairly narrow syntactic domain the marking of obviation is obligatory. That is, if there are two or more distinct third persons all but one must be marked as obviative. Outside this syntactic domain obviation is optional, and is employed in narrative texts for a variety of purposes (see Dahlstrom 1986 for discussion). The third person singled out as proximate often corresponds to the discourse topic and is often the focus of the speaker's empathy, in the sense of Kuno and Kaburaki 1977. In narratives, shifts in point of view are often accomplished by making a new character proximate.

At the clause level, obviation plays a major syntactic role. Cree is a non-configurational language in which verb inflection expresses grammatical relations. Verbs are inflected for person, number, gender (animate or inanimate), and obviation status of subject and object. [1] In the absence of lexical NP arguments, third person verb inflection functions pronominally; if an NP is used, the verb inflection functions as agreement. First and second person verb inflection is always pronominal, and never merely agreement. [2] Independent personal pronouns are reserved for special discourse functions.

When both subject and object are third person, one must be marked as obviative. [3] If lexical NPs are used for subject and object they may occur in any order relative to the verb and to each other. In both of the examples below, the obviative NP, mahke-si-sa 'fox', precedes the proximate NP, wi-sahke-ca-hk. In the first sentence Wisahkechahk is the subject, while in the second Fox is the subject. This is indicated by the verb inflection. [4]

- (2) nakate-w mahke-si-sa wi-sahke-ca-hk
 leave 3-obv fox obv
 'Wisahkechahk [prox] left Fox [obv] behind'
- (3) nakatik mahke-si-sa wi-sahke-ca-hk
 leave obv-3 fox obv
 'Fox [obv] left Wisahkechahk [prox] behind'

The verb stem in both sentences is nakat- 'leave'. In (2) the inflectional suffix -e-w indicates action by a proximate animate third person singular subject on an obviative animate third person object (animate obviative third persons are not specified for number). That is, in (2), Wisahkechahk, the proximate argument, is subject and Fox, the obviative argument, is object.

(3) is similar to (2) in that Wisahkechahk is proximate and Fox is obviative; the structural position of the NPs relative to the verb and to each other is also the same in both sentences. In (3), however, the verb stem nakat- 'leave' is followed by the inflectional suffix -ik indicating action by an obviative third person subject on a proximate animate third person singular object. In (3), therefore, it is Fox who is subject and Wisahkechahk who is object.

This pair of sentences illustrates the role of obviation and verb inflection in encoding grammatical relations. The marking of obviation distinguishes one third person argument from another in the same clause, and the information carried by the verb inflection imposes a particular interpretation of the syntactic role of the verb's arguments.

The domain in which obviation is obligatory is not limited to arguments of a verb in a single clause, but extends down into possessive constructions, clausal complements, and relative clauses as well. As a consequence, in this domain obviation resembles a switch-reference system operating with respect to the proximate third person: all proximate forms are coreferent, and all obviative forms are disjoint in reference from the proximate third person. For example, the subject of the complement clause in the sentences below must be marked as coreferential or noncoreferential with the subject of the matrix verb.

- (4) John kiske.yihtam e--a.hkosit
 know 3-inan be sick 3
 'John; [prox] knows that he; [prox] is sick'
- (5) John kiske.yihtam e--a.hkosiyit.
 know 3-inan be sick obv
 'John; [prox] knows that he; [obv] is sick'

Cree also distinguishes proximate and obviative third person possessors. A singular proximate possessor is indicated by the prefix o- on the possessed noun, plural proximate possessor by o--iwa.w, and obviative possessor by o--iyiw. [5] NPs possessed by third persons are obligatorily obviative: the obviative suffix -a attached to animate nouns follows the possessive suffix, if any.

- (6) kiskisiyiwa o·hta·wiya
 remember obv his father obv
 ose·hke·payi·simiyiwa ka--ki--pi·kosima·t.
 obv's car obv wreck 3-obv
 'His; [prox] father; [obv] remembers
 his; [obv] car_k [obv] that he; [prox] wrecked.'

In the above example, the possessor of 'father' is proximate and the possessor of 'car' (which is an animate noun) is obviative. Again, the distinction between proximate and obviative functions like switch-reference with respect to the proximate third person.

For examples of relative clauses see (1), which contains two relative clauses, one with an NP head, the other with a locative head. Both obviative NPs in (1) occur in the relative clauses, while the subject of the matrix verb is proximate. It is not necessary, however, for the proximate third person to occur in the highest clause of the sentence, as seen in the following example from Bloomfield 1934 (p. 96).

- (7) e·kwa pe·-na·tima·wa o·hi ka--ki--nipaha·t
 and fetch.pass obv this.obv kill 3-obv
 'And the ones [obv] whom he [prox] had killed
 were fetched, ...'

Here the higher verb is pe·-na·tima·wa 'they [obv] were fetched', a passive verb inflected for an obviative subject. It is followed by a relative clause o·hi ka·-ki--nipaha·t 'the ones [obv] whom he [prox] had killed'. The proximate third person is subject of the lower verb, and the object of that verb is obviative. The object of the lower verb is also the head of the relative clause, which functions as subject of the higher verb 'be fetched'. Heads of relative clauses must have the same obviation value in both the matrix clause and the relative clause: since the head is here obviative in the relative clause it must also be obviative in the matrix clause.

When there are two distinct third persons, the one that is singled out as proximate is selected not on the basis of its structural position, but rather on the basis of discourse factors (e.g., discourse topic, focus of empathy, source of viewpoint). (7) is taken from the same text as (1), and the proximate third person in (7) is the boy who is introduced as proximate in (1). The entire story is about the boy; the majority of proximate forms in the text refer to him.

2. Weak crossover

Weak crossover effects show up in a subset of antecedent-anaphor pairings: those in which the antecedent acts as a semantic operator, binding the interpretation of the pronoun. This type of anaphora, bound variable anaphora, is subject to certain constraints not found with ordinary anaphoric reference to a definite NP antecedent. The examples given here focus on quantified antecedents: weak crossover effects may also be seen in English when the antecedent is a wh-element in a question or relative clause, or has been topicalized. All these constructions contain NPs behaving as semantic operators. Reinhart 1983 argues that some cases of definite NP antecedents also behave as semantic operators, binding pronouns in their scope. This point is returned to below.

A pronoun whose antecedent is a quantified NP has no independent reference, but instead is interpreted as a variable dependent upon the antecedent. [6] For example, the sentence below may be paraphrased as "for each x , x = a woman, x hoped x would win the lottery".

- (8) Each woman_i hoped she_i would win the lottery.

Bound variable anaphora is subject to certain constraints on the relative position of antecedent and pronoun. While anaphoric reference to a definite antecedent may occur across sentence boundaries, bound variable anaphora cannot.

- (9) Bill_i loves his_i mother.
He_i calls her every weekend.
(10) Everyone_i loves his_i mother.
* He_i calls her every weekend.

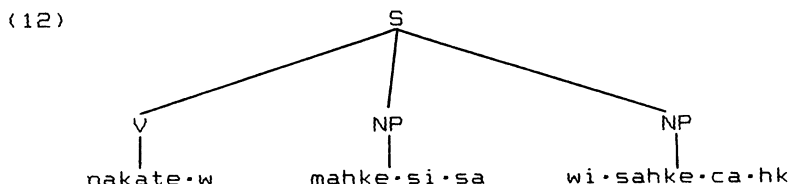
Even within a single sentence bound variable anaphora is more constrained than anaphora involving a definite antecedent. In particular, sentences in which neither the antecedent nor the pronoun c-commands the other are grammatical if the antecedent is definite, but ungrammatical if the antecedent is quantified. These are the weak crossover cases.

- (11) His_i mother loves John_i.
* His_i mother loves every boy_i.
Every boy_i loves his_i mother.

In English, the presence of the VP node prevents the object from c-commanding the subject: the first branching node dominating the object is VP, which does

not dominate the subject. This well-known structural asymmetry of subjects and objects in English is reflected in bound variable anaphora: if a quantified antecedent is subject, it may bind a pronoun in the object, but an object antecedent cannot bind a pronoun in the subject.

Cree is a non-configurational language with no VP. Subject and object NPs c-command each other, as seen in the following diagram of the structure of (2).



The symmetrical clause structure of Cree is reflected in patterns of bound variable anaphora. A quantified NP object may serve as antecedent for the possessor of the subject, just as a quantified subject may bind the possessor of the object.

(13)
 namo·ya awiyak wanikiskisitotawe·w otawa·simisa
 no one forget 3-obv his child obv
 'No one [prox] forgets his [prox] children [obv]'

(14) namo·ya awiyak wanikiskisitota·k otawa·simisa
 no one forget obv-3 his child obv
 'His [prox] children [obv] forget no one [prox]'
 (i.e., No one is forgotten by his children)

In both (13) and (14) the quantified antecedent is namo·ya awiyak 'no one', which is proximate. In (13) the antecedent is subject; in (14) it is object. As stated above, possessed NPs are obligatorily obviative, reflected by the nominal suffix -a and by the verb inflection. Again, the use of proximate possessive inflection ensures that the possessor is coreferent with namo·ya awiyak 'no one'. The possessor cannot have an exophoric reading.

The same pattern holds with universal quantification of the antecedent. There is no singular quantifier in Cree corresponding to each or every; universal quantification is expressed instead by kahkiyaw 'all'.

- (15) kahkiyaw iskwe·wak sa·kihe·wak ota·nisiwa·wa
 all woman pl love 3p-obv their dgtr obv
 'All women [prox] love their [prox]
 daughters [obv]'
- (16) kahkiyaw iskwe·wak sa·kihikwak ota·nisiwa·wa
 all woman pl love obv-3p their dgtr obv
 'Their [prox] daughters [obv] love
 all women [prox]'
 (i.e., all women are loved by their daughters)

The antecedent need not precede the possessed NP:

- (17) otawa·simisa wanikiskisitota·k namo·ya awiyak
 his child obv forget obv-3 no one
 'His [prox] children [obv] forget no one [prox]'
- (18) sa·kihikwak ota·nisiwa·wa kahkiyaw iskwe·wak
 love obv-3p their dgtr obv all woman pl
 'Their [prox] daughters [obv] love
 all women [prox]'

Furthermore, objects of transitive verbs may float quantifiers to preverbal position (Dahlstrom 1986). The quantifier and head noun thus need not even form a constituent:

- (19) kahkiyaw sa·kihikwak ota·nisiwa·wa iskwe·wak
 all love obv-3p their dgtr obv woman pl
 'Their [prox] daughters [obv] love
 all women [prox]'

There is also no asymmetry if the antecedent is a wh-element. The examples below show a wh-element as subject binding the possessor of the object, and the wh-element as object, binding the possessor of the subject. (Wh-words are always clause-initial, but there is no evidence that this is the result of a movement rule.)

- (20) awi·na e·-sa·kiha·t oma·ma·wa?
 who love 3-obv his mother obv
 'Who [prox] loves his [prox] mother [obv]?'
 (21) awi·na e·-sa·kihikot oma·ma·wa?
 who love obv-3 his mother obv
 'Who [prox] does his [prox] mother [obv] love?'

It must be emphasized that the verb forms in (14), (16), (17), (18), (19), and (21) are active verbs, not passives. Syntactic arguments supporting this claim are given in Dahlstrom 1986.

Although bound variable anaphora in Cree does not display subject-object asymmetries, in other respects it behaves like bound variable anaphora in English. Pronouns bound by quantified antecedents do not have a reading of independent reference: the following sentence may be paraphrased as "there is no x such that x hits x's wife".

(22) namo·ya awiyak pakamahwe·w wi·wa.
 no one hit 3-obv his wife obv
 'No one [prox] hits his [prox] wife [obv]'

Furthermore, quantified antecedents may bind pronouns only within the sentence. A pronoun in a subsequent sentence cannot be interpreted as referring back to the quantified antecedent.

(23) namo·ya awiyak pakamahwe·w wi·wa.
 no one hit 3-obv his wife obv
 * ma·ka otawa·simisa a·skaw pakamahwe·w.
 but his child obv sometimes hit 3-obv
 'No one [prox] hits his [prox] wife [obv].
 * But sometimes he [prox] hits his [prox]
 children [obv].'

In general, proximate pronominal forms are obligatorily coreferent to c-commanding proximate antecedents whether the antecedent is definite or quantified. This is reminiscent of Reinhart's (1983) analysis of some definite NPs in English acting as semantic operators binding the pronouns they c-command. According to Reinhart, this may be seen in VP deletion sentences which allow a "sloppy identity" reading. The following example is taken from Reinhart 1983, p. 150.

(24) Felix hates his neighbors and so does Max.

This sentence has two readings: the strict reading is that Max hates Felix's neighbors, and the sloppy reading is that Max hates Max's neighbors. Reinhart represents the sloppy reading as follows, in which Felix and Max are operators binding variables:

(25) $(\lambda x(x \text{ hates } x\text{'s neighbors}))(\text{Felix})$
 and $(\lambda x(x \text{ hates } x\text{'s neighbors}))(\text{Max})$

In the strict reading of (24), on the other hand, his is not a bound variable; rather it has a fixed referent of "Felix".

If proximate pronominal forms are variables bound by proximate antecedents, similar patterns should be found in Cree. However, this is not borne out. The interpretation of deleted material allows only strict readings, and not sloppy readings:

- (26) John sa·kihe·w okosisa, wi·sta mi·na George
 love 3-obv his son obv he.too also
 'John [prox] loves his [prox] son [obv],
 and so does George [prox].'

The reading of the above sentence is unambiguously that George loves John's son, and not that George loves his own son. In other words, the pronominal possessor has independent reference, just as in the reading of (24) which does not involve bound variable anaphora. This argues against assimilating all cases of intrasentential proximate anaphora to bound variable phenomena. [7]

Cree has a flat, symmetrical clause structure and a corresponding lack of subject-object asymmetries in bound variable anaphora. Though the system of obviation provides a means of tracking third person reference in the constructions discussed here, the obligatory coreference between proximate pronominal forms and definite antecedents appears to be a phenomenon distinct from that of binding by quantified antecedents.

Notes

* Thanks to Madeleine Greyeyes Dennison and John Starblanket, who provided examples quoted here, and to Cathy O'Connor, for discussion of the issues involved. In the examples taken from Bloomfield 1930, 1934, I have omitted word-final h to conform to the current orthography.

1. The system of verb inflection is complex and interesting in its own right; see Wolfart 1973 or Dahlstrom 1986 for details. However, the internal organization of the inflectional system does not bear upon the issues discussed here. Categories marked on the verb will simply be indicated in the interlinear glosses without breaking down the inflection into component morphemes.
2. See Bresnan and Mchombo 1985 for discussion of agreement versus incorporated pronouns.
3. Both subject and object may be marked obviative: Dahlstrom 1986 discusses some textual examples of this. It is impossible, however, for both subject and object

to be proximate.

4. (2) is taken from a text in Bloomfield 1930 (p. 36) in which the trickster Wisahkechahk challenges Fox to a race. (3) has been made up for the purposes of this discussion.

5. The third person possessive prefix is o- before consonant-initial stems. Before vowel-initial independent stems it is ot-; before vowel-initial dependent stems (those requiring a possessor) it is w-, or \emptyset if the stem begins in o(·).

6. I am here ignoring the E-type pronouns of Evans 1980.

7. In (26) George is proximate. If this NP were obviative, the pronoun wi-sta 'he too' could not be used; the reading would then be that John loves both his son and George.

Bibliography

- Bloomfield, Leonard, 1930. Sacred stories of the Sweet Grass Cree. National Museum of Canada Bulletin 60. Ottawa.
- Bloomfield, Leonard, 1934. Plains Cree texts. American Ethnological Society Publications, 16. New York.
- Bresnan, Joan, and Sam A. Mchombo, 1985. Topic, pronoun, and agreement in Chichewa. Stanford University ms.
- Dahlstrom, Amy, 1986. Plains Cree morphosyntax. UC Berkeley dissertation.
- Evans, Gareth, 1980. Pronouns. Linguistic Inquiry 11.2:337-362.
- Kuno, Susumu, and Etsuko Kaburaki, 1977. Empathy and syntax. Linguistic Inquiry 8.4:627-672.
- Reinhart, Tanya, 1983. Anaphora and semantic interpretation. Chicago: University of Chicago Press.
- Wolfart, H. Christoph, 1973. Plains Cree: a grammatical study. American Philosophical Society Transactions, new series, vol. 63, part 5. Philadelphia.