How Far Can a Probe Agree:
Microvariation in Algonquian Peripheral Agreement

by

Yadong Xu

A thesis submitted to the Faculty of Graduate Studies
In partial fulfillment of the requirement of
the degree of Doctor of Philosophy

Department of Linguistics
University of Manitoba

How Far Can a Probe Agree:
Microvariation in Algonquian Peripheral Agreement

Yadong Xu, Ph.D.
University of Manitoba
August 2022

Abstract

This thesis investigates microvariation in agreement with objects across the Algonquian languages, a sub-family of the Algic languages of North America. The empirical focus of the thesis is *peripheral agreement* (Goddard 1979; Pentland 1999), an agreement suffix that indexes the number, gender, and obviation of a third-person argument. The questions of interest concern the complex patterning of this suffix in agreeing with the third-person internal argument and its role in conditioning the shape of the preceding person-number agreement suffix called *central agreement* (Goddard 1979). Through examining seven Algonquian language varieties from both Central and Eastern groups, a number of factors condition the intricate variability of peripheral agreement in indexing the third-person object, including definiteness, gender, and the syntactic position of the object as well as the person-number features of the subject.

I argue that a combination of three analytical ingredients accounts for the varying ability of peripheral agreement to index the object. The first ingredient is accessibility. I build on Keine's (2016, 2019) *horizons* model, proposing that the capacity of the probe to access a DP can be microparameterized. In particular, the variable treatment of secondary objects (Goddard 1979; Rhodes 1990) reflects that the accessibility domain of the probe can be language-specific: secondary objects are accessible in certain Eastern languages (e.g. Unami Delaware) but inaccessible in some non-Eastern languages (e.g. Oji-Cree). As for the second ingredient, valuation of the probe's features, I show that the patterning of peripheral agreement with primary objects depends on two microparameters involving *relativized probing* (Béjar & Rezac 2009; Nevins 2011; Preminger 2011; Oxford 2015) and the *Activity Condition* (Chomsky 2000, 2001; Hammerly 2020). The third ingredient concerns morphological operations. I explain that the cases where peripheral agreement disappears depending on features of the subject are best analyzed as having a *post-syntactic* source. I also provide a contextual allomorphy analysis (Bobaljik 2000) capturing that the shape of the central suffix is dependent on the kinds of third-person features that the probe responsible for peripheral agreement has copied over from its goal.

More broadly, this thesis sets out several dimensions of microvariation in the Agree operation (Chomsky 2000, 2001) as clarified through the lens of the complex inflectional systems and rich variations across the Algonquian languages. First, the status of a horizon (the domain that halts

the search of the probe) can differ not only in whether it exists in a particular language, but also in finer details involving subcategories of the same projection. Second, variation in probe relativization across the languages closely models the selectiveness of the probes that search for third-person features: [uD] in Maliseet-Passamaquoddy, [uDef] in Unami Delaware, and [uProx] in Plains Cree.

Thesis Supervisor: Will Oxford
Internal Examiners: Jila Ghomeshi
    Nicole Rosen
External Examiner: Elizabeth Ritter

Acknowledgement

You might wonder what led me to pursue a PhD in linguistics and write a doctoral thesis on Algonquian languages. Please indulge me, allowing me to tell the story, thanking people who have helped along the way.

My sincere gratitude goes to Dr. Will Oxford, Dr. Jila Ghomeshi, and Dr. David Pentland, without whom I would never know about linguistics or Algonquian morphosyntax. First and foremost, I am incredibly lucky to have Will as my advisor and mentor for my Master's and PhD. He is an exemplar of world's best advisor for his sharp mind, his blazing talent in research and teaching, and the kindness in his spirit. His brand is the ability to extract the essence from complex cross-linguistic patterns, explaining them in the simplest language and visualizing them in most clear way. He genuinely cares for his students. He generously spared his funding in my academic development, enriching my experience in the variety of languages and granting me the opportunity to explore my curiosity through fieldwork on Oji-Cree. Will has a warm soul. In my most exhausting yet least appreciated job experience as a waitress back in 2015, he visited me by dining at the restaurant I worked at. His visit left me not just a generous tip but a reputation of being valued by a university professor among my co-workers. Such heart-warming deeds of his were numerous. I am therefore forever grateful for his knowledge and his good-hearted nature.

Jila is the second person who is special to my growth. She opened the door of linguistics to me in her 2012 Intro course. She might not know that her presence has been a motivation. She once said in class that she was a big nerd. In my early 20s, I was reluctant to admit who I was or what I wanted. Her frankness was empowering. From my point of view, she was smart, strong, confident, and well-spoken. If such a charming person called herself a nerd, I longed for being a nerd too. In 2014, when I was on the fence struggling to choose Chinese or Algonquian (my newly found passion) as my primary research area, she encouraged me to dare to be ambitious, going for the choice that seemed to be a bolder one at the time. I am so fortunate to be cared for by her. When she saw an applicable award or a job opportunity, she thought of me. I am also thankful that she tirelessly wrote many letters of recommendation for me and gave careful thought to each different one.

It would be amiss if I did not thank my friends outside of linguistics. In a decade of living 10,231 km away from my family, my Winnipeg friends are the gravity keeping me grounded. Especially, I thank Qiuyi, Zoe, Amber, Yunlong, Jiaqi, Julian, Tony, Peiyuan, Bing, Jia, Zhu Laoshi, and Aihua for their unwavering support and belief in me. My special thanks are extended to Wang, Elaine, Dean, Phoebe, Xiao, Vince, Clara, Cecilia, Dawei, and Miq. They are a group of friends who I saw every day on Zoom in the last two years but have never had the chance to meet in person yet. Our friendship started in a cloud studying room in March 2020 during the first lockdown of COVID. I am appreciative of their company in countless study-together hours. They made me feel light-hearted and less alone in a time of isolation when uncertainty, anxiety, and depression were supposed to prevail.

Last but not least, I cannot make it this far without my awesome family. I am extremely thankful to my mom, Yongxia Wei, my dad, Runlin Xu, and my sister, Yaxuan Xu, for their everlasting love and their firm belief in me. My parents' full support cleared away my financial concern, allowing me to freely pursue the highest degree in education. Thank you to my cousin, Yanwen Xu, who had the convenience to urge me to study and listen to my pre-graduation rant for sharing the same time zone with me. Our little "Tiger Wolf Squad" had creatively come up with strategies, tools, and even fines that effectively motivated each other's progress (mostly mine). Finally, I want to acknowledge my sweet boy, Theta, who was literally by my side with every word I typed in this thesis.

"There is no time for despair, no place for self-pity, no need for silence, no room for fear.
We speak, we write, we do language. That is how civilizations heal."
—Toni Morrison

Contents

List of Tables

List of Abbreviations

*	Proto-Algonquian reconstruction
0	inanimate third-person
1	first-person
2	second-person
3	animate third-person, proximate
3′	animate third-person, obviative
3→1	3rd-person logical subject, 1st-person logical object
ABS	absolutive
AC	activity condition
ACC	accusative
ADDR	addressee
AI	animate intransitive
AI+O	transitivized animate intransitive
APPL	applicative
AN	animate
C	complementizer head
CONJ	conjunct
DAT	dative
DEF	definite
DEM	demonstrative
DIM	dimunitive
DIR	direct theme sign
DIST	distal
DM	Distributed Morphology
DUB	dubitative mode
EPP	extended projection principle
ERG	ergative

F	feminine
FTV	formative element
FOC	focus
FUT	future
GEN	genitive
II	inanimate intransitive
IC	initial change
IMP	imperative
IN	inanimate
INDEF	indefinite
IND	indicative
INDP	independent
INF	infinitive
INFL	inflectional head
INST	instrumental
INV	inverse
LOC	locative
M	masculine
MOD	modal head
NEG	negative
NMLZ	nominalizer
OBJ	object
OBL	oblique
OBV	obviation/obviative
PA	Proto-Algonquian
PEJ	pejorative mode
PERS	person
PIC	Phase Impenetrability Condition
PF	phonological form
PFX	prefix
PFV	perfective
PL	plural
POSS	possessive
PRET	preterite mode
PRO	pronoun

PROX	proximate
PST	past tense
PTCT	participle
Q	question marker/particle
RECIP	reciprocal
REFLX	reflexive
REL	relative
RR	relative root
SAP	speech act participant
SBD	subordinative mode
SBJV	subjunctive
SCOPA	Structural Condition on Person Agreement
SFX	suffix
SG	singular
SUB	subordinative
SUBJ	subject
T	tense head
TA	transitive animate
TA+O	ditransitive with animate goal
TI	transitive inanimate
TOP	topic
u	uninterpretable
V	verb stem
v	light verb

Chapter 1

Introduction

Much work on double-object constructions notes that the goal and the theme show asymmetries for syntactic operations like object shift (Holmberg 1986; Diesing 1996; López 2012; Gallego 2013; Holmberg et al. 2019, among others), passivization (Baker 1988; Woolford 1993; McGinnis 2001; Anagnostopoulou 2003; Haddican & Holmberg 2019, among others), and agreement (Bresnan & Moshi 1990; Zeller 2015). This thesis is grounded in the Algonquian languages, investigating cross-linguistic asymmetries in agreement with the internal arguments of ditransitives and monotransitives.

Icelandic, in simplest strokes, demonstrates an asymmetry in object shift. If there are two objects and only one of them shifts, it must be the higher of the two (the same holds for Tagalog: Rackowski & Richards 2005:570). The internal arguments of the double object construction are assumed to involve Pylkkänen's (2008) high applicative construction in which the goal is structurally above the theme. As illustrated in (1a), the goal can be shifted to the left of the negator, *ekki*, whereas in (1b), the theme cannot be shifted.[1]

(1)   Object shift in Icelandic ditransitives (Collins & Thráinsson 1996:404, 420)

    a.   goal-shift is permitted
        Ég lána **Maríu** ekki bækurnar.
        I lend Maria.DAT not books.ACC
        'I do not lend the books to Maria.'

    b.   theme-shift is not permitted
        ?Ég lána **bækurnar** ekki Maríu.
        I lend books.ACC not Maria.DAT
        'I do not lend the books to Maria.'

---

[1]Collins & Thráinsson (1996:420) note that (1b) is acceptable when there is stress on the goal. Otherwise, the sentence is unacceptable.

Regarding passivization, English displays an asymmetrical pattern in which A-movement is confined to the higher internal argument. As exemplified in (2b), the higher argument, the goal, is allowed to move to the subject position, whereas in (2b) the lower theme is not allowed.

(2)   a.   I gave Maria a book. active
      b.   Maria was given a book. goal-passive
      c.   ˣA book was given Maria. theme-passive

However, passivization of themes is not prohibited cross-linguistically. Norwegian is known for displaying a symmetrical pattern in which the goal and the theme both can be passivized (the same holds for Swedish, some British English dialects, Kinyarwanda, Zulu, and Luganda; see Haddican & Holmberg 2019). As exemplified below, the counterparts of (2b-c) are both grammatical in Norwegian.

(3)   Object passivization in Norwegian (Haddican & Holmberg 2015:145)

      a.   goal-passive
           Jon ble gitt   boka.
           John was given the.book
           'John was given the book.'

      b.   theme-passive
           Boka   ble gitt   Jon.
           the.book was given Jon
           'The book was given John.'

When it comes to agreement, interesting variations with respect to the indexing of goals and themes have been discovered within the Bantu language family. Zulu has been described as a symmetrical language because either object of a ditransitive verb can be indexed by an object marker (see Zeller 2015 for details). In contrast, other members of the Bantu family such as Chichewa (Bresnan & Moshi 1990) or Swahili (Riedel 2009) are pointed out as asymmetrical. Zeller (2015) argued for Zulu that object agreement is constrained by locality: a theme argument can only be indexed when it is dislocated and marked with an antifocus feature. When both internal arguments are dislocated and marked as antifocus, locality requires that agreement must be with the goal, as this argument is closer to the agreement probe than the theme.

Turning to Algonquian languages, they demonstrate comparable language-internal variations in agreement asymmetries. Using ditransitive verbs as a starting point, the asymmetrical availability of internal arguments can be observed through the lens of an agreement suffix called PERIPHERAL AGREEMENT (Goddard 1979; Pentland 1999; indicated in boldface hereafter). This suffix occurs at the right edge of the main clause-type verb and expresses the nominal features

of a third-person argument (gender, number, and obviation). The asymmetrical agreement pattern is exemplified by Meskwaki (Central Algonquian). As shown below, the goal is available for agreement and therefore is indexed by the peripheral suffix -*a* as in (4a), while the theme is unavailable for agreement: the intended pattern with peripheral agreement indexing the theme results in ungrammaticality in (4b).

(4)   Meskwaki ditransitive: peripheral agreement indexes the goal

      a.   *nepye·tahwa·wa*
            ne- pye·tahw -a·   -w   -**a**
            1- bring   -3.OBJ -1SG -**AN.SG**
            'I brought it **for him**.' (Dahlstrom 2009:231)

      b.   ˣ*nepye·tahwa·wi*
            ne- pye·tahw -a·   -w   -**i**
            1- bring   -3.OBJ -1SG -**IN.SG**
            Intended: 'I brought **it** for him.'

However, unlike Meskwaki, in which peripheral agreement indexes the goal, the Passamaquoddy (Eastern Algonquian) example in (5) presents a different pattern, showing that it is the theme that is indexed by peripheral agreement: the peripheral suffix -*əl* 'IN.PL' indexes the inanimate 'potatoes' (the theme) rather than the animate 'pigs' (the goal).

(5)   Maliseet-Passamaquoddy: peripheral agreement indexes the theme
      nkissəmanəl piksək pəcetesəl
      n- kissəm -a   -n -**əl**   piks -ək   epeskəmakən -əl
      1- feed   -3.OBJ -1SG -**IN.PL** pig -AN.PL potato   -IN.PL
      'I fed the pigs (AN) **potatoes** (IN).' (Sherwood 1983:125)

Considering that locality is a fundamental property of natural language syntax, the different behaviors of peripheral agreement in Meskwaki and Passamaquoddy lead us to one of the central puzzles of this thesis: how close must two items be in order for agreement to take place?

    Asymmetries in peripheral agreement can be found not just in ditransitive constructions, but with monotransitive verbs as well. The example in (6a) illustrates that the inanimate object is accessible for peripheral agreement in Southwestern Ojibwe (hereafter SW Ojibwe), indicated by -*an* 'IN.PL', but (6b) shows that the very same object is not indexed by peripheral agreement in Plains Cree, where the animate subject is indexed instead, indicated by -*ak* 'AN.PL'.

(6)   Differential accessibility in peripheral agreement

    a. *owaapantaanaawaan*   SW Ojibwe
        o- waapant -aa   -naawaa -**an**
        3- see   -0. OBJ -3PL   **-IN.PL**
        'They see **them** (IN).' (Nichols 1980:282)

    b. *wâpahtamwak*   Plains Cree
        wâpaht -am   -w -**ak**
        see   -0.OBJ -3 **-AN.PL**
        '**They** see it/them (IN).' (Wolfart 1973:43)

When seven major Algonquian language varieties are surveyed, an even greater amount of variation in terms of the degree of accessibility in peripheral agreement with third-person arguments is found. The extensive cross-linguistic variations therefore motivate the exploration of the ability of peripheral agreement to access the internal arguments. The empirical contribution of this thesis is that the availability of objects for peripheral agreement depends on an intricate set of factors (see Section 1.1.1 for an overview or Section 3 for a lengthy discussion). The theoretical contribution is to pinpoint the mechanisms that are responsible for giving rise to such substantial variation.

Before proceeding to the next section, it is worthwhile to establish that Algonquian languages follow principles that are rooted from configurational languages despite possessing the characteristics that are commonly associated with non-configurational languages (Hale 1983), including free word order, discontinuous constituents, and null anaphora. Even though Algonquain word order is not rigidly fixed, multiple researchers have shown that the positioning of nominals is tied to distinct pragmatic or syntactic functions. Pragmatically, word order is largely discourse-determined: Dahlstrom (1994, 2013b) has argued for Plains Cree and Meskwaki that word order reflects the discourse-based hierarchy in which the topic/focus NPs are mapped to a preverbal position while non-topic/focus NPs are mapped to a post-verbal position. But there is still evidence for syntactic hierarchy in that preverbal NPs are found to have a distinct structural status from post-verbal NPs. For instance, Russell & Reinholtz (1995) have shown that preverbal NPs c-command post-verbal NPs but not vice versa in Swampy Cree (see also Bruening 2001 for Passamaquoddy).

The remainder of this chapter provides a bird's-eye view of the core problem and then introduces the relevant theoretical background. The chapter is organized as follows. Section 1.1 presents the core puzzle highlighting the key divergences in the accessibility of objects to peripheral agreement. Then Section 1.2 lays out the relevant theoretical accounts that can potentially explain why certain nominals are accessible for agreement while other nominals are inaccessible. Section 1.3 summarizes the account that the thesis will propose for the behaviors of peripheral

agreement across languages. Lastly, Section 1.4 outlines a short summary of each chapter. To keep this chapter's discussion centered on key language patterns and relevant theoretical frameworks, the full background on the Algonquian language family and morphosyntactic descriptions will be held back until Section 2.1 of the next chapter.

1.1 The puzzle: Peripheral agreement

This section concisely presents the core puzzles involving the different patterns of peripheral agreement. To avoid too many complications, the comprehensive description of the complex patterns will be withheld until Chapter 2 and the complete detailed examples from a wider range of languages will be withheld until Chapter 3. In what follows, in Section 1.1.1, I illustrate the crucial diverging patterns of peripheral agreement, emphasizing that its ability to index objects shows sensitivity to various properties, such as gender of the object, person of the subject, verb classes, and argument configurations. Then in Section 1.1.2, I present a long-standing problem that centers on the connection between peripheral agreement and the shape of a morpheme called the FORMATIVE ELEMENT (Goddard 2007).

1.1.1 Cross-linguistic variations

Peripheral agreement occurs at the right edge of the verb in the independent inflection (i.e. main clause inflection) and expresses the animacy, number, and obviation of a third-person argument. It often indexes either the subject of an intransitive verb, as in the Oji-Cree example in (7a), or the object of a transitive verb, as in (7b), although other patterns are also possible.[2] What is noteworthy about the examples in (7) is this: the pattern of peripheral agreement indexing the third-person subject of intransitive verbs shown in (7a) is invariant across all languages examined in this thesis. However, regarding the pattern in (7b) in which peripheral agreement indexes the object, extensive cross-linguistic variation arises, which leads to the necessity of the exploration in this thesis.

(7)   Oji-Cree: subject and object indexing[3]

    a. *nipaawak*   intransitive
        nipaa -w -**ak**
        sleep -3 -**AN.PL**
        '**They** (AN) are sleeping.'

---

[2]It can also index the subject of a transitive verb in the case of the inverse inflection.

[3]The Oji-Cree data presented throughout this thesis are from the author's fieldwork.

b.   *niwaapamaak*   transitive
     ni- waapam -aa   -Ø -**ak**
     1- see   -3.OBJ -1SG -**AN.PL**
     'I see **them** (AN).'

In the following, I focus on the ability of peripheral agreement to index the object across Algonquian languages. At the end of this subsection, these variations are shown to form a "staircase" cline. It should be noted here that this thesis does not discuss the Plains Algonquian languages. Unlike the Eastern and Central Algonquian languages, the Plains languages, such as Blackfoot and Arapaho, have undergone more dramatic changes and greater innovations (Goddard 1994b). To facilitate the comparison of fine-grained details, the languages chosen are either from Eastern Algonqiuan (a genetic grouping; languages included are, e.g. Unami Delaware, Massachusett, and Maliseet-Passamaquoddy) or Central Algonquian (an areal grouping; languages included are, e.g. Menominee, Ojibwe, Cree, and Meskwaki).

The first variation in the accessibility of objects to peripheral agreement involves the gender of the object.[4] The most robust use of peripheral agreement occurs when the object is animate. The ability of peripheral agreement to index objects is less robust when the object is inanimate. Examples with animate objects are given for Menominee in (8a) and Plains Cree in (8b). The accessibility of the animate object is shown by the appearance of the peripheral suffix *-ak* 'AN.PL'.[5]

(8)   Peripheral agreement with the animate object

a.   *nena·na·wak*   Menominee: ✓3.OBJ
     ne- na·n -a·   -w -**ak**
     1- fetch -3.OBJ -1SG -**AN.PL**
     'I fetch **them** (AN).' (Bloomfield 1962:152)

b.   *niwâpamâwak*   Plains Cree: ✓3.OBJ
     ni- wâpam -â   -w -**ak**
     1- see   -3.OBJ -1SG -**AN.PL**
     'I see **them** (AN).' (Wolfart 1973:41)

The examples in (9) show that the ability of peripheral agreement to index the object differs cross-linguistically when the object is inanimate. In the Menominee form in (9b), the inanimate

---

[4]There are debates on whether animacy and gender are the same thing. Wiltschko (2012) and Ritter (2014) have argued for Blackfoot that animacy is not gender, but nominal aspect. In this thesis, I follow the standard position to treat the Algonquian animacy noun classification as a gender system (Dahlstrom 1995; Goddard 2002; Mathieu 2012, 2019).

[5]In this thesis, I follow Goddard's (1967:70, 2007) analysis of the suffixes *-w*, e.g. (8), and *-n*, e.g. (9), which precede the peripheral suffix, as singular markers that are interpreted together with the person prefix. Further explanation will be given in Section 2.2.1, cf. (18). In a different analysis, Pentland (1999:239) treated these suffixes as number-indifferent third-person markers.

object is accessible for peripheral agreement, manifested by the suffix *-an* 'IN.PL'. In contrast, in the corresponding Plains Cree form in (9b), the inanimate object is unavailable for peripheral agreement: the peripheral suffix does not appear at all in this form, resulting in the number of the inanimate object being neutralized.

(9)   Peripheral agreement with the inanimate object

    a. *nepo·na·nan*   Menominee: ✓0.OBJ
        ne- po·n -a·   -n   **-an**
        1- put.in -0.OBJ -1SG **-IN.PL**
        'I put **them** (IN) in.' (Bloomfield 1962:158)

    b. *niwâpahtên*   Cree: ✗0.OBJ
        ni- wâpaht -ê   -n
        1- see   -0.OBJ -1SG
        'I see it/them (IN).' (Wolfart 1973:43)

The gender-conditioned variation shown by the examples in (8) and (9) is summarized in Table 1.1. In transitive clauses in which the subject is a singular SAP (speech act participant, i.e. a first or second person), Menominee shows peripheral agreement for objects of either gender (indicated by the ✓ symbol), while Plains Cree shows peripheral agreement only for the animate object; the inanimate object fails to be indexed by peripheral agreement (indicated by the ✗ symbol).

Table 1.1: Variation in object indexing conditioned by object's gender

	Menominee	**Cree**
SG SAP on 3	✓	✓
SG SAP on 0	✓	✗

The next difference involves contexts in which both arguments are third persons. In the Oji-Cree form in (10a), the suffix *-an* 'IN.PL' demonstrates that peripheral agreement is able to access the third-person object. The corresponding Menominee and Cree forms differ from the Oji-Cree form in that the object is not indexed by peripheral agreement, which instead indexes the third-person subject. To save space, only the Menominee example is given in (10b), but bear in mind that Plains Cree shows the same pattern.

(10)   Peripheral agreement in third-person forms

    a. *owaapahtaanan*   Oji-Cree: ✓0.OBJ
        o- waapaht -aa   -n   **-an**
        3- see   -0.OBJ -3SG **-IN.PL**
        'S/he sees **them** (IN).'

    b.   *po·namok*   Menominee: ✗0.OBJ

            po·n   -am   -w **-ak**

            put.in -0.OBJ -3 **-AN.PL**

            '**They** put it/them (IN) in.' (Bloomfield 1962:159)

The Menominee example in (10b) is distinct from the singular SAP subject example in (9b) above, where peripheral agreement is completely absent. In the third-person example in (10b), peripheral agreement does appear, but it indexes the subject rather than the object, manifested by *-ak* 'AN.PL'. Consequently, the inanimate object is unindexed by peripheral agreement and ends up with its number distinction neutralized.

    The variation in peripheral agreement in third-person forms is summarized in Table 1.2. In forms involving two third-person arguments, the object is accessible for peripheral agreement in Oji-Cree but inaccessible in Menominee and Cree. In the following, the ✗symbol with a gray background represents the pattern in which the object is not indexed by peripheral agreement but peripheral agreement does appear indexing a different argument, in this case the third-person subject.

Table 1.2: Variation in object indexing conditioned by subject's person

	Oji-Cree	Menominee	Cree
3 on 0	✓	✗	✗

    The next variation involves a special class of verbs that are syntactically transitive but morphologically intransitive, known as AI+O verbs (Goddard 1979). These verbs are capable of taking an internal argument but lack the object-marking suffix known as a THEME SIGN. The verbs illustrated above are morphologically transitive because they contain a theme sign, e.g. *-aa* '0.OBJ' in (10a) and *-am* '0.OBJ' in (10b). No such theme sign appears in the AI+O verbs in (11). The AI+O examples in (11), from Nishnaabemwin (Eastern Ojibwe) and Oji-Cree (Severn Ojibwe), show different peripheral agreement patterns. In Nishnaabemwin, the AI+O object is available for peripheral agreement and accordingly is indexed by *-an* 'IN.PL', whereas in Oji-Cree (as well as Menominee and Cree), the AI+O verb is inflected like an intransitive verb with peripheral agreement indexing the subject, thus leaving the object unindexed by peripheral agreement.

(11)   Accessibility sensitive to verb class

    a.   *wmiigwenan*   Nishnaabemwin: ✓0.OBJ

            w- miigwe   -n **-an**

            3- give.away -3SG **-IN.PL**

            'S/he gives **them** (IN) away.' (Valentine 2001:244)

b.   *ataawe waapikoniin*   Oji-Cree: [✗]0.OBJ
     ataawe -w -**Ø**   waapikony -an
     buy   -3 -**AN.SG** flower   -IN.PL
     '**S/he** buys flowers (IN).'

Note that the animate singular form of the peripheral suffix is morphologically zero in all Algonquian languages exemplified so far. Since the Oji-Cree example in (11b) involves a zero singular peripheral suffix, I add an example from Meskwaki to reinforce the identification of the Oji-Cree pattern. Meswkaki is a language in which the animate singular form of the peripheral suffix is overtly realized (as -*a*). The Meskwaki example in (12) shows the same peripheral agreement pattern as the Oji-Cree example in (11b): the peripheral suffix indexes the animate singular subject rather than the inanimate singular object.

(12)   *ahpe·nemowa na·tawino·ni*   Meskwaki: [✗]0.OBJ
       ahpe·nemo -w -**a**   na·tawino·n -i
       depend.on -3 -**AN.SG** medicine   -IN.SG
       '**S/he** relies on the medicine (IN).' (Dahlstrom 2009:231)

The use of peripheral agreement to index the object of an AI+O verb is less widespread than its use with morphologically transitive verbs. As shown in Table 1.3, the AI+O object is accessible for peripheral agreement in Nishnaabemwin but inaccessible in the three languages previously surveyed: Oji-Cree, Menominee, and Plains Cree.

Table 1.3: Variation in object indexing conditioned by verb class

	Nishnaabemwin	**Oji-Cree**	**Menominee**	**Cree**
AI+O OBJ	✓	✗	✗	✗

Lastly, I turn to the context of ditransitives, also known as TA+O verbs (Goddard 1979), which have two internal arguments: a goal (the indirect object) and a theme (the direct object). I assume the structure proposed by Quinn (2006b) for Penobscot and Lochbihler (2012) for Ojibwe, in which the goal is introduced in ApplP, higher than the theme in *v*P. The languages differ regarding which internal argument is indexed by peripheral agreement. In Unami Delaware, the lower theme is accessible for peripheral agreement, indicated by the appearance of -*a(l)* 'them IN.PL' in (13a). However, the other languages discussed above are all incapable of indexing the theme, as illustrated for Meskwaki in (13b), where the suffix -*a* indexes the higher goal 'her/him' rather than the lower theme 'it'.

(13) Accessibility sensitive to argument configuration

    a.   *nəmi·lá·na*   Unami: ✓theme

          nə- mi·l -a·   -n   **-al**

          1- give -3.OBJ -1SG **-IN.PL**

          'I gave **them** (IN) to him.' (Goddard 2020:104)

    b.   *nepye·tahwa·wa*   Meskwaki: ✗theme

          ne- pye·tahw -a·   -w   **-a**

          1- bring   -3.OBJ -1SG **-AN.SG**

          'I brought it for **her/him**.' (Dahlstrom 2009:231)

Table 1.4 summarizes the full set of variations in the accessibility of objects for peripheral agreement discussed above. As the table shows, the overall pattern of variation takes the shape of a cline. However, beyond the patterns summarized in this table, there are further variations that make the picture slightly less tidy. In the remaining paragraphs, two particular complications are introduced, to be discussed in more detail in Chapter 3.

Table 1.4: Cross-linguistic cline of objects indexed by peripheral agreement

	Unami	Nishnaabemwin	Oji-Cree	Menominee	Cree
1/2SG on 3	✓(DEF)	✓	✓	✓	✓
1/2SG on 0	✓(DEF)	✓	✓	✓	✗
3SG on 0	✓(DEF)	✓	✓	✗	✗
AI+O OBJ	✓(DEF)	✓	✗	✗	✗
TA+O THEME	✓(DEF)	✗	✗	✗	✗

The first context that breaks the "staircase" cline in Table 1.4 involves forms with a plural SAP subject. In certain languages, such as Menominee, the number of the SAP subject affects the ability of peripheral agreement to index an inanimate object. The pattern previously shown for Menominee in (9a), repeated here as (14a), in fact holds only when the SAP subject is singular. When the SAP subject is plural, as in (14b), peripheral agreement is absent, with the number of the inanimate object being neutralized.

(14) Accessibility sensitive to plurality of the SAP actor: e.g. Menominee

    a.   *nepo·na·nan*   ✓0.OBJ

          ne- po·n -a·   -n   **-an**

          1- put.in -0.OBJ -1SG **-IN.PL**

          'I put **them** (IN) in.' (Bloomfield 1962:158)

b.   *nepo·nɛ·menaw*   ✗0.OBJ
    ne- po·n -ɛ·   -menaw
    1- put.in -0.OBJ -1PL
    'We put it/them (IN) in.' (Bloomfield 1962:159)

The second complication is observed in some Eastern languages, in which the definiteness of the object is relevant for its treatment by peripheral agreement. The pattern shown previously for Unami Delaware in (13a) in fact holds only for ditransitive forms with a definite theme. Drawing parallel examples from Massachusett,[6] another Eastern language, if the theme is indefinite, as in (15b), peripheral agreement stops indexing the theme and instead indexes the goal (as it always does in Meskwaki, cf. (13b)).

(15)   Accessibility sensitive to definiteness: e.g. Massachusett

a.   *nuttinnonash*   ✓definite
    nut- in   -ô   -n   -**ash**
    1-   say.so -3.OBJ -1SG -**IN.PL**
    'I tell **them** (DEF) to him.' (Goddard & Bragdon 1988:531)

b.   *nuttinnammauonooog*   ✗indefinite
    nut- inam -ô   -wunôn -**ak**
    1-   give -3.OBJ -1SG   -**AN.SG**
    'We give some thing (INDEF) to **them** (DEF).' (Goddard & Bragdon 1988:519)

To sum up, the accessibility of objects for peripheral agreement across languages involves a range of complications. Some issues seem to be more language-specific, such as the definiteness-based sensitivity and the ability to access the syntactically low theme in TA+O verbs, as both of these properties are observed only in Eastern languages. However, some issues are more language-independent, such as the gradient sensitivity involving the gender of the object and the person and/or number properties of the subject.

1.1.2   Correlations with formative elements

This section discusses the connection of peripheral agreement with a controversial set of morphemes known as FORMATIVE ELEMENTS (Goddard 2007). These elements are not immediately adjacent to the position of the peripheral suffix but the selection of the formative element actually correlates with the behavior of peripheral agreement. To introduce the agreement morphemes at issue, the Algonquian transitive independent verb template is illustrated in (16), in which central agreement (underlined) is manifested by a combination of the person-denoting prefix, e.g.

---

[6]The Massachusett orthography presented in the first line uses the orginal spelling from Goddard & Bragdon (1988). The inter-linear glosses in the second line provide the underlying morphemic analysis by me.

Munsee Delaware *nə-* '1', and the number-specifying central suffix, *-wəna·* '1PL'. Note that TAM (tense/mood/modality) morphemes, here the preterite suffix *-əpan*, can intervene between the central suffix and the peripheral suffix. See Section 2.1.2 for more on verb templates.

(16) Verb template: e.g. Munsee Delaware 1PL→3PL preterite
      nəmi·la·wəná·p·ani·k 'We gave to **them**.' (Goddard 1979:173)

nə-	mi·l	-a·	-wəna·	-əpan	-i·k
1-	give	-3.OBJ	-1PL	-PRET	-AN.PL
prefix	stem	theme sign	central suffix	TAM suffix	peripheral suffix

Goddard (1979, 2007) categorized the central suffixes into three sets with their functions correlated with the characteristics of the peripheral participant (Goddard & Bragdon 1988:514). The three sets of central suffixes are distinguished formally by the "formative element" that occurs at the beginning of the central suffix. Taking the 1PL central suffix as a concrete example, the three sets of suffixes are exemplified by Massachusett in (17). Within each central suffix, the formative element is followed by the number marker, here the 1PL pluralizer (Pentland 1999) *-un(ôn)*. The usage of the three formally distinct 1PL suffixes, which can be regarded as three competing allomorphs, is conditioned by the properties of peripheral agreement: *-mun* (the m-ending, PA *-ehmena·*) is used when peripheral agreement is absent, as in (17a); *-wunôn* (the w-ending, PA *-wena·n*) is used when the peripheral participant is the lower-ranked animate argument, such as the 3PL object in (17b);[7] and *-unánôn* (the n-ending, PA *-ene·na·n*) is used when the peripheral participant is an inanimate argument, as in (17c), or the theme of an AI+O/TA+O verb.

(17) Massachusett: 1PL allomorphs

a. *nussohomun*   TA absolute
    nu- soh -ô   -mun
    1- send -3.OBJ -1PL
    'We sent (people) out.' (Goddard & Bragdon 1988:518)

b. *n8wadchanoinonog*   TA objective
    nu- wadchan -ô   -wunôn -ak
    1- keep   -3.OBJ -1PL   -AN.PL
    'We keep **them**.' (Goddard & Bragdon 1988:519)

c. *nuttahtunnannash*   TI objective
    nut- aht -aw   -unánôn -ash
    1- have -0.OBJ -1PL   -IN.PL
    'We have **them**.' (Goddard & Bragdon 1988:525)

---

[7]Here the "lower-ranked argument" refers to a third person in a form that involves an SAP and an animate third person or an obviative person in a form that involves two animate third person arguments.

Notice that the examples in (17) are labelled as "absolute" or "objective". These terms refer to two parallel inflectional patterns shown by transitive verbs. The use of the two patterns is conditioned by definiteness. If the object is indefinite, the absolute inflection is used, characterized by the m-endings. On the contrary, if the object is definite, the objective inflection is used, characterized by the w-endings or the n-endings.[8] Section 2.3.1 provides further explanation of the absolute and objective patterns.

The n-ending example in (17c) above involves an inanimate peripheral participant, but the conditioning of n-endings by inanimates is not the full story, as the n-endings also appear when peripheral agreement indexes the SECONDARY OBJECT (the object of an AI+O verb or the theme of a TA+O verb; Goddard 1979; Rhodes 1990), which can be either animate or inanimate. In the Massachusett AI+O example in (18), the object is animate, indicated by the AN.PL peripheral suffix -*ak*, and the central ending begins with the n-formative. Such examples show that the use of n-endings is not exclusive to inanimate forms. The n-endings are used when peripheral agreement indexes either an inanimate argument or a secondary object or either gender.

(18)   Massachusett AI+O, 1SG→3PL
        nussohwhohkonunk
        <u>nu</u>- sohwhohkon -<u>n</u>   **-ak**
        1-   cast   -1SG -**AN.PL**
        'I cast **them** (AN) away.' (Goddard & Bragdon 1988:529)

The distribution of the formative elements and their correlation with peripheral agreement is summarized in Table 1.5.

Table 1.5: Formatives, distribution and correlation with peripheral agreement

Formative	Distribution	Peripheral agreement indexes
*-ehm	AI, absolute TA/TI	peripheral agreement absent
*-w	objective TA	lower-ranked primary animate argument
*-ene·	objective TI, AI+O, TA+O	inanimate argument or secondary object

It is noteworthy to mention that the distribution of the formatives is not conditioned by grammatical relations. The example in (17c) involves the n-formative being triggered by an inanimate object, but the n-formative can also be triggered by an inanimate subject, as in the Unami Delaware example in (19) (1PL n-ending -*əne·n(a·n)*, PA **-ene·na·n*).

---

[8]In the inverse inflection, which is used when a third person acts on an SAP, forms with an animate third person always take the objective inflection, but the definiteness-based contrast comes back in use when the actor of the inverse inflection is inanimate. See Goddard (1979, 2021) for descriptive data and see Xu (2021) for a theoretical analysis.

(19) Unami Delaware, 0sg→1pl objective

    mo·šə́š·a kkwi·tələtəwá·kan ntəlkó·ne·n   n-formative

mo·šəš·a	wə-	kwəhtələtəwa·kan	<u>nət</u>-	əl	-əkw	-əne·n(a·n)	-Ø
Moses	3-	law.IN.SG	1-	say.so	-INV	-1PL	**-IN.SG**

    '**Moses's law** tells us.' (Goddard 2020:104)

The Unami example in (20) contrasts with (19) in terms of the inanimate subject's definiteness: the indefinite subject in (20) triggers absolute inflection: there is no peripheral suffix at all, and the central suffix is realized as an m-ending *-əhməna·n* (PA *-*ehmena·n*) rather than an n-ending. Forms with an inanimate argument show an m-ending when the inanimate argument is indefinite, no matter whether it is a subject or an object, and they show an n-ending whenever the inanimate argument is definite, again no matter whether it is the subject or the object. Therefore, neither the m-endings nor the n-endings can be tied to a particular grammatical role.

(20) Unami Delaware, 0pl→1pl absolute

    wəla·te·namowá·k·an nəməšhika·kóhməna·   m-formative

wəla·te·namoá·k·an	<u>nə</u>-	məšhika·	-əkw	-<u>əhməna·n</u>
gladness.IN.SG	1-	come.over	-INV	-1PL

    'Gladness come over us.' (Goddard 1979:159)

Formatives are interesting but perplexing, and Pentland (1999:239) described them as "perhaps the most important — and certainly the most disputed — set of affixes" in the Algonquian verb. The Algonquian literature has not reached a consensus regarding what formatives really are. In fact, little work has focused directly on this question. Bruening & Rackowski (2001) analyzed formatives in Passamaquoddy as the spell-out of the "Def" head, but their proposal oversimplified the n-endings as expressing inanimate features, not acknowledging their occurrence with secondary objects of either gender. Oxford (2014) treated formatives in Proto-Algonquian as expressing the Tense heads but without going into detail. As mentioned as footnotes in Section 1.1, Goddard (1967:70, 2007) treated them as components of the central suffix, while Pentland (1999:239) considered them as number-indifferent third-person markers.

    The conditioning of formatives is evidently dependent on the patterning of peripheral agreement. However, a complete explanation for this dependency has not yet been offered in the literature. The notion that the realization of a morpheme can be dependent on another morpheme is not a completely novel phenomenon. Bobaljik (2000) described a similar correlation between the agreement affixes in Itelmen and Chukchi, where certain suffixes agreeing with the object show sensitivity to features of the subject. An account of the allomorphs of the formative elements could potentially follow Bobaljik's analysis. That is, formatives could be understood as contextual allomorphs of the central suffixes conditioned by features of the peripheral suffix.

Two previous papers, Halle & Marantz (1993) and Bruening & Rackowski (2001), paid attention to the correlation between these two agreement affixes and approached a contextual allomorphy analysis. However, a complete analysis is still missing.

1.2   Theoretical overview

This section lays the theoretical background that is relevant for understanding Agree, the syntactic operation that is responsible for agreement. Section 1.2.1 introduces the Agree framework proposed by Chomsky. Over the last two decades, developments have been made in understanding two aspects of how Agree operates: *accessibility* (what elements are visible for Agree) and *feature matching* (what it takes for Agree to succeed). Section 1.2.2 overviews accounts that handle the question of accessibility. Section 1.2.3 considers the question of feature matching. Finally, Section 1.2.4 introduces the claim of Distributed Morphology that adjustments may take place after syntax, accounting for mismatches between syntax and morphology.

1.2.1   Chomsky's model

In the framework of the Minimalist Program, Chomsky (2000, 2001) recognizes three operations that drive syntactic derivations: Move, Merge and Agree. The operation of interest in this thesis is Agree, which establishes a relation between a probe bearing uninterpretable φ-features (uF) and the closest c-commanded goal with matching interpretable φ-features (F). Chomsky proposes that the core functional categories C, T, v are introduced in the syntax with uF that need to be valued. When a functional head with uF enters the derivation, Agree operates in three steps, as summarized in (21) by Deal (2015). First, the head probes downward in search of a nominal goal that bears a matching F. Next, if such a goal is found, F is copied from the goal to the probe. Finally, when uF on the probe has been valued, the operation of Agree completes.

(21)   The operation Agree proceeds in three steps (Deal 2015:1)

   a.   **Search.** A probe initiates a search for an element with matching features (a goal).
   b.   **Copying.** Features are copied from the goal to the probe.
   c.   **Valuation.** The probe's features are valued, and the search is halted.

Boiling it down, in order for the Agree operation to take place between a particular probe and a particular goal, two criteria must be satisfied. First, can the probe see the goal (i.e. *accessibility*)? Second, does the goal have the features that the probe seeks (i.e. *matching*)?

In Chomsky's model, in order for the probe to successfully see the goal, certain conditions must be met. First, the goal needs to be located in the domain c-commanded by the probe (*c-command condition*). This c-command condition restricts the probe and the goal to certain configurations, entailing that probing must proceed in a downward direction, since the probe must c-command the goal. Second, there should not be any element bearing matching F intervening between the probe and the intended goal (*intervention condition*). Third, the Agree operation is constrained by a locality condition involving the notion of phases (Chomsky 2000, 2001, 2008). CP and vP are assumed to be different phases. In order to be accessible, the goal is required to be in the same phase as the probe or at the edge of the next phase (*phase condition*), formalized as the Phase Impenetrability Condition (PIC) (Chomsky 2000) in (22).

(22)   **Phase Impenetrability Condition (PIC)** (Chomsky 2000:108)
In phase α with head H, the domain of H is not accessible to operations outside α, only H and its edge are accessible to such operations.

Taking the structure in (23) as an example, if a probe is on C, the goal needs to be within the CP phase or in Spec-vP to qualify as accessible. In other words, DP_1 and DP_2 are accessible for the probe because DP_1 is inside the CP-phase and DP_2 is at the edge of the next phase. In contrast, DP_3 is inaccessible for the probe since it is below Spec-vP, too distant to be accessed.

(23)   Accessibility of the Probe based on the PIC
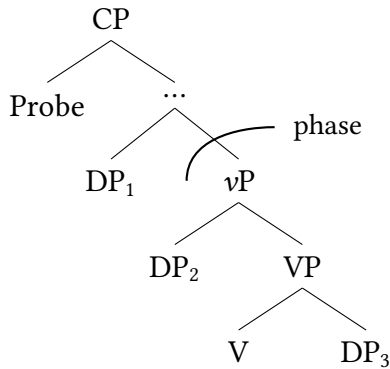
Finally, in order to be counted as an eligible goal, a DP has to be active. A DP is active if it has not been agreed with by previous probes (*activity condition*). Chomsky's (2000, 2001) Activity Condition (AC) relates the accessibility of the argument to case valuation. As stated in (24), only DPs whose Case feature is unvalued are "active" and may undergo A-movement. In contrast, once a DP has received Case, it becomes "inactive" and therefore unable to undergo further A-processes. The outcome of the AC is that it prevents a probe from agreeing with a goal that some other probe has already agreed with.

(24) **Activity Condition** (Chomsky 2000:123, 127 and Chomsky 2001:6)

DPs whose case feature is valued become inactive and thereby unable to undergo subsequent A-processes.

As a recap, the above constraints concerning accessibility in Chomsky's model are summarized in (25).

(25) Accessbility conditions of the goal in Chomsky's model (based on Chomsky 2000 et seq.)

a. **C-command condition:** The probe must c-command the goal.

b. **Intervention condition:** No elements bearing features that match the probe can intervene between the probe and the goal.

c. **Phase condition:** The goal must be in the same phase as the probe, or at the edge of the next phase.

d. **Activity condition:** The goal must be active.

1.2.2 Accessibility

In addition to the PIC of Chomsky (2000), the issue of whether a goal can be accessed by the probe has been approached under various accounts: the SCOPA, horizons, and m-case. These other accounts are summarized in this section.

The PIC requires the goal to be local to the probe to some extent. Baker's (2008a, 2011) Structural Condition on Person Agreement (SCOPA) is a more nuanced observation regarding the role of locality in agreement. The SCOPA states that the locality condition on the Agree operation can differ depending on what type of feature the probe is searching for. Specifically, agreement for person features cannot take place at a distance while agreement for gender and number features can.

Horizons is a fairly recent mechanism proposed by Keine (2016, 2019), which ties the accessibility of a goal to the syntactic position of the probe. A horizon is defined as a boundary that delimits a probe's search space. In particular, Keine examined the phenomenon of selective opacity (i.e. the asymmetrical treatment of elements by different kinds of movement), arguing that the capacity of probes to access goals is determined by the height of the probe. In particular, the higher a probe is in the clausal spine, the more structures are transparent (i.e. accessible) to it. A higher probe can reach a DP further down in the structure than a lower probe can. This proposal at the first glimpse appears to resemble the idea of phases, as both horizons and phases prevent certain areas of the structure from being targeted by syntactic operations like movement and Agree. The significant difference between them is that the horizons model does not

assume the delimiting edge to be a fixed boundary: flexibility is permitted across categories and languages.

From a morphological perspective, Bobaljik (2008) regarded accessibility as being determined by a nominal's morphological case. That is, accessibility is determined by morphology rather than grammatical function or other syntactic relations. Bobaljik proposed an accessibility hierarchy in which unmarked Case (nominative/absolutive) outranks Dependent Case (accusative/ergative), which further outranks Lexical Case (dative). If an accusative NP is accessible to agreement, for example, this implies that a nominative NP is also accessible, but not vice versa.

The above mechanisms are motivated by distinct empirical data. It is particularly difficult, perhaps rare, to test the legitimacy of the various mechanisms in a single language. The substantial amount of diversity in the Algonquian family, specifically the number of language varieties as well as the complexity of the agreement variations, make the pursuit of this topic promising, as Algonquian languages provide researchers the opportunity to sort through the predictions of these disparate theoretical claims within one language family.

1.2.3 Probe-Goal: feature matching

The above theoretical accounts all concern the first question introduced above: whether the goal is visible to the probe. As explained at the beginning of Section 1.2, even if a DP is accessible to the probe, agreement will only take place if the particular features required by the probe are present on the goal. Hence, the second question needs to be considered: does the goal have the features to match those of the probe? A number of works (e.g. Béjar 2003; Béjar & Rezac 2009; Nevins 2011; Preminger 2012, among others) have shown that the features that the probe searches for may be specified, or, in other words, the probe may be *relativized* to seek goals with particular features. For example, Béjar (2003) showed if the probe is specified for the [SPKR] feature, the goal must contain the matching [SPKR] feature in order for Agree to succeed.

The Béjar-style approach shows some promising applications in Algonquian (e.g. Béjar & Rezac 2009). For peripheral agreement in particular, Oxford (2015) proposed that some of the variations discussed in Section 1.1.1 can be captured by the relativization of the probe. To account for differences between Ojibwe and Cree, Oxford proposed that the probe in Ojibwe is simply [uD] and is thus satisfied by any DP, while the probe in Plains Cree is more specified as [uD, uProx] and thus prefers proximate DPs over obviative DPs. Accordingly, the reason why the inanimate objects are consistently unindexed by peripheral agreement in Plains Cree is because these objects lack the [Prox] feature to match the probe. Oxford also proposed that the probe in Unami Delaware is specified as [uD, uDef], accounting for the role of definiteness in conditioning peripheral agreement in this language. However, Oxford's analysis concerns only

monotransitive TA/TI verbs and intransitive verbs. The puzzles arising from variations of AI+O and TA+O verbs as well as other language-specific patterns, such as sensitivity to plural SAP subjects demonstrated in Menominee, are still unresolved.

In chapter 5, the sensitivity of peripheral agreement to features like gender, obviation, and definiteness across different language varieties will be attributed to microparameters of relativized probing.

1.2.4 Post-synactic operations

The theory of Distributed Morphology (DM) has united word formation and sentence formation under the same principles of syntax. The syntactic derivation that DM assumes is that of a typical Minimalist grammar. Halle & Marantz's 1993 paper is a foundational work of DM and other major developments are made by a number of papers (e.g. Bonet 1991; Noyer 1992; Halle 1997; Harley & Noyer 1999; Embick & Noyer 2007; Matushansky & Marantz 2013; Bobaljik 2017). The model of grammar proposed in DM is illustrated in (26). In this model, the crucial notion is that syntactic structure feeds morphology instead of the other way around. Another important claim is that post-syntactic operations can further manipulate the output of the syntax. Recognizing the existence of these operations helps us to understand mismatches between syntax and morphology.

(26)   Layout of the grammar (Embick & Noyer 2007:292)

      Syntactic Derivation
              |
        (Spell Out)
          ⟋   ＼
    [Morphology] LF
          |
        PF
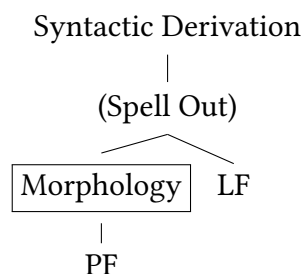
One significant assumption in DM concerns the realization of the output of the syntactic derivation through the process of vocabulary insertion, which inserts the appropriate phonological material in each syntactic terminal. Each vocabulary item contains the phonological material (exponent) and the grammatical context in which the exponent can be inserted. Vocabulary items are formalized using the schema in (27).

(27)   **Vocabulary item schema** (Harley & Noyer 1999:4)
      exponent   ⇔   context of insertion

Taking the insertion of Algonquian object agreement markers as an example, the vocabulary items that can realize the functional head Voice (cf. Oxford 2017b) are listed in (28). The vocabulary item that gets spelled out in a given form is determined by the features that the Voice head has in that form (indicated by the material in square brackets).

(28)   Spell-out of Voice (Oxford 2017b:419, examples in Proto-Algonquian)
    a.   *-i*   ⇔   [1]
    b.   *-eθ*   ⇔   [2]
    c.   *-a·*   ⇔   [3]
    d.   *-ekw*   ⇔   *elsewhere*

Sometimes there is more than one vocabulary item whose conditioning is compatible with the features of a particular syntactic terminal. In such cases the SUBSET PRINCIPLE "controls the application of vocabulary items and resolves (most) cases of competition of this sort" (Embick & Noyer 2007:289), summarized in (29).

(29)   **Subset Principle** (based on Halle 1997 and Bobaljik 2017)

    a.   The phonological exponent is inserted into a position if the item matches all or a subset of the features specified in that position;

    b.   Insertion does not take place if vocabulary item contains a feature not present in the morpheme;

    c.   If several items meet the condition for insertion, then the item matching the greatest number of features specified in the terminal morpheme must be chosen.

DM helps to shed light on mismatches between syntax and morphology. In the simplest case, morphological structures and syntactic structures are parallel. However, the morphology-syntax connection is not always transparent. DM accounts for a lack of isomorphism between syntax and PF as an outcome of operations that apply at PF. Admitting such post-syntactic operations allows complex morphological patterns to be captured while preserving "the central architectural premise of the theory" (i.e. that syntactic structure and morphological structure are the same in the default case, Embick & Noyer 2007:301).

One post-syntactic adjustment of interest is IMPOVERISHMENT, a process that deletes particular morphosyntactic features in a particular context. The effect of impoverishment is that once the features are deleted (impoverished), vocabulary items associated with the deleted features cannot be inserted, and a less specified item will be inserted instead. Halle & Marantz (1993:157) have termed this phenomenon Retreat to the General Case. The Spanish "spurious *se*" effect analyzed by Bonet (1991, 1995) is a classical illustration of impoverishment. The examples in (30)

provide the background on two Spanish third person clitics when they are used in isolation: the third-person accusative clitic, *lo*, is seen in (30a) and the third-person dative clitic, *le*, is seen in (30b).

(30)   a.   3.ACC clitic: *lo*
            El premio, **lo**   dieron   a Pedro ayer.
            the prize   3.ACC give.3PL to Pedro yesterday
            'They gave the prize to Pedro yesterday.'

       b.   3.DAT clitic: *le*
            A Pedro, **le**   dieron   el premio ayer.
            to Pedro 3.DAT give.3PL the prize   yesterday
            'They gave the prize to Pedro yesterday.' (Bonet 1995:608)

The central observation that motivated the impoverishment analysis is that these two clitics cannot co-occur. Neither the combination of ^{x}*lo le* nor that of ^{x}*le lo* is allowed. Rather, as exemplified in (31), only the sequence *se lo* is permitted, with the unexpected occurrence of the reflexive/impersonal clitic *se*.

(31)   Co-occurrence of two third person clitics: *se lo*
       A Pedro, el premio, **se lo**   dieron
       to Pedro the prize   SE 3.ACC give.3PL
       'They gave the prize to Pedro.' (Bonet 1995:608)

In Bonet's analysis, *se* is the default/underspecified form in the clitic system of Spanish, as indicated by the broad set of contexts in which it occurs (reflexives, certain anticausatives, and a number of other contexts). There are a number of different analyses to derive the "spurious *se*" effect in the literature (e.g. Halle & Marantz 1994 and Nevins 2011) but they share the same fundamental insight, which is that there is a deletion of features from the dative clitic, as shown in (32). The consequence of this deletion rule is the insertion of the underspecified clitic *se* rather than dative *le*.

(32)   [+DAT] $\rightarrow$ Ø / _ [+ACC]

In this thesis, the mechanisms of DM will be important for capturing unexpected morphological patterns involving peripheral agreement. Some of these variations may not directly result from the syntactic derivation and may instead reflect readjustments that take place post-syntactically.

1.3 The proposal

Given the scope of the variation examined in this thesis, a single mechanism will not be sufficient to provide a satisfactory solution for all patterns involved in peripheral agreement. Broadly speaking, I will argue that the different degrees of accessibility in peripheral agreement across the Algonquian language varieties surveyed is a combined outcome from interactions of various levels of the grammar, reflecting mechanisms in both the syntax and the morphology. More specifically, I will address the patterning of peripheral agreement in three respects: the probe's search capacity (accessibility), the features sought by the probe (feature matching), and post-syntactic operations.

First, the accessibility of the goal will be fundamentally determined by the probe's search capacity. The cross-linguistic variation in peripheral agreement with secondary objects (the object of an AI+O verb or the theme of a TA+O verb) will be crucial in determining the formal mechanism responsible for accessibility. The models of *horizons* (Keine 2016, 2019) and *phases* (Chomsky 2000, 2008) can both account for the success or failure of Agree in certain domains. However, in this thesis, I argue in favor of horizons. Two significant advantages favor the horizons model. First, horizons allow for flexibility in setting probe-specific boundaries across constructions and languages. Second, the horizons model captures the deep connection between a probe's search space and its height in the structure.

The central proposal is schematized in (33). I will take secondary objects to be base-generated inside RootP. I argue that RootP forms a horizon for C in languages that do not allow peripheral agreement to index secondary objects, such as Oji-Cree, Menominee, and Plains Cree. However, in Eastern languages such as Unami Delaware and Maliseet-Passamaquoddy, C has no horizons to limit its search. In this way, the (un)availability of peripheral agreement with secondary objects reflects microparametric variation in the probe's search space.

(33)   Horizons in AI+O and TA+O clauses
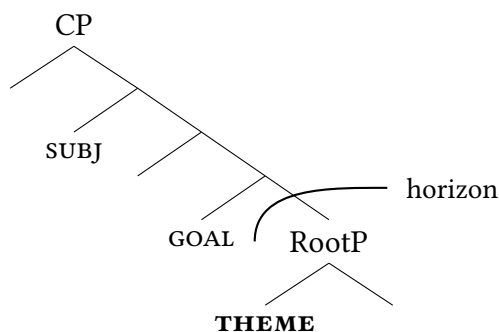
    a. TA+O: RootP   b. AI+O: RootP
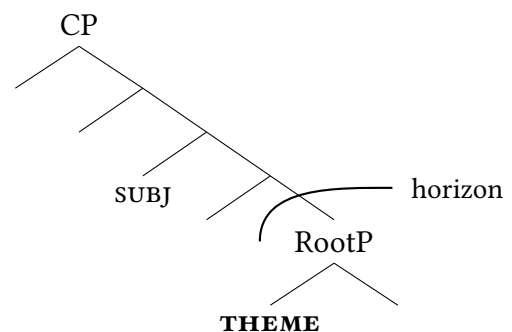
Second, the divergences observed in TA and TI forms will clarify the role of feature matching and activity in determining the patterning of peripheral agreement. Extending the analysis put forth in Oxford (2015), I argue that relativization of the probe (e.g. Béjar 2003; Béjar & Rezac 2009; Nevins 2011; Preminger 2011) works hand-in-hand with the Activity Condition (e.g. Chomsky 2000; 2017a) to explain the failure of peripheral agreement with inanimate/obviative DPs in languages like Plains Cree as well as the failure of peripheral agreement with indefinite DPs in Unami Delaware. As summarized in (34), microparametric variation in these two mechanisms accounts for the patterns found in languages like Maliseet-Passamaquoddy and Ojibwe, where the probe is flat and the AC determines which DP is "active" for peripheral agreement (indicated by the ✓symbol). In Unami Delaware, the specification of the probe and the AC work together to determine which DP will be targeted by Agree when more than one DP matches the features with the probe. However, in Plains Cree, relativized probing alone determines which DP will be targeted and the AC can be violated (indicated by the ✗symbol).

(34) Microparameters of relativized probing and the AC

	Language	Probe features	AC
	Language	Probe features	AC
a.	Maliseet-Passam'dy	flat: [uD]	✓
b.	Plains Cree	relativized: [uProx]	✗
c.	Unami Delaware	relativized: [uDef]	✓

Finally, the patterns in languages in which peripheral agreement is blocked from appearing in the context of a plural subject will be argued to result from the post-syntactic operation of impoverishment (Halle & Marantz 1993). This analysis follows the assumption in the DM literature that vocabulary insertion cannot take place when the relevant features of the syntactic terminal are deleted. Concretely, I extend and modify Halle & Marantz's (1993) impoverishment rule for Potawatomi to SW Ojibwe and Menominee. I also suggest potential modifications needed to account for Oji-Cree and Meskwaki. A summary of the impoverishment rules that account for the cross-linguistic patterns of plural subject interference is given in (35). In short, the features contained in Infl, the head that is realized as central agreement, will have an impact on C, the head that is realized as peripheral agreement. If Infl contains the features listed in the rules below, the features of C will be impoverished, making it impossible to insert the vocabulary items that normally realize peripheral agreement. This explains the disappearance of peripheral suffixes in these contexts.

(35) Summary: impoverishment rules accounting for the suppressed peripheral agreement

    a.   Potawatomi: C → Ø / Infl [1, PL, NOM] ___

    b.   SW Ojibwe: C [-ANIM] → Ø / Infl [1, PL] ___

    c.   Menominee: C [-ANIM] → Ø / Infl [PART, PL] ___
    d.   Oji-Cree: C → Ø / Infl [PL] ___
    e.   Meskwaki: C → Ø / Infl [PART, PL, NOM] ___

Chapter 6 will also present an analysis that explains the distribution of the formative elements of the central ending in terms of contextual allomorphy (Bobaljik 2000). In brief, using the Eastern languages as an example, the three-way allomorphy between w-endings, n-endings, and m-endings is analyzed as variation in the realization of Infl conditioned by the features on C. The proposal is summarized in Table 1.6. The core insights that apply to both Unami and Passamaquoddy are: (i) the w-formative is spelled out when C has agreed with a "person-ful" DP (e.g. an animate primary object), (ii) the n-formative is spelled out when C has agreed with a DP that lacks or cannot transmit [Pers] (e.g. inanimate primary objects, secondary objects), and (iii) the m-formative is spelled out when C has not agreed with any argument at all, represented by the notation [$u\phi$], which indicates that the probe's uninterpretable ϕ-features remain unvalued.

Table 1.6: VI variations for formatives in Eastern Algonquian

Vocabulary item	Unami C	Passm'dy C
w-formative	[Def, Pers]	[Pers]
n-formative	[Def]	[D]
m-formative	[$u\phi$]	[$u\phi$]

In summary, the outcome of the Agree operation depends on two basic questions: (i) is the goal visible to the probe (accessibility) and (ii) does the goal satisfy the probe (matching)? Several mechanisms from existing research, such as phases (Chomsky 2000, 2001), horizons (Keine 2019), and the Activity Condition (Chomsky 2000, 2001) overlap on tackling the issue of accessibility, but it is not clear in the existing literature how much these mechanisms may interact with each other in the same language. Moreover, some types of variation may not result from syntax at all, but may instead be an effect of morphology. Therefore, the third question to consider is: (iii) are there post-syntactic operations involved? This thesis investigates the above three questions through the lens of Algonquian by focusing on peripheral agreement. The extensive cross-linguistic variation cannot be determined by a single mechanism and instead reflects the interaction of multiple mechanisms, both syntactic and morphological. This theoretical investigation is possible because of the rich diversity shown by the Algonquian languages, which provides the perfect opportunity to tease apart the distinct theoretical proposals discussed above.

1.4   Thesis outline

The thesis focuses on the cross-linguistic patterning of peripheral agreement with the object across different verb classes. The current chapter has described the core data and the frameworks upon which the analysis is based. This section gives roadmap of the organization of the following chapters. Chapter 2 and Chapter 3 are descriptive. These two chapters present the cross-linguistic data in full and itemize the empirical questions associated with peripheral agreement. Chapters 4, 5, and 6 are theoretical. Each chapter considers a particular module of the grammar and shows which aspects of the patterning of peripheral agreement can be accounted for within that module.

Chapter 2 A description of peripheral agreement. This chapter gives an in-depth description of the distribution of peripheral agreement and its connections to the allomorphs of the central endings.

Chapter 3 Availability in peripheral agreement: A pan-Algonquian overview. This chapter is a comprehensive examination of the patterning of peripheral agreement in indexing third-person arguments. The comparative data are drawn from mainly from five major languages: Maliseet-Passamaquoddy, Delaware (both Unami and Munsee languages), Ojibwe (three dialects: Nishnaabemwin, Oji-Cree, SW Ojibwe), Menominee, Cree (the Plains dialect), and Meskwaki.

Chapter 4 Accessibility-conditioned patterns. This chapter overviews the theoretical approaches that overlap as potential accounts of accessibility. I will argue that Keine's (2016, 2019) horizons model is the mechanism that most adequately captures the difference between languages that allow peripheral agreement to access secondary objects and languages that do not.

Chapter 5 Probe-conditioned patterns. This chapter first provides theoretical background on feature specification and nominal spines, relativized probing, and the AC. Then it proceeds to account for the patterns that show sensitivity to DP features such as gender and definiteness.

Chapter 6 Post-syntactic operations. This chapter develops the insights that were presented by Halle & Marantz (1993) for Potawatomi. Building upon their work, the cases in which peripheral agreement is suppressed in the presence of a plural subject are analyzed as the result of impoverishment. In addition, the long-standing question about the status of the formative elements of the central endings will be given an answer that is formalized in terms of contextual allomorphy.

Chapter 2

A description of peripheral agreement

This chapter presents a pan-Algonquian description of peripheral agreement with a special focus on the variation observed in the paradigm of main-clause verb inflection known as the INDEPEN-DENT ORDER. The main purpose of the chapter is to provide a definitive summary of the patterning of Algonquian peripheral agreement across languages and verb classes.

The chapter is structured as follows. Section 2.1 introduces the Algonquian language family and provides a grammatical sketch with a concentration on the verbal inflection. Section 2.2 describes the environments in which peripheral agreement occurs. Section 2.3 describes the dependency between peripheral agreement and CENTRAL AGREEMENT (Goddard 1979), a distinct inflectional slot that expresses both person and number agreement.

2.1 Background

This section gives some background on the members of the Algonquian family (§2.1.1) followed by a sketch of the inflection of Algonquian verbs (§2.1.2).

2.1.1 Algonquian family

Algonquian languages belong to the Algic language family and are genetically related to Yurok and Wiyot, two languages spoken in California (Haas 1958). Speakers of Algonquian languages are distributed widely across North America, from the Rocky Mountains to the east coast of Canada and the United States. There are roughly 30 Algonquian languages, some of which consist of several different dialects (Goddard 1996; Mithun 1999). There has been no consensus about where the ancestor language, Proto-Algonquian (PA), was spoken. According to two prominent Algonquianists, PA was spoken between 1000 B.C. and 500 B.C. (Pentland 1979:329) to the west of Lake Superior (Goddard 1994b:207).

The Algonquian languages are conventionally divided into three subgroups according to their geographical locations: the Plains subgroup, the Central subgroup, and the Eastern subgroup, illustrated in the map in (1). Only Eastern Algonquian is a genetic subgroup; the other two groups are areal (Goddard 1980).

(1)   Historical distribution of major Algonquain languages (Oxford 2019a:505)

The major Algonquian languages are listed in (2). The Plains Algonquian languages are marked by dramatic phonological and grammatical innovations. The Plains group consists of Cheyenne, Blackfoot, and three Arapahoan languages: Arapaho, Gros Ventre (Atsina), and Nawathine-hena. The Central Algonquian languages have a larger number of language varieties and speakers. These languages fall into six groups: (1) Meskwaki-Sauk-Kickapoo, (2) Miami-Illinois, (3) Shawnee, (4) Menominee, (5) Ojibwe-Potawatomi, and (6) Cree-Innu-Naskapi (Goddard 1978, 1994b, 1996; Mithun 1999; Oxford 2019a). The latter two Central groups comprise a large number of dialects and are internally diverse (Rhodes & Todd 1981). There are disagreements on genetic relations amongst these groupings; the only large genetic grouping that is widely accepted consists of the Eastern Algonquian languages (Goddard 1994b). Unfortunately, most Eastern languages no longer have speech communities except for Mi'gmaq and Maliseet-Passamaquoddy.

(2)   List of major Algonquian languages (†dormant or extinct language)

   a.   **Plains**: Cheyenne, Arapaho-†Gros Ventre, Blackfoot
   b.   **Central**: Meskawaki-Sauk-Kickapoo, Shawnee, Miami-Illinois, Menominee, Ojibwe-Potawatomi, Cree-Innu-Naskapi

      (i)   <u>Ojibwe varieties</u>: Algonquin, Oji-Cree, Central Ojibwe, Nishnaabemwin (Odawa and Eastern Ojibwe), Southwestern Ojibwe, and Saulteaux

      (ii)   <u>Cree varieties</u>: Plains Cree, Woods Cree, Swampy Cree, Moose Cree, Atikamekw, East Cree, Naskapi, and Innu

  c. **Eastern**: Mi'gmaq, Maliseet-Passamaquoddy, †Abenaki (Western and Eastern), †Southern New England Algonquian (e.g. Massachusett, Narragansett, etc.), †Mahican, †Delaware (Munsee and Unami), †Nanticoke, †Powhatan

Using the Proto-Algonquian cognates for *eθkwe·wa*[1] 'woman' to illustrate the phonological divergences across sub-families, as listed in (3), the reflexes in the Plains Algonquian languages are seen to be dramatically different from the PA form. In contrast, the Central languages are more conservative than the Plains languages despite not being a genetic group, and the reflexes in the Eastern languages bear a great deal of similarity to those of the Central languages.

(3)   Reflexes of Proto-Algonquian *eθkwe·wa* 'woman' (Oxford 2014:20)

  a. **Plains**: Cheyenne *hē̄ʔe*, Blackfoot *ski·ma*, Arapaho *ísei*, Gros Ventre *íθe·*

  b. **Central**: Meskwaki *ihkwe·wa*, Shawnee *-ehkwe·w*, Miami-Illinois *-ihkwe*, Menominee *-hki·w*, Ojibwe *ikkwe·*, Plains Cree *iskwe·w*

  c. **Eastern**: Mi'gmaq *skwe-*, Maliseet-Passamaquoddy *skwe-*, Western Abenaki *(a)skwa*, Massachusett *skwa*, Mahican *-axkwa·w*, Munsee *óxkwe·w*

A comparable degree of divergence can be found in the morphology and syntax, which will be manifested in the examination of the patterning of peripheral agreement in this thesis.

2.1.2 Verb inflection: Classes, orders, and modes

This section provides a brief sketch of some important aspects of Algonquian morphosyntax, with an emphasis on verbs. I introduce some Algonquian-specific concepts, including verb classes (e.g. AI, TA) and types of arguments (e.g. primary object, secondary object), as well as the slots in the verb template (e.g. central agreement, peripheral agreement) and the inflectional orders (e.g. independent, conjunct), and modes (e.g. preterite, indicative).

Verb classes

Bloomfield (1946) distinguished three classes of words that can be inflected in Algonquian languages: verbs, nouns, and pronouns. Four morphological classes of verbs can be distinguished

---

[1]In this thesis, a form beginning with an asterisk (*) indicates a reconstructed proto-language form.

based on the derivational morpheme that appears at the end of the stem, known as a FINAL (Bloomfield 1946:104-111). The classes of AI verbs (animate intransitive) and II verbs (animate intransitive) are morphologically intransitive and their finals denote the animacy of the actor argument. The other two classes, TA verbs (transitive animate) and TI verbs (transitive animate) are morphologically transitive and their finals denote the animacy of the patient argument. As shown by the Munsee Delaware examples in (4), pairs of intransitive verbs contrast in their stem-final morphemes (in boldface): the final *-əsi·* in (4a) indicates that the stem is an AI verb requiring an animate actor, whereas the final *-at* in (4b) indicates that the stem is an II verb requiring an inanimate actor. Note that the stem is enclosed in square brackets in these and subsequent examples. The meaning that a final contributes to the stem is subtle: both finals in (4) take the acategorial root *pəkw-* 'hole' and turn it into an intransitive verb, differing only in whether the actor is animate or inanimate.

(4)   AI-II pair: e.g. Munsee Delaware (O'Meara 1992:322)

    a.   *pkwəsəw*
        [pəkw -**əsi·**] -w -Ø
        [hole   -AI   ] -3 -AN.SG
        'Something (AN) has a hole in it.'

    b.   *pkwat*
        [pəkw -**at**] -w -Ø
        [hole   -II   ] -3 -IN.SG
        'Something (IN) has a hole in it.'

Transitive verbs also form pairs with contrasting stem shapes. The Munsee Delaware TA and TI stems in (5) both share the same root *pak-* 'hit' but differ in their finals, which identify the gender of the object. The TA final *-am* in (5a) indicates that the verb takes an animate object, while the TI final *-ant* in (5b) indicates that the verb takes an inanimate object.

(5)   TA-TI pair: e.g. Munsee Delaware (Goddard 1979:35)

    a.   *mpákama·w*
        n- [pak -**am**] -a·   -w   -Ø
        1- [hit   -TA   ] -3.OBJ -1SG -AN.SG
        'I hit him/her.'

    b.   *mpakántamən*
        n- [pak -**ant**] -am   -ən -Ø
        1- [hit   -TI   ] -0.OBJ -1SG -IN.SG
        'I hit it.'

Two further verb classes, AI+O (transitivized AI) and TA+O (terms coined by Goddard 1979), are distinguished by the ability to take an additional internal argument. AI+O verbs, such as the Munsee Delaware example in (6a), are morphologically intransitive: the final *-əsi·* in (6a) is an AI final that selects for the gender of the actor argument. However, the verb is nevertheless syntactically transitive in that it can take an internal argument as well. As for TA+O verbs, which take two objects, a number of them are derived by adding an applicative final such as -*amaw* to a TI stem (Valentine 2001:463-465). As exemplified in (6b), the stem *aki·ntamaw-* 'to read something to someone' contains two finals: the TI final *-t*, which forms a monotransitive verb stem, and the applicative TA final *-amaw*, which adds a goal/recipient. Algonquianists refer to the goal/recipient as the PRIMARY OBJECT (Goddard 1979; Rhodes 1990) and the theme as the SECONDARY OBJECT (Goddard 1979; Rhodes 1990).

(6)   AI+O and TA+O: e.g. Munsee Delaware (O'Meara 1990:98, 103)

   a.   *nəwan'si·n*
         nə- [wan   -**əsi·**] -n   -Ø
         1- [forget -AI   ] -1SG -IN/AN.SG
         'I forget him/it.'

   b.   *ntaki·ntamawa·n*
         nət- [aki·n -**t** -**amaw**] -a·   -n   -Ø
         1-   [read -TI -APPL.TA] -3.OBJ -1SG -IN/AN.SG
         'I read something (AN or IN) to him/her.'

The secondary object differs from the primary object in restrictions on person and gender. First, secondary objects must be a third person while primary objects do not have such restriction and therefore can be a first or second person too. Second, secondary objects of an AI+O or TA+O verb are not restricted to one gender category but can be animate or inanimate, as indicated in (6), whereas primary objects are confined to one gender category: they must be animate in TA verbs and inanimate in TI verbs (see Rhodes 1990 and Dahlstrom 2009 for additional details).

Table 2.1 provides a summary of the six verb classes and the illustrative examples given above.

Goddard (1988:510) points out that three grammatical functions are core to Algonquian verbs: subject, primary object, and secondary object. The primary object is the only object in TA and TI verbs (patient/theme), or the indirect object in TA+O verbs (recipient/goal), whereas the secondary object is the only object in AI+O verbs (theme), or the direct object of TA+O verbs (theme) (Rhodes 1990).

The issue of interest in this thesis is whether or not peripheral agreement indexes a given type of object across the languages surveyed. As summarized in Table 2.2, the more specific question

Table 2.1: Verb classes and stem shapes

Class	Stem	Final	Meaning
AI	*pəkwəsi·-*	AI *-əsi·*	'something (AN) has a hole'
II	*pəkwat-*	II *-at*	'something (IN) has a hole'
TA	*pakam-*	TA *-am*	'to hit someone'
TI	*pakant-*	TI *-ant*	'to hit something'
AI+O	*wanəsi·-*	AI *-əsi·*	'to forget (something/someone)'
TA+O	*aki·ntamaw-*	TI *-t* + TA APPL *-amaw*	''to read something to someone'

(Examples are from Munsee Delaware, O'Meara 1990, 1992 and Goddard 1979)

involves whether the primary object of TA/TI verbs or the secondary object of AI+O/TA+O verbs is indexed by peripheral agreement.

Table 2.2: Grammatical functions, thematic roles, and peripheral agreement

Class	Grammatical function	Thematic role	Does peripheral index...
TA/TI	subject primary object	agent/experiencer patient/theme	primary object?
AI+O	subject secondary object	agent/experiencer theme	secondary object?
TA+O	subject primary object secondary object	agent/experiencer goal/recipient theme	secondary object?

(adapted from Oxford 2019a:512)

Verb inflection

In light of the preceding background on verb classes and argument types, let us now turn to verbal inflection. Algonquian languages are head-marking and polysynthetic. An Algonquian verb can be inflected using one of the three parallel sets of inflection (also called "orders" by Bloomfield 1946): the INDEPENDENT ORDER, the CONJUNCT ORDER and the IMPERATIVE ORDER. Each order uses a different set of agreement morphology. As an illustration, the Munsee Delaware examples in (7) demonstrate the different shapes of 2PL subject agreement. The morphology in the independent form in (7a) is discontinuous, using a combination of a person prefix *k-* '2' and a central suffix *-hmwa* '2PL', which indicates the number of the argument indexed by the prefix. The morphology in the other two orders is exclusively suffixal. The conjunct form in (7b) uses the suffix *-e·kw* while the imperative form in (7c) uses *-o·kw* to index the 2PL subject. Each order contains different sub-

paradigms of inflection ("modes"; Bloomfield 1946) that indicate meanings associated with tense, aspect, and modality. The examples in (7) are in the morphologically unmarked indicative mode.

(7)   Munsee Delaware: 2PL agreement in different orders

    a.   *kkəntkáhmwa*   INDEPENDENT
        k- kəntəka· -**hmwa**
        2- dance   -2PL/INDP
        'You (PL) dance.' (Goddard 1979:167)

    b.   *lpáke·kw*   CONJUNCT
        ləpak -**e·kw**
        cry   -2PL/CONJ
        'You (PL) cry.' (Goddard 1979:181)

    c.   *lpáko·kw*   IMPERATIVE
        ləpak -**o·kw**
        cry   -2PL/IMP
        'You (PL) cry!' (Goddard 1979:188)

The selection of inflectional order is syntactically and pragmatically conditioned (Cook 2014). Generally speaking, the independent order is used in main clauses and the conjunct order is used in embedded clauses, but the conjunct can be found in certain kinds of main clauses as well (Cook 2014). The imperative order is typically used for commands and is therefore restricted to second-person forms in most languages. Note that peripheral agreement appears systematically in the independent order (see §2.2.1) and in a subset of conjunct forms called PARTICIPLES in some languages (see explanations in §2.2.2), and rarely in imperative forms. The rest of this chapter discusses only the two non-imperative orders.

The independent inflection of transitive verbs follows the template shown in Table 2.3, in which four slots are agreement markers: the prefix (underlined), the THEME SIGN (Bloomfield 1946:98-102, boxed) in slot 1, the CENTRAL ENDING (Goddard 1979:38, underlined) in slot 4, and the PERIPHERAL ENDING (Goddard 1979:38, bolded) in slot 6. Theme signs are object markers (cf. Rhodes 1976; Brittain 2001; Oxford 2014). The prefix and the central suffix normally work together to index the primary argument, with the former expressing the person feature and the latter the number feature. Goddard (1979:79) dubs this prefix-suffix combination the "central participant marker" and I refer to it as CENTRAL AGREEMENT for brevity in this thesis. Peripheral suffixes express nominal features of number, gender, and obviation. Markers of categories other than agreement may be interspersed among the agreement slots: diminutive/pejorative in slot 2; negative in slot 3; preterite/dubitative in slot 5.

The SW Ojibwe example in (8) illustrates the realization of the template in the preterite mode. The second-person plural subject 'you (pl)' is indexed by the central agreement (underlined):

Table 2.3: The independent verb template

		1	2	3	4	5	6
PFX	Verb	THEME SIGN	DIM	NEG	CENTRAL	MODE	**PERIPHERAL**

prefix *ki-* and central suffix *-inaawaa*. The third-person inanimate object is indexed by the theme sign *-am* (boxed) and the peripheral agreement *-en* (bolded).

(8) Independent negative preterite: e.g. SW Ojibwe

    kiwaapantansiinaawaapanen   2PL→0PL

    ki- waapant -[am] -ssiw -inaawaa -pan -**en**

    2- see   -0.OBJ -NEG -2PL   -PRET -**IN.PL**

    'You (PL) didn't see **them (IN)**.' (Nichols 1980:284)

The only slot not exemplified in (8) is the diminutive, which is an inflectional suffix that can be added to verbs and nouns to convey smallness, cuteness, or brevity. The Proto-Algonquian example in (9a) illustrates a verb without diminutive inflection, while (9b) illustrates the diminutive suffix **-(e)hsi* (underlined; Meskwaki *-(e)hi*) that carries the meaning of "little". The diminutive suffix affects the patterning of peripheral agreement in Meskwaki; see discussion in Section 3.7.

(9) Proto-Algonquian: neutral vs. diminutive (Pentland 1999:236)

    a. **nena·θa·wa*   NEUTRAL

        ne- na·θ -a·   -w -**a**

        1- fetch -3.OBJ -1SG -AN.SG

        'I fetched **him**.'

    b. **nena·θe·hsi*   DIMINUTIVE

        ne- na·θ -a·   -hsi -w -**a**

        1- fetch -3.OBJ -DIM -1SG -AN.SG

        'I fetched **little him**.'

The verb template in Table 2.3 is formulated for the independent order, but it mostly holds for the conjunct order as well. A conjunct 2PL→0 example is given below. In comparison to the independent form in (9), two affixes are absent in the conjunct form in (10): person prefixes do not occur in conjunct forms and in many languages the peripheral suffix is absent as well. The verb in (10) ends with the preterite mode suffix *-(i)pan*, which is not followed by a peripheral suffix. The absence of peripheral agreement means that the number of the inanimate object is not expressed on the verb.

(10) Conjunct negative preterite: e.g. SW Ojibwe

  wanittoossiwekipan   2PL→0

  wanitt -| oo | -ssiw -<u>ek</u>   -ipan

  lose -0.OBJ -NEG -2PL/CONJ -PRET

  'You (PL) didn't lose it/them (IN).' (Nichols 1980:310)

The inflectional template for the conjunct order is given in Table 2.4.

Table 2.4: The conjunct verb template

	1	2	3	4	5
Verb	<u>THEME SIGN</u>	DIM	NEG	<u>CENTRAL</u>	MODE

Finally, let us turn to the sub-paradigms called MODES by Bloomfield (1946), which essentially involve the addition of TAM (Tense-Aspect-Mood) suffixes. Only a small number of modes are discussed in this thesis because other modes are not relevant to peripheral agreement. Table 2.5 gives examples of some modes.

Table 2.5: Selective modes in Algonquian

Mode	Form	Order	Context
Preterite	*-(e)pan*	INDP, CONJ	event happened or completed in the past
Dubitative	*-(e)toke·h*	INDP, CONJ	uncertain statement
Indicative	unmarked	INDP	statement, main clause
(plain)	*-i*	CONJ	statement, embedded clause
Changed	*-i* (and IC)	CONJ	adverbial clause
Subjunctive	*-e*	CONJ	conditional clause

(based from Bloomfield 1946, Pentland 1999, Dahlstrom 2013a)

These mode markers appear in slot 5 in the verb templates above. The modes in the first three rows can occur in both orders. The preterite mode indicates that the event took place or was completed in the past. The preterite was illustrated in the preceding examples (independent preterite in (9), conjunct preterite in (10)). The dubitative mode indicating that the speaker is not fully certain about the information. The indicative is the default mode, which is unmarked in the independent inflection as in (11a) and is marked by -*i* in the conjunct inflection. The Meskwaki examples in (11) are both of independent order but the mode markers (boxed) differ: (11a) is dubitative and (11b) is indicative.

(11)   Modes of the independent order (Meskwaki, Dahlstrom 2013a:5-3)

  a.   *kewača·hopwa·toke*   DUBITATIVE
       <u>ke</u>- wača·ho -pwa   -│etokeh│
       2- cook   -2PL/INDP -DUB
       'You (PL) probably cook.'

  b.   *kewača·hopwa*   INDICATIVE
       <u>ke</u>- wača·ho -pwa   -│Ø│
       2- cook   -2PL/INDP -IND
       'You (PL) cook or are cooking.'

Proceeding to the mode markers that exclusively occur in the conjunct order, the three listed in Table 2.5 are: the plain indicative, as in (12a); the changed conjunct, as in (12b); and the subjunctive, as in (12c). The Meswaki examples in (12a-b) share the same conjunct indicative suffix **-i* (glossed as 'IND'), which triggers palatalization of a preceding **t* to **č*. The examples differ, however, in whether the first vowel of the verb stem is affected by an ablaut process called INITIAL CHANGE (Costa 1996, glossed as 'IC'). There is no initial change in the plain conjunct in (12a). In contrast, the changed conjunct in (12b) alternates the initial vowel of the stem **wača·ho-* 'cook' from **a* to **e·* in the surface form. As for the conjunct subjunctive, it uses a different mode suffix, **-e*, shown in (12c) (glossed as 'SBJV').

(12)   Modes of the conjunct order (Meskwaki, Dahlstrom 2013a:5-3)

  a.   *e·hwača·hoči*   PLAIN
       e·h- wača·ho -<u>t</u>   -│i│
       SUB- cook   -3SG/CONJ -IND
       'that she cooked'

  b.   *we·ča·hote*   CHANGED
       IC.wača·ho -<u>t</u>   -│i│
       IC.cook   -3SG/CONJ -IND
       'when she cooked'

  c.   *wača·hote*   SUBJUNCTIVE
       wača·ho -<u>t</u>   -│e│
       cook   -3SG/CONJ -SBJV
       'if she cooked'

As exemplified in (12), peripheral agreement does not occur in the conjunct inflection in morphologically conservative languages like Meskwaki. There is one exception, however, involving PARTICIPLES, which are conjunct verbs that have an added layer of nominal inflection and functioning as relative clauses (Goddard 1979, 1987; Dahlstrom 2006); see further description in Section 2.2.2. Even though the central agreement of participles uses conjunct morphology,

participles differ from typical conjunct forms in that peripheral agreement *does* appear at the end of the verb complex, expressing the features of the head of the relative clause. As the Meskwaki example in (13) illustrates, the peripheral suffix -*a* '3sg' indicates that the head of the relative clause is animate singular. Peripheral agreement seems to play a nominalizing role in participles, since all nouns end with a peripheral suffix marking the noun's gender, number, and obviation; in participles, the peripheral suffix does the same for the understood head of the participle (see (14) for an illustration of Algonquian nominal inflection and §2.2.3 for the inflectional similarities of verbs and nouns). Note that the example in (13) forms a minimal pair with (12b): both forms involve conjunct 3sg inflection but they differ in whether the verb is an indicative form or a participle.

(13)   *we·ča·hota*   PARTICIPLE
        IC.wača·ho -<u>t</u>   -**a**
        IC.cook   -3SG/CONJ -AN.SG
        '**the one** who cooks' (Meskwaki, Dahlstrom 2013a:5-3)

In summary, four basic verb types are distinguished by derivational morphology (AI, II, TA, TI), and the ability of certain verbs to take a secondary object results in two additional verb classes (AI+O and TA+O). Inflectional paradigms exist in three parallel sets or orders: the independent, the conjunct, and the imperative. In the independent and conjunct orders, various modes can be differentiated. As far as peripheral agreement is concerned, it occurs in Proto-Algonquian (and conservative languages) in the independent order and the participle of the conjunct order. The next section describes the distribution of peripheral agreement in greater detail.

2.2   Distribution of peripheral agreement

In Proto-Algonquian and conservative languages, peripheral agreement is found in three contexts: independent verb inflection, as in (14a); conjunct participle forms, as in (14b), repeated from (13); and noun inflection, including nouns and demonstratives, as in (14c). In these Meskwaki examples, the peripheral suffix -*a* expresses the nominal features of number (singular) and gender (animate).

(14)   Distribution of peripheral agreement (Meskwaki, Dahlstrom 2013a)

    a.   *newa·pama·wa*   INDEPENDENT
         <u>ne</u>- wa·pam -a·   -<u>w</u> -**a**
         1-   see   -3.OBJ -1SG -AN.SG
         'I see **him**.'

b. *we·ča·hota* PARTICIPLE

IC.wača·ho -t̲ -**a**

IC.cook -3SG/CONJ -AN.SG

'**the one** who cooks'

c. *i·na neniwa* NOMINAL

i·n -**a** neniw -**a**

that -AN.SG man -AN.SG

'that man'

Peripheral agreement is used to mark nominal features, including the number, gender, and obviation of a third-person argument. Most Algonquian languages have a two-way distinction for number (singular and plural),[2] a two-way distinction for gender (animate and inanimate; Dahlstrom 1995; Goddard 2002) and a two-way distinction for third-persons involving discourse prominence (PROXIMATE and OBVIATIVE). The proximate-obviative contrast can be understood as a "spotlighting" system (Quinn 2006a) in which the proximate nominal is highlighted as the topic while any less topical third persons end up with obviative morphology. All these nominal features can be expressed via peripheral suffixes, summarized in Table 2.6 (Proto-Algonquian examples).

Table 2.6: Proto-Algonquian peripheral suffixes

Form	Notation	Meaning
*-a	3SG	3rd animate proximate singular
*-i	0.SG	3rd inanimate singular
*-aki	3.PL	3rd animate proximate plural
*-ali	0.PL	3rd inanimate plural
*-ali	OBV.SG	3rd animate obviative singular
*-ahi	OBV.PL	3rd animate obviative plural

(Source: Pentland 1999:244)

In terms of their morphological shape, three distinct allomorphic sets of peripheral suffixes can be identified. The complete sets exemplified by Meskwaki are shown in Table 2.7: A-ENDINGS, I-ENDINGS, and E-ENDINGS (Goddard 2003:39). The consonants are the same across all three sets, but the a-endings and i-endings end with *i* (except in the animate singular), while the e-endings end with *a* or *e*, with the inanimate singular distinctively ending with *e* only.

In regards to the contexts in which the three sets of allomorphs are used, all three sets are found in the inflection of demonstratives. The a-endings are commonly found in the inflection of nouns. The i-endings are typically used in conjunct participles (Goddard 1987, Goddard 2003:39).

---

[2]Eastern languages Mi'gmaq and Passamaquoddy have a three-way distinction on number thanks to the addition of dual number.

Table 2.7: Three sets of peripheral suffixes, exemplified by Meskwaki

Category	a-endings	i-endings	e-endings
3sg	*-a*	*-a*	*-a, -**a**·ka*
0.sg	*-i*	*-i*	*-**e***
3.pl	*-**a**ki*	*-**i**ki*	*-**e**·ka, -**e**·ke*
0.pl	*-**a**ni*	*-**i**li*	*-**e**·na, -**e**·ne*
obv.sg	*-**a**ni*	*-**i**li*	*-**e**·ka, -**e**·ke*
obv.pl	*-**a**hi*	*-**i**hi*	*-**e**·ha, -**e**·he*

(Source: Goddard 2003:39)

Both the a-endings and the i-endings may appear in the inflection of verbs, expressing the nominal features of a third-person argument. In this case, independent verbs usually show the a-endings and conjunct verbs usually show the i-endings, conservatively only on participles, but extended to other conjunct verb forms in certain languages such as Cree. The e-endings are found in some forms "referring to distant, more remote, or absent entities" (ibid.). In Ojibwe, both i-endings and e-endings may appear in the inflection of independent verbs, and the *e*-variants are observed to occur in particular with the preterite mode (Nichols 1980:290, 293; Sullivan 2016:178). Since the thesis primarily investigates the independent indicative inflection, the a-ending peripheral suffixes will be predominantly shown in the data.

The Meskwaki example in (15) illustrates the variants of the 3pl peripheral suffix. In this example, the peripheral suffix of the NP 'the children' is an a-ending (-*aki*) and the peripheral suffix of the participle is an i-ending (-*iki*). This sentence involves one proximate argument, 'the children', and one obviative argument, 'their fathers'. It is the proximate plural peripheral suffix -*iki* that clarifies that the head of the participle is the proximate possessor *apeno·haki* 'the children' rather than the obviative possessee 'their fathers'. The inflection of participles is discussed further in Section 2.2.2.

(15) *o·swa·wahi ne·penič̌iki apeno·haki*
o- o·s   -wa·w -ahi   IC.nep -eni -<u>t</u>   **-iki**   apeno·h -**aki**
3- father -3PL   -OBV.PL   IC.die -OBV -3.SG/CONJ -AN.PL   child   -AN.PL
'**The children** whose fathers (OBV) have died.' (Meskwaki, Dahlstrom 1996:4)

The reminder of this section fills in the details of the distribution of peripheral agreement. Section 2.2.1 concentrates on the independent indicative inflection. Section 2.2.2 turns to participles and discusses variation in the formation of relative clauses in Algonquian languages. Finally, Section 2.2.3 introduces the inflection of demonstratives and possessive constructions and then considers the striking parallelism between the verbal paradigms and the nominal paradigms.

2.2.1 Independent indicative

Peripheral agreement is limited to indexing third-person arguments only. Some languages like Meskwaki and Miami-Illinois have preserved all the categories of peripheral agreement from PA, shown in Table 2.6. However, syncretism is common in many daughter languages, such as Menominee, Ojibwe, Delaware languages, and Massachusett (see Bliss & Oxford 2017 for a complete pan-Algonquian survey). In these languages, the number contrast for obviation is conflated. In addition, the animacy contrast for the singular category is also conflated. Taking Unami Delaware for instance, as listed in Table 2.8, singular third-persons regardless of gender are marked with a zero suffix, and homophony exists between the OBV and 0PL suffixes, which are both -*al*.

Table 2.8: Peripheral suffixes in Unami Delaware

PerA	Notation	Meaning
-Ø	3.SG	3rd animate proximate singular
	0.SG	3rd inanimate singular
-*al*	OBV	3rd animate obviative
	0.PL	3rd inanimate plural
-*ak*	3.PL	3rd animate proximate plural

Peripheral agreement is not restricted to nominals with a certain grammatical role. As illustrated by the 3PL agreement affixes in the following examples, peripheral agreement (in boldface) can index the subject of an intransitive verb, as in (16a), or the object of a transitive verb, as in (16b). Turning to the example in (16c), the 3PL subject agreement of the transitive verb is distinct from that of the intransitive verb in (16a). The patterns exemplified in (16) have led some researchers to claimed that Algonquian shows an ergative agreement system (Hewson 1987; Bruening 2007) since the S (core argument of an intransitive verb) and the O (object of a transitive verb) are treated alike, indexed by the peripheral suffix -*ak*, while the A (agent of a transitive verb) is treated differently, indexed by central agreement, consisting of the person prefix *w-* '3' and the central suffix -*wəwa·w* '3PL'.

(16)   3PL agreement in Algonquian (Unami Delaware)

    a.   *kəntəké·yɔk*   S

            kəntka· -w̄ -**ak**

            dance   -3 -**AN.PL**

            '**They** dance.' (Goddard 1979:167)

b. *nno·t·əmá·ɔk*   O
   <u>nə-</u> no·təm -a·   <u>-w</u> -**ak**
   1- guard -3.OBJ -1SG -AN.PL
   'I guard **them**.' (Goddard 2021:64)

c. *wəno·t·əmuk·əwá·ɔ*   A
   <u>wə-</u> no·təm -əkw <u>-wəwa·w</u> -**al**
   3- guard -INV -3PL   -OBV
   'They guard her/them (OBV).' (Goddard 2021:66)

Even though my focus is on peripheral agreement, there are some points about central agreement that need to be clarified too. Focusing on the examples in (16a-b), the central suffix *-w* in (16a) is, in fact, different from the central suffix *-w* in (16b) in two respects. First, the former triggers umlaut on the verb stem, altering *a·* in *kəntəka·-* 'to dance' to become *e·*, while the latter does not have such an effect. To signal their differential phonological impact on the stem, I adopt Nilsen's (2017) notation, using *ẅ* to indicate the umlaut-triggering suffix and regular *w* to indicate the non-umlaut-triggering suffix. Second, the makeup of the central agreement differs: the non-umlauting *-w* always co-occurs with a prefix, as in (16b); on the contrary, the prefix is always missing when the umlauting *-ẅ* occurs, as in (16a). Normally, the prefix and the central suffix work together to specify the person and number features of the same argument, as in (16b-c). Since there is no prefix in (16a), the person feature is not expressed in the typical way via the prefix, but instead by the suffix *-ẅ*, and the number feature is also not manifested in the typical way via the central suffix, but instead by the peripheral suffix, which always indexes the same argument as the central suffix in forms with *-ẅ*, e.g. *-ak* '3PL' in (16a).

Since central agreement is only realized as the umlauting *-ẅ* in contexts where all arguments are third person, the umlauting *-ẅ* can be glossed as a third-person marker '3'. By comparison, the prefix is present in (16b) and expresses the first-person feature. Therefore, the prefixing *-w* remains the usual function of the central suffix as a number marker, signaling that the argument indexed by the prefix is singular. The Plains Cree minimal pair in (17) supports the analysis of the prefixing *-w* as a singular marker: the contrast between the central agreement of *ni-...-w* '1SG' in (17a) and *ni-...-nân* '1PL' in (17b) shows that *-w* is the only element in the form that indicates singular number.

(17)   Minimal pair of the central suffix, e.g. Plains Cree

a. *niwâpamâwak*
   <u>ni-</u> wâpam -â   <u>-w</u> -**ak**
   1- see   -3.OBJ -1SG -AN.PL
   'I see them.' (Wolfart 1973:41)

b. *niwâpamânânak*
ni- wâpam -â   -nân -**ak**
1- see   -3.OBJ -1PL -AN.PL
'We see them.' (Wolfart 1973:41)

As exemplified in (18) as well as the Unami example in (16b), even though the central suffix -*w* indicates that the argument indexed by the prefix is 'SG', I will gloss it as '1SG' as in (16b), '2SG' as in (18a), and '3SG' as in (18b), including the number of the prefix-indexed argument as appropriate so that it will not be ambiguous which argument -*w* marks as singular in any given example.

(18)   *w*- as a singular marker

a. *kəmi·lá·ɔk*
kə- mi·l   -a·   -w -**ak**
2- give.to -3.OBJ -2SG -AN.PL
'You (SG) give to them.' (Goddard 1979:171)

b. *mwi·lá·ɔ*
wə- mi·l   -a·   -w -**al**
3- give.to -3.OBJ -3SG -OBV
'S/he gives to her/him/them (OBV).' (Goddard 1979:171)

Returning to the ergative pattern in (16) above, however compelling this evidence for ergativity appears, one argument against an ergative analysis is that peripheral agreement can also index "A" (the subject of a transitive verb) when the verb is in the inverse form. In the Unami Delaware examples in (19), the grammatical roles in (19a) are reversed in the inverse form as in (19b). In the two examples, the peripheral agreement -*ak* '3PL' switches from indexing the patient to the agent. Typologically, Algonquian agreement is well-known for its direct-inverse alignment pattern in which the grammatical functions of the arguments are indicated by the theme sign, which expresses the ranking of the subject/object on a person hierarchy. The Algonquian person hierarchy is said to be 2 > 1 > 3 > 3′ > 0 (Wolfart 1973, Zwicky 1977, Nichols 1980, Dawe-Sheppard & Hewson 1990, Rhodes 1994, Blain 1998, Valentine 2001, among others; here ">" is read as "outranks"). When a DIRECT theme sign is used, such as -*a·* in (19a), also (17b-c) and (18), the higher-ranked participant is understood to act on the lower-ranked participant. In contrast, if the INVERSE theme sign, -*əkw* in (19b), is employed, the lower-ranked participant is understood to act on the higher-ranked participant. Comparing the two examples in (19), their central agreement (underlined) and peripheral agreement (bolded) are identical but the subject-object relation is reversed by replacing -*a·* 'direct' with -*əkw* 'inverse'.

(19)   Direct vs. inverse: e.g. Unami Delaware

    a.   *nəmi·lá·ɔk*   DIR
        n̲ə̲- mi·l   -a·   -w̲   -**ak**
        1-   give.to -3.OBJ -1SG -AN.PL
        'I give to **them**.' (Goddard 1979:171)

    b.   *nəmí·lko·k*   INV
        n̲ə̲- mi·l   -əkw -w̲   -**ak**
        1-   give.to -INV -1SG -AN.PL
        '**They** give to me.' (Goddard 1979:174)

Reviewing (19a), the theme sign *-a·* is traditionally called "direct" because the two arguments, the first person 'I/me' and the third animate person 'they/them', follow the forward direction of the person hierarchy: the higher-ranked first person acts on the lower ranked third person. On the other hand, *-əkw* in (19b) is traditionally called "inverse" because it indicates that it is the lower-ranked argument, third person 'they', that acts on the higher ranked argument, first person 'me'. More recent analyses regard most theme signs, including the so-called direct marker, as object markers (Rhodes 1976; Brittain 1999; Oxford 2014), as listed in (20), except for the inverse marker, which is analyzed as an elsewhere form that fills the object-marking slot in inverse forms, where the function of indexing the object has been taken over by the central agreement (Oxford 2017b; see the more elaborate discussion in Section 6.2). I follow these accounts and therefore gloss *-a·* as '3.OBJ'.

(20)   Treatment of theme signs (examples in Unami Delaware)
    a.   *-i*   ⇔   first person object
    b.   *-əl*   ⇔   second person object
    c.   *-a·*   ⇔   third person object
    d.   *-əkw* ⇔   *elsewhere*

Earlier, Section 2.1.2 introduced that object arguments can be identified as primary or secondary. The objects illustrated in this subsection so far, from (16) to (19), are all primary objects. We have seen that primary objects can be indexed by peripheral agreement. Recall that AI+O and TA+O verbs are the two classes that take secondary objects (Table 2.2). Unami Delaware is one of the few Algonquian languages that allow peripheral agreement to index secondary objects. An AI+O example is given in (21a) and a TA+O example is given in (21b). Iin the TA+O form in (21b), because of the syncretism between the obviative and inanimate plural peripheral suffixes in Delaware, the peripheral suffix *-al* can have two interpretations for the secondary object (i.e.

theme): it can be an obviative animate person without a number distinction, 'her/him/them', or an inanimate person which must be plural, 'them'.

(21)   3PL secondary object agreement in Unami Delaware

   a.   *nəwaní·na·k*   AI+O
        n<u>ə</u>- wa·ni· -<u>n</u>   -**ak**
        1-   forget -1SG -AN.PL
        'I forgot **them**.' (Goddard 2020:104)

   b.   *nəmi·lá·na*   TA+O
        n<u>ə</u>- mi·l   -a·   -<u>n</u>   -**al**
        1-   give.to -3.OBJ -1SG -OBV/IN.PL
        'I give **her/him/them** to him/them.' (Goddard 2020:104)

Peripheral agreement in Unami Delaware and Maliseet-Passamaquoddy is even more flexible: in addition to subjects, primary objects, and secondary objects, it can index oblique arguments, adjuncts, and relative root complements (Goddard 2020). The Unami examples below illustrate two instances of obliques: an instrumental in (22a) and a locative in (22b). Both are indexed by peripheral agreement. In parallel to the secondary object pattern of the AI+O verb and TA+O verb given in (21), even though the peripheral suffix is morphologically a zero singular form here, the occurrence of the central suffix *-n* supports the presence of peripheral agreement with the oblique argument, since the n-allomorphs of the central suffix are conditioned by the presence of peripheral agreement indexing an inanimate argument or secondary object.

(22)   Peripheral agreement with olique arguments

   a.   *pə́k·ama·n*   INSTRUMENTAL
        <u>w</u>ə- pakam- a·   -<u>n</u>   -Ø
        3-   hit   -3.OBJ -3SG -IN.SG
        'He struck him with **it**.' (Unami, Goddard 2020:106)

   b.   *ná=háč kəwí·k·i·n*   LOCATIVE
        ná=háč <u>k</u>ət- wi·ki· -<u>n</u>   -Ø
        WH=Q   2-   dwell -2SG -IN.SG
        '**Where** do you (SG) live?' (Unami, Goddard 2021:72)

The Unami example in (23) provides clear evidence that peripheral agreement is able to index an adjunct: the peripheral suffix *-ak* '3PL' indexes the 3PL adjunct *kíči-xkwé·ɔk* 'your fellow women'.

(23) *ktaləwa·p·ensí·nak kíči-xkwé·ɔk*   ADJUNCT
   <u>kət</u>- aləwa·pe·nsi·   -<u>n</u> -**ak**   kə- íči-   axkwe·w -ak
   2-   be.more.blessed -2SG -AN.PL 2- fellow- woman -AN.PL
   'You (SG) are more blessed than **your fellow women**.' (Unami, Goddard 2020:105)

Relative roots (glossed as 'RR') are a set of preverbal morphemes that require a nominal complement in the clausal syntax (Bloomfield 1946:120; Wolfart 1973:66; Rhodes 1998, 2010). In (24a), the demonstrative *ná=nə* 'that' is considered the relative root complement because it satisfies the valency introduced by the relative root *əli-* 'thus, like, to(ward)' (PA **eθ-*). The morpheme **eθ-* is probably the most common relative root across Algonquian languages, expressing meanings of manner and directionality of movement. The Maliseet-Passamaquoddy example in (24b) illustrates another relative root, *wit-* 'with', which selects a comitative complement. Relative root complements can be covert, in which case they are translated as deictics (e.g. 'here', 'there') or indefinite or anaphoric pronouns (Russell et al. 2012:72).

(24) Agreement with relative root complements

   a. *ná=nə ntə́li-kí·spwi·n*   MANNER
      ná=nə   <u>nət</u>- **əli·**- ki·spwi· -<u>n</u> -**Ø**
      FOC=that 1-   so.RR- be.full -1SG -IN.SG
      'I got full on **it**.' [lit. 'I got full that way.'] (Unami, Goddard 2020:105)

   b. *nìl n-wit-ayyanénuuk nuhsimísok*   COMMITATIVE
      nìl <u>n</u>- **wit**-   ayya -<u>nénənw</u> -**ək**   n- uhsimís   -ok
      I   1- with.RR- play -1PL   -AN.PL 1- young.sibling -AN.PL
      'I play with **my younger siblings**.' (Maliseet-Passamaquoddy, LeSourd 2020)

The examples in (24) show that relative root complements can be indexed by peripheral agreement in Unami Delaware and Maliseet-Passamaquoddy. The Unami example in (24a) has a central suffix *-n* and a zero peripheral suffix, comparable to the oblique examples in (22). The Maliseet-Passamaquoddy example in (24b) is even more straightforward because the relative root complement is plural, so we can see the overt plural peripheral suffix *-ək* cross-referencing the third-person animate plural argument. Note that the 1PL central suffix *-nénənw* in (24b) belongs to the n-ending allomorph set, in line with the use of an n-ending in the Unami form in (24a).

To sum up, peripheral agreement in the independent order is used to express the nominal features of a third-person argument. Peripheral agreement in some languages (Unami Delaware and Maliseet-Passamaquoddy) is capable of indexing a range of nominals: subjects, primary objects, secondary objects, adjuncts, oblique arguments, and relative root complements. The same wide range of nominals, however, is not equally accessible in other languages. We will see in the next chapter that most non-Eastern Algonquian languages prohibit peripheral agreement from index-

ing secondary objects, and in some languages, such as Plains Cree and Meskwaki, peripheral agreement is even prohibited from indexing certain primary objects in TA/TI verbs.

2.2.2 Conjunct participle

This section discusses the occurrence of peripheral agreement in participles. The participle is a verb form that functions as a relative clause (Goddard 1979, 1987; Dahlstrom 2006). It is categorized as one of the conjunct modes because the inflection used (theme signs, central agreement) is drawn from the conjunct order. Another characteristic of participles is the appearance of INITIAL CHANGE (Bloomfield 1946:101; Costa 1996, abbreviated as IC hereafter), an ablaut process applied to the first vowel of the verb stem. The morphology of the participle is shown in the template in (25). What distinguishes participles from other conjunct forms is the appearance of peripheral agreement, which expresses the nominal features of the head of the relative clause. A participle is basically a nominalization in that it functions like a nominal but is derived from a verb. Thus, it makes sense that a participle ends with a peripheral suffix just like all nominals do.

(25)   **Template for participles**
       IC.verb stem + theme sign + central agreement + peripheral agreement

The example in (26) illustrates a participle in Meskwaki modifying the head *oškinawe·ha* 'young man'. The participle is built on the AI verb stem *mahkate·wi-* 'to fast'. The stem undergoes initial change, indicated by the alternation of the first vowel from the short *a* to a long *e·*. Generally, IC changes *a*, *e*, and *i* to *e·*; and short *o* to *we·* in Meskwaki (Dahlstrom 2013b:5-2). The underlined central suffix *-t* indicates that the subject of 'to fast' is third-person singular and the bolded peripheral suffix *-a* further adds that the head of the relative clause is an animate singular argument, co-referential to the preceding NP *oškinawe·ha* 'young man'.

(26)   *oškinawe·ha me·hkate·wi·ta*
       oškinawe·h -a   ic.mahkate·wi· -t̲   **-a**
       young.man -AN.SG   ic.fast   -3SG/CONJ -AN.SG
       '**a young man** who fasted' (Meskwaki, Dahlstrom 2019:72)

The example in (27) shows a participle whose head is an obviative object. The first vowel of the TA stem *nes-* 'kill' is lengthened due to IC. The theme sign *-a·* following the stem signals that the object is an animate third person. The underlined central suffix *-t* again indicates that the subject is 3SG, i.e. Lazybones. And the bolded peripheral suffix *-ini* indicates that the head of the relative clause is obviative singular, co-referential to the demonstrative pronoun *i·nini* 'that one'.

Note here that palatalization is triggered by the high vowel *i*, accounting for why the 3sg suffix *-t* surfaces as *-č*.

(27) *i·nini ne·sa·čini pačana*

i·nini	ic.nes -a·	-t	**-ini**	pačan	-a
that.obv.sg	ic.kill -3obj	-3.sg/conj	-obv.sg	Lazybones	-an.sg

'**that one** (obv) whom Lazybones (prox) killed' (Meskwaki, Dahlstrom 2019:72)

The above Meskwaki participles conform with Goddard's (2020) observations for Unami. What is more, not just subjects and primary objects, but also secondary objects and oblique arguments can be the head of a participle. To reinforce this claim, the examples in (28) show instances from Unami Delaware where the relative clause is headed by different arguments: the subject in (28a), the primary object in (28b), the secondary object in (28c), and an oblique argument in (28d). As pointed out by Goddard (2020), the range of nominals that can serve as the head of a participle is the same as the range of nominals that are available for peripheral agreement in the most permissive languages, as seen in the last section.

(28) Heads of participles (Unami Delaware, Goddard 2020:107)

a. *ké·pča·t lə́nu* SUBJECT

ic.kə·pəča·	-t	-**Ø**	lənu
ic.be.foolish	-3sg/conj	-an.sg	man.an.sg

'foolish man' [lit. '**the man** who is foolish']'

b. *mehɔ́·č·i* PRIMARY OBJECT

ic.məhw -a·	-t	-**i·l**
ic.eat	-3.obj -3sg/conj	-obv

'**the one** (obv) he ate'

c. *mi·lianpáni·k* SECONDARY OBJECT

mi·l	-ə	-<u>yan</u>	-əpan	-**i·k**
give.to	-1.obj	-2sg/conj	-pret	-an.pl

'**the ones** (an) you (sg) gave me'

d. *takó· kéku ... anshi·k·é·an* OBLIQUE

tako· keku	ansahi·k·e·	-<u>yan</u>	-**Ø**
neg anything	scoop.up(water)	-2.sg/conj	-in.sg

'**nothing** for you (sg) to scoop up water with'

It is worth noting that participles are just one of the strategies to form a relative clause in Algonquian languages. Johansson (2011) observes that in addition to using the participle construction, the other major strategy is to use the preverb construction, which is characterized by the preverb *ka·-* and the ordinary conjunct inflection. Crucially for the purposes of this thesis,

the preverb construction does not allow the appearance of peripheral agreement. Algonquian languages usually employ one of the constructions for relative clauses and rarely both. Languages like Meskwaki, Unami Delaware, Massachusett, Blackfoot, and most Ojibwe varieties use the participle construction. On the contrary, the Cree varieties, such as Western Naskapi, Northern Eastern Cree, and Plains Cree, as well as some Ojibwe varieties, such as the Rainy River dialect and the northern Ojibwe dialects (Sullivan 2016), employ the *ka·*-construction. A Western Naskapi example is illustrated in (29).

(29)   *nîyâ kâ-tikusîhk îskwâw nîy nitiskwâm*
    nîyâ   **kâ**- tikusin -<u>k</u>   îskwâw nîy   nit- iskwâm
    DEM   REL- arrive -3SG/CONJ   woman PRO   1-   wife
    '**That woman** who came here is my wife.' (Western Naskapi, Brittain 2001:102)

Note that the *ka·*-construction is not exclusively used for forming relative clauses. An in-depth description of *ka·*-clauses as well as debates on their analysis are out of the scope of this thesis. For further discussions, see Johns (1982), Brittain (2001), and Lochbihler & Mathieu (2013, 2016).

Returning to the conjunct participle, some languages have reanalyzed the participles as an indicative verb form with the original nominal function bleached out. For instance, the participle inflection has become the ordinary indicative verb inflection in Arapaho, which is called AFFIRMATIVE MODE (Goddard 2015:366). Miami-Illinois and Mi'gmaq share the same path of changes with Arapaho (Goddard 2015:367). In Mi'gmaq in particular, the participle inflection has completely replaced the independent indicative inflection (ibid.). As for Plains Cree, the participle inflection has replaced the ordinary conjunct indicative inflection. Consequently, peripheral agreement is permitted in Plains Cree's conjunct order.

In summary, peripheral agreement can appear in participles, one subtype of the conjunct order functioning as relative clauses. A wide range of nominals can be the head of a participle: subjects, primary objects, secondary objects, and oblique arguments. Thus, all of these types of arguments can be marked by peripheral agreement in a participle. Some languages have reanalyzed participles as ordinary verbal inflection, such as Aarapho and Mi'gmaq, which use it where other languages would use independent inflection, and Plains Cree, which uses it to replace the ordinary conjunct inflection. The result of such changes is non-participial conjunct forms that use peripheral agreement, a pattern that is not possible in Proto-Algonquian or more conservative languages.

2.2.3 Nominal inflection: demonstratives and possessive constructions

The final occurrence of peripheral suffixes to be discussed in this section is that found in nominal inflection. I first introduce the inflection of demonstratives, in which all three sets of peripheral allomorphs are observed. Then I turn to possessed nouns, focusing on discussing the parallelism between the verbal paradigm of the independent order and the nominal paradigm of the posessive inflection. Due to the scope of the thesis primarily concerning independent verbs, the detailed patterning of peripheral suffixes in nominal contexts cannot be fully explored.

In addition to the grammatical categories of number, gender, and obviation, demonstrative pronouns in Algonquian also frequently express the semantic categories commonly known as PROXIMAL and DISTAL (Goddard 2003:39; Valentine 2001:124). Some languages, including Meskwaki, also have a REMOTE category. As introduced in the beginning of Section 2.2, all three sets of peripheral suffixes are found in the inflection of demonstratives. The previous summary of the variants of the peripheral suffixes is repeated as Table 2.9.

Table 2.9: Three sets of peripheral suffixes, exemplified by Meskwaki

Form	a-endings	i-endings	e-endings
3SG	*-a*	*-a*	*-a, -**a**·ka*
0SG	*-i*	*-i*	*-**e***
3PL	*-**a**ki*	*-**i**ki*	*-**e**·ka, -**e**·ke*
0PL	*-**a**ni*	*-**i**li*	*-**e**·na, -**e**·ne*
OBV SG	*-**a**ni*	*-**i**li*	*-**e**·ka, -**e**·ke*
OBV PL	*-**a**hi*	*-**i**hi*	*-**e**·ha, -**e**·he*

(Source: Goddard 2003:39)

In Meskwaki, the proximal demonstrative paradigm uses the a-endings, as illustrated by the example in (30a); the distal uses the i-endings, as in (30b); and the remote uses the e-endings, as in (30c). However, not all languages follow this pattern, as there is extensive variation in the shapes of demonstratives across the family.

(30)   Meskwaki animate third demonstrative (Goddard 2003:38)

	Patterns	3SG	Meaning	3PL	Meaning
a.	PROXIMAL	*ma**na***	'this'	*ma·**haki***	'these'
b.	DISTAL	*i·**na***	'that'	*i·**niki***	'those'
c.	REMOTE	*anika·**na**·**ka***	'that further'	*anika·**ne**·**ke***	'those further'

Now turning to possessive constructions, the Massachusett examples in (31) illustrate the striking similarities between the inflection of independent transitive verbs and possessed nouns: the example in (31a) is a transitive verb, 3SG acting on OBV, and (31b) is a possessed noun, 3SG

possessing OBV. In both forms, the subject and the possessor are realized by identical central agreement (3SG *w-* ... *-Ø*, underlined), and the nominal properties of the object or the possessee are realized by identical peripheral agreement (OBV *-ah*, bolded).

(31) Massachusett V-N parallelism: 3SG→OBV

    a. *ummachkeshoh*
       <u>wu-</u> machkesh -ô   <u>-Ø</u> **-ah**
       3-   pay   -3.OBJ -3SG -OBV
       'He has paid **him** (OBV).' (Goddard & Bragdon 1988:519)

    b. *ummanitt8moh*
       <u>wu-</u> manito -um   <u>-Ø</u> **-ah**
       3-   god   -POSS -3SG -OBV
       'His **god** (OBV).' (Goddard & Bragdon 1988:503)

The Massachusett examples in (32) illustrate another instance of the verb-noun parallelism: the independent verb in (32a) involves 1PL acting on 3PL, and the noun in (32b) involves 1PL possessing 3PL.

(32) Massachusett V-N parallelism: 1PL→3PL

    a. *n8wadchanoinonog*
       <u>nu-</u> wadchan -ô   <u>-wunôn</u> **-ak**
       1-   keep   -3.OBJ -1PL   -AN.PL
       'We keep **them**.' (Goddard & Bragdon 1988:519)

    b. *nunnettassummunnanog*
       <u>nu-</u> netas   -um   <u>-unôn</u> **-ak**
       1-   animal -POSS -1PL   -AN.PL
       'Our **animals**.' (Goddard & Bragdon 1988:505)

Despite the great similarities demonstrated by their inflection, note that the 1PL verbal central suffix *-wunôn* in (32a) has a *-w* that is absent from the nominal 1PL suffix *-unôn* in (32b). This *-w* has been introduced as the w-formative in Section 1.1.2.

The parallel verb-noun examples presented so far involve an animate object/possessee. The examples in (33) illustrate the case of an inanimate object/possessee. The overall inflectional similarities are maintained. Notice that the 1PL verbal central suffix in (33a) takes the n-ending form *-unánôn* since the object is definite inanimate.

(33) Massachusett V-N parallelism: 1PL→0PL

    a. *nuttahtunnannash*
       <u>nut-</u> aht -aw   -<u>unánôn</u> -**ash**
       1-   have -0.OBJ -1PL   -IN.PL
       'We have **them**.' (Goddard & Bragdon 1988:525)

    b. *nuttahkeunnonnash*
       <u>nut-</u> ahke- <u>unôn</u> -**ash**
       1-   land -1PL -IN.PL
       'Our **lands**.' (Goddard & Bragdon 1988:505)

A schematic summary of the inflectional parallelism between the independent verb and the possessive construction is given in Table 2.10.

Table 2.10: The N-V inflection parallelism, exemplified by Massachusett

	Noun inflection 3PL possessed noun				**Verb inflection** independent TA w./ 3PL object			
	pfx	N(-um)	centr	periph	pfx	V-ô	centr	periph
1SG	nu-	...	-Ø	-ak	nu-	...	-Ø	-ak
2SG	ku-	...	-Ø	-ak	ku-	...	-Ø	-ak
3SG	wu-	...	-Ø	-ah	wu-	...	-Ø	-ah
1PL	nu-	...	-nôn	-ak	nu-	...	-wunôn	-ak
2PL	ku-	...	-wôw	-ak	ku-	...	-wôw	-ak
3PL	wu-	...	-wôw	-ah	wu-	...	-wôw	-ah

Goddard (1974, 2007; also see Proulx 1982) has provided a historical account of the similarities in the inflection of verbs and nouns. Simply put, the independent verb inflection originated from the reanalysis of possessed deverbal nouns as main clause verb forms. As shown earlier, "formative elements" are uniquely present in the central suffixes of the independent order. We will see in the following examples, (34) to (36), that the formatives are actually fossilized nominalizers left behind by the reanalysis of nominalized verbs.

Beginning with the Proto-Algonquian example in (34), the noun **akwehmi* 'robe' is derived by adding **-ehm* (later the m-formative) to the AI verb *akw-* 'wear as robe'. As exemplified here, the nominalizer **-ehm* derived nouns from AI verbs.

(34) The *-ehm* nominalizer in Proto-Algonquian (Goddard 2007:259)

    AI VERB   DERIVED NOUN
    *akwi-   **akwehmi*
    akwi-   ⟹   [akwi]-**ehm**-i
    wear.as.robe   [wear.as.robe]-NMLZ-IN.SG
    'to wear as a robe'   'robe'

The nominalizer **-w* (later the w-formative) derives nouns from TA verbs. As illustrated in the Menominee example in (35), the animate noun *na·na·w* 'invited speaker' is derived by adding **-w* to the TA stem *na·n-* 'go to get, fetch' and the theme sign *-a·* '3.OBJ'.

(35)   The *-w* nominalizer in Menominee (Goddard 2007:259)

TA VERB		DERIVED NOUN
na·n-		*na·na·w*
na·n-	$\Longrightarrow$	[na·n]-a·-**w**-Ø
go.to.get		[go.to.get.someone]-3.OBJ-NMLZ-AN.SG
'to fetch someone'		'invited speaker'

Lastly, the Meskwaki example in (36) illustrates derivation of a noun from a TI verb by use of **-n* (later the n-formative). In a similar vein to the example in (35), the inanimate noun *takwaha·ni* 'corn mush' is formed by adding *-n* to the verb complex consisting of the TI **-takwahn* 'grind' and the theme sign **-a·*. Note that the **-n* nominalizer is not restricted to applying to TI verbs; Goddard (2007:260) shows that it can also be added to AI verbs in noun derivation.

(36)   The *-n* nominalizer in Meskwaki (Goddard 2007:260)

TI VERB		DERIVED NOUN
takwah-		*takwaha·ni*
takwah-	$\Longrightarrow$	[takwah]-a·-**n**-i
grind.up		[grind.up]-0.OBJ-NMLZ-IN.SG
'to grind something'		'corn mush'

The above three examples provide an explanation of the striking parallelism in the independent inflection and the noun inflection, as the formative elements originally served to make nouns from verbs. When possessed forms of these deverbal nouns were reanalyzed as verbs, the suffixes that derived these nouns from verb stems would be present in the new verbal paradigms. As shown in the preceding examples, these formative elements, now bleached of their nominalizing function, have demonstrated interesting connections with particular verb classes: the m-formative with the morphologically intransitive AI verbs, the w-formative with the TA verbs, and the n-formative with TI verbs (and AI verbs). However, as noted by Goddard (2007:264), we should not expect to see the exact syntactic functions of the formative elements be inherited from the derivational nominal suffixes, since they become fossilized in the verbal paradigms.

Now that the inflectional parallels between verbs and nouns have been discussed, let us return to the issue of peripheral agreement. Since this thesis focuses on the variable patterning of peripheral agreement in the verbal domain, a natural question after observing the verb-noun parallelism is the following: is the variation in peripheral agreement also mirrored in the nominal

domain? The answer is almost uniformly no. Using the 1PL→3PL inflection as an example, two patterns can be identified across the language. Each pattern is represented by one language in Table 2.11. In this table, a check mark indicates that peripheral agreement appears in the given form while an X mark indicates that peripheral agreement is missing.

Table 2.11: Patterns of 1PL→3PL N-V inflection

	Massachusett	**Kickapoo**
Independent	✓	✗
Possessive	✓	✓

The classical pattern is illustrated by Massachusett, with previous (35) repeated below. In both the independent inflection in (37a) and the possessive in (37b), the 3PL object/possessee is indexed by peripheral suffix -*ak*. Again, the verbal central suffix contains the additional w-formative before the pluralizer -*unôn* (PA *-*ena·n*).

(37)   Massachusett-type: 1PL→3PL

   a.   *n8wadchanoinonog*
         <u>nu</u>- wadchan -ô   -<u>wunôn</u> -**ak**
         1-   keep   -3.OBJ -1PL   -AN.PL
         'We keep **them**.' (Goddard & Bragdon 1988:519)

   b.   *nunnettassummunnanog*
         <u>nu</u>- netas   -um   -<u>unôn</u> -**ak**
         1-   animal -POSS -1PL   -AN.PL
         'Our **animals**.' (Goddard & Bragdon 1988:505)

The other pattern is exemplified by Kickapoo. The Kickapoo verbal inflection given in (38a) uses the central m-ending -*pena*, the reflex of PA *-*(h)mena·*, and lacks peripheral agreement. The Kickapoo possessive form in (38b), however, does still show a peripheral suffix: the 3PL possessee is overtly marked by -*aki*.

(38)   Kickapoo-type: 1PL→3PL

   a.   *newiiteemaapena*   V
         <u>ne</u>- wiiteem -aa   -pena
         1-   go.with -3.OBJ -<u>1PL</u>
         'We go with **him/them**.' (Voorhis 1967:99)

   b.   *nekoohkoosemenaanaki*   N
         <u>ne</u>- koohkoos -em   -<u>enaan</u> -**aki**
         1-   pig   -POSS -1PL   -AN.PL
         'Our **pigs**.' (Voorhis 1967:66)

The verb-noun patterns in Massachusett and Kickapoo are summarized in Table 2.12. In possessive constructions, the central pluralizer *-ena·n* is consistently used in both languages and the peripheral suffix is robustly present. In verbal inflection, the morphological realization of central agreement differs between the two languages, as does the occurrence as the appearance of peripheral agreement. The patterning of verb inflection is thus more variable than that of possessed noun inflection.

Table 2.12: Variations of the 1PL→3PL V-N parallelism with the central suffix provided

	Massachusett	**Kickapoo**
Independent	*-wena·n*, ✓*-aki*	*-hmena·n*, ✗*-aki*
Possessive	*-ena·n*, ✓*-aki*	*-ena·n*, ✓*-aki*

To sum up, this section has described the distribution of peripheral suffixes, which occur on both verbal and nominal categories. On verbs, peripheral agreement is widely present in the independent order but much less frequent in the conjunct order. On nominals, peripheral agreement is consistently present on nouns, possessed nouns, and demonstratives. The striking parallelism between verbal inflection and nominal inflection was discussed and the similarities were shown to result from reanalysis: the independent verb inflection descended from nominal inflection and the formative elements that appear at the beginning of the independent central suffixes were originally nominalizers.

2.3 The correlation of peripheral agreement and formatives

This section details the dependency between the allomorphs of the central suffix and the patterning of peripheral agreement. In Section 2.3.1, I describe the absolute and objective paradigms, which are two contrastive sets of independent forms that were originally conditioned by definiteness. In Section 2.3.2, I elaborate on the use of the three sets of allomorphs of the central suffix.

2.3.1 Contrastive paradigms: absolute vs. objective

In some Eastern languages, the independent forms of transitive verbs may use either of two parallel paradigms: the ABSOLUTE and the OBJECTIVE. The critical difference in the choice of the two paradigms lies in whether the third person object is "specified" by the verb (Wolfart 1973:52). Goddard & Bragdon (1988:511) have pointed out that this absolute-objective opposition is definiteness-based. That is why the form with the indefinite object in (39a) uses the absolute inflection, whereas the form with the definite object in (39b) takes the objective inflection.

(39) The absolute-objective opposition in TA forms with SAP persons

    a.   *nné·yɔ lə́nowak*   ABSOLUTE

         <u>n</u>- ne·w -a·   -<u>Ø</u>   lənəw -ak

         1- see   -3.OBJ -1SG   man   -AN.PL

         'I see some men.' (Goddard 1979:158)

    b.   *nne·yɔ́·ɔk ne·k lə́nowak*   OBJECTIVE

         <u>n</u>- ne·w -a·   -<u>w</u> **-ak**   ne·k lənəw -ak

         1- see   -3.OBJ -1SG -AN.PL   DEM man   -AN.PL

         'I see **the men**.' (Goddard 1979:158)

The main characteristic of the absolute-objective opposition in (39) is whether or not peripheral agreement appears on the verb. In the absolute form in (39a), the verb does not have peripheral agreement, whereas in the objective form in (39b), peripheral agreement indexes the AN.PL object.

    The Munsee Delaware examples in (40) illustrate the same pattern for a TI verb. Again the inflection with the indefinite object in (40a) uses the absolute pattern, characterized by an absence peripheral agreement. In contrast, the inflection with the definite object in (40b) uses the objective pattern, characterized by the occurrence of peripheral agreement. Even though there is no visible peripheral agreement in either form, as the singular form of the peripheral suffix is zero in (40b), the preceding central suffix provides crucial evidence that clarifies which paradigm is being used. In Munsee Delaware, the central suffix -Ø in (40a) corresponds to Proto-Eastern-Algonquian *-əhm*, an m-ending belonging to the absolute inflection, which does not include a peripheral suffix. In contrast, the central suffix *-ən* in (40b) is an n-ending belonging to the objective inflection, which does include a peripheral suffix.

(40) The absolute-objective opposition in TI verbs

    a.   *nná·t·əm tə́ntay*   ABSOLUTE

         <u>n</u>- na·t·   -əm   -<u>Ø</u>   təntay

         1- go.after -0.OBJ -1SG   fire.IN.SG

         'I am going after some fire.' (Unami, Goddard 1974:320)

    b.   *nná·t·əmən ní tə́ntay*   OBJECTIVE

         <u>n</u>- na·t·   -əm   -<u>ən</u> **-Ø**   ni   təntay

         1- go.after -0.OBJ -1SG -IN.SG   DEM fire.IN.SG

         'I am going after **the fire**.' (Unami, Goddard 1974:320)

A more dramatic effect of the absolute-objective contrast occurs in forms in which both arguments are third person. The pair of examples in (41) show that peripheral agreement occurs in both forms but indexes different arguments. The central agreement in the absolute form in (41a) consists of the special "umlauting" central suffix *-w*, which always occurs without a prefix.

Note that the umlauting suffix -*ẅ* in (41a) triggers umlaut of the preceding theme sign *a·* '3.OBJ' to *e·*. The central agreement in the objective form shown in (41b) contains a prefix and a different central suffix -*w* that does not affect the preceding vowel of the theme sign *a·* (Pentland 1999; Goddard 2007). The crucial difference between the absolute form in (41a) and the objective form in (41b) is this: they both show peripheral agreement, but in the absolute form in (41a), peripheral agreement does not index the indefinite object; instead, it indexes the subject, taking over the role usually played by central agreement. On the other hand, in the objective form in (41b), peripheral agreement indexes the definite object as usual.

(41) The ABS-OBJ opposition in TA forms with third-persons

    a.   *máxkwal níhle·w*   ABSOLUTE

         maxkw -al   nihl -e·   -ẅ̲ -**Ø**

         bear   -OBV   kill -3.OBJ -3 -AN.SG

         '**He** killed a bear or some bears (OBV).' (Munsee, Goddard 2007:210)

    b.   *wǎnihlá·wal né·l máxkwal*   OBJECTIVE

         wə- nihl -a·   -w   -**al**   ne·l   maxkw -al

         3-   kill -3.OBJ -3SG -OBV DEM bear   -OBV

         'He killed **the bear(s)** (OBV).' (Munsee, Goddard 2007:210)

The absolute-objective contrast is retained in several of the Eastern languages: Unami and Munsee Delaware, Massachusett, Eastern Mahican, and Western Abenaki (Goddard 2007:211). The other languages do not systematically retain the contrast, but traces of the system are found in Ojibwe, Potawatomi, Shawnee, and Eastern Abenaki (Goddard 2007:211). Because these traces occur widely across the family, Goddard (1967, 1974, 2007) has argued that the absolute-objective contrast dates back to Proto-Algonquian.

In the languages where the absolute-objective contrast is no longer maintained, i.e. the northernmost Eastern languages and all non-Eastern languages, the independent inflection may use originally absolute forms, originally objective forms, or a mixture of the two. Table 2.13 shows some of the patterns. The gray shading indicates that the object is not indexed by peripheral agreement. Some languages, like Meskwaki, use the absolute forms in the majority of contexts. Quite the opposite, some languages, like Passamaquoddy, use the objective forms in all contexts. Some languages fall in between, like Plains Cree, with TI verbs being completely absolute while TA verbs are mostly objective, aside for the third-person forms. Of course, there is more variation beyond the patterns shown in Table 2.13. Additional patterns from other languages are discussed in Section 3.4 of the next chapter.

All of the preceding discussion has focused on peripheral agreement indexing the object, which is the main pattern of interest in this thesis. It is also possible for peripheral agreement in

Table 2.13: Synchronic patterns of the ABS-OBJ contrast in TA/TI direct inflection

	Meskwaki		Plains Cree		Passam'dy	
	TA	**TI**	**TA**	**TI**	**TA**	**TI**
1s/2s→**3/0**	OBJ	ABS	OBJ	ABS	OBJ	OBJ
1p→**3/0**	ABS	ABS	OBJ	ABS	OBJ	OBJ
2p→**3/0**	ABS	ABS	OBJ	ABS	OBJ	OBJ
3→**3'/0**	ABS	ABS	ABS	ABS	OBJ	OBJ

the objective inflection to index the subject of a TA verb, but only if the verb uses the inverse form (cf. (19b) in Section 2.2). In languages in which the absolute-objective contrast is maintained, a person split is displayed in terms of indexing the subject in these inverse forms. Specifically, the inverse forms involving a third person acting on an SAP object have neutralized the absolute-objective contrast and always use the objective paradigm (Goddard 1979:157), in which the third-person subject is indexed by peripheral agreement. As illustrated by the Delaware inverse forms in (42), the indefinite third-person subject in Munsee in (42a) and the definite third-person subject in Unami (42b) both trigger the objective inflection, with peripheral agreement indexing the third-person subject even when it is indefinite. (Even though the singular animate peripheral suffix is morphologically zero here, the preceding 1PL central suffix *-(w)əna·* is a w-ending, indicating the presence of peripheral agreement. The 1PL central suffix appears as the m-ending *-əhmənaʔ* when peripheral agreement is truly absent, as in (43a) below.)

(42) No ABS-OBJ opposition in TA inverse SAP forms

    a. *awé·n kǎne·wkó·na*   OBJECTIVE
       awe·n   <u>kə-</u> ne·w -əkw -<u>əna·</u> -Ø
       someone 2- see -INV -1PL -AN.SG
       '**Someone** saw us (inclusive).' (Munsee, Goddard 1979:159)

    b. *ktahɔ·kó·na*   OBJECTIVE
       <u>kət-</u> ahwa·l -əkw -<u>əna·</u> -Ø
       2-   love   -INV -1PL -AN.SG
       '**He** loves us (inclusive).' (Unami, Goddard 2021:66)

The loss of the absolute-objective distinction in the TA inverse forms only holds when the third-person subject is animate. As the Unami Delaware examples in (43) show, the absolute-objective distinction continues to be made in the TA inverse inflection when the third-person subject is inanimate. As given in (43a), an absolute form with no peripheral agreement is used when the inanimate subject is indefinite, while an objective form with peripheral agreement indexing the inanimate subject is used when the subject is definite as in (43b).

(43) The ABS-OBJ opposition in TA inverse forms with an inanimate actor

    a.   *wəla·te·naməwá·k·an nəməšhika·khúməna*   ABSOLUTE
        wəla·te·naməwa·k·an -Ø   <u>nə</u>- məšəhkkaw -əkw -<u>əhməna</u>·
        happiness   -IN.SG   1- come.over -INV -1PL
        'Happiness comes over us.' (Unami, Goddard 2021:66)

    b.   *mo·šə́š·a kkwi·tələt·əwá·kan ntəlkó·ne·n*   OBJECTIVE
        mo·šəš·a wə- kwi·tələtəwá·kan -Ø   <u>nət</u>- əl   -əkw -<u>əne·n(a·n)</u> -**Ø**
        Moses's 3- law   -IN.SG 1- say.so -INV -1PL   **-IN.SG**
        '**Moses's law** tells us.' (Unami, Goddard 2021:167)

In addition, the absolute-objective contrast in inverse forms also comes back if both arguments are animate third persons. This is illustrated by the Munsee examples with an obviative subject acting on an animate proximate object in (44). When the obviative subject is indefinite, as in (44a), the absolute inflection is used, with no peripheral suffix indexing the indefinite subject. However, when the obviative subject is definite, as in (44b), the objective paradigm is used, with the peripheral suffix *-al* indexing the definite subject.

(44) The ABS-OBJ opposition maintained in TA inverse third-person forms

    a.   *máxkwal níhləkw*   ABSOLUTE
        maxkw -al   nihl -əkw -(ẅ) -**Ø**
        bear   -OBV   kill -INV -3 -**AN.SG**
        'A bear or some bears (OBV) killed **him**.' (Munsee, Goddard 1979:159)

    b.   *wǎníhlko·l*   OBJECTIVE
        <u>wə</u>- nihl -əkw -<u>w</u>   -**al**
        3- kill -3.OBJ -3SG -**OBV**
        '**S/He/They** (OBV) killed him.' (Munsee, Goddard 1979:158)

To quickly sum up the absolute-objective pattern shown in the above inverse examples, the forms with a third-person subject acting on an SAP object are always objective while the remaining forms show an absolute-objective contrast, as indicated in Table 2.14. In this table, the column labelled "3/3′subj'' refers to the forms with an animate subject (proximate 3 in SAP forms or obviative 3′ in third person forms) and the column labelled "0 subj" refers to the forms with an inanimate subject. Cells containing "ABS/OBJ" indicate that the absolute-objective contrast is maintained.

Synchronically, variations again are found across different languages. Some TA inverse patterns are schematized in Table 2.15. First, there are language-internal variations in the Delaware languages. In Munsee, an unusual pattern occurs in objective forms with an inanimate subject, indicated by gray shading in the table. In these forms, the n-ending central suffixes are employed,

Table 2.14: The ABS-OBJ contrast in TA inverse inflection: Unami Delaware

Form	3/3′ subj	0 subj
SUBJ→1s/2s	OBJ	ABS/OBJ
SUBJ→1p	OBJ	ABS/OBJ
SUBJ→2p	OBJ	ABS/OBJ
SUBJ→3	ABS/OBJ	ABS/OBJ

like in Unami Delaware, but there is no peripheral agreement with the inanimate subject when the animate object is plural. Second, outside of the Eastern languages, the definiteness-based contrast is completely lost, and the inflection is non-contrastively either absolute or objective for any particular form. In Meskwaki, the absolute pattern is used in all forms with inanimate actors. On the contrary, Passamaquoddy has gone completely objective, with peripheral agreement systematically indexing the third-person subject no matter if it is animate or inanimate. Examples illustrating these patterns will be discussed in Chapter 3.

Table 2.15: Synchronic patterns of the ABS-OBJ contrast in TA inverse inflection

	Munsee		Meskwaki		Passam'dy	
Form	3/3′ subj	0 subj	3/3′ subj	0 subj	3/3′ subj	0 subj
SUBJ→1s/2s	OBJ	ABS/OBJ	OBJ	ABS	OBJ	OBJ
SUBJ→1p	OBJ	ABS/ OBJ	OBJ	ABS	OBJ	OBJ
SUBJ→2p	OBJ	ABS/ OBJ	OBJ	ABS	OBJ	OBJ
SUBJ→3	ABS/OBJ	ABS/ OBJ	ABS	ABS	OBJ	OBJ

To conclude, Algonquian transitive verbs originally had parallel independent paradigms conditioned by definiteness. This parallelism is preserved in some Eastern languages, with some language-internal variation, but is lost in all other languages. In direct forms, Meskwaki is almost entirely absolute while Passamaquoddy is entirely objective; other languages, such as Plains Cree, show more of a mix of absolute and objective forms. As for inverse forms, forms with a third-person animate actor and SAP object always are objective while forms with an obviative or inanimate actor show variation.

2.3.2 The dependency of formatives on peripheral agreement

Apart from whether peripheral agreement is present in the verb inflection indexing the object (or the subject of the inverse form), the absolute paradigm also differs from the objective paradigm in the use of central suffixes. The Unami Delaware examples in (45) illustrate the allomorphs of the 1PL central suffix. These suffixes are characterized by the initial components called FORMATIVE

ELEMENTS (Goddard 2007:208) and are accordingly categorized by Goddard (1979, 2007) into three sets: the M-ENDINGS such as *-hməna·* in (45a), the W-ENDINGS such as *-wəna·n* in (45b), and the N-ENDINGS such as *-əne·na·n* in (45c).

(45) Unami Delaware: 1PL allomorphs

    a.   *nno·t·əmáhəna*   TA absolute
         <u>nə-</u> no·təm -a·   <u>-hməna·</u>
         1-   guard -3.OBJ -1PL
         'We guard (a person/people).' (Goddard 2021:64)

    b.   *nno·t·əma·wəná·nak*   TA objective
         <u>nə-</u> no·təm -a·   <u>-wəna·n</u> -**a·k**
         1-   guard -3.OBJ -1PL   -AN.PL
         'We guard **them**.' (Goddard 2021:64)

    c.   *nəmaxkaməne·ná·ni né·l ahə́sna*   TI objective
         <u>nə-</u> maxk -am   <u>-əne·na·n</u> -**i·l**   ne·l ahəsn -al
         1-   find -0.OBJ -1PL   -IN.PL DEM stone -IN.PL
         'We found **the stones**.' (Goddard 2021:70)

As shown by the examples in (45), the shapes of the central suffixes are closely dependent on peripheral agreement: the m-ending is used when there is no peripheral agreement, the w-ending is used when peripheral agreement indexes an animate argument, and the n-ending is used when peripheral agreement indexes an inanimate argument or a secondary object. Table 2.16 summarizes the distribution of the allomorphs of the 1PL central suffix as well as their connection with peripheral agreement.

Table 2.16: Massachusett 1PL allomorphy

Allomorph	Label	Context (simplified)	Periph agr allowed?
-hməna·(n)	m-ending	AI, absolute TA/TI	no
-wəna·n	w-ending	objective TA	yes
-əne·na·n	n-ending	TI, AI+O, TA+O	yes

In the above, I have focused on the allomorphy of the 1PL central suffix. The complete sets of central suffixes for all persons are provided in the two tables below using Proto-Algonquian morphemes (Goddard 2007:209). The m-endings shown in Table 2.17 are used in the inflection of intransitives or the absolute paradigm of transitives. In both occurrences, peripheral agreement never appears. Conversely, the endings that occur in objective paradigms can be further divided into two sets as given in Table 2.18: the w-endings and the n-endings. Both of these sets co-occur with peripheral agreement.

Table 2.17: Absolute: M-endings

Actor	M-endings
1s, 2s	*-ehm*
1p	*-ehm-ena·n*
21	*-ehm-enaw*
2p	*-ehm-wa·w*

Table 2.18: Objective: W-endings and N-endings

Actor	W-endings	N-endings
1s, 2s, 3s	*-w*	*-en*
1p	*-w-ena·n*	*-ene·-na·n*
21	*-w-enaw*	*-ene·-naw*
2p, 3p	*-wa·w*	*-ene·-wa·w*

Notice that m-endings for third-person actor forms are not given in Table 2.17. This is because third-person central agreement has a distinct makeup in absolute forms. A Munsee TA absolute example with a third-person subject acting on an indefinite obviative object is given in (46).

(46) *máxkwal níhle·w*   TA absolute
      maxkw -al   nihl -e·   -w̱ -Ø
      bear   -OBV   kill -3.OBJ -3 -AN.SG
      '**He** killed a bear or some bears (OBV).' (Munsee, Goddard 2007:210)

The central ending that occurs in third-person absolute forms such as (46) does not contain the *-ehm* formative at all but is instead *-w̱*, which triggers umlaut and, significantly, is never accompanied by a person prefix. In contrast, the m-endings begin with *-ehm* (which does not trigger umlaut) and co-occur with person prefixes, as in (45a). Also, in regards to the relation to peripheral agreement, *-w̱* co-occurs with peripheral agreement that indexes the third-person subject, the same argument that we would ordinarily expect central agreement to index in such a form. A reason for the special morphological shape of *-w̱* will be proposed in Section 6.2. For now, I set aside forms with *-w̱* and concentrate on examples involving an SAP subject.

Before continuing the dependency between formative elements and peripheral agreement, it is necessary to describe the diverse contexts in which the n-formative occurs. The n-endings are often associated with inanimate arguments, appearing systematically in TI forms, e.g. (45c), and TA inanimate-actor forms, e.g. (43b). But they occur in other contexts as well, as shown by the following points, which are drawn from the observations in Goddard 2020. First, the Unami Delaware examples in (47) show that the n-formative also occurs in the context of an animate secondary object: the object of an AI+O verb in (47a) and the theme of a TA+O verb in (47b).[3] Therefore, the n-endings are not strictly restricted to inanimates.

---

[3]Note, the peripheral suffix *-i·l* in (47b) indexes the animate obviative theme. Had it indexed the animate proximate subject 'they', the peripheral suffix would have been *-a·k*.

(47)   Unami Delaware: n-formative and animate secondary objects

    a.   *nəwaní·ne·n*   AI+O objective
        nə- wani· -<u>əne·n</u> -Ø
        1-   forget -1PL   -AN.SG
        'We forgot **him/her**.' (Goddard 2021:71)

    b.   *nəmi·lá·na*   TA+O objective
        <u>nə</u>- mi·l -a·   -<u>n</u>   -**al**
        1-   see -3.OBJ -1SG -OBV
        'I give **her/them** (OBV) to her/them (AN).' (Goddard 1979:159)

What's more, Goddard (2020) showed that peripheral agreement can index more than just core arguments. The Unami Delaware examples in (48) illustrate that various oblique arguments can be indexed by peripheral agreement, and in each case, the central suffix appears with the n-formative. The example in (48a) involves a relative root complement (RRC); the latter two examples show the n-endings co-occurring with an instrumental oblique in (48b) and an oblique wh-word in (48c).

(48)   Unami Delaware: n-formative and obliques

    a.   *ná=nə ntə́li-kí·spwi·n*   RRC
        ná=nə   <u>nət</u>- əli·- ki·spwi· -<u>n</u> -Ø
        FOC=that 1-   so.RR- be.full -1SG -IN.SG
        'I got full **on it**.' [lit. 'I got full that way.'] (Goddard 2020:105)

    b.   *pə́k·ama·n*   Instrumental
        <u>wə</u>- pakam -a·   -<u>n</u>   -Ø
        3-   strike -3.OBJ -3SG -IN.SG
        'He struck him **with it**.' (Goddard 2020:106)

    c.   *tá=háč ktá·n*   Wh-word
        tá =háč <u>kət</u>- á· -<u>n</u> -Ø
        WH =Q   2-   go -2SG -IN.SG
        '**Where** are you going?' (Goddard 2020:105)

The n-formative is also found when the verb has a clausal subject, as in (49a), or an adjunct, as in (49b). These examples again indicate that the use of the n-formative is not conditioned by inanimate grammatical gender.

(49)   Eastern Algonquian: n-formative and clausal complement and adjunct

    a.   *kəmac notəmeyakon ahtəli-metsəyayin*   Clausal complement

        kəmac <u>n</u>- otəmeya -əko -<u>n</u> -**Ø**   ahtəli- metsəya -**yin**

        very   1- annoy -INV -1SG -IN.SG repeatedly- arrive.late -2SG/CONJ

        '**Your repeatedly arriving late** annoys me very much.' (Maliseet-Passamaquoddy, Sherwood 1983:124)

    b.   *ktaləwa·p·ensí·nak kíči-xkwé·ɔk*   Adjunct

        <u>kət</u>- aləwa·p·ens· -<u>n</u> -**ak**   kə- íči- axkwe·w -**ak**

        2- be.more.blessed -1SG -AN.PL 2- fellow- woman -AN.PL

        'You (SG) are more blessed **than your fellow women**.' (Unami, Goddard 2020:105)

Continuing on Goddard's (2020) observations, the n-formative systematically appears in a mode of the independent order called the SUBORDINATIVE (Proulx 1980; Goddard 1983; here glossed as SUB). The subordinative mode seems to be an Eastern Algonquian creation as it is not found in non-Eastern languages. The subordinative inflection partially takes over the function with the plain conjunct order, which is typically used in subordinate clauses. As shown by Goddard (2020:108), the subordinative is usually used for complements of higher verbs or other ostensible predicates, and it often co-occurs with the preverb *lí-* 'so' in Unami Delaware. The distinctive characteristic of the subordinative inflection is the use of the n-endings as well as total suppression of peripheral agreement.

The Unami examples in (50) illustrate the inflection of the subordinative order. The form in (50a) involves a 2PL subject acting on a 1SG object. Notice that the central suffix uses the n-ending *-nəwa·*. In (50b), which shows an AI verb with a third-person animate subject, we also see the appearance of *-n*.

(50)   Unami Delaware: n-formative and the subordinative inflection[4]

    a.   *nkat·á·t·amən ko·la·mhitai·né·ɔ*

        n- kat·á·t -am -ən <u>kə</u>- wəla·məhtaw -i· -**ne·wa·**

        1- want -0.OBJ -1SG 2- believe -1.OBJ -2PL/SUB

        'I want you to believe in me.' (Goddard 2020:108)

    b.   *ná tɔlə́mska·n*

        na   <u>wə</u>- aləmska· -**n**

        then 3- depart -3SG/SUB

        'Then he departed.' (Goddard 2020:109)

---

[4]Goddard (1979) noted that a zero peripheral suffix could be set up for the subordinative forms, explaining why peripheral agreement is consistently absent in these forms. Pentland (personal communication) suggested that the subordinative inflection in fact uses *-i* 'IN.SG', which is used as a default marker, agreeing with the preverb or the constituents/elements subordinated to the verb.

In the above examples from (47) to (50), there are no inanimate arguments, and yet we still see n-endings. Therefore, the wide distribution of the n-formative leads us to reject an analysis treating the n-endings as a marker conditioned by inanimate gender.

As mentioned above, a key issue for an analysis of Algonquian agreement is the correlation between the selection of the central endings and the patterning of peripheral agreement. Whenever the m-endings are used, peripheral agreement does not appear on the verb. The w-endings and n-endings appear in contexts in which an argument is indexed by peripheral agreement: w-endings occur when peripheral agreement indexes an animate primary object or subject while n-endings occur in the inflection when peripheral agreement indexes an inanimate primary object or a secondary object or oblique of either gender. To make sense of this distribution, we can describe the formative elements as being conditioned by the prominence of the third-person NP that is indexed by peripheral agreement, as illustrated in Table 2.19: peripheral agreement with a highly prominent NP triggers the w-formative allomorph of the central suffix; peripheral agreement with a less prominent NP triggers the n-formative allomorph; and the absence of peripheral agreement triggers the m-formative allomorph.

Table 2.19: The correlation of formatives with the prominence of arguments

Prominence	most prominent	>	intermediate prominent	>	least prominent
Formative	W		N		M
NP examples	primary animate object animate subject (INV)		secondary object inan subj, oblique, adjunct		no object indexed by peripheral agr't

The languages differ in exactly where the cut-off points lie, as shown more fully in the next chapter, and also in the number of allomorphs of the central suffix that are distinguished. So far we have seen a three-way distinction between m-, w-, and n-endings, but some of the daughter languages have collapsed this to a two-way distinction. Plains Cree, for example, has replaced all instances of the m-endings with n-endings, and Kickapoo has replaced n-endings with w-endings. These mergers will be described in detail and analyzed in Chapter 6.

2.4 Chapter summary

This chapter has presented a description of peripheral agreement. Regarding its distribution, peripheral agreement is regularly used in independent verb inflection, conjunct participle inflection, and nominal inflection. From a diachronic perspective, peripheral agreement originally occurred only on nominals, including conjunct participles, which were argued above to be nominalizations.

Peripheral agreement was brought into the verbal domain when the independent verb inflection was created by the reanalysis of noun forms as verb forms.

Depending on their use of peripheral agreement, independent verb forms can be sorted into distinct absolute and objective paradigms. In Proto-Algonquian, the use of these paradigms was conditioned by definiteness. This system is preserved in some Eastern languages but is lost elsewhere. The other languages use a mix of originally absolute and originally objective forms without their original functional correlates. Different allomorphs of the central suffix, distinguished by the formative elements *m*, *w*, and *n*, are selected depending on whether a peripheral suffix appears and what type of argument it indexes.

This chapter has surveyed the empirical issues that surround Algonquian peripheral agreement. The following chapters aim to deepen our understanding of this agreement marker and of the Algonquian agreement system as a whole.

Chapter 3

Availability of peripheral agreement: A pan-Algonquian overview

The preceding chapter laid out a descriptive framework for the patterning of peripheral agreement. This chapter gives a comprehensive survey of the patterning of peripheral agreement across six Algonquian languages: Maliseet-Passamaquoddy and Unami Delaware of the Eastern subgroup, and Ojibwe, Menominee, Plains Cree, and Meskwaki of the Central subgroup. These languages are selected because they represent various points along a continuum of robustness of peripheral agreement. Unami Delaware retains the original absolute-objective contrast, with the occurrence of peripheral agreement driven by definiteness. The rest of the languages in the survey have lost the absolute-objective contrast. As described in the previous chapter, Maliseet-Passamaquoddy uses mostly objective forms while Plains Cree and Meskwaki use more absolute forms. Menominee and Ojibwe are included in the survey as transitional languages with a mix of objective and absolute forms.

This chapter is structured as follows. Section 3.1 provides a baseline for the survey by presenting the conservative system of Unami Delaware, where definiteness determines the occurrence of peripheral agreement. Section 3.2 surveys variation in indexing the primary objects of TA and TI verbs. Section 3.3 surveys the treatment of inanimate subjects of TA inverse verb, which are generally treated similarly to the primary object of a TI verb. Section 3.5 moves on to secondary objects: the object of an AI+O verb or the theme of a TA+O verb. Section 3.6 shows that some Algonquian languages permit peripheral agreement with oblique arguments. Finally, Section 3.7 discusses the interference of mode markers in the patterning of peripheral agreement in language varieties such as Southwestern Ojibwe and Meskwaki.

In all examples in this chapter, peripheral agreement is shown in boldface. Other agreement morphemes are not given special formatting unless they are relevant to a particular discussion.

3.1 Definiteness

In some Eastern languages, whether or not the object is indexed by peripheral agreement depends on its definiteness. As described previously in Section 2.3.1, these languages have retained the absolute-objective contrast in TA and TI verbs: definite objects can be indexed by peripheral agreement while indefinite objects cannot. This section reviews some of the previous Unami Delaware examples and prepares for the cross-linguistic comparison of peripheral agreement patterns to follow.

The Unami Delaware examples in (1) involve TA verbs. In (1a), the indefinite object *lə́nowak* 'some men' is unindexed by peripheral agreement. In contrast, the definite object in (1b) is indexed by peripheral agreement (animate plural *-ak*).

(1)   Definiteness conditioned contrast, e.g. Unami Delaware TA verbs

      a.   *nné·yɔ lə́nowak*   ABSOLUTE

          n- ne·w -a·   -Ø   lənəw -ak

          1- see   -3.OBJ -1SG man -AN.PL

          'I see some men.' (Goddard 1979:158)

      b.   *nne·yɔ́·ɔk ne·k lə́nowak*   OBJECTIVE

          n- ne·w -a·   -w **-ak**   ne·k lənəw -ak

          1- see   -3.OBJ -1SG -AN.PL DEM man -AN.PL

          'I see **the men**.' (Goddard 1979:158)

The same pattern is shown by the TI pair in (2). In (2a), peripheral agreement is missing when the inanimate object *té·hi·m* 'strawberry' is indefinite, thus giving the generic reading. On the contrary, peripheral agreement *-i·l* appears in (2b), when the inanimate object *ahə́sna* 'stones' is preceded by the demonstrative *né·l*, thus resulting in a definite interpretation.

(2)   Definiteness conditioned contrast, e.g. Unami Delaware TI verbs

      a.   *té·hi·m nəmi·číhəna*   ABSOLUTE

          te·hi·m   nə- mi·či· -Ø   -həna·

          strawberry 1- eat   -0.OBJ -1PL

          'We ate strawberries.' (Goddard 2021:70)

      b.   *nəmaxkaməne·ná·ni né·l ahə́sna*   OBJECTIVE

          nə- maxk -am   -əne·na·n **-i·l**   ne·l ahəsn -al

          1- find -0.OBJ -1PL   -IN.PL DEM stone -IN.PL

          'We found **the stones**.' (Goddard 2021:70)

The above TA and TI examples both involve SAP subjects. Turning to third-person forms, definiteness again determines whether or not the object is indexed by peripheral agreement. In

(3a), the indefinite obviative object is not indexed by peripheral agreement. Peripheral agreement does appear in this form, however, but it indexes the proximate subject rather than the object. In (3b), in contrast, the obviative object is definite and thus triggers the objective paradigm of verb inflection, with the peripheral suffix -*al* 'OBV' indexing the object. These examples involve TA verbs; TI third-person forms show the same pattern.

(3)   Definiteness conditioned contrast, e.g. Munsee Delaware TA third-person forms

a.   *máxkwal níhle·w*   ABSOLUTE
maxkw -al   nihl -e·   -w̰ -Ø
bear   -OBV   kill -3.OBJ -3 -AN.SG
'**He** killed a bear or some bears (OBV).' (Goddard 2007:210)

b.   *wǎnihlá·wal né·l máxkwal*   OBJECTIVE
w̰ə- nihl -a·   -w   -**al**   ne·l   maxkw -al
3-   kill -3.OBJ -3SG -**OBV**   DEM   bear   -OBV
'He killed **the bear(s)** (OBV).' (Goddard 2007:210)

Even though peripheral agreement typically indexes the object, it can also index a third-person subject when the verb shows inverse marking. As described in Section 2.3.1, peripheral agreement with inanimate and obviative subjects shows the same sensitivity to definiteness that holds in the examples given above. A pair of inanimate-subject forms is given in (4): the indefinite subject *wəla·te·naməwá·k·an* 'happiness' in (4a) is not indexed by peripheral agreement, whereas the definite subject *mo·šǎš·a kkwi·tələt·əwá·kan* 'Moses's law' in (4b) is indexed by peripheral agreement. (Even though the inanimate singular form of the peripheral suffix is morphologically zero, the occurrence of an n-allomorph of the central ending in (4b) indicates that the objective agreement pattern is being used, thus supporting the presence of peripheral agreement.) Forms with obviative subjects show the same pattern, as previously exemplified in (44) in Section 2.3.1.

(4)   Definiteness conditioned contrast, e.g. Unami Delaware TA inanimate subject forms

a.   *wəla·te·naməwá·k·an nəməšhika·khúmənа*   ABSOLUTE
wəla·te·naməwa·k·an -Ø   nə- məšəhkkaw -əkw -əhmənа·
happiness   -IN.SG   1- come.over   -INV -1PL
'Happiness comes over us.' (Goddard 2021:66)

b.   *mo·šǎš·a kkwi·tələt·əwá·kan ntəlkó·ne·n*   OBJECTIVE
mo·šəš·a wə- kwi·tələtəwá·kan -Ø   nət- əl   -əkw -əne·n(a·n) -Ø
Moses's 3-   law   -IN.SG   1- say.so -INV -1PL   -**IN.SG**
'**Moses's law** tells us.' (Goddard 2021:167)

When the subject of an inverse form is a proximate animate third person, it is always indexed by peripheral agreement regardless of its definiteness. Examples are given in (5).[1] Clearly, both forms inflect in the objective paradigm, with peripheral agreement indexing the subject no matter whether it is indefinite as in (5a) or definite as in (5b). (Once again, in spite of the zero singular peripheral suffix, the occurrence of peripheral agreement in (5) is supported by the w-ending allomorph of the central suffix *-(w)əna·*. Had the form inflected for the absolute pattern, the central suffix would have used the m-ending allomorph *-əhməna·*, cf. (4a).)

(5)   No ABS-OBJ opposition in TA inverse SAP forms

    a.   *awé·n kǒne·wkó·na*   OBJECTIVE
          awe·n   kə- ne·w -əkw -əna· -Ø
          someone   2- see   -INV -1PL -AN.SG
          '**Someone** saw us (inclusive).' (Munsee, Goddard 1979:159)

    b.   *ktahɔ·kó·na*   OBJECTIVE
          kət- ahwa·l -əkw -əna· -Ø
          2-   love   -INV -1PL -AN.SG
          '**He** loves us (inclusive).' (Unami, Goddard 2021:66)

In addition to Unami and Munsee Delaware, the definiteness-conditioned pattern is found in certain other Eastern languages, such as Massachusett (examples in Section 2.3.2) and Western Abenaki (Laurent 1884:92-95). A summary of the definiteness-conditioned pattern in these languages is given in Table 3.1: "if definite" means that the given argument is indexed by peripheral agreement only when it is definite, and "always" means it is indexed regardless of definiteness.

Table 3.1: Summary of definiteness-driven pattern in transitive verb inflection

TA/TI direct	Indexing of object		TA inverse	Indexing of subject	
	3/3′	**0**		**3/3′**	**0**
1s/2s→ **OBJ**	if definite	if definite	**SUBJ**→1s/2s	always	if definite
1p→**OBJ**	if definite	if definite	**SUBJ**→1p	always	if definite
2p→**OBJ**	if definite	if definite	**SUBJ**→2p	always	if definite
3 →**OBJ**	if definite	if definite	**SUBJ**→3	if definite	if definite

Not all Eastern lanuages show the Delaware pattern. In Maliseet-Passamaquoddy, the absolute-objective contrast has been lost and the transitive verb forms are entirely objective. Consequently, definiteness no longer plays a role in the use of peripheral agreement. As shown by

---

[1]The form in (5a) is from Munsee Delaware rather than Unami Delaware. A perfect minimal pair with examples that are both from Unami Delaware were unable to be found in the sources of Goddard (1979, 2007, 2021). The Munsee example will not be an issue here as the verb inflection is identical with the corresponding Unami inflection.

the examples in (6), peripheral agreement always appears in transitive forms and indexes the object even if it is indefinite.

(6)   Indefinite objects indexed by peripheral agreement in Maliseet-Passamaquoddy

    a.   *nəməya nil mahtək^{w}ehs*   OBJECTIVE

        nə- məy -a   -Ø -**Ø**   nil mahtək^{w}ehs

        1- see -3.OBJ -1SG -**AN.SG** I rabbit.AN.SG

        'I see **a rabbit**.' (Sherwood 1983:110)

    b.   *nehpahawal ətohkəl nowel naka can*   OBJECTIVE

        w- nehpah -a   -wa -**əl**   ətohk -əl   nowel naka can

        3- kill   -3.OBJ -3PL -**OBV** deer -OBV Nowel and John

        'John and Nowel killed **a deer** (OBV).' (Sherwood 1983:110)

The Delaware examples in subsequent sections are taken from the objective set, in which there is a definite argument that triggers peripheral agreement. To avoid repetition, the absolute counterparts will not be provided in the remainder of this chapter.

3.2   Primary objects

This section surveys the availability of peripheral agreement with the object of monotransitive verbs across the sample of six Algonquian languages and is divided into two parts: Section 3.2.1 on TA verbs and Section 3.2.2 on TI verbs. Both of the two subsections follow the same layout: first forms with SAP subjects are considered, followed by forms with third-person subjects, and finally by forms with a plural subject. Note that two Ojibwe varieties, Nishnaabemwin and Oji-Cree, will be included because these two dialects illustrate important Ojibwe-internal variations in the cline of peripheral agreement.

3.2.1   TA forms

This subsection surveys the indexing of animate objects by peripheral agreement in TA verbs. In what follows, "SAP forms" refers to forms with an SAP subject (a speech-act participant, i.e. a first or second person) and an animate third-person proximate object, while "third-person forms" refers to forms with an animate proximate subject and an animate obviative object. The overall TA patterns are summarized in Table 3.2, which shows that the objects of the SAP forms are available for peripheral agreement in all examined languages. However, variation arises in the third-person forms: the object is available for peripheral agreement in Maliseet-Passamaquoddy, Unami Delaware, Nishnaabemwin, and Oji-Cree but not in Menominee, Plains Cree, and Meskwaki.

Table 3.2: TA overview: Availability of peripheral agreement with inanimate object

	Mal-P	U Del	Nish	Oji-C	Meno	Cree	Mesk
SAP forms (SG SUBJ)	✓	✓	✓	✓	✓	✓	✓
Third-person forms	✓	✓	✓	✓	✗	✗	✗

This table considers SAP forms in which the subject is singular. There are sometimes variations when the subject is plural, as shown at the end of this section.

SAP forms

Peripheral agreement shows the most robust cross-linguistic distribution in singular SAP forms: forms with a singular SAP subject and an animate third-person object. As illustrated in the 1SG→3PL forms in (7), the third-person plural object is indexed by the peripheral suffix (PA *-aki* 'AN.PL') in all seven of the surveyed language varieties.

(7)   TA SAP forms: peripheral agreement with object in all languages

    a.   *nwicohkemak*   Maliseet-Passamaquoddy
        n- wicohkem -a   -Ø -**ək**
        1- help   -3.OBJ -1SG -**AN.PL**
        'I help **them** (AN).' (Sherwood 1983:217)

    b.   *nəmi·lá·ɔk*   Unami Delaware
        nə- mi·l   -a·   -w -**ak**
        1- give.to -3.OBJ -1SG -**AN.PL**
        'I give to **them** (AN).' (Goddard 1979:171)

    c.   *nwaabmaag*   Nishnaabemwin
        n- waabam -aa   -Ø -**ag**
        1- see   -3.OBJ -1SG -**AN.PL**
        'I see **them** (AN).' (Valentine 2001:287)

    d.   *niwaapamaak*   Oji-Cree
        ni- waapam -aa   -Ø -**ak**
        1- see   -3.OBJ -1SG -**AN.PL**
        'I see **them** (AN).'

    e.   *nena·na·wak*   Menominee
        ne- na·n -a·   -w -**ak**
        1- fetch -3.OBJ -1SG -**AN.PL**
        'I fetch **them** (AN).' (Bloomfield 1962:152)

    f.   *niwâpamâwak*   Plains Cree
        ni- wâpam -â   -w -**ak**
        1- see   -3.OBJ -1SG -**AN.PL**
        'I see **them** (AN).' (Wolfart 1973:41)

    g.   *newa·pama·waki*   Meskwaki
        ne- wa·pam -a·   -w -**aki**
        1- see   -3.OBJ -1SG -**AN.PL**
        'I see **them** (AN).' (Goddard 1994a:190)

Third-person forms

When both the subject and the object are animate third persons, peripheral agreement indexes the obviative object in Maliseet-Passamaquoddy as in (8a), Unami Delaware as in (8b), Nishnaabemwin as in (8c), and Oji-Cree as in (8d) (PA *-*ali* 'OBV.SG').

(8)   TA third-person forms: peripheral agreement with object in Mal-P, U Del, Nish, Oji-C

    a.   *wicohkemawal*   Maliseet-Passamaquoddy
        w- wicohkem -a   -wa -**əl**
        3- help   -3.OBJ -3PL -**OBV**
        'They help **them** (OBV).' (Sherwood 1983:217)

    b.   *mwi·la·wwá·ɔ*   Unami Delaware
        w- mi·l   -a·   -wa·w -**al**
        3- give.to -3.OBJ -3PL   -**OBV**
        'They give to **them** (OBV).' (Goddard 1979:171)

    c.   *wwaabmaawaan*   Nishnaabemwin
        w- waabam -aa   -waa -**an**
        3- see   -3.OBJ -3PL -**OBV**
        'They see **them** (OBV).' (Valentine 2001:287)

    d.   *owaapamaawaan*   Oji-Cree
        o- waapam -aa   -waa -**an**
        3- see   -3.OBJ -3PL -**OBV**
        'They see **them** (OBV).'

In third-person forms in Menominee, Plains Cree, and Meskwaki, peripheral agreement does not index the obviative object. Peripheral agreement does appear in the relevant forms, as shown in (9), but it indexes the proximate subject (PA *-*aki* 'AN.PL') rather than the obviative object. The other noticeable difference in these languages is the absence of the person prefix in the verb inflection. The combination of peripheral agreement not indexing the object as well as lacking the prefix reflects the use of the absolute inflectional pattern in these forms, in contrast to the objective inflectional pattern shown in (8).

(9)   TA third-person forms: no peripheral agreement with object in Meno, Cree, and Mesk

    a.   *na·nɛ·wak*   Menominee
        na·n -ɛ·   - w̆ -**ak**
        fetch -3.OBJ -3S -**AN.PL**
        '**They** fetch him/them (OBV).' (Bloomfield 1962:152)

    b.   *wâpamêwak*   Plains Cree
        wâpam -ê   -w̆ -**ak**
        see   -3.OBJ -3S -**AN.PL**
        '**They** see him/them (OBV).' (Wolfart 1973:41)

    c.   *wa·pame·waki*   Meskwaki
        wa·pam -e·   -w̆ -**aki**
        see   -3.OBJ -3 -**AN.PL**
        '**They** see him/them (OBV).' (Goddard 1994a:190)

Interference of a plural subject

As mentioned earlier, the SAP forms show variation when the subject is plural. In Meswkaki, when the SAP subject is plural, peripheral agreement is prevented from appearing on the verb. The Meskwaki form in (10a) has a 1SG subject and the object is indexed by the peripheral suffix *-aki*. In contrast, the form in (10b) has a 1PL subject, and here peripheral agreement does not appear at all, thus leaving the number of the object unexpressed.

(10)   Meskwaki: variation sensitive to number of the SAP subject

    a.   *newa·pama·waki*   1SG subject
        ne- wa·pam -a·   -w -**aki**
        1- see   -3.OBJ -1SG -**AN.PL**
        'I see **them** (AN).' (Goddard 1994a:190)

    b.   *newa·pama·pena*   1PL subject
        ne- wa·pam -a·   -pena
        1- see   -3.OBJ -1PL
        'We see **him/them** (AN).' (Goddard 1994a:190)

Oji-Cree shows a similar pattern to Meskwaki. When the subject is 1SG, peripheral agreement explicitly indexes the 3PL object, as in (11a). But when the subject is 1PL, peripheral agreement disappears from the verb, resulting in the ambiguity of the object's number.

(11) Oji-Cree: variation sensitive to number of the SAP subject

    a.   *niwaapamaak*   1SG subject
           ni- waapam -aa   -Ø **-ak**
           1- see   -3.OBJ -1SG **-AN.PL**
           'I see **them** (AN).'

    b.   *niwaapamaamin*   1PL subject
           ni- waapam -aa   -min
           1- see   -3.OBJ -1PL
           'We see **him/them** (AN).'

The patterning of the SAP forms represent different distributions of the original absolute and objective forms. In the singular subject examples in (10a) and (11a), the appearance of peripheral agreement and the w-ending central suffix (Meskwaki -*w* and Oji-Cree -Ø) reflect the use of the objective pattern, while the disappearance of peripheral agreement coupled with the m-ending central suffix in (10b) and (11b) (Meskwaki -*pena* and Oji-Cree -*min*) reflect the use of the absolute pattern.

In the other language varieties (Maliseet-Passamaquoddy, Unami Delaware, Nishnaabemwin, Menominee, and Plains Cree), the TA forms show the same peripheral agreement pattern regardless of the number of the SAP subject. Examples with a 1PL subject in these languages are given in (12). Peripheral agreement (PA **-aki* 'AN.PL') appears at the end of the verb in these examples, unlike in Meskwaki and Oji-Cree.

(12) TA plural SAP forms: peripheral agreement with object in Mal-P, U Del, Nish, Meno, Cree

    a.   *nwicohkemannok*   Maliseet-Passamaquoddy
           n- wicohkem -a   -nno **-ək**
           1- help   -3.OBJ -1PL **-AN.PL**
           'We help **them** (AN).' (Sherwood 1983:217)

    b.   *nəmi·la·wəná·na(·)k*   Unami Delaware
           nə- mi·l   -a·   -wəna·n **-ak**
           1- give.to -3.OBJ -1PL   **-AN.PL**
           'We give to **them** (AN).' (Goddard 1979:171)

    c.   *nwaabmanaanig*   Nishnaabemwin
           n- waabam -aa   -naan **-ig**
           1- see   -3.OBJ -1PL   **-AN.PL**
           ''We see **them** (AN).' (Valentine 2001:287)

    d.   *nena·no·nawak*   Menominee
           ne- na·n -a·   -wenaw **-ak**
           1- fetch -3.OBJ -1PL   **-AN.PL**
           'We fetch **them** (AN).' (Bloomfield 1962:152)

e.   *niwâpamânânak*   Plains Cree
    ni- wâpam -â   -nân -**ak**
    1- see   -3.OBJ -1PL -**AN.PL**
    'We see **them** (AN).' (Wolfart 1973:41)

The patterning of peripheral agreement with the object of a TA verb is summarized in Table 3.3. In this table, a check mark indicates that peripheral agreement indexes the given object. An X mark without gray shading indicates that the verb does not contain peripheral agreement at all, so the number of the object is unspecified. An X mark with gray shading indicates that peripheral agreement appears on the verb but indexes the subject instead of the object.

Table 3.3: TA summary: Availability of peripheral agreement with animate object

	Mal-P	**U Del**	**Nish**	**Oji-C**	**Meno**	**Cree**	**Mesk**
SG SAP subject	✓	✓	✓	✓	✓	✓	✓
PL SAP subject	✓	✓	✓	✗	✓	✓	✗
Third-person forms	✓	✓	✓	✓	✗	✗	✗

In summary, in SAP forms with a singular subject, the object is accessible for peripheral agreement across all surveyed languages. However, in forms with a plural subject, there is variation: Oji-Cree and Meskwaki inflect in the absolute pattern, lacking peripheral agreement, while the other languages inflect in the objective pattern, with peripheral agreement indexing the object. Finally, in third-person forms, Maliseet-Passamquoddy, Unami Delaware, Nishnaabemwin, and Oji-Cree use the objective pattern, with peripheral agreement indexing the object, while Menominee, Plains Cree, and Meswaki use the absolute pattern, with peripheral agreement indexing the third-person subject rather than the object.

3.2.2   TI forms

This section surveys the indexing of inanimate objects by peripheral agreement in TI forms. As in the preceding survey of TA forms, three contexts will be distinguished: SAP forms, third-person forms, and forms with a plural subject. The overall patterns shown by TI forms are summarized in Table 3.4. The third-person TI forms show the same patterns as the third-person TA forms. The main difference arises in the SAP forms in the second row of the table. In TA forms, we saw that the animate object is available for peripheral agreement in all surveyed languages. In TI forms, however, the inanimate object is unavailable for peripheral agreement in Plains Cree and Meswaki. TI forms with plural subjects show complications that are not indicated in the table but will be discussed below.

Table 3.4: TI overview: Availability of peripheral agreement with animate object

	Mal-P	**U Del**	**Nish**	**Oji-C**	**Meno**	**Cree**	**Mesk**
SAP forms (sg subj)	✓	✓	✓	✓	✓	✗	✗
Third-person forms	✓	✓	✓	✓	✗	✗	✗

SAP forms

The distribution of peripheral agreement in TI forms with a singular SAP subject is fairly robust. Five of the surveyed language varieties use the peripheral suffix to index the inanimate object (PA *-ali* 'in.pl'): Maliseet-Passamaquoddy in (13a), Unami Delaware in (13b), Nishnaabemwin in (13c), Oji-Cree in (13d), and Menominee in (13e).

(13)   TI singular SAP forms: peripheral agreement with object in in Mal-P, U Del, Nish, Oji-C

  a.   *npawatəmənəl*   Maliseet-Passamaquoddy
        n- pawat -əm   -ən -**əl**
        1- want   -0.obj -1sg -**in.pl**
        'I want **them** (in).' (Sherwood 1983:223)

  b.   *mpənamə́na*   Unami Delaware
        n- pən   -am   -ən -**al**
        1- look.at -0.obj -1sg -**in.pl**
        'I look at **them** (in).' (Goddard 1979:179)

  c.   *nwaabndaanan*   Nishnaabemwin
        n- waabnd -aa   -n   -**an**
        1- see   -0.obj -1sg -**in.pl**
        'I see **them** (in).' (Valentine 2001:311)

  d.   *nitakihshikaataanan*   Oji-Cree
        nit- akihshikaat -aa   -n   -**an**
        1-   kick   -0.obj -1sg -**in.pl**
        'I kick **them** (in).'

  e.   *nepo·na·nan*   Menominee
        ne- po·n -a·   -n   -**an**
        1- put.in -0.obj -1sg -**in.pl**
        'I put **them** (in) in the pot.' (Bloomfield 1962:158)

In Plains Cree and Meskwaki, however, peripheral agreement is absent in TI SAP forms, as illustrated in (14). The number of the inanimate object is thus neutralized in these languages.

(14)   TI singular SAP forms: no peripheral agreement with object in Cree and Meskwaki

    a.   *niwâpahtên*   Plains Cree
        ni- wâpaht -ê   -n
        1- see   -0.OBJ -1SG
        'I see it/them (IN).' (Wolfart 1973:41)

    b.   *newa·pata*   Meskwaki
        ne- wa·pat -a·   -Ø
        1- see   -0.OBJ -1SG
        'I see it/them (IN).' (Goddard 1994a:190)

Even though Plains Cree patterns with Meswaki in disallowing peripheral agreement in TI SAP forms, the shape of the central suffix in these two languages is not the same. The Meskwaki form in (14b) shows an m-ending, as expected for an absolute form lacking peripheral agreement. The Plains Cree form in (14a) instead shows an n-ending, which is surprising, since the n-endings in the other languages normally appear in objective paradigms and co-occur with peripheral agreement. Plains Cree shows this pattern because it has neutralized the contrast between n-endings and m-endings in favor of the n-endings (see Section 2.3.2).

Third-person forms

Turning to the third-person TI forms, they show the same patterns as the corresponding TA forms. Maliseet-Passamaquoddy, Unami Delaware, Ojibwe, and Oji-Cree use objective forms with peripheral agreement indexing the object (PA *-ali* 'IN.PL'), as exemplified in (15). (The Oji-Cree example in (15d) involves a 3SG subject. This is because, in Oji-Cree, a 3PL subject suppresses peripheral agreement. This interference will be discussed further below.)

(15)   TI third-person forms: peripheral agreement with object in Mal-P, U Del, Nish, Oji-C

    a.   *p'awatəmənəwal*   Maliseet-Passamaquoddy
        w- pawat -əm   -əniya -**əl**
        3- want -0.OBJ -3PL   -**IN.PL**
        'They want **them** (IN).' (Sherwood 1983:223)

    b.   *pwənaməne·yə́·i*   Unami Delaware
        w- pən   -am   -əne·wa·w -**i·l**
        3- give.to -0.OBJ -3PL   -**IN.PL**
        'They look at **them** (IN).' (Goddard 1979:179)

    c.   *wwaabndaanaawaan*   Nishnaabemwin
        o- waaband -aa   -naawaa -**an**
        3- see   -0.OBJ -3PL   -**IN.PL**
        'They see **them** (IN).' (Valentine 2001:312)

    d.   *owaapahtaanan*   Oji-Cree

        o- waapaht -aa   -n   **-an**

        3- see   -0.OBJ -3SG **-IN.PL**

        'S/he sees **them** (IN).'

Conversely, the third-person TI forms in Menominee, Plains Cree, and Meskwaki show absolute inflection: the third-person prefix is missing and the peripheral suffix indexes the subject rather than the object, manifested by the animate plural peripheral suffix (*-*aki* 'AN.PL') in (16). Consequently, the inanimate object in the examples in (16) is left unindexed and its number is thus neutralized.

(16)   TI third-person forms: no peripheral agreement with object in Meno, Cree, and Mesk

    a.   *po·namok*   Menominee

        po·n -am   -ẅ **-ak**

        put.in -0.OBJ -3 **-AN.PL**

        '**They** put it/them (IN) in the pot.' (Bloomfield 1962:159)

    b.   *wâpahtamwak*   Plains Cree

        wâpaht -am   -ẅ **-ak**

        see   -0.OBJ -3 **-AN.PL**

        '**They** see it/them (IN).' (Wolfart 1973:43)

    c.   *wa·patamo·ki*   Meskwaki

        wa·pat -am   -ẅ **-aki**

        see   -0.OBJ -3 **-AN.PL**

        '**They** see it/them (IN).' (Goddard 1994a:190)

Interference of a plural subject

In some of the languages, the usual patterning of peripheral agreement is disrupted in TI forms with a plural subject. Such disruptions can be classified into three types. The first type is seen in Southwestern Ojibwe (hereafter SW Ojibwe), in which peripheral agreement is suppressed when the subject is first-person plural. The second type is seen in Menominee, where peripheral agreement is suppressed when the subject is first-person plural or second-person plural. The third type of plural subject interference applies even more broadly: peripheral agreement is suppressed by a plural subject of any person in Oji-Cree and Munsee Delaware.

    Let us begin with SW Ojibwe, where peripheral agreement is disrupted only when the subject is first-person plural.[2] Before considering the plural subject example, it is necessary to remember that SW Ojibwe TI forms with a singular subject use the objective inflection, characterized by

---

[2]I limit myself here to the indicative mode in SW Ojibwe. The first-person plural subject does not disrupt peripheral agreement when the verb is inflected in other modes; see more details in Section 3.7.

the occurrence of peripheral agreement as well as n-endings. A SW Ojibwe 1SG-subject form is shown in (17a), along with a comparable form in Oji-Cree in (17b).

(17)   TI SAP form in Ojibwe varieties: 1SG subject

    a.   *niwaapantaanan*   SW Ojibwe
       ni- waapant -aa   -n   -**an**
       1- see   -0.OBJ -1SG -**IN.PL**
       'I see **them** (IN).' (Nichols 1980:282)

    b.   *nitakihshikaataanan*   Oji-Cree
       nit- akihshikaat -aa   -n   -**an**
       1- kick   -0.OBJ -1SG -**IN.PL**
       'I kick **them** (IN).'

The SW Ojibwe examples in (18) show what happens when the subject is plural: peripheral agreement is suppressed when the subject is first-person plural, as in (18a).[3] This suppression of peripheral agreement is not triggered by other plural subjects: in the 2PL-subject form in (18b), the peripheral suffix -*an* 'IN.PL' indeed appears and indexes the inanimate object. In SW Ojibwe, a 1PL subject blocks peripheral agreement while a 2PL subject does not.

(18)   SW Ojibwe: Just the 1PL subject blocks peripheral agreement

    a.   *niwaapantaamin*   1PL subject
       ni- waapant -aa   -min
       1- see   -0.OBJ -1PL
       'We see it/them (IN).' (Nichols 1980:282)

    b.   *kiwaapantaanaawaan*   2PL subject
       ki- waapant -aa   -naawaa -**an**
       2- see   -0.OBJ -3PL   -**IN.PL**
       'You (PL) see **them** (IN).' (Nichols 1980:282)

From a diachronic perspective, the SW Ojibwe examples involve a mixture of the historical absolute and objective paradigms. The TI inflection of SW Ojibwe is largely objective, with peripheral agreement indexing the inanimate object, but the first-person plural subject form in (18a) is exceptionally absolute inflection, indicated by the use of an m-ending (1PL -*min*) and the lack of peripheral agreement.

The second type of plural subject interference occurs in Menominee, where peripheral agreement is suppressed with all plural SAP subjects. The previous Menominee 1SG-subject example

---

[3]Algonquian languages have two kinds of plural first persons: the exclusive, as illustrated here, and the inclusive. I do not provide the inclusive plural forms throughout the thesis, but omitting the inclusive examples is safe as they never show a conflicting peripheral agreement pattern from the corresonding exclusive forms.

is repeated in (19), demonstrating the use of objective inflection with an n-ending allomorph of the central suffix -*n* and a peripheral suffix indexing the inanimate object.

(19) *nepo·na·nan*   1SG subject
   ne- po·n -a· -n -**an**
   1- put.in -0.OBJ -1SG -**IN.PL**
   'I put **them** (IN) in the pot.' (Menominee, Bloomfield 1962:158)

However, when the subject is a plural SAP subject, either the 1PL subject as in (20a) or the 2PL subject as in (20b), Menominee TI verbs use absolute inflection, shown by m-endings (-*menaw* and -*mwa·w*) and the absence of peripheral agreement.

(20) Menominee: Plural SAP subject blocks peripheral agreement

   a. *nepo·nɛ·menaw*   1PL subject
      ne- po·n -ɛ· -menaw
      1- put.in.pot -0.OBJ -1PL
      'We put it/them (IN) in the pot.' (Bloomfield 1962:159)

   b. *kepo·nɛ·muaw*   2PL subject
      ke- po·n -ɛ· -mwa·w
      2- put.in.pot -0.OBJ -2PL
      'You (PL) put it/them (IN) in the pot.' (Bloomfield 1962:159)

The third type of plural subject interference affects all forms with plural subjects. This pattern arises in Oji-Cree and Munsee Delaware. Beginning with Oji-Cree, the TI 1SG-subject example is repeated as (21a), showing objective inflection, with the number of the plural object expressed by peripheral agreement. In contrast, the 1PL-subject example in (21b) shows absolute inflection, indicated by the m-ending -*min* as well as absence of a peripheral suffix, resulting the neutralization of the number contrast for the inanimate object.

(21) Oji-Cree: 1PL subject blocks peripheral agreement while 1SG subject does not

   a. *nitakihshikaataanan*   1SG subject
      nit- akihshikaat -aa -n -**an**
      1- kick -0.OBJ -1SG -**IN.PL**
      'I kick **them** (IN).'

   b. *niwaapantaamin*   1PL subject
      ni- waapant -aa -min
      1- see -0.OBJ -1PL
      'We see it/them (IN).'

Oji-Cree lacks peripheral agreement for the inanimate object not only when the plural subject is first person, as in (21b), but also when it is second person, as in (22a), or third person, as in (22b). Apart from the absence of peripheral agreement, the TI forms in (22) are interesting in that their central suffix -*nawaa* descends from the PA *-*ne·wa·w*, an n-ending typically used in objective forms. Despite the occurrence of the n-ending, Oji-Cree does not follow the objective pattern, since peripheral agreement is absent and the object's number is neutralized.

(22)   Oji-Cree: 2PL and 3PL subjects also block peripheral agreement

    a.   *kiwaapataanaawaa*   2PL subject
        ki- waapant -aa   -naawaa
        2- see   -0.OBJ -2PL
        'You (PL) see it/them (IN).'

    b.   *owaapataanaawaa*   3PL subject
        o- waapant -aa   -naawaa
        3- see   -0.OBJ -3PL
        'They see it/them (IN).'

The unusual combination of the use of an n-ending allomorph and the absence of peripheral agreement is also observed in Munsee Delaware. Overall, Munsee Delaware is similar to Oji-Cree in that peripheral agreement is not allowed to appear when the subject, regardless of person, is plural. To reinforce that the form with a 1SG subject is objective, a Munsee Delaware TI example involving a 1SG subject is given in (23a). This is the same pattern as the previous Unami example shown in (13). In this pattern, the plural object's number is expressed by the peripheral suffix -*al*. However, in the 1PL-subject form in (23b), peripheral agreement is blocked, resulting in the number of the object being neutralized.

(23)   Munsee Delaware: 1PL subject blocks peripheral agreement while 1SG subject does not

    a.   *mpənamə́nal*   1SG subject
        n- pən- am   -ən -**al**
        1- look.at -0.OBJ -1SG -**IN.PL**
        'I look at **them** (IN).' (Goddard 1979:180)

    b.   *mpənamə́né·n*   1PL subject
        n- pən   -am   -əne·n
        1- look.at -0.OBJ -1PL
        'We look at it/them (IN).' (Goddard 1979:180)

Moreover, the Munsee Delaware examples in (24) show that a 2PL subject or a 3PL subject also blocks peripheral agreement, just as in Oji-Cree.

(24)   Munsee Delaware: 2PL and 3PL subjects also block peripheral agreement

    a.   *kpənaməné·wa*   2PL subject
           n- pən   -am   -əne·wa·
           1- look.at -0.OBJ -2PL
           'We look at it/them (IN).' (Goddard 1979:180)

    b.   *pə̀naməmé·wa*   3PL subject
           w- pən   -am   -əne·wa·
           3- look.at -0.OBJ -3PL
           'They give to it/them (IN).' (Goddard 1979:180)

The Delaware languages show variation in the blocking of peripheral agreement across languages and generations. In Munsee, the TI verbs generally lack peripheral agreement for the object in plural-subject forms, but a distinct form for plural object with first-person plural subject is attested in a 19th century prayer book (Goddard 1979:180). In Unami, Goddard provides a TI verb paradigm with forms that inflect for plural objects (1979:179), but he comments on the existence of intergenerational variation (1979:179; 2021:69-70). Specifically, forms that retain peripheral agreement for plural objects are attested only for some speakers and in older records. For modern Unami speakers, peripheral agreement does not occur in forms with second- or third-person plural subjects, as shown for Munsee in (24), and it is optional in forms with a first-person plural subject. This optionality is illustrated by the Unami examples in (25): the plural inanimate object *né·l ahə́sna* 'the stones' can be indexed by peripheral agreement *-i·l*, as in (25a), or it can be left unindexed, as in (25b).[4]

(25)   Unami Delaware: peripheral agreement is optional with a first-person plural subject

    a.   *nəmaxkaməne·ná·ni né·l ahə́sna*
           nə- maxk -am   -əne·na·n **-i·l**   ne·l ahəsn -al
           1- find   -0.OBJ -1PL   -IN.PL DEM stone -IN.PL
           'We found **the stones**.' (Goddard 2021:70)

    b.   *nəmaxkaməne·n né·l ahə́sna*
           nə- maxk -am   -əne·n   ne·l ahəsn -al
           1- find   -0.OBJ -1PL   DEM stone -IN.PL
           'We found the stones.' (Goddard 2021:70)

In summary, this subsection has shown that peripheral agreement with inanimate objects may be suppressed when the subject is plural subject. Three kinds of interference were discussed. SW Ojibwe suppresses peripheral agreement only when the plural subject is first-person. Menominee

---

[4]Goddard (2021:69) commented that the plural object form "was optional and perhaps not spontaneous" but the exact conditioning of which form to use is unclear.

suppresses peripheral agreement when the plural subject is either first-person or second-person. Oji-Cree and Munsee Delaware suppress peripheral agreement whenever the subject is plural, regardless of its person.

In summary, peripheral agreement in TI forms shows a crosslinguistic cline in its ability to index inanimate objects. At one end of the cline, peripheral agreement is robustly used in Maliseet-Passamaquoddy and Nishnaabemwin (as well as Unami Delaware in older records) to index the object. On the other end, Plains Cree and Meskwaki never allow peripheral agreement to index the object in TI forms. The languages in between reflect the interference of plural subjects summarized in the previous paragraph. The check mark in parentheses for modern Unami Delaware indicates that peripheral agreement is optional in forms with a 1PL subject. (As in previous tables, cells with an X mark and gray shading indicates that peripheral agreement appears in the given form but indexes the subject rather than the object but rather the subject. This is the case in the third-person forms in Menominee, Plains Cree, and Meskwaki.)

Table 3.5: TI summary: Availability of peripheral agreement with inanimate object

	Mal-P Nish	SW Oj	U Del (modern)	Oji-C M Del	Meno	Cree Mesk
SG SAP subject	✓	✓	✓	✓	✓	✗
3SG subject	✓	✓	✓	✓	✗	✗
3PL subject	✓	✓	✗	✗	✗	✗
2PL subject	✓	✓	✗	✗	✗	✗
1PL subject	✓	✗	(✓)	✗	✗	✗

3.3   Subjects

The previous sections examined forms in which peripheral agreement can potentially index the object. In the inverse forms of TA verbs, peripheral agreement can instead potentially index the subject. This section surveys the cross-linguistic patterning of peripheral agreement in such forms.

The Algonquian direct-inverse system was introduced in Section 2.2.1. As a recap, the previous Unami Delaware examples exemplifying the direct-inverse opposition are repeated in (26). In particular, the inverse form in (26b) is distinct in three aspects from the direct form in (26a). First, unlike the object-marking theme sign *-aˑ* in the direct form, the inverse theme sign *-əkw* is used. Second, even though central agreement (underlined) indexes the more prominent participant in both forms, this participant is the object rather than the subject in the inverse form.

Third, although peripheral agreement indexes the less prominent participant in both forms, this participant is the subject rather than the object in the inverse form.

(26)   Direct vs. inverse in Unami Delaware

    a.   *nəmi·lá·ɔk*   DIR
          <u>nə</u>- mi·l   -a·   -<u>w</u>   -**ak**
          1- give.to -3.OBJ -1SG -AN.PL
          'I give to **them**.' (Goddard 1979:171)

    b.   *nəmí·lko·k*   INV
          <u>nə</u>- mi·l   -əkw -<u>w</u>   -**ak**
          1- give.to -INV -1SG -AN.PL
          '**They** give to me.' (Goddard 1979:174)

As described in Sections 2.3.1 and 3.1, Unami and Munsee Delaware retain the absolute-objective agreement pattern that is conditioned by definiteness. What is interesting about the inverse inflection is that the absolute-objective parallel is not always maintained and can be conflated in certain cases within the Delaware languages. Specifically, inverse forms with a third-person animate subject are always objective, so the subject is invariably indexed by peripheral agreement regardless of its definiteness. The previous inverse examples with animate subjects are repeated in (27), illustrating objective inflection with peripheral agreement indexing the indefinite subject in (27a) and the definite subject in (27b).

(27)   No ABS-OBJ opposition in TA inverse SAP forms

    a.   *awé·n kə̆ne·wkó·na*   OBJECTIVE
          awe·n   <u>kə</u>- ne·w -əkw -<u>əna·</u> -**Ø**
          someone 2- see   -INV -1PL -AN.SG
          '**Someone** saw us (inclusive).' (Munsee, Goddard 1979:159)

    b.   *ktahɔ·kó·na*   OBJECTIVE
          <u>kət</u>- ahwa·l -əkw -<u>əna·</u> -**Ø**
          2-   love   -INV -1PL -AN.SG
          '**He** loves us (inclusive).' (Unami, Goddard 2021:66)

The absolute-objective contrast does exist, however, in inverse forms with an inanimate subject. Here the patterning of peripheral agreement is again conditioned by definiteness. The previous inanimate subject examples are repeated in (28): the form with the indefinite subject in (28a) is absolute, with no peripheral agreement, whereas the form with the definite subject in (28b) is objective.

(28)   Definiteness conditioned contrast, e.g. Unami Delaware TA inanimate subject forms

    a.   *wəla·te·naməwá·k·an nəməšhika·khúmə̀na*   ABSOLUTE

        wəla·te·naməwa·k·an -Ø   <u>nə</u>- məšəhkkaw -əkw -<u>əhmə̀na</u>·

        happiness   -IN.SG   1- come.over -INV -1PL

        'Happiness comes over us.' (Goddard 2021:66)

    b.   *mo·šə́š·a kkwi·tələt·əwá·kan ntəlkó·ne·n*   OBJECTIVE

        mo·šəš·a wə- kwi·tələtəwá·kan -Ø   <u>nət</u>- əl   -əkw -<u>əne·n(a·n)</u> -Ø

        Moses's 3-   law   -IN.SG   1-   say.so -INV -1PL   -**IN.SG**

        '**Moses's law** tells us.' (Goddard 2021:167)

For the rest of the languages in the survey, the patterning of TA inverse forms with animate subjects is identical to their direct counterparts in the previous section. To save space, I omit illustrative examples and simply summarize the patterning of these inverse forms in Table 3.7.

Table 3.6: The inverse summary: Availability of peripheral agreement with animate subject

	Mal-P	**U Del**	**Nish**	**Oji-C**	**Meno**	**Cree**	**Mesk**
3→1/2 SG	✓	✓	✓	✓	✓	✓	✓
3→1/2PL	✓	✓	✓	✗	✓	✓	✗
3′→3	✓	✓	✓	✓	✗	✗	✗

As for the inverse forms with inanimate subjects, in my sample, the patterning of third-person forms is identical to that of the corresponding TI forms. Menominee, Plains Cree, and Meskwaki use the absolute pattern, indicated by an X mark with the cell shaded in gray in Table 3.7. This means that peripheral agreement does appear, but it indexes the animate third-person object rather than the inanimate subject. In contrast, the remaining languages show the objective pattern, with peripheral agreement indexing the inanimate subject, indicated by check marks in the table. Inverse forms involving a singular SAP argument also generally show the same pattern as their TI counterparts, except in Menominee, where the TI forms show peripheral agreement but the TA inverse forms do not.

Table 3.7: Overview: patterning of peripheral agreement in forms with inanimate arguments

	Mal-P	**U Del**	**Nish**	**Oji-C**	**Meno**	**Cree**	**Mesk**
1/2SG→0	✓	✓	✓	✓	✓	✗	✗
0→1/2SG	✓	✓	✓	✓	✗	✗	✗
0→3SG	✓	✓	✓	✓	✗	✗	✗

Examples of the objective pattern in Maliseet-Passamaquoddy, Nishnaabemwin, and Unami Delaware are provided in (29a-b). The inanimate subject in these three languages is accessible for peripheral agreement, manifested by the suffix PA **-ali* 'IN.PL' in (29a-b) and -Ø 'IN.SG' in (29c).

(29) Inanimate subject forms: peripheral agreement with inanimate subject

    a.   *nwicohkemkonəl*   Maliseet-Passamaquoddy
        n- wicohkem -əkw -ən **-əl**
        1- help   -INV -1SG **-IN.PL**
        '**They** (IN) help me.' (Sherwood 1983:220)

    b.   *nwaabmigonan*   Nishnaabemwin
        n- waabam -igw -in **-an**
        1- see   -INV -1SG **-IN.PL**
        '**They** (IN) see me.' (Valentine 2001:287)

    c.   *mɔnt·uwwá·k·an ntap·i·tá·k·o·n*   Unami Delaware
        mantəto·wəwa·kan   nət- api·htaw -əkw -ən **-Ø**
        power.IN.SG   1- be.in   -INV -1SG **-IN.SG**
        '**His spiritual power** (IN) is in me.' (Goddard 2020:104)

In contrast, the inanimate-subject forms in Menominee, Plains Cree, and Meskwaki show the absolute pattern, with peripheral agreement entirely missing. As exemplified in (30), the absence of peripheral agreement results in the number of the inanimate subject being neutralized.

(30) Inanimate subject forms: no peripheral agreement with inanimate subject

    a.   *nenɛ·qnekom*   Menominee
        ne- nɛ·ʔn -ekw -em
        1- kill   -INV -1SG
        It/They kill(s) me.' (Bloomfield 1962:154)

    b.   *niwâpamikon*   Plains Cree
        ni- wâpam -ikw -in
        1- see   -INV -1SG
        'It/They see(s) me.' (Wolfart 1973:43)

    c.   *newa·pamekwipena*   Meskwaki
        ne- wa·pam -ekwi   -pena
        1- see   -INV.IN -1PL
        'It/They see(s) us.' (Goddard 1994a:191)

The inanimate subject forms in Oji-Cree show a split pattern. If the object is singular, as in (31a), the inflection uses the objective pattern and the number of the plural inanimate subject can be specified by peripheral agreement -*an* 'IN.PL'. However, if the object is plural, as in (31b), the inflection uses the absolute pattern, lacking peripheral agreement. As a result, the number of the subject is not specified.

(31) Oji-Cree inanimate subject forms: a split pattern based on object's number

    a.   *niwaapamikonan*
        ni- waapam -ikw -in   -**an**
        1- see   -INV -1SG -**IN.PL**
        '**They** (IN) see me.'

    b.   *niwaapamikomin*
        ni- waapam -ikw -min
        1- see   -INV -1PL
        'It/They (IN) see us.'

There is an interesting contrast in the patterning of inanimate subject agreement between Meskwaki and its closely-related sister language Kickapoo. In both languages, the inanimate object of a TI verb cannot be indexed by peripheral agreement, as shown by the Meskwaki and Kickapoo examples in (32), which are both absolute, lacking a peripheral suffix.

(32) TI verbs: no peripheral agreement with the inanimate object

    a.   *newa·pata*   Meskwaki
        ne- wa·pat -a·   -Ø
        1- see   -0.OBJ -1SG
        'I see it/them (IN).' (Goddard 1994a:190)

    b.   *nemiici*   Kickapoo
        ne- miici -Ø   -Ø
        1- eat   -0.OBJ -1SG
        'I eat it/them (IN).' (Voorhis 1967:97)

However, Kickapoo differs from Meswaki in the patterning of inanimate subject agreement. In contrast to Meskwaki, where inanimate subjects, like inanimate objects, cannot be indexed by peripheral agreement (see (30c) above), Kickapoo does allow the inanimate subject to be indexed by peripheral agreement, as shown by the examples in (33), in which the verb takes objective inflection with peripheral agreement specifying the number of the inanimate subject.

(33) Kickapoo inanimate subject forms: peripheral agreement with the subject

    a.   *neθeekihekonaani*
        ne- θeekih -ekw -enaan -**i**
        1- scare -INV -1PL   -**IN.SG**
        '**It** scares us.' (Voorhis 1967:101)

    b.   *neθeekihekonaanani*
         ne- θeekih -ekw -enaan **-ani**
         1-   scare -INV -1PL   **-IN.PL**
         '**They** (IN) scare us.' (Voorhis 1967:101)

To conclude, this subsection focuses on the behavior of peripheral agreement in indexing the subject of a TA inverse verb. The bulk of the variation invovles TA inverse forms with inanimate subjects. The variations in these forms are summarized in Table 3.8. In languages where the absolute-objective opposition is lost, some languages (Maliseet-Passamaquoddy, Nishnaabemwin, and Kickapoo) always use objective forms (indicated by the check mark), specifying the inanimate subject's number by peripheral agreement. Other languages (Menominee, Plains Cree, and Meswaki) always use absolute forms (indicated by the X mark), not specifying the number of the inanimate subject due to a lack of peripheral agreement. Lastly, in Oji-Cree, the number of the other argument again interferes with the patterning of peripheral agreement: forms with a singular object show peripheral agreement, but a plural object results in the suppression of peripheral agreement and accordingly produces the absolute pattern.

Table 3.8: Summary: Availability of peripheral agreement with inanimate subject

	Mal-P	Nish	U Del	Oji-C	Kick	Meno	Cree	Mesk
0→SG SAP	✓	✓	✓	✓	✓	✗	✗	✗
0→PL SAP	✓	✓	✓	✗	✓	✗	✗	✗
0→3SG	✓	✓	✓	✓	✗	✗	✗	✗
0→3PL	✓	✓	✓	✗	✗	✗	✗	✗

3.4   Interim summary: TA and TI verbs

This section synthesizes the intricate divergences of peripheral agreement in the monotransitive verbs (TA and TI) discussed in the preceding sections. The overall patterns are summarized for TA verbs in Table 3.9 and TI verbs in Table 3.10. In the two tables, the notation "ABS/OBJ" indicates that the absolute-objective opposition is maintained, meaning that agreement with the bolded third-person argument is dependent on definiteness. The notation "OBJ" indicates the use of objective inflection in which the bolded third-person argument is indexed by peripheral agreement. As for the notation "ABS", if it appears in a plain cell, it denotes the type of absolute inflection in which peripheral agreement is entirely missing, while if it appears in a shaded cell, it denotes the type of absolute inflection in which peripheral agreement is present but it indexes the other third person-argument, not the object. Recall that in Oji-Cree, peripheral agreement is blocked when the subject (or inverse object) is plural. The label "OBJ*" indicates this plural interference.

Table 3.9: Summary: Synchronic patterns of the ABS-OBJ opposition in TA verbs

	U Del	**Mal-P**	**Nish**	**Oji-C**	**Meno**	**Cree**	**Mesk**
1/2SG→**3**	ABS/OBJ	OBJ	OBJ	OBJ	<u>OBJ</u>	<u>OBJ</u>	OBJ
1/2PL→**3**	ABS/OBJ	OBJ	OBJ	OBJ*	<u>OBJ</u>	<u>OBJ</u>	ABS
3SG→**3′**	ABS/OBJ	OBJ	OBJ	OBJ	ABS	ABS	ABS
3PL→**3′**	ABS/OBJ	OBJ	OBJ	OBJ*	ABS	ABS	ABS

Notice that I do not provide the corresponding patterns for the inverse forms in either table because they generally pattern the same as the corresponding direct forms, except for inverse forms in which an inanimate subject acts on a singular SAP object, which pattern differently from the corresponding TI forms in Menominee. The Menominee TI forms for 1/2SG→**0** use objective inflection but the TA inverse forms for 0→1/2SG use absolute inflection (shown in the bottom row of Table 3.10).

Table 3.10: Summary: synchronic patterns of the ABS-OBJ opposition in inanimate forms

	U Del	**Mal-P**	**Nish**	**SW O**	**Oji-C**	**Meno**	**Cree**	**Mesk**
1/2SG→**0**	A/O	OBJ	OBJ	<u>OBJ</u>	OBJ	<u>OBJ</u>	ABS	ABS
1PL→**0**	A/O	OBJ	OBJ	ABS	OBJ	ABS	ABS	ABS
2PL→**0**	A/O	OBJ	OBJ	<u>OBJ</u>	OBJ*	ABS	ABS	ABS
3SG→**0**	A/O	OBJ	OBJ	<u>OBJ</u>	OBJ	ABS	ABS	ABS
3PL→**0**	A/O	OBJ	OBJ	<u>OBJ</u>	OBJ*	ABS	ABS	ABS
0→1/2SG	A/O	OBJ	OBJ	<u>OBJ</u>	OBJ	ABS	ABS	ABS

The above two tables present the complexity of variations seen in peripheral agreement from the perspective of each individual language. The order of languages in the tables starts with Unami Delaware, the language that retains the objective-absolute contrast, then moves to the most objective language (Maliseet-Passamaquoddy), and gradually transitions to the languages that are less objective, and finally ends with Meskwaki, the language that represents the most absolute pattern. The following paragraphs summarize the patterns shown within each language.

In Unami Delaware, TA and TI verbs retain the absolute-objective opposition, in which the use of peripheral agreement is conditioned by definiteness of the relevant third-person argument. Despite this retention, the availability of peripheral agreement shows language-internal variation. In the Munsee variety, the patterning of peripheral agreement can be interfered with by the other argument. When the animate subject (or inverse object) is plural, inanimate peripheral agreement is suppressed.

In the rest of the surveyed languages, the absolute and objective patterns are no longer conditioned by definiteness. Maliseet-Passamaquoddy shows objective inflection across the board,

resulting in the most robust use of peripheral agreement among all surveyed languages. The object of monotransitive verbs in Maliseet-Passamaquoddy is always accessible for peripheral agreement regardless of its gender (no variations between TA verbs and TI verbs), the person of the other argument (no variations between third-person forms and SAP forms), or the of number of the other argument (no variations between TI forms with a singular and plural SAP subjects).

Ojibwe shows elaborate variation across dialects. Focusing on the three varieties described in this thesis, Nishnaabemwin is the most robust dialect in terms of the use of peripheral agreement, sharing the same pattern as Maliseet-Passamaquoddy in TA and TI forms. In SW Ojibwe, the TA and TI inflection is largely the same as Nishnaabemwin, except that peripheral agreement is absent in TI forms with a first-person plural subject. In Oji-Cree, most TA and TI forms are objective, but the absolute pattern occurs when the other argument is plural. Within TI verbs, Oji-Cree resembles Munsee Delaware in suppressing peripheral agreement when the subject is plural, but Oji-Cree further extends this pattern of plural interference to TA forms in which the plural argument is an SAP.

In Menominee, the absolute and objective patterns in TA and TI verbs are conditioned by person. SAP forms are usually objective (all SAP forms in TA verbs and singular SAP forms in TI verbs) while third-person forms are always absolute in both TA and TI forms. This person-based split leads to interesting variation in the alignment of peripheral agreement. In TA SAP forms and TI singular SAP forms, peripheral agreement indexes the object (or the inverse subject), but in third-person forms, peripheral agreement indexes the proximate subject (or inverse object). Menominee TI verbs are subject to interference from a plural SAP subject (or inverse object in TA inanimate-subject forms). Furthermore, Menominee is the only language in the survey that shows a difference between the TI inflection and the TA inanimate subject inflection: TI forms with a singular SAP subject are objective while TA inverse forms with an inanimate subject and a singular SAP object are absolute.

Plains Cree patterns with Menominee in showing a person-based split. Third-person forms of TA and TI verbs are absolute, with peripheral agreement indexing the subject (or inverse object). SAP forms involving an animate third person are objective, but SAP forms involving an inanimate third person are uniformly absolute, no matter whether the other argument is singular or plural.

Finally, Meskwaki shows the least objective inflectional system, or, in other words, the most absolute inflectional system amongst all examined languages. Meskwaki is quite similar to Plains Cree, showing the absolute pattern in all third-person forms and all forms involving an inanimate third person, but Meskwaki diverges from Plains Cree in TA forms with a plural SAP subject. As seen in Table 3.9, the absolute pattern extends to the 1/2PL→**3** forms in Meskwaki. As a result, Meswaki represents the least robust use of peripheral agreement among the languages in my sample, since peripheral agreement occurs only in TA forms with a singular SAP subjects.

3.5 Secondary objects

The previous section surveyed the distribution of peripheral agreement with the primary objects of TA and TI verbs. This section looks into the distribution of peripheral agreement with the secondary objects of AI+O and TA+O verbs.

3.5.1 AI+O forms

In AI+O verbs, the inability of peripheral agreement to index objects is more extensive than with TA/TI verbs. Table 3.11 summarizes the patterning of peripheral agreement with the secondary object. In this table, a check mark indicates the given object is accessible for peripheral agreement, accompanied by the appearance of the n-ending realization of the central suffix. The X mark in a plain cell indicates that peripheral agreement is missing, whereas the X in a gray shaded cell indicates that peripheral agreement does not index the secondary object and instead indexes the third-person subject, co-occurring with the central suffix -*w̆*, which is regarded as an absolute ending (Goddard 1979, 2007).

Table 3.11: Summary: Availability of peripheral agreement with secondary objects in AI+O verbs

	Mal-P	**U Del**	**Nish**	**Oji-C**	**Meno**	**Cree**	**Mesk**
SAP forms	✓	✓	✓	✗	✗	✗	✗
Third-person forms	✓	✓	✓	✗	✗	✗	✗

Table 3.11 shows that Oji-Cree joins with Menominee, Plains Cree, and Meskwaki in not allowing the object to be indexed in AI+O verbs. The following paragraphs present examples to illlustrate the patterns summarized in the table.

First, examples from Maliseet-Passamaquoddy, Unami Delaware, and Nishnaabemwin are given in (34), showing that secondary objects are accessible for peripheral agreement, as observed by the co-occurrence of n-endings and a peripheral suffix.

(34)   AI+O forms: peripheral agreement with object in M-P, U Del, and Nish

    a.   *k'isahkanəl can epeskəmakənəl*   Maliseet-Passamaquoddy
        w- pisahke   -n   **-əl**   can   epeskəmakən -əl
        3- be.able.to.throw -3SG **-OBV.SG** John   ball   -OBV.SG
        'John can throw **the ball** (OBV).' (Sherwood 1983:94)

    b.   *nəwaní·na·k*   Unami Delaware
        nə- wani· -n   **-a·k**
        1- forget -1SG **-AN.PL**
        'I forgot **them** (AN).' (Goddard 2020:104)

c. *nmiigwenag*   Nishnaabemwin
    n- miigiwe -n **-ag**
    1- give.away -1SG **-AN.PL**
    'I give **them** (AN) away.' (Valentine 2001:244)

In the rest of the surveyed languages, in contrast, secondary objects are inaccessible for pe-
ripheral agreement, as illustrated in (35). In Oji-Cree, Menominee, Plains Cree, and Meswaki,
AI+O verbs share the same inflection as intransitive AI verbs. That is why in the following exam-
ples, both central agreement and peripheral agreement index the animate third-person subject
and the object is left unindexed.

(35)   AI+O forms: no peripheral agreement with object in Oji-C, Meno, Cree

    a. *ataawew waapikoniin*   Oji-Cree
        ataawe -ẅ **-Ø**   waapikony -an
        buy   -3 **-AN.SG** flower   -IN.PL
        '**She** buys flowers (IN).'

    b. *napa·kɛ·hnakɛsewan awe·htepa·ha·kɛ·w*   Menominee
        napa·kɛ·hnakɛsew -an   awe·h- tepa·ha·kɛ· -ẅ **-Ø**
        flat.timber   -OBV go.off- sell   -3 **-AN.SG**
        '**He** is going off to sell flat timbers (OBV).' (Bloomfield 1962:47)

    c. *tâpwê mêkiw pêyak mistatimwa*   Plains Cree
        tâpwê mêki -ẅ **-Ø**   pêyak mistatimw -a
        truly give.out -3 **-AN.SG** one   horse   -OBV
        'Truly **he** gave out one horse (OBV).' (Wolfart 1996:403)

    d. *ahpe·nemowa osi·me·hani*   Meskwaki
        ahpe·nemo -ẅ **-a**   o- si·me·h   -ani
        depend.on -3 **-AN.SG** 3- younger.sibling -OBV.SG
        '**He** relies on his younger brother (OBV).' (Dahlstrom 2009:231)

3.5.2 TA+O forms

In TA+O verbs, peripheral agreement appears in all languages, but it differs whether it indexes
the primary object or the secondary object. Recall that TA+O verbs are ditransitive verbs taking
two internal arguments: a goal, which is referred to as the primary object, and a theme, which is
referred to as the secondary object. The distribution of peripheral agreement indexing the sec-
ondary object of a TA+O verb is even narrower than it is for AI+O verbs. As summarized in Table
3.12, the secondary object is accessible for peripheral agreement only in Maliseet-Passamaquoddy
and Unami Delaware, indicated by a check mark. In the rest of the languages, peripheral agree-
ment in TA+O verbs does not index the secondary object but instead the primary object (indicated

by an X mark in the gray cell), just as it does in the ordinary monotransitive TA forms discussed earlier.

Table 3.12: Summary: Availability of peripheral agreement with theme in TA+O verbs

	Mal-P	**U Del**	**Nish**	**Oji-C**	**Meno**	**Cree**	**Mesk**
TA+O	✓	✓	✗	✗	✗	✗	✗

I first present the TA+O examples in which peripheral agreement agrees with the theme. Their verb inflection is characterized by the n-endings and, of course, the corresponding peripheral suffix. The Maliseet-Passamaquoddy example is shown in (36a) and the Unami Delaware example is shown in (36b). These two examples both involve an animate goal, 'the pigs' in (36a) and 'him' in (36b), and an inanimate theme, 'potatoes' in (36a) and 'them (IN)' in (36b). In both examples, the n-ending along with the inanimate peripheral suffix *-*ali* 'IN.PL' (-*əl* for Maliseet-Passamaquoddy and -*al* for Unami Delaware) makes it clear that the theme is agreed with.

(36) TA+O forms: peripheral agreement with secondary object in M-P and U Delware

    a.   *nkissəmanəl piksək pəcetesəl*   Maliseet-Passamaquoddy
        n- kissəm -a   -n -**əl**   piks -ək   epeskəmakən -əl
        1- feed   -3.OBJ -1SG -**IN.PL** pig -AN.PL potato   -IN.PL
        'I fed **potatoes** (IN) to the pigs (AN).' (Sherwood 1983:125)

    b.   *nəmi·lá·na*   Unami Delaware
        nə- mi·l -a·   -n   -**al**
        1- give -3.OBJ -1SG -**IN.PL**
        'I gave **them** (IN) to him.' (Goddard 2020:104)

I now present the TA+O examples from the remaining languages, in which peripheral agreement agrees with the goal. Their verb inflection is identical to ordinary TA verbs: the animate primary object is indexed by the peripheral suffix, accompanied by the w-ending allomorph of the central suffix. In these languages, the theme (secondary object) is not indexed at all.

(37) TA+O: peripheral agreement with goal in the remaining languages

    a.   *ngii-noojmotmawaa wniijaansan*   Nishnaabemwin
        n- gii- noojimotamaw -aa   -Ø -Ø   w- niijaans -an
        1- PAST- cure.for   -3.OBJ -1SG -**AN.SG** 3- child   -OBV
        'I cured his child **for him**.' (Valentine 2001:658)

    b.   *Menii omiinaan Cawnan masinahikanan*   Oji-Cree
        Menii o- miin -aa   -Ø -**an**   Cawn -an   masinahiikan -an
        Mary 3- give -3.OBJ -3SG -**OBV** John -OBV book   -IN.PL
        'Mary gives **John** (OBV) books.'

    c.   *newe·htamowa·w*   Menominee

ne- we·htamow -a·   -w   **-Ø**

1- tell   -3.OBJ -1SG **-AN.SG**

'I tell it **to him/her**.' (Bloomfield 1946:92)

    d.   *niwîhtamawâw*   Plains Cree

ni- wîhtamaw -â   -w   **-Ø**

1- tell.of   -3.OBJ -1SG **-AN.SG**

'I tell of it **to him/her**.' (Bloomfield 1946:92)

    e.   *nepye·tahwa·wa*   Meskwaki

ne- pye·tahw -a·   -w   **-a**

1- bring   -3.OBJ -1SG **-AN.SG**

'I brought it **for him**.' (Dahlstrom 2009:231)

In the Oji-Cree example in (37b), the peripheral suffix *-an* could in principle be ambiguous, since the animate obviative and inanimate plural peripheral suffixes are both *-an* in Oji-Cree, but the preceding central suffix -Ø '3SG' makes it clear that peripheral agreement targets the obviative primary object 'John' here, because the central suffix would instead be realized as the n-ending allomorph if the peripheral agreement truly indexed the inanimate secondary object *masinahikanan* 'books'.

3.5.3   Summary: Peripheral agreement for secondary objects

Combining the examples presented from (34) to (37), the distribution of peripheral agreement with the secondary object is summarized in Table 3.13. In this table, a check mark indicates that the secondary object (the object of an AI+O verb or the theme of a TA+O verb) is indexed by peripheral agreement, whereas an X mark with gray background indicates that the secondary object is not indexed by peripheral agreement, which instead indexes some other third-person argument if one exists (i.e. the subject of an AI+O verb or the the goal of a TA+O verb).

Table 3.13: Summary: Availability of peripheral agreement with secondary objects

	Mal-P	U Del	Nish	Oji-C	Meno	Cree	Mesk
AI+O	✓	✓	✓	✗	✗	✗	✗
TA+O	✓	✓	✗	✗	✗	✗	✗

Table 3.13 shows that peripheral agreement is less robust for secondary objects than for primary objects, especially in the case of TA+O verbs. For primary objects, setting aside the interference from a plural subject, we saw earlier that Menominee is the cut-off boundary among the examined languages in that primary objects are always accessible for peripheral agreement in

languages to the left of Menominee. For secondary objects, the boundary is shifted leftward to Oji-Cree for AI+O verbs and further to Nishnaabemwin for TA+O verbs.

3.6 Oblique arguments

This section turns to the accessibility of oblique arguments to peripheral agreement. When the pervasive occurrence of the n-endings was introduced in Section 2.2.1 and Section 2.3.2, it was mentioned that peripheral agreement in Eastern languages like Unami Delaware is even capable of indexing oblique arguments (Goddard 2020). This section will show that the possibility of peripheral agreement is restricted to certain types of oblique arguments. After a cross-linguistic comparison, we will see that languages may differ in allowing peripheral agreement to index oblique arguments. We will also see that certain types of oblique arguments can never be indexed by peripheral agreement regardless of the language.

The discussion proceeds as follows. Section 3.6.1 introduces two important categories of grammatical relations and reviews the ability of peripheral agreement to index different arguments. Section 3.6.2 identifies four types of oblique arguments and discusses the availability of peripheral agreement for each type in Nishnaabemwin. Section 3.6.3 repeats the survey of obliques in Unami Delaware and Maliseet-Passamaquoddy, revealing the differential behaviors of oblique arguments for peripheral agreement.

3.6.1 Peripheral agreement with core and oblique arguments

This subsection provides a sketch of oblique arguments, focusing on three Algonquian languages: Ojibwe, Unami Delaware, and Maliseet-Passamaquoddy. I first explain the difference between oblique arguments and core arguments. Then I review the agreement behaviors of three types of core arguments (subject, primary object, secondary object) in Algonquian languages and compare them with the agreement behavior of oblique arguments. Finally, I describe three strategies used to code oblique arguments in Algonquian languages.

In the typological literature, grammatical relations are divided into two general categories: core arguments and oblique arguments (Comrie 1989:66, 179; Dixon 1994:122-3; Andrews 2007:152, 157). Core arguments are noun phrases that have close associations with semantic roles determined by verbs/predicates. Subject, direct object, and indirect object are examples of core arguments. In contrast, oblique arguments provide additional circumstances such as location, time, and manner. Most importantly, the form or the meaning of oblique arguments usually is not determined by the verb. In English, the core arguments are often NPs or pronouns, whereas oblique arguments are typically introduced by a preposition. For instance, the instrumental oblique is in-

troduced by the preposition *with* in (38a) and the locative oblique is indicated by *to* in (38b). In these examples, the obliques (underlined) behave like adjuncts as they can be dropped freely.

(38)   Obliques in English

    a.   *John hit the bear <u>with a hammer</u>.*

    b.   *John ran <u>to the store</u>.*

In certain collocations, an oblique argument is obligatory rather than optional. Research on subcategorization has contributed to explaining the number as well as the type of internal arguments required by the predicate (Chomsky 1965; Kaplan & Bresnan 1982). For example, as noted in Rhodes (1998:1), the English verb *put* subcategorizes for three arguments: a subject, a direct object, and a location. The clause in (39a) containing all three arguments is permissible. A clause lacking any of the three arguments is ungrammatical. The example in (39b) missing the NP object and the example in (39c) missing the PP in-phrase are both impermissible.

(39)   a.   *Alice put the key <u>in the box</u>.*

    b.   [✗]*Alice put the key.*

    c.   [✗]*Alice put <u>in the box</u>.*

Turning to Algonquian languages, the Nishnaabemwin examples in (40) show that all three types of core arguments can be indexed by peripheral agreement: subject in (40a), indirect object (primary object of a TA+O verb) in (40b), and direct object (secondary object of a AI+O verb) in (40c).

(40)   Nishnaabemwin: peripheral agreement with core arguments

    a.   *boodwewag*   subject
        boodwe   -w̆ -**ag**
        make.fire -3 -**AN.PL**
        '**They** make a fire.' (Valentine 2001:232)

    b.   *ngii-noojmotmawaa wniijaansan*   indirect object
        n- gii-   noojimotamaw -aa   -Ø -**Ø**   w- niijaans -an
        1- PAST- cure.for   -3.OBJ -1SG -**AN.SG** 3- child   -OBV
        'I cured his child **for him**.' (Valentine 2001:658)

    c.   *nmiigwenag*   direct object
        n- miigiwe   -n   -**ag**
        1- give.away -1SG -**AN.PL**
        'I give **them** (AN) away.' (Valentine 2001:244)

Quite the opposite to core arguments, oblique arguments in Nishnaabemwin are not indexed by peripheral agreement or by any agreement marker at all. The example in (41a) involves a temporal oblique *ngo-bboon* 'for one winter'. However, the verb is inflected as an intransitive AI verb, not showing any agreement with the oblique NP. The example in (41b) involving a locative oblique *jiimaaning* 'in a canoe' is very similar to (41a), showing AI inflection with no agreement with the locative oblique argument. Lastly, the example in (41c) involves an AI+O verb with an instrumental oblique *mookmaanens* 'with a pocketknife'. The verb inflection shows agreement with the inanimate secondary object *mtigoons* '(the) stick', manifested by the n-ending central allomorph and the zero peripheral suffix, but no agreement with the oblique.

(41)   Nishnaabemwin: no agreement with oblique arguments

    a.   *ngo-bboon ngii-yaa widi*   temporal
        <u>ningo-biboon</u> ni- gii-   ayaa   iwidi
        one-winter   1- PAST- be   there
        'I went there for one year.' (Rhodes 2010:308)

    b.   *jiimaaning ngii-boozmi miinwaa bezhig kwe*   locative
        <u>jiimaan-ing</u> n- gii-   boozi   -min   miinawaa bezhig kwe
        canoe-LOC   1- PAST- embark -1PL   and   one   woman
        ''She and I and another woman got into a canoe.' (Rhodes 2010:314)

    c.   *mookmaanens wgii-giishkojgen mtigoons*   instrumental
        <u>mookomaan-ens</u> w- gii-   giishkojge -n -Ø   mitigoons
        knife-DIM   3- PAST- cut.through -3SG -**IN.SG** stick
        'He whittled through **the stick** with a pocketknife.' (Rhodes 1998:4)

Oblique arguments do, however, trigger agreement on the verb in some Eastern Algonquian languages (see Goddard 2020 for Unami Delaware, Sherwood 1983 for Maliseet-Passamaquoddy, and Quinn 2006b for Penobscot). For example, the instrumental oblique in the Unami Delaware form in (42a) is indexed by the inanimate singular peripheral suffix -Ø, accompanied by the n-ending allomorph of the central suffix. (The peripheral suffix cannot be indexing the object 'him' here, because in that case it would be realized as *-al* 'OBV'.) The Maliseet-Passamaquoddy example in (42b) is even more self-explanatory: the plural peripheral suffix *-ək* 'AN.PL' indexes the comitative oblique NP *nuhsimísok* 'my younger siblings'. In addition, the central suffix *-nénənw* shares the same pattern as Unami Delaware in using an n-ending allomorph.

(42) Eastern Algonquian: peripheral agreement with oblique arguments

    a.   *pɔ́k·ama·n*   instrumental

        wə- pakam- a·   -n -**Ø**

        3-   hit   -3.OBJ -3SG -**IN.SG**

        'He struck him with **it**.' (Unami Delaware, Goddard 2020:106)

    b.   *nìl n-wit-ayyanénuuk nuhsimísok*   comitative

        nìl n- wit-   ayya -nénənw -**ək**   <u>n-uhsimís-ok</u>

        I   1- with.RR- play -1PL   -**AN.PL**   1-young.sibling-AN.PL

        'I play with **my younger siblings**.' (Maliseet-Passamaquoddy, LeSourd 2020)

Based on the above examples, a summary of peripheral agreement with oblique arguments is given in Table 3.14. The Nishnaabemwin pattern is representative of all the Central Algonquian languages (see Dahlstrom 1994, 2010, 2013a for Meskwaki). Therefore, a division is found in terms of the ability of peripheral agreement to index oblique arguments across Algonquian languages. In Central Algonquian languages, obliques are inaccessible for peripheral agreement. In contrast, in some Eastern Algonquian languages, obliques are accessible for peripheral agreement.

Table 3.14: Accessibility of oblique argument for peripheral agreement (incomplete)

	Nish	**U Del**	**Mal-P**
Oblique	✗	✓	✓

3.6.2   Four types of oblique arguments in Nishnaabemwin

This section examines the treatment of oblique arguments in Nishnaabemwin in greater depth. I will show that oblique arguments are introduced via four means: as a bare NP, via a case marker, via a relative root, or via the combination of case marking and a relative root.

The oblique arguments exemplified in (41) and (42) can be further distinguished into four types. First, the oblique argument may appear as a simple NP, such as *ngo-bboon* 'for one winter' in (41a). Second, the oblique NP may be marked by a locative case suffix, such as *jiimaaning* 'in the canoe' in (41), in which the NP *jiimaan* 'the canoe' takes the locative suffix *-ing* (PA **-enki*). Third, the oblique NP may be introduced via a relative root on the verb, as in (42b). Fourth, the oblique NP may be introduced using both a locative suffix and a relative root; an example will be given later in (49). Relative roots (glossed as 'RR') were previously introduced in Section 2.2.1 as verbal morphemes that add a valency for a nominal complement in the clause (Bloomfield 1946:120; Wolfart 1973:66; Rhodes 1998, 2010). A relative root can be understood as an adposition-like morpheme that is morphologically part of the verb but takes a freestanding phrase as its complement. The nominals selected by relative roots are known as relative root complements

and can be overt NPs, deictics, or pronouns. In the Maliseet-Passamaquoddy example in (43), the NP *nuhsimísok* 'my younger siblings' is the complement of the relative root *wit-* 'with', creating a comitative oblique.

(43)   *nìl n-wit-ayyanénuuk nuhsimísok*   overt NP

nìl	n-	**wit**-	ayya	-nénənw	-**ak**	n-uhsimís-ok
I	1-	**with.RR**-	play	-1PL	-**AN.PL**	1-young.sibling-AN.PL

'I play with **my younger siblings**.' (Maliseet-Passamaquoddy, LeSourd 2020)

It is also possible for relative root complements to be covert elements, as in (44). In this example, the complement that relative root references is interpreted as a spatial deictic 'there', even though it is morphologically absent in the clause.

(44)   *baamaa go ga-zhaami.*   covert deictic

baamaa	go	Ø	gi-	ga=	**iN**-	yaa	-min
afterwards	PTCL	there	2-	FUT=	**to.RR**-	go	-1PL

'Afterwards we (inclusive) will go there.' (Nishnaabemwin, Rhodes 2010:314)

In summary, oblique arguments in Algonquian languages can be indicated using one of four means. The nominal element may be unmarked, or it could be morphologically encoded via case marking (Dahlstrom 2013a) or a relative root, or by both types of morphology together. In what follows, I discuss each type of oblique argument in Nishnaabemwin. I will refer to the first types as the unmarked type. The Nishnaabemwin example in (45) provides an additional illustration of this type. The verb in this example shows AI inflection with peripheral agreement indexing the animate subject. The NP *gkizhe* 'charcoal' is interpreted as an instrumental oblique but is not morphologically marked.

(45)   Nishnaabemwin oblique: unmarked type

wezhho gye gkizhe.

wezhho	-Ø	-**Ø**	gye	gkizhe
adorn.REFLX	-3	-**AN.SG**	also	charcoal

'He paints himself with charcoal.' (Valentine 2001:659)

The example in (46) illustrates an oblique introduced by the relative root *dso-* 'in a certain number, so many'. The sentence-initial particle *mdaaswi-shi-naanan* 'fifteen' is the relative root complement, completing the expression of quantity initiated by the relative root. I will refer to the obliques that are relative root complements as the RR type. The RR type oblique argument is not indexed by the verb, which shows agreement only with the subject in (46).

(46) Nishnaabemwin oblique: RR type

mdaaswi-shi-naanan dso-bboon'-gizi

midaaswi-shi-naanan	**dso-**	biboon-	gizid	-Ø	-**Ø**
ten-plus-five	**so.many.RR-**	year-	have	-3	-**AN.SG**

'He is fifteen years old.' (Valentine 2001:664)

The example in (47) illustrates an oblique marked with the locative suffix. I follow Dahlstrom (2013a, chapter 3) in regarding the locative suffix -*ing* as a case marker. In the following, I will refer to the NPs bearing this suffix as the case-marked type of oblique.

(47) Nishnaabemwin oblique: case-marked type

jiimaaning ngii-boozmi miinwaa bezhig kwe

jiimaan-**ing**	n-	gii-	boozi	-min	miinawaa	bezhig	kwe
canoe-**LOC**	1-	PAST-	embark	-1PL	and	one	woman

'She and I and another woman got into a canoe.' (Rhodes 2010:314)

As described in Dahlstrom (2013a:3-29), the case suffix **-enki* appears on nouns expressing various types of locations: goal, source, or path of motion, or stationary location. The **-enki* suffix may also express non-locative meanings associated with manner or appearance. A relevant Nishnaabemwin example is given in (48): the noun *mhiingn* 'wolf' marked with "locative" case suffix -*ing* but its function is that of a non-locative oblique, translated as 'like wolves'.

(48) *mhiinging zhinaaziwag gonad nimookajiinyig*

mhiingn-**ing**	zhinaazi	-ẅ	-ag	gonad	nimmokaajiiny-ig
wolf-**LOC**	look.so	-3	-AN.PL	these.AN.PL	dog-AN.PL

'These dogs look like wolves.' (Nishnaabemwin, Valentine 2001:664)

The example in (49) illustrates an oblique coded by both case and a relative root: the verb contains the relative root *in*-, expressing manner, and the preverbal NP *aniniw* 'man', which is the complement of the relative root, bears the locative case suffix -*ing*. In terms of inflection, this example involves a TA verb that agrees with the subject and object but not with the oblique argument.

(49) Nishnaabemwin oblique: mixed type

niniing-sh go naa wgii-naabmaan niwi mnidoon

aniniw-**ing**	=sh	go	naa	o-	gii=	**in-**	aabam	-aa	-Ø	-**an**	aniwi
man-**LOC**	=PTCL	PTCL	PTCL	3-	PAST=	**to.RR-**	see	-3.OBJ	-3	-**OBV**	this.OBV

manidoo-an
spirit-OBV

'He saw **the spirit** in the form of a man.' (Rhodes 2010:308)

In summary, obliques can be classified into four types depending on the strategy by which they are introduced: unmarked, case-marked, relative root, and a mixture of case and relative root. None of these types of obliques trigger agreement on the verb in Nishnaabemwin, as summarized in Table 3.15.

Table 3.15: Nishnaabemwin: types of oblique arguments with peripheral agreement

	Unmarked	RR	Case	Mixed
Nish	✗	✗	✗	✗

3.6.3   Four types of oblique arguments in Eastern Algonquian

This subsection proceeds to examine the patterning of peripheral agreement with the four types of obliques in Eastern Algonquian languages. Recall in Section 3.6.1 that obliques are accessible for peripheral agreement in Unami Delaware and Maliseet-Passamaquoddy. In what follows, I will show that these four types do not show equal accessibility for agreement. Specifically, when the oblique argument is case-marked, agreement does not occur.

First, an Unami Delaware unmarked oblique is illustrated in (50). The verb in this example shows peripheral agreement for the oblique, manifested by the combination of an n-ending and a peripheral suffix (which happens to be morphologically zero).

(50)   Eastern Algonquian oblique: unmarked type

    pɔ́k·ama·n   Unami Delaware
    wə- pakam- -a·   -n   -Ø
    3-   hit   -3.OBJ -3SG -IN.SG
    'He struck him **with it**.' (Goddard 2020:106)

Moving on to the RR type, the previous Maliseet-Passamaquoddy comitative example is repeated as (51a), accompanied by an Unami Delaware RR oblique example in (51b). The example in (51b) involves the relative root *əli-*, which expresses manner and is glossed as 'so' for short. The complement selected by *əli-* is the emphatic pre-verbal demonstrative *ná=nə*. In both examples in (51), the RR oblique is indexed by peripheral agreement on the verb.

(51)   Eastern Algonquian oblique: RR type

    a.   *nìl n-wit-ayyanénuuk nuhsimísok*   Maliseet-Passamaquoddy
          nìl n- **wit-**   ayya -nénənw -**ak**   n-uhsimís-ok
          I   1- **with.RR**- play -1PL   -**AN.PL** 1-young.sibling-AN.PL
          'I play with **my younger siblings**.' (LeSourd 2020)

b. *ná=nə ntə́li-kí·spwi·n*   Unami Delaware
   ná=nə   nət- **əli·**-   ki·spwi· -n   -Ø
   FOC=that   1-   **SO.RR**- be.full   -1SG -IN.SG
   'I got full **on it**.' [lit. 'I got full that way.'] (Goddard 2020:105)

The third type, case-marked obliques, differ from the previous two types in that they are not available for peripheral agreement. In the Maliseet-Passamaquoddy example in (52), the NP *katkohk* 'pot' bears the case suffix *-ək*. The AI verb in this example shows plural peripheral agreement with the secondary object *pəcetesəl* 'potatoes' but no agreement with the locative oblique.

(52)   Eastern Algonquian oblique: case type
       ntepahkanəl pəcetesəl katkohkək   Maliseet-Passamaquoddy
       nt- epahka -n   -**əl**   pəcetes-**əl**   katkohk-**ək**
       1- throw -1SG -**IN.PL** potato-IN.PL   pot-**LOC**
       'I throw **potatoes** (IN) in the pot.' (Sherwood 1983:121)

Finally, the mixed type of obliques is also attested in the Eastern languages. In the examples in (53), the case-marked NP is the complement of the relative root on the verb: the locative NP *hák·ink* 'on the ground' is the complement of the relative root *əli-* 'to' in the Unami Delaware example in (53a) and the locative NP *qospemok* 'in/to the lake' is the complement of the relative root *oloq-* 'to, that way' in the Maliseet-Passamaquoddy example in (53b). Oblique arguments of this mixed type again cannot be indexed by peripheral agreement. Looking closer at the Unami Delaware example in (53a), the verb uses the absolute inflection with central agreement and peripheral agreement both indexing the subject and no agreement indexing the oblique. In the Maliseet-Passamaquoddy example in (53b), the verb shows objective TA inflection, indexing the proximate subject and obviative object, but again no agreement for the oblique.

(53)   Eastern Algonquian oblique: mixed type

       a. *hák·ink lí-súk·o·p*   Unami Delaware
          hak·-**ink**   **əli**- sukw -ẅ -əp   -Ø
          ground-**LOC** **to.RR**- spit -3 -PRET -**AN.SG**
          '**He** spat on the ground.' (Goddard 2021:45)

       b. *'toloqaphal oloqiw qospemok*   Maliseet-Passamaquoddy
          't- **oloq**-   aph -a   -Ø -**əl**   oloqiw   qospem-**ok**
          3- **that.way.RR**- track -3.OBJ -3SG -**OBV** that.way lake-**LOC**
          'She tracked **him** (OBV) toward the lake.' (Bruening 2001:169)

Taken together, an interesting split is found in terms of peripheral agreement with oblique arguments in the two Eastern Algonquian languages surveyed. As shown in Table 3.16, obliques of the unmarked type or the RR type can be indexed by peripheral agreement, whereas obliques of the case-marked type or the mixed type cannot. In short, whenever the oblique argument is case-marked, agreement is prohibited (Sherwood 1983:122-123).

Table 3.16: Eastern Algonquian: types of oblique arguments with peripheral agreement

	Unmarked	**RR**	**Case**	**Mixed**
Eastern	✓	✓	✗	✗

Convincing evidence supporting the inaccessibility of case-marked obliques is presented by Sherwood (1983:122-123). In Maliseet-Passamaquoddy, if an NP bears the locative suffix *-ək*, peripheral agreement is systematically banned. The examples in (54) present a clear contrast. In (54a), the unmarked oblique NP *wik* 'house' triggers peripheral agreement on the AI verb, resulting in an objective form with a person prefix and an n-ending indexing the subject. However, when the oblique NP is case marked as *wikək* 'in the house' in (54b), the same agreement pattern is prohibited.

(54)   Maliseet-Passamaquoddy: unmarked NP vs. case-marked NP (Sherwood 1983:122-123)

    a.   *məwin kwəssəyotan məcəyehsəwəl wik*   unmarked type
        məwin   w- kəssəyota -n   -Ø   məcəyehsəw-əl   wik
        bear   3- move.in -3SG -**IN.SG** Partridge-OBV   house.IN.SG
        'Bear moved in **into Partridge's house**.'

    b.   *˟məwin kwəssəyotan məcəyehsəwəl wikək*   case type
        məwin   w- kəssəyota -n   -Ø   məcəyehsəw-əl   wik-**ək**
        bear   3- move.in -3SG -**IN.SG** Partridge-OBV   house-**LOC**
        Intended: 'Bear moved in **into Partridge's house**.'

If the sentence is forced to maintain the case-marked oblique *wikək*, it is only grammatical if the AI verb uses absolute inflection, as in (55). Here the central suffix *-w̃* and the zero peripheral suffix both index the subject *məwin* 'bear' and there is no agreement for the locative oblique argument.

(55)   *məwin ksəyote məcəyehsəwəl wikək*
      məwin   ksəyota -w̃ -Ø   məcəyehsəw-əl   wik-**ək**
      bear   move.in -3 -**AN.SG** Partridge-OBV   house-**LOC**
      '**Bear** moved in into Partridge's house.' (Sherwood 1983:123)

To conclude, this subsection has examined the patterns of peripheral agreement with the four kinds of oblique arguments in Unami Delaware and Maliseet-Passamaquoddy. Even though

peripheral agreement in Eastern Algonquian languages behaves most robustly in being capable of indexing a wide range of nominal elements, an important limit is revealed with respect to oblique arguments for peripheral agreement: case marking blocks an NP from being indexed by peripheral agreement. Table 3.17 summarizes the accessibility of oblique arguments for peripheral agreement in Nishnaabemwin, Maliseet-Passamaquoddy, and Unami Delaware. In Nishnaabemwin, oblique arguments are inaccessible regardless of which of the four strategies is used. In contrast, a division exists in the two Eastern languages depending on the involvement of case marking.

Table 3.17: Summary: Availability of peripheral agreement with oblique arguments

Oblique	**Nish**	**Mal-P**	**U Del**
Unmarked type	✗	✓	✓
RR type	✗	✓	✓
Case type	✗	✗	✗
Mixed type	✗	✗	✗

3.7   Interference of mode and the diminutive

Up to this point, the survey of peripheral agreement has focused on properties of arguments such as animacy, grammatical function, and number. This section completes the picture by considering the influence of event semantics (i.e. different predicate forms; Witzlack-Makarevich & Seržant 2018:14). In particular, I show that two inflectional categories have an effect on the patterning of peripheral agreement in SW Ojibwe and Meskwaki. I first discuss the case of SW Ojibwe, in which verbs inflected in the indicative mode lack peripheral agreement in certain contexts, but peripheral agreement returns when the verb is inflected in non-indicative modes. Then I turn to the case of Meskwaki, where the verbal diminutive suffix may block peripheral agreement.

In Section 3.2.2, SW Ojibwe was shown to be a language in which first-person plural subjects block peripheral agreement in TI verbs. In (56a), for example, the subject is first-person plural and there is no peripheral agreement with the inanimate object; the resulting absolute inflection triggers the use of the m-ending allomorph of the central suffix. This plural subject interference does not affect second-person forms such as (56b), where the peripheral suffix -*an* indexes the inanimate object and the central suffix appears in its n-ending allomorph.

(56) SW Ojibwe: Just the 1PL subject blocks peripheral agreement

    a.   *niwaapantaamin*   1PL

        ni- waapant -aa   -min

        1-   see   -0.OBJ -1PL

        'We see it/them (IN).' (Nichols 1980:282)

    b.   *kiwaapantaanaawaan*   2PL

        ki- waapant -aa   -naawaa -**an**

        2-   see   -0.OBJ -2PL   **-IN.PL**

        'You (PL) see **them** (IN).' (Nichols 1980:282)

The blocking effect of first-person plural subjects is limited to the indicative verb inflection, which is unmarked for mode markers. If the preterite mode suffix *-pan* (underlined) is added, peripheral agreement with the object appears even when the subject is first-person plural, as in (57b).

(57) SW Ojibwe: indicative vs. preterite

    a.   *niwaapantaamin*   INDICATIVE

        ni- waapant -aa   -min

        1-   see   -0.OBJ -1PL

        'We see it/them (IN).' (Nichols 1980:282)

    b.   *niwaapantaaminaapanen*   PRETERITE

        ni- waapant -aa   -minaa -<u>pan</u> -**en**

        1-   see   -0.OBJ -1PL   -PRET **-IN.PL**

        'We saw **them** (IN).' (Nichols 1980:284)

The same effect arises with the dubitative mode suffix, as illustrated in (58): peripheral agreement with the object again appears even though the subject is first-person plural.

(58) *niwaapantaaminaatokenan*   DUBITATIVE

    ni- waapant -aa   -minaa -<u>token</u> -**an**

    1-   see   -0.OBJ -1PL   -DUB   **-IN.PL**

    'We might see **them** (IN).' (SW Ojibwe, Nichols 1980:286)

Interestingly, the central suffixes in (57b) and (58) continue to use the m-endings, as in an absolute form, despite the appearance of peripheral agreement.

    The influence of mode inflection on the agreement pattern in SW Ojibwe is not unusual from a typological perspective, given that a TAM-based differential argument marking, sometimes referred to as aspect-based split ergativity, has been observed in various languages (see Comrie 1978, Dixon 1994:97-101 for a comprehensive comparative description, Laka 2006 for Basque, and Coon 2010 for Mayan languages).

Peripheral agreement can also be disrupted by the presence of diminutive inflection. Nouns and verbs can both inflect for the diminutive in some Algonquian languages (Pentland 1999:236; Goddard 1994a:190, 204). Verbs inflected for the diminutive can express small size/quantity, cuteness, or brevity of time (Salt et al. 2004). In the East Cree examples below, the form in (59a) is unmarked, meaning 's/he sleeps'. The addition of the diminutive suffix -*shi* in (59b) adds the interpretation of brevity of time to the event of sleeping.

(59)   Diminutive inflection on a verb: e.g. East Cree (Salt et al. 2004)

    a.   *nipâu*
        nipâ -u -Ø
        sleep -3 -AN.SG
        'S/he sleeps.'

    b.   *nipâshiu*
        nipâ -**shi** -u -Ø
        sleep -**DIM** -3 -AN.SG
        'S/he takes a nap.'

The diminutive suffix is fundamentally different from the preterite and dubitative mode markers discussed above, because in addition to its distinct type of meaning, it also appears in a completely different slot on the verb. The independent verb template is repeated in Table 3.18. Mode markers belong to slot 6, occurring between the central suffix and peripheral agreement, while the diminutive suffix occurs in slot 2 suffix, preceding the central suffix.

Table 3.18: The independent verb template

		1	2	3	4	5	6	7
PFX	Verb	THEME SIGN	DIM	OBV	NEG	CENTRAL	MODE	**PERIPHERAL**

Meskwaki is the language in which diminutive inflection disrupts the patterning of peripheral agreement. Consider the pair of forms in (60). The verb in (60a) is unmarked for diminutive, which I will call the neutral form. This form includes a peripheral suffix -*a* indexing the animate singular object. However, if the diminutive suffix -*hi* is added, as in (60b), peripheral agreement disappears, leaving the number of the object unexpressed.

(60)   Meskwaki: interference of diminutive with peripheral agreement

    a.   *newa·pama·waki*   NEUTRAL
        ne- wa·pam -a·   -w -**a**
        1- see   -3.OBJ -1SG -**AN.SG**
        'I see **him**.' (Dahlstrom 2013b:4-1)

b.   *nemi·ne·hi*   DIMINUTIVE
     ne- mi·n -e·   -<u>hi</u> -Ø
     1-   give -3.OBJ -DIM -1SG
     'I give [diminutive] to him/them.' (Goddard 1974:324)

In summary, it is possible for the availability of peripheral agreement to vary across paradigms within the same language. In particular, the preterite and dubitative modes in SW Ojibwe as well as the diminutive inflection in Meskwaki add complications to the already complicated picture of variation. The overall effect of these marked inflectional categories on peripheral agreement is quite limited, however, since these effects arise only in certain forms in particular languages.

3.8   Chapter summary

This chapter surveyed the availability of peripheral agreement in seven Algonquian language varieties: two Eastern languages (Maliseet-Passamaquoddy and Unami Delaware) and four Central languages (Menominee, Plains Cree, Meskwaki and two Ojibwe dialects – Nishnaabemwin and Oji-Cree). The survey considered six broad contexts in which languages demonstrate divergences in whether or not peripheral agreement can index a third-person argument: definite objects (§3.1), primary objects (§3.2), inanimate subjects (§3.3), secondary objects (§3.5), oblique arguments (§3.6), and inflection that involves TAM or diminutive markers (§3.7).

Section 3.1 showed that definiteness determines the availability of peripheral agreement with third-person primary objects in the languages that maintain the parallel absolute and objective paradigms. It was illustrated that, in Unami Delaware, definite objects, animate or inanimate, trigger peripheral agreement (objective forms) while their indefinite counterparts do not (absolute forms). The definiteness-based pattern has been lost in all non-Eastern Algonquian languages and in some Eastern languages such as Maliseet-Passamaquoddy.

Section 3.2 described the cross-linguistic treatment of the primary object of TA and TI verbs, which show the most extensive variation of all the contexts considered in the survey. For TA verbs (§3.2.1), peripheral agreement is always available in Unami Delaware, Maliseet-Passamaquoddy, and Nishnaabemwin. In Menominee, Plains Cree, and Meskwaki there is a person-based split: when the subject is an SAP, peripheral agreement can index the animate object, but when the subject is a third-person, peripheral agreement does not index the object and instead indexes the subject. Oji-Cree is mostly similar to Nishnaabemwin except in the plural SAP forms, where peripheral agreement is blocked.

TI verbs (§3.2.2) show even more variation than TA verbs. Maliseet-Passamaquoddy and Nishnaabemwin allow peripheral agreement to index the object in all TI forms, while Plains

Cree and Meskwaki never do. The rest of the languages allow peripheral agreement to index the object in all TI forms with a singular SAP subject, but forms with a plural SAP subject show variation: peripheral agreement is blocked in SW Ojibwe when the subject is a plural first person, in Menominee when the subject is a plural first or second person, and Oji-Cree and Munsee Delaware when when the subject is plural, regardless of which person. Unami Delaware shows interspeaker and intergenerational variation in this respect.

Section 3.3 examined the TA inverse forms, which show variation when the third-person subject is inanimate. The treatment of inanimate subjects is mostly the same as the treatment of the object of a TI verbs (§3.2.2). The only difference arises in Menominee, where forms with a singular SAP argument allow peripheral agreement for an inanimate object (TI forms) but not for an inanimate subject (TA inverse forms).

Section 3.5 considered secondary objects (the object of an AI+O verb or the theme of a TA+O verb), which are less robustly indexed by peripheral agreement. For AI+O verbs, peripheral agreement can index the secondary object in Maliseet-Passamaquoddy, Unami Delaware, and Nishnaabemwin, but not in the other surveyed languages. For TA+O verbs, peripheral agreement can index the secondary object only in Maliseet-Passamaquoddy and Unami.

Section 3.6 showed that peripheral agreement can agree with certain oblique arguments in some Algonquian languages. I concentrated on three languages, showing that oblique arguments are never available for agreement for Nishnaabemwin, and that in the Eastern languages that do permit oblique agreement, such agreement becomes unavailable when the oblique argument is case-marked.

Finally, Section 3.7 discussed the interference of TAM markers in SW Ojibwe and the diminutive marker in Meskwaki, which both result in peripheral agreement patterns that differ from those found in ordinary indicative forms.

This chapter has shown that a variety of factors condition the ability of peripheral agreement to index the object. The rest of the thesis aims to explain the patterning of peripheral agreement with primary objects and secondary objects in the surveyed languages. The patterning of oblique arguments and the influence of TAM morphemes will be left for future research.

Chapter 4

Accessibility-conditioned patterns

In dissecting the mechanisms responsible for variability in peripheral agreement with distinct kinds of arguments, three theoretical dimensions will be explored: (i) accessibility, (ii) feature matching, and (iii) post-syntactic operations.

  (i) **Accessibility**: can the probe access the goal?

 (ii) **Feature matching**: does the goal have the features sought by the probe?

(iii) **Post-syntactic operations**: does the morphology transparently realize the probe's features?

   Given the complexity of the issues, one chapter will be devoted to each question. This chapter addresses the first question, focusing on variations conditioned by mechanisms that involve accessibility. The other two questions will be explored in the following chapters: Chapter 5 for (ii) feature matching and Chapter 6 for (iii) post-syntactic operations.

   Specifically, this chapter pursues the following question: what mechanism makes an argument visible for the syntactic operation that is responsible for peripheral agreement? To pinpoint the answer, I focus on the variation in forms with secondary objects, summarized in Table 4.1.[1] By starting with secondary objects, we avoid added complications such as gender, since secondary objects in Algonquian languages are not restricted to a particular gender. In addition, as we have seen in the previous chapter, the variation shown by peripheral agreement with secondary objects is straightforward within every surveyed language: for each verb class that takes a secondary object (AI+O and TA+O), secondary objects as a whole are either accessible or inaccessible, with no further complications.

---

[1]In this table, the secondary object has to be definite in Unami Delaware in order to be indexed by peripheral agreement. The explanation for definiteness-based agreement patterns will be offered in Chapter 5.

Table 4.1: Summary: Availability of peripheral agreement with secondary objects

	Mal-P	U Del (DEF)	Nish	Oji-C	Meno	Cree	Mesk
AI+O	✓	✓	✓	✗	✗	✗	✗
TA+O	✓	✓	✗	✗	✗	✗	✗

This chapter is laid out as follows. Section 4.1 lays out a syntactic analysis of Algonquian agreement, establishing the necessary background for the investigation to follow. Section 4.2 overviews the relevant theoretical proposals that involve accessibility and argues that certain models cannot handle the Algonquian data. Section 4.3 proceeds to elaborate on two mechanisms, PHASES (Chomsky 2000) and HORIZONS (Keine 2016, 2019), and their implications. Finally, Section 4.4 concentrates on three representative languages (Unami Delaware, Nishnaabemwin, and Oji-Cree), arguing that the horizons model provides the best account of variation in the availability of peripheral agreement with secondary objects.

4.1   The syntax of Algonquian agreement

This section introduces the formal analysis of Algonquian morphosyntax within which the subsequent investigation will be framed. Section 4.1.1 identifies the structural argument configurations involved in distinct verb classes (TA/TI, TA+O, and AI+O verb). Section 4.1.2 identifies the agreement operations that take place on the functional heads of Voice and Infl, clarifying the syntactic derivation below the C head, which is the locus of peripheral agreement.

4.1.1   Syntactic configurations

Morphemes in the verb inflection in Algonquian languages are argued to correspond to functional heads in the syntax (Halle & Marantz 1993). The template for transitive inflection in the independent indicative is shown in (1a): the Root is followed by a derivational FINAL morpheme (Bloomfield 1946:104-111) and three agreement morphemes, the THEME SIGN (Bloomfield 1946:98-102, boxed), the CENTRAL ENDING (Goddard 1979:38, underlined), and the PERIPHERAL ENDING (Goddard 1979:38, bolded). Since the prefix and the central suffix normally index the same argument, I will use the term CENTRAL AGREEMENT to refer to this prefix-suffix combination. The proposed syntactic source for each morpheme is identified in (1b). Following previous work, I regard finals as the verbalizing head *v* (Bruening 2001:122; Brittain 2003), theme signs as the external-argument-introducing head Voice (Bruening 2005; Béjar & Rezac 2009; Oxford 2014), central agreement as Infl (Ritter & Wiltschko 2009, 2014; Coon & Bale 2014; Oxford 2014), and peripheral agreement as C (Halle & Marantz 1993; Branigan & MacKenzie 1999; Bliss 2013; Ox-

ford 2017a; Hammerly 2020). The realization of Infl as a discontinuous prefix-suffix combination is explained by the post-syntactic operation FISSION (Harbour 2008; Oxford 2019b).

(1)   Schema of Algonquian independent indicative verb
      a. <u>PREFIX-</u>   Root   -FINAL   -☐THEME SIGN☐   -<u>CENTRAL</u>   -**PERIPHERAL**
      b. ...   Root   -*v*   -Voice   -Infl   -**C**

The Maliseet-Passamaquoddy examples in (2) illustrate the application of the template. The verb forms in the TA-TI pair in (2) share the same root *nəm-* 'see' but differ in use of finals, theme signs, central agreement, and peripheral agreement. First, the final *-ihw* in (2a) verbalizes the Root and categorizes it as a TA verb requiring an animate object, whereas the final *-iht* in (2b) verbalizes the Root and categorizes it as a TI verb requiring an inanimate object. Second, the theme sign *-a* (2a) is an object marker indicating the object is a third-person animate, while the theme sign *-o* (2b) indicates that the object is inanimate. Third, central agreement in both examples consists of a third-person prefix *w-* and a 3PL central suffix indexing the subject, but the TA example uses the w-ending *-wa* while the TI example uses the n-ending *-nəya.* Lastly, the peripheral suffix *-əl* in (2a) specifies the animate object as singular, whereas the null singular peripheral suffix *-Ø* in (2b) indicates that the inanimate object is singular.

(2)   Maliseet-Passamaquoddy: TA vs. TI (Sherwood 1983:92)

    a.   *nəməyawal skitapəyək maliwəl*   TA
       <u>w-</u> nəm -ihw -☐a☐ -<u>wa</u> -**əl**   skitapəy -ək   mali -wəl
       3- see -TA -3.OBJ -3PL -**OBV** man   -AN.PL Mary -OBV
       'The men see **Mary**.'

    b.   *nəmihtonəya skitapəyək wikəwam*   TI
       <u>w-</u> nəm -iht -☐o☐ -<u>nəya</u> -Ø   skitapəy -ək   wikəwam -Ø
       3- see -TI -0.OBJ -3PL -**IN.SG** man   -AN.PL house   -IN.SG
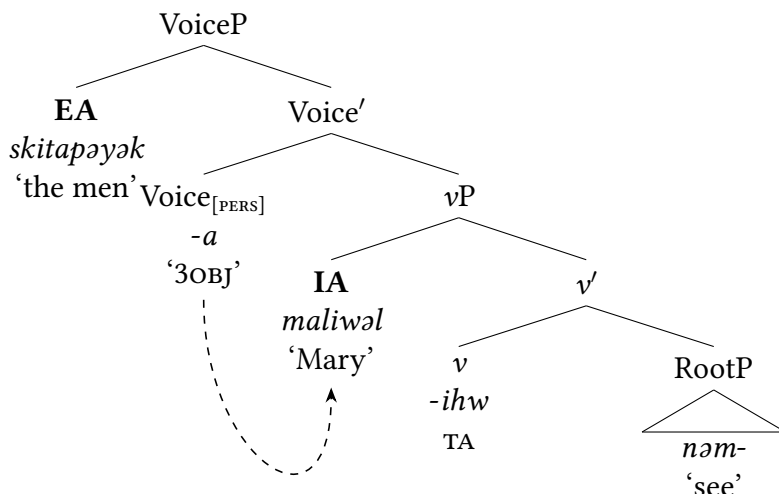   'The men see **the house**.'

Before turning to the argument structure of monotransitive verbs (TA and TI), it is necessary to understand the theoretical context involving articulated VP projections. Because of the split-VP hypothesis (Kratzer 1996; Pylkkänen 2008, among others), VPs are assumed to have two layers: the lower VP (also referred as RootP) selects and theta-marks the internal argument, while the higher VP (also referred as *v*P) introduces the external argument. Later studies such as Harley (2013) for Hiaki and Legate (2014) for Acehnese further show that verb phrases can even consist of three distinct layers, with VoiceP projected above *v*P and VP. The syntactic heads of these three projections each have a distinct function: Root hosts the lexical-contributing component, *v* verbalizes the Root, and Voice introduces the external argument.

I now return to theoretical research that focuses on Algonquian in particular. All three layers of the VP have been argued to be present in Algonquian languages (Tollan & Oxford 2018). The behaviors of each projection precisely follow the descriptions given in the previous paragraph. Namely, the final, *v*, verbalizes the Root (Bruening 2001:122; Brittain 2003; Mathieu 2008), and the theme sign, Voice (Chomsky's *v**), introduces the external argument (Hirose 2003; Bruening 2005; Béjar & Rezac 2009; Oxford 2014). The precise base position of the internal argument is not clear from the literature. Some papers have treated the internal argument as originating in the RootP/VP (such as complement of VP in Bruening 2001:122 or specifier of VP in Lochbihler 2012:44) while Hirose (2003) has argued for Plains Cree that it could originate in the specifier of *v*P. In the following, I assume that primary objects are base-generated in *v*P while secondary objects are introduced in RootP.[2] The motivation for suggesting that secondary objects originate in a lower position is the fact that the final, *v*, is not sensitive to the gender of the secondary object, unlike its sensitivity to the gender of primary objects and intransitive subjects.

The argument configuration of monotransitive verbs is schematized in (3). Using the a Maliseet-Passamaquoddy TA form as an example, the Root *nəm-* provides the lexical meaning of 'see' and *v* is realized by the final *-ihw*, which verbalizes the Root and categorizes it as TA. Then Voice introduces the external argument. Voice also hosts a person probe, which searches down and agrees with the object (the dotted arrow indicates the Agree operation). This Agree operation is why the theme sign is realized as an object marker despite serving syntactically to introduce the external argument.
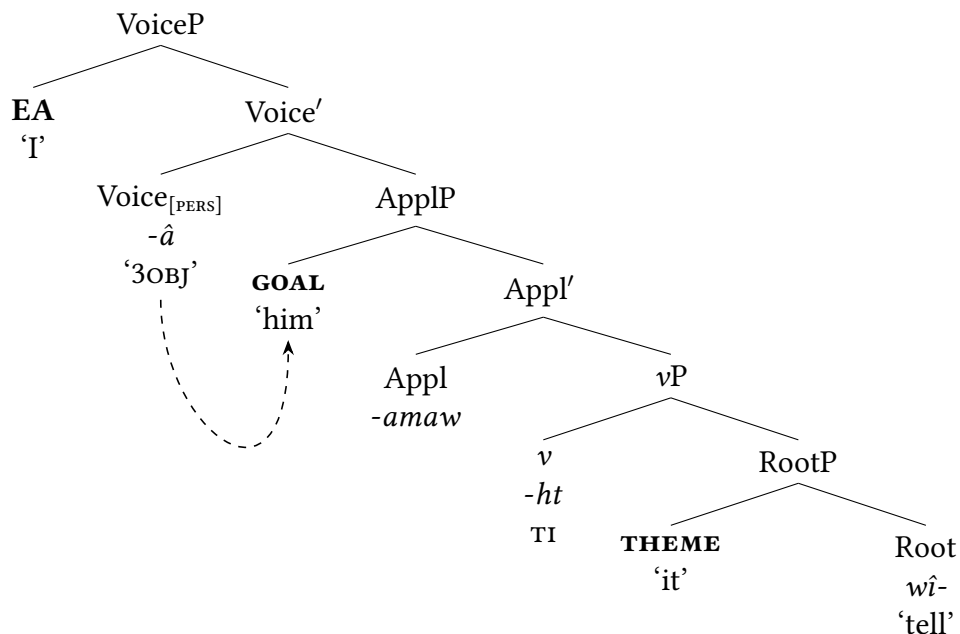
(3)   Argument configuration: TA/TI

w-	nəm	-ihw	-a	-wa	-**əl**	skitapəy	-ək	mali	-wəl
3-	see	-TA	-3.OBJ	-3PL	-**OBV**	man	-AN.PL	Mary	-OBV

'The men see **Mary**.' (Sherwood 1983:92)

---

[2]The precise base position of the internal arguments is ignored in this thesis. Even though they are shown as being introduced in the specifier position of the respective VP projection, I do not reject the possibility of treating them as the complement of the given head.

```
                    VoiceP
                  /        \
               EA           Voice′
          skitapəyək      /        \
          'the men'  Voice[PERS]      vP
                       -a          /      \
                      '3OBJ'     IA        v′
                              maliwəl    /    \
                              'Mary'    v      RootP
                                       -ihw    /\
                                       TA    nəm-
                                            'see'
```
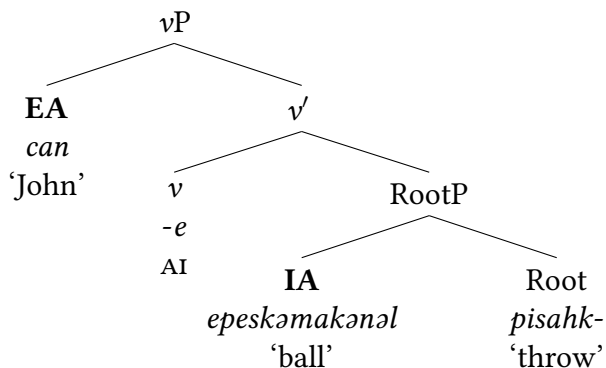
We now turn to TA+O verbs, which have two internal arguments: a goal and a theme. Their argument configuration is equivalent to that of a TA/TI verb with the addition of an ApplP projection introducing the goal. A Plains Cree TA+O example is given in (4). Appl corresponds to Pylkkänen's (2008) high applicative (Quinn 2006b; Lochbihler 2012), located below Voice and above *v*. This example illustrates a common way to derive a TA+O verb, which is to add the applicative/benefactive final -*amaw* to a TI stem (Valentine 2001:463-465). The argument configuration of the TA+O verb is schematized below the example: the subject is introduced by Voice, the goal is introduced by Appl, and the theme is inside the *v*P. This syntactic configuration in which the goal is higher than the theme explains why the object agreement on the theme sign (Voice) always targets the goal and never the theme.

(4)   Argument configuration: TA+O
        ni- wîhtamaw -â   -w -Ø
        1- tell.of   -3.OBJ -1SG -**AN.SG**
        'I tell of it **to him/her**.' (Bloomfield 1946:92)

The last class of transitive verbs to be discussed is AI+O verbs, which are syntactically transitive but morphologically intransitive. These verbs are argued by Tollan & Oxford (2018) to lack the VoiceP layer. The argument configuration of an AI+O verb is shown in (5), illustrated by a Maliseet-Passamaquoddy example. In view of the fact that AI+O verbs have a lower degree of semantic transitivity than TA/TI verbs (Dahlstrom 2013a), Tollan & Oxford (2018) regard the external argument of an AI+O verb as a "doer" rather than an "agent" (cf. Massam 2009) that is introduced by *v*P rather than Voice. Treating AI+O subjects as base-generated in Spec-*v*P is also motivated by syntactic and semantic properties, such as the fact that these verbs cannot be passivized. Due to the absence of the Voice head, theme signs (object agreement markers) are systematically absent from AI+O verbs. As for the base position of the internal argument, I consider it to originate inside RootP. The RootP-internal position accounts for why the secondary object is not required to belong to a particular gender category, since it is not selected by a gender-specifying final. This is why secondary objects can be either animate or inanimate.

(5) Argument configuration: AI+O

w-	pisahke	-n	**-əl**	can	epeskəmakən	-əl
3-	throw	-3sg	**-OBV.SG**	John	ball	-OBV.SG

'John threw **the ball** (obviative).' (Sherwood 1983:94)

```
                        vP
                 ┌──────┴──────┐
                EA             v′
               can      ┌──────┴──────┐
              'John'    v           RootP
                       -e      ┌──────┴──────┐
                       AI     IA            Root
                         epeskəmakənəl    pisahk-
                            'ball'        'throw'
```

In summary, this section has established the background on the morphology-syntax correspondence in Algonquian verbs as well as the syntactic argument structures assumed for the three verb classes: TA/TI, TA+O, and AI+O. The following section will elaborate on the derivation of agreement on the Voice and Infl heads, laying the groundwork for the Agree operation on C that accounts for peripheral agreement.

4.1.2 Agreement operations on Voice and Infl

As exemplified by the Unami Delaware TA 1SG→3PL form in (6a), the theme sign -*a·* (boxed) indexes the person of the object, the central agreement *nə-...-w* (underlined) indexes the person and number of the subject, and the peripheral agreement -*ak* (bolded) indexes the nominal properties (number, gender, obviation) of the object. The derivation of (6a) is schematized in (6b). The Voice probe searches downward and is successfully valued by the object, surfacing as -*a·* '3.OBJ', because the third person animate object contains the matching [Pers] feature. According to Oxford (2014, 2019c), Voice has the [EPP] feature, causing the object to move to Spec-VoiceP after its person feature is valued. This step makes the external argument and the internal argument equidistant for subsequent operations, which is crucial in understanding the preference of Infl to always target the argument that contains the most specified features. The Infl probe then searches downward and the sees both the first-person subject and third-person animate object, which are equally close to the probe. The reason why the first-person subject is targeted by Infl is because it best matches the features of [Part, Pers]: the third-person object lacks the [Part] feature (cf. Harley & Ritter 2002) and thus is not favored by the Infl probe. Note that as part of the morphological realization, Infl undergoes fission (Oxford 2019b, cf. Harbour 2008) and therefore surfaces as a discontinuous prefix-suffix combination: *nə-...-w* '1SG'.
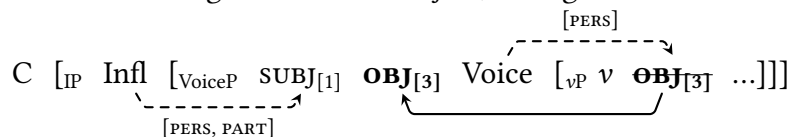
(6)   TA direct: 1SG→3PL

    a.   *nno·t·əmá·ɔk*
          n̠ə- no·təm -⎡a·⎤ -w̠ -**ak**
          1- guard -3.OBJ -1SG -**AN.PL**
          'I guard **them** (AN).' (Unami, Goddard 2021:64)

    b.   Scheme: Voice agrees with 3PL object, Infl agrees with 1SG subject

$$\text{C } [_{\text{IP}} \text{ Infl } [_{\text{VoiceP}} \text{ SUBJ}_{[1]} \textbf{ OBJ}_{[3]} \text{ Voice } [_{v\text{P}} \ v \ \textbf{OBJ}_{[3]} \ ...]]]$$

          [PERS]   [PERS, PART]

The example in (6) shows a direct form. A corresponding inverse form (3PL→1SG) is shown in (7a). Here the theme sign is realized as the inverse marker *-əkw* rather than an object marker, but the central agreement and the peripheral agreement affixes are identical to those of the direct form above. In fact, the overall valuation of Voice and Infl operates similarly in the inverse form. As illustrated in (7b), the person feature of the object values Voice and the object is moved to Spec-VoiceP to satisfy the EPP requirement, thus making the subject and the object equidistant from Infl. Unlike in the direct form, it is the object rather than the subject that is agreed with by Infl, since the third-person subject does not contain all the features sought by the probe. Here it is the first-person object that matches the features of [Pers, Part], and this is why Infl agrees with the object in inverse forms such as this.
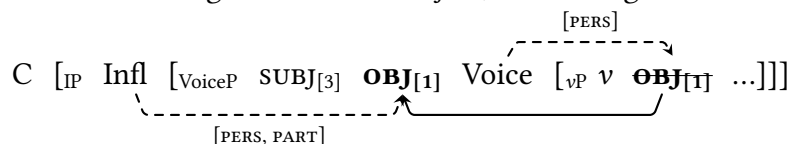
(7)   TA inverse: 3PL→1SG

    a.   *nno·t·əmúk·o·k*
          n̠ə- no·təm -⎡əkw⎤ -w̠ -**ak**
          1- guard -INV -1SG -**AN.PL**
          '**They** (AN) guard me.' (Unami, Goddard 2021:65)

    b.   Scheme: Voice agrees with 1SG object, Infl also agrees with 1SG object

$$\text{C } [_{\text{IP}} \text{ Infl } [_{\text{VoiceP}} \text{ SUBJ}_{[3]} \textbf{ OBJ}_{[1]} \text{ Voice } [_{v\text{P}} \ v \ \textbf{OBJ}_{[1]} \ ...]]]$$

          [PERS]   [PERS, PART]

As for the special inverse marker *-əkw* that realizes Voice in such cases, it results from the post-syntactic operation of impoverishment. As argued in Oxford (2017b, 2019c), when two adjacent functional heads, Voice and Infl, target the same argument (i.e. the object), a profound consequence occurs: the features of the lower head, Voice, are deleted, and as a result, the Voice head is spelled out as the unspecified vocabulary item *-əkw* rather than as an object marker. This feature deletion effect is similar to the Spanish "spurious *se*" phenomenon (see Section 1.2.4).

Notice that the use of inverse morphology is ultimately determined by the Agree operation on Infl: inverse morphology will appear when Infl agrees only with the object. The C head, which is argued below to be the locus of peripheral agreement, plays no role in deriving the inverse pattern. No matter whether the form is direct or inverse, the peripheral agreement targets the third-person argument. For this reason, the inverse will be ignored in this thesis, as it does not impose problems for the patterning of peripheral agreement.

To sum up, in the analysis assumed here, following Oxford (2014, 2017b, 2019c), Voice copies the person feature of the object, and Infl copies the features of whichever argument that best matches the articulated [*u*Part, *u*Pers] features. After Voice and Infl are merged, it is crucial to bear in mind that the object of a TA/TI verbs is moved to Spec-VoiceP, escaping its original base position inside the *v*P. With this background in place, the remainder of the chapter will be devoted to investigating the question of the visibility of arguments to C, the probe that is realized as peripheral agreement.

4.2 Mechanisms for accessibility

This section briefly overviews some proposed theoretical mechanisms that are relevant to accessibility. Recall that, in the narrow syntax, Agree proceeds in three steps: search, copying, and valuation (Deal 2015:1). As a starting point for Agree, accessibility concerns whether the probe can see the goal. As mentioned at the beginning of this chapter, the second and third steps of Agree will be considered in Chapter 5, which examines the patterning of peripheral agreement with primary objects. In order to explore the question of accessibility, this chapter focuses on the patterning of peripheral agreement with secondary objects, because, with the exception of Nishnaabemwin, they are either entirely accessible, as in Unami Delaware and Maliseet-Passamaquoddy, or entirely inaccessible, as in Oji-Cree. In addition, secondary objects are structurally low and therefore provide a useful way of diagnosing the limits of the search space of the probe.

In the theoretical literature, various mechanisms have been proposed to account for patterns involving accessibility. Baker's (2008a, 2011) Structural Condition on Person Agreement (SCOPA) posits that the type of features that the probe seeks to value affects how far an argument can be accessed. On the other hand, Bobaljik (2008) offers a purely morphological account, arguing that an argument's accessibility is determined by its morphological case. Lastly, PHASES (Chomsky 2000, 2001) and HORIZONS (Keine 2016, 2019) both concern the syntactic domains that a probe may search into but differ significantly regarding the location of the delimiting boundary.

It is not clear which theoretical claim applies best to the Algonquian system and how much these mechanisms may interact with each other in the same language. The richness of the Algonquian data provides the perfect opportunity to disentangle the theoretically distinct claims by

assessing them against genetically related yet grammatically divergent languages. The purpose of this chapter is to pinpoint which mechanism plays a central role in conditioning the accessibility of internal arguments for peripheral agreement in Algonquian languages and, additionally, to explore the interactions of these mechanisms, if any, within the same language family.

This section discusses three mechanisms that will ultimately be found to be inadequate to account for the Algonquian facts: Section 4.2.1 on Baker's SCOPA, Section 4.2.2 on Bobaljik's morphological case, and Section 4.2.3 on Chomsky's (2000, 2001) phases. These mechanisms do not fit the data, and the horizons model (Keine 2016, 2019) will be argued to best capture the Algonquian facts (Section 4.3).

4.2.1 Baker's SCOPA

Baker's (2008a, 2011) Structural Condition on Person Agreement (SCOPA) is relevant to the question of accessibility as it suggests that probes may differ in their locality requirements depending on what type of features they search for. The SCOPA states that agreement for person features cannot take place at a distance while agreement for gender and number features can. As a result, if a probe searches for person features, its goal must be strictly local. In contrast, if a probe searches for other ϕ-features, such as number and gender, its goal need not follow such a strict locality constraint.

In Baker 2011, the SCOPA is proposed to handle cross-linguistic agreement asymmetries between person agreement and non-person agreement (number and gender agreement) in various constructions, including adjective-noun concord and the PCC (person case constraint) phenomenon in ditransitive constructions. As illustrated in (8), a ditransitive verb in Nahuatl can agree with the subject and the goal ('me') for person, number, and gender, but can only partially agree with the theme ('some turkeys') in number and/or gender but not in person.

(8) PCC in Nahuatl (Launey 1981:174)
Xi-   nēch- **im**- maca   huēhuèxōlô.
2SG.SUBJ.IMP- 1SG.OBJ- **PL**- give   turkeys
'Give me some turkeys.' (Not: 'Give me to some turkeys.')

Similarly, agreement on predicative adjectives displays an asymmetry, as illustrated for Spanish in (9): adjectives allow number and gender agreement but not person agreement.

(9) Adjective concord in Spanish (Baker 2011:876)
(Nosotras) somos   gord-**as**. (*gord-**amos**)
we.F.PL   are.1PL.SUBJ fat-**F.PL**   (*fat-**1PL**)
'We are fat.'

Baker attributes these types of asymmetries to the syntactic derivation. As stated in (10), the SCOPA requires agreement for person to be more local than agreement for number and gender.

(10)   **The Structural Condition on Person Agreement (SCOPA)** (Baker 2011:878)
        A category F can bear the features +1 or +2 if and only if a projection of F merges with a phrase that has that feature and F is taken as the label of the resulting phrase.

The SCOPA is consistent with the overall behavior of Algonquian peripheral agreement, which indexes third persons but never first or second persons. Under the SCOPA, the lack of peripheral agreement with first and second persons reflects the fact that C is not local to either argument. Peripheral agreement does not express person at all, but just the nominal features of number, gender, and obviation. The SCOPA captures the fact that such longer-distance agreement is permitted and that it manifests as non-person agreement.

However, as pointed out by den Dikken (2019:1), the SCOPA is merely an empirical observation on asymmetries in agreement but by itself it offers no explanation for these asymmetries. For Algonquian, the SCOPA does not offer insights into what kinds of third-person objects are accessible and what kinds are not accessible for peripheral agreement. The SCOPA is unable to explain why the C probe targets the third-person object of TA/TI verbs but not that of AI+O verbs in the surveyed languages except for Nishnaabemwin, Maliseet-Passamquoddy, and Unami Delaware. As shown in the Oji-Cree examples below, the inanimate object of the TI verb is accessible to C, manifested by the peripheral suffix -*an* in (11a), but an object with the same features cannot be targeted by C in the AI+O example in (11b), where peripheral agreement instead ends up indexing the subject, 's/he' (proximate).

(11)   Oji-Cree: the IN.PL object is accessible in TI but inaccessible in AI+O

    a.   *owaapahtaanan*   TI
          o- waapaht -aa   -n   -**an**
          3- see   -0.OBJ -3SG -**IN.PL**
          'S/he sees **them** (IN).'

    b.   *ataawew waapikoniin*   AI+O
          ataawe -w̆ -**Ø**   waapikony -an
          buy   -3 -**AN.SG** flower   -IN.PL
          '**She** buys flowers (IN).'

The SCOPA also does not explain cross-linguistic variation in the same verb class. In Nishnaabemwin, for example, peripheral agreement can index the inanimate object of either a TI verb, as in (12a), or an AI+O verbs, as in (12b), unlike in Oji-Cree.

(12)   Nishnaabemwin: the inanimate object is accessible in TI and AI+O

    a.   *nwaabndaanan*   TI
        n- waabnd -aa   -n   **-an**
        1- see   -0.OBJ -1SG **-IN.PL**
        'I see **them** (IN).' (Valentine 2001:311)

    b.   *nmiigwenan*   AI+O
        n- miigwe   -n   **-an**
        1- give.away -1SG **-IN.PL**
        'I give **them** (IN) away.' (Valentine 2001:244)

In summary, the SCOPA is concerned with differential treatment of SAP arguments and third-person arguments. It makes no predictions about differential treatment of sub-types of third-person arguments or differential treatment of distinct verb classes. As we have seen, such differences are pervasive across the Algonquian languages.

4.2.2   M-case

Unlike the other accounts discussed in this thesis, which treat accessibility as arising from syntactic configurations, Bobaljik (2008) proposes a morphological account, attributing accessibility to morphological case marking. The central claim is that "the finite verb agrees with (the highest) accessible NP in its domain". Importantly, the notion of accessibility here is defined by a universal hierarchy of morphological cases.

Bobaljik's accessibility hierarchy is based on implicational universals from previous typological works (Moravcsik 1974 and Croft 1990). Moravcsik (1974) pointed out that there is an implicational hierarchy, shown in (13), governing which types of arguments are accessible for agreement. If a particular element of this hierarchy is accessible for agreement in a given language, any elements to its left in the hierarchy are also accessible.

(13)   **Moravcsik hierarchy**
       Subject > Direct Object > Indirect Object > Adverbs

Motivated by this observation, Bobaljik (2008) proposes the *accessibility hierarchy* in Table 4.2, which is read as follows: NPs with unmarked Case (nominative/absolutive) outrank NPs with Dependent Case (accusative/ergative), which further outrank NPs with the Lexical Case (dative). What this hierarchy says about accessibility to agreement is that if any NP is available for agreement, it is the unmarked (nominative/absolutive) NP.

One argument that Bobaljik uses is that when there is a mismatch of m-case and grammatical function, it is m-case that governs agreement rather than the grammatical function. Icelandic

Table 4.2: Case accessibility hierarchy (Bobaljik 2008:303)

Unmarked Case	>	Dependent Case	>	Lexical/Oblique case
nominative		accusative		dative
absolutive		ergative		dative

quirky subjects provide support for this claim. Icelandic allows non-nominative subjects and nominative NPs that are not subjects. As shown in (14a), when the subject is dative, it is the nominative object that controls verbal agreement. If the verb is forced to show agreement with the dative subject, as seen in (14b), the result is ungrammatical.

(14) Nominatives control agreement in Icelandic

    a. Verb agrees with the NOM object
        Jóni   líkuð**u** **þessir sokkar**
        John.DAT like.**PL** **these socks.NOM**
        'John liks these socks.' (Jónsson 1996:143)

    b. Verb agrees with the DAT subject is not allowed
        ✗Morgum studentum   líka   verkið
         many   students.DAT like.PL job.NOM
        Intended: 'Many students like the job.' (Harley 1995:208)

In Algonquian, one immediate problem for this morphological account is that Algonquian languages lack morphological case. An m-case account would have to rely on abstract Case marking that is never realized overtly. Suppose that we do make this assumption: Case is not limited to morphological marking on nominals but can be manifested more broadly by the patterns shown by the alignment of agreement inflection.[3] Under such an approach, the accessibility of different kinds of Algonquian objects can be mapped to the hierarchy in Table 4.3. I follow Odribets & Oxford (2020) in treating Algonquian languages as fundamentally showing accusative alignment. Algonquian ditransitives demonstrate the properties of Haspelmath's (2005) secundative alignment: the goal of a ditransitive patterns like the patient of a monotransitive while the theme of a ditransitive patterns differently. As represented in Table 4.3, the nominative argument corresponds to the agent, the accusative argument corresponds to the primary object, and the dative argument corresponds to the secondary object.

With these assumptions about Case in Algonquian, Bobaljik's (2008) accessibility hierarchy predicts that if the primary object is accessible for peripheral agreement, the subject will also be

---

[3]Coon (2017) and Coon & Parker (2019) look into Ch'ol, a Mayan language that shows ergative agreement alignment and lacks overt morphological case. They concluded that Case is a result of the narrow syntax via licensing, therefore arguing against Bobaljik (2008) that Case is assigned post-syntactically.

Table 4.3: Bobaljik's prediction for Algonquian NPs

Unmarked Case	>	Dependent Case	>	Lexical/Oblique case
nominative		accusative		dative
subject		primary object		secondary object

accessible; and if the secondary object is accessible to peripheral agreement, all arguments will be accessible. This account nicely captures the Eastern languages, where peripheral agreement is capable of indexing the secondary object in TA+O verbs and AI+O verbs, and the primary object in TA/TI verbs. Since the secondary object is accessible, all other arguments are also accessible.

Nevertheless, an account involving the accessibility hierarchy faces certain challenges. First, if m-case was the sole explanation, variations in peripheral agreement would have to reflect variations in Case assignment. This requires us to make ad hoc claims about which and abstract Cases get assigned where, since the corresponding case morphology is never visible on the surface. The second challenge arises in the Unami Delaware form in (15), in which the theme sign *-əl* '2.OBJ' and the central agreement *kə-...-hmwa·* show agreement with the 2PL object (accusative).

(15)   Agreement with 1SG subject and 2PL object
       kəwi·č·əməlhúmə
       kə- wi·čəm -əl   -hmwa·
       2- help   -2.OBJ -2PL
       'I help you (PL).' (Unami Delaware, Goddard 2021:67)

Bobaljik's proposal is problematic in explaining why there is no agreement for the 1SG subject (nominative). The example in (15) shows that there is agreement with the object (accusative) but not the subject (nominative), which contradicts Bobaljik's hierarchy and thus makes it doubtful whether this hierarchy is sufficient to explain the patterning of Algonquian agreement.

4.2.3   Phases and the PIC

In Chomsky's Agree model, in order for the goal to be accessible to the probe, a locality condition involving the notion of a PHASE (Chomsky 2000, 2001) must be satisfied. A phase is a structural domain in the derivation of a clause that gets sent off to PF and LF at the same time. CP and *v*P are assumed to be different phases. To qualify for accessibility, the goal needs to be in the same phase as the probe or at the edge of the next phase. This requirement, which is known as Phase Impenetrability Condition (PIC, Chomsky 2000), is stated formally in (16).

(16) **Phase Impenetrability Condition (PIC)** (Chomsky 2000:108)

In phase α with head H, the domain of H is not accessible to operations outside α, only H and its edge are accessible to such operations.

For a probe on C, a nominal will be inaccessible if it is lower than the edge of the next phase, namely lower than Spec-vP. Using the structure in (17) as an illustration, if a probe is on C, the nominals DP_1 and DP_2 are accessible for the probe because DP_1 is inside the CP phase and DP_2 is at the edge of the next phase. In contrast, DP_3 is inaccessible for the probe since it is below Spec-vP, too far to be accessed.

(17) Accessible areas of the Probe on C
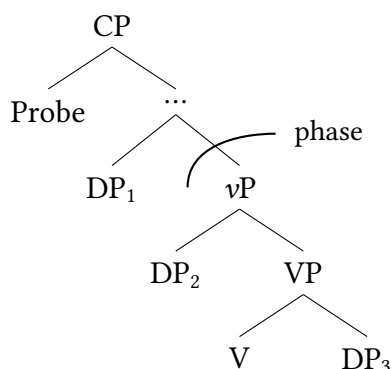
Now relating to the issue with peripheral agreement, the PIC is compatible with the pattern seen in the TA SAP forms which are invariant across all examined languages. A Meskwaki example is given in (18) and its schematic representation is shown in (19).

(18)   *newa·pama·waki*   TA
         ne- wa·pam -a·   -w   -**aki**
         1- see   -3.OBJ -1SG -**AN.PL**
         'I see **them** (AN).' (Meskwaki, Goddard 1994a:190)

As introduced earlier, the theme sign -*a·* '3.OBJ' realizes Voice, which hosts a [*u*Person] probe that agrees with the object and is argued in Oxford (2014, 2019c) to have an [EPP] feature that attracts the object to the specifier of VoiceP. Once this movement takes place, the object is accessible to C because its position in Spec-VoiceP is at the edge of the phase. (Bear in mind that Chomsky's *v* corresponds to Voice in the analysis assumed here.)

(19) TA SAP schema: both the subject DP and the object DP are accessible
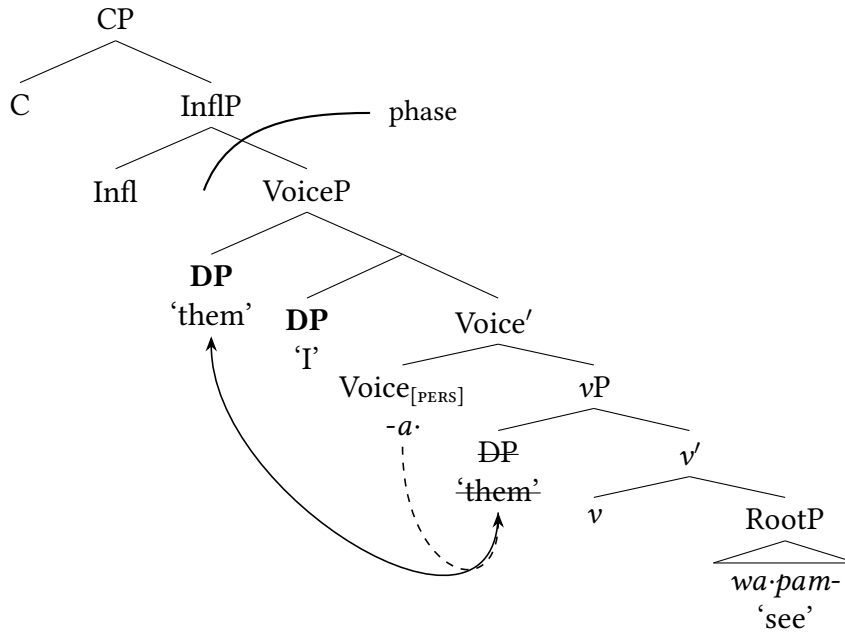
A phase-based analysis is also compatible with the TA+O forms in languages where peripheral agreement indexes the goal rather than the theme. A Meswaki example is given in (20).

(20) *nepye·tahwa·wa*   TA+O
    ne- pye·tahw -a·   -w   **-a**
    1- bring   -3.OBJ -1SG **-AN.SG**
    'I brought it **for him**.' (Meskwaki, Dahlstrom 2009:231)

As schematized in (22) and as argued in Section 4.1.1 above, the theme DP originates in RootP. The inability of C to access the theme is well captured by the PIC because the theme is in a domain that the C-probe cannot penetrate. In contrast, the goal is accessible for C because it has been moved to Spec-VoiceP after being agreed with by Voice.

(21)   TA+O schema: the subject and the goal are accessible in Meskwaki
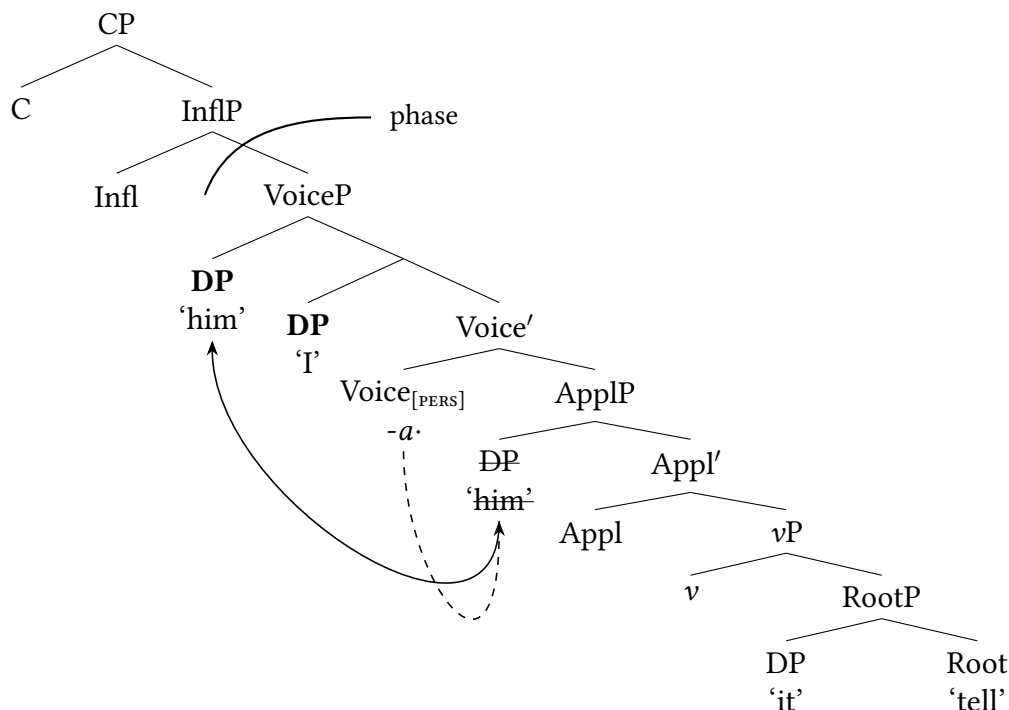
Not all peripheral agreement patterns are so compatible with a phase-based account, however. The TA+O pattern in the Eastern languages is problematic because peripheral agreement indexes the theme rather than the goal. A Maliseet-Passamaquoddy example is given in (22). The problem is as follows: the structure in (21) shows that the theme is in an area that C should not be able to access if Agree cannot search past the phase edge. In Maliseet-Passamaquoddy, the edge of the phase, Spec-VoiceP, is evidently not a boundary that delimits the search of C.

(22)   *nkissəmanəl piksək pəcetesəl*   TA+O
         n- kissəm -a   -n   **-əl**   piks -ək   epeskəmakən -əl
         1- feed   -3.OBJ -1SG **-IN.PL** pig -AN.PL potato   -IN.PL
         'I fed the pigs (AN) **potatoes** (IN).' (Maliseet-Passamaquoddy, Sherwood 1983:125)

The PIC cited up to this point is known as the Strong PIC. Chomsky (2001:14) has proposed a weak version, delaying spell-out of a phase complement until the next highest phase head is merged. The Weak PIC essentially bestows one extra phase length to play with and therefore seems promising to explain the problematic TA+O patterns. However, the Weak PIC still is not a favorable analysis because of the conflicting demands of different probes in Algonquian languages. For instance, in Maliseet-Passamaquoddy and all Algonquian languages, the Infl head, which is realized as central agreement, cannot agree with a secondary object. Therefore, we need to assume that the search domain of Infl ends at the edge of VoiceP (i.e. the Strong PIC). But, as

we have seen, the C head in Maliseet-Passamaquoddy, which is realized as peripheral agreement, can search beyond the edge of VoiceP (i.e. the Weak PIC). But the PIC cannot be both strong and weak at the same time. Therefore, neither version of phase theory is able to provide a full account of the Algonquian data.

In conclusion, the SCOPA, morphological case, and phase theory all have some degree of applicability to the Algonquian facts, but none of these mechanisms provide a fully satisfactory account of the crosslinguistic conditioning of peripheral agreement. In particular, the TA+O pattern in the Eastern languages fundamentally contradicts the predictions of the PIC, since the theme can be accessed by the probe across a phase boundary. The insufficient explanations provided by the above mechanisms lead us to consider a more recently proposed mechanism: horizons (Keine 2016, 2019).

4.3 Horizons

This section argues that horizons (Keine 2016, 2019) is the crucial mechanism that conditions the accessibility of Algonquian secondary objects. Specifically, I discuss two advantages of the horizons approach over the phase analysis. First, it is superior to the PIC in that it nicely captures the fact that the accessibility of the theme of a TA+O verb varies across the languages. Second, the empirical observations regarding different Algonquian probes' search capacity are consistent with the locality-height connection predicted by the horizons model. This section proceeds as follows. Section 4.3.1 introduces the context that motivates the horizons model. Section 4.3.2 discusses the locality-height connection arising from the horizons approach and gives the proposal for how horizons work in Algonquian.

4.3.1 Selective opacity in Hindi

As theorized by Keine (2016, 2019), a HORIZON is a boundary that delimits a probe's search space. Keine examined the SELECTIVE OPACITY phenomenon in Hindi, arguing that the capacity of probes to access goals is determined by the height of the probe. The selective opacity phenomenon refers to asymmetries of syntactic operations across different types of clauses. Typically in the literature, selective opacity is observed in behavior of different types of movement. For instance, finite clauses are transparent for Ā-movement but opaque for A-movement. As shown below, Ā-extraction out of a finite clause is allowed, as in (23a), whereas A-extraction (hyperraising) is prohibited, as in (23b).

(23) a. ✓Who₁ do you think [CP t₁ eats oatmeal for breakfast]?

b. ✗John₁/Who₁ seems [CP t₁ eats oatmeal for breakfast]?   (Keine 2019:14)

Selective opacity concerning movement is clause-based: finite clauses are selectively opaque for A-movement but not Ā-movement; non-finite clauses are transparent for both. The contribution of the horizon theory (Keine 2016, 2019) is that it extends the selective opacity effects from A/Ā-movement to Agree. A connection between movement and long-distance agreement in Hindi enables Keine to propose that selective opacity is a property of probes: probes can differ in respect to which domains they are able to search into.

Long-distance agreement (LDA) is a phenomenon in which a verb agrees with a constituent inside its clausal complement (Polinsky & Potsdam 2001:583). Hindi-Urdu shows this phenomenon (Mahajan 1990; Butt 1993; Boeckx 2004; Bhatt 2005). Generally, Hindi verbal agreement targets the highest nominal which does not bear an overt case marker (Pandharipande & Kachru 1977). But if the matrix clause does not contain an eligible nominal, an optional cross-clausal agreement can take place. As illustrated below, the matrix subject *laṛkõ-ne* 'the boys' bears the overt ERG case and hence is not an eligible DP, enabling the optional LDA to apply in (24a): the matrix verb *caah* 'want' agrees with the embedded object *roṭii* 'bread'. Since LDA is optional, it is also possible for default agreement to occur: *caah* 'want' in (24b) illustrates the default morphology as both the matrix verb and the embedded verb share masculine singular agreement.

(24) Infinitival clauses: Matrix verb optionally agrees with the object

a. Long-distance agreement
laṛkõ-ne [**roṭii**   khaa-**nii**   ] caah-**ii**
boys-ERG **bread.F** eat-**INF.F.SG**   want-**PFV.F.SG**
'The boys wanted to eat bread.' (Keine 2019:18)

b. Default agreement
laṛkõ-ne [roṭii   khaa-**naa**   ] caah-**aa**
boys-ERG bread.F eat-**INF.M.SG**   want-**PFV.M.SG**
'The boys wanted to eat bread.' (Keine 2019:17)

Interestingly, Hindi LDA is also sensitive to clause type. In contrast to (24), finite clauses never allow LDA. As illustrated in (25), the matrix verb *soc* 'think' cannot agree with the feminine object *ghazal* in the finite embedded clause. Instead, the verb must display default agreement (-*aa*). LDA is prohibited regardless of the position of *ghazal*: as seen below, even if *ghazal* appears at the edge of the lower clause, the feminine agreement suffix -*ii* is not allowed.

(25)   Finite clauses prohibit LDA (Keine 2019:25)

firoz-ne   soc-**aa**/ˣ-ii   [(**ghazal**) monaa-ne (**ghazal**) gaa-yii
Firoz-ERG think-**PF.M.SG**/ˣ-PFV.F.SG   ghazal.F Mona-ERG ghazal.F sing-**PFV.F.SG**
th-ii   ]
be.PST-**F.SG**

'Firoz thought that Mona had sung ghazal.'

To sum up, LDA in Hindi (and movement as well, as in English) shows sensitivity to clause type, therefore demonstrating selective opacity. A summary is given in Table 4.4: non-finite clauses are transparent for A-movement, Ā-movement, and ϕ-agreement while finite clauses (including their edge) are opaque to A-movement and ϕ-agreement, but not to Ā-movement. In this table, a check mark indicates that the clause is transparent for the given operation while an X mark indicates that the clause is opaque for the given operation.

Table 4.4: Transparency and opacity by clause type and operation (Keine 2019:32)

		Size of clause		
	Probe location	CP (finite)	TP (finite)	vP (non-finite)
ϕ-agreement	T	✗	✗	✓
A-movement	T	✗	✗	✓
Ā-movement	C	✓	✓	✓

Keine ties these asymmetries to the Agree operation. As he puts it, "selective opacity is a manifestation of the Agree relation that movement is parasitic on" (Keine 2019:16). Furthermore, as we can see in Table 4.4, there exists a connection between locality and height. In comparison to A-movement and ϕ-agreement, whose probe is located on T, more structures (both finite and non-finite clauses) are transparent to Ā-movement as its probe is located higher on C. This observation eventually led to the proposal of horizons, which argues that the capacity of probes to access goals is determined by the height of the probe.

The essence of the locality-height implication is this: the higher the structural position of a probe in the clausal spine, the more structures are accessible to it. Using the schema in (26) as an example, suppose there are two probes: $\pi 1$ and $\pi 2$. The higher probe $\pi 2$ has a wider search space, capable of accessing elements that are further down in the structure than the lower probe $\pi 1$. For $\pi 1$, its search space is limited to the domains above CP. In other words, CP constitutes the delimiting boundary (i.e. horizon) preventing CP-internal elements from being accessed by $\pi 1$. In contrast, there is no horizon for the probe on $\pi 2$; all elements are accessible to $\pi 2$. It is crucial to point out that the account of horizons differs from the standard phase theory (Chomsky 2000, 2001) in the status of the edge of a domain: the edge of a horizon has no special status for

accessibility (Keine 2016:32). As represented below, if CP is a horizon for the probe $\pi 1$, then all elements inside CP, including Spec-CP at its edge, are inaccessible to $\pi 1$.

(26)   Search space of different probes (Keine 2019:36)

$$[\pi 2 \quad \dots \quad \pi 1 \quad \dots \quad [_{CP} \quad \dots]]$$

horizon

search space of $\pi 1$

search space of $\pi 2$
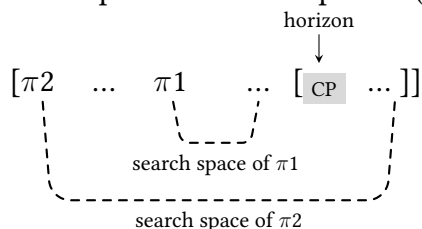
4.3.2   The proposal: the locality-height implication in Algonquian

At first glance, the horizon proposal appears to resemble the idea of phases as both accounts prevent certain areas of the structure from being affected by syntactic operations including Agree. The key difference is that the horizon model does not assume the delimiting edge to be a fixed boundary while the phase model does. The account of horizons excels over the PIC in that it nicely captures the conflict arising from the TA+O patterns in the Eastern Algonquan languages. In addition, the empirical observations regarding different Algonquian probes' search capacity are perfectly in line with the height-locality connection predicted by the horizon model. The observations are summarized in (27) and they essentially reflect the implication of horizons: the higher the probe is located in the structure, the more elements are accessible to it.

(27)   Overall patterns of Algonquian probes

   a.   Voice (theme sign) indexes the primary object (the object of TA/TI, the goal of TA+O) only

   b.   Infl (central agreement) indexes the subject and the primary object (in the inverse)

   c.   C (peripheral agreement) can index the subject, the primary object, and the secondary object (the theme of TA+O, the object of AI+O)

As described in (27), the elements accessible for various Algonquian probes are exactly what the horizons model predicts for the search space of probes in accordance to their syntactic height. In the schematic representation in (26) above, the higher probe $\pi 2$ has a wider search space than the lower probe $\pi 1$. Extending Keine's model to Algonquian argument configurations, as schematized in (28), the search space of Voice and Infl is confined to areas above RootP. Since C is syntactically higher, its search space is wider than that of Voice and Infl, enabling it to access elements that Voice and Infl cannot, namely, the RootP-internal theme.

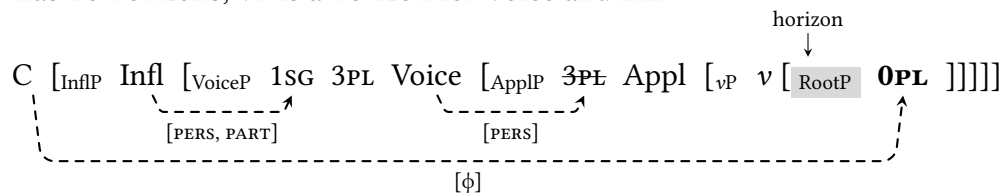(28) Search space of probes on Voice and C in Algonquian

horizon
↓

C [$_{InflP}$ Infl [$_{VoiceP}$ DP$_{subj}$ DP$_{goal}$ Voice [$_{ApplP}$ ~~DP$_{goal}$~~ Appl [$_{vP}$ *v* [$_{RootP}$ DP$_{theme}$]]]]]

search space of Voice

search space of Infl

search space of C
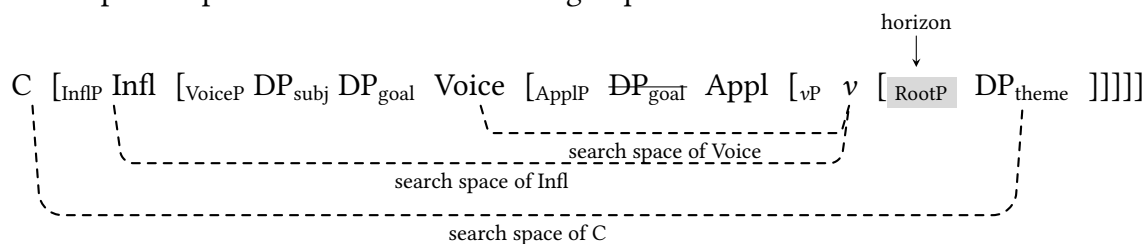
I now return to the Maliseet-Passamaquoddy TA+O form, repeated here as (29a). The deriva-tion of this example is shown in (29b). Starting from the lowest probe, Voice targets the 3PL goal rather than the 0PL theme not only because the inanimate theme lacks the [Person] feature, but also because Voice cannot search past the *v*P in the first place. After the person feature of the 3PL goal is copied to Voice, the goal moves to Spec-VoiceP to satisfy the [EPP] requirement on Voice. Turning to Infl, the head that is realized as central agreement, it is argued to search for [*u*Pers, *u*Part] (Oxford 2014, 2019c). Even though the first-person subject and the third-person goal are equally close to Infl, the first-person subject is targeted because it better matches the articulated Infl-probe, having the [Part] feature that is absent from the third-person goal. At this point, we can see that the probes on Voice and Infl never reach past RootP, suggesting that RootP may be a horizon delimiting the search capacity of Voice and Infl.

(29) TA+O: C agrees with the theme

a. *nkissəmanəl piksək pəcetesəl*
    n- kissəm -a -n -**əl** piks -ək epeskəmakən -əl
    1- feed -3.OBJ -1SG -**IN.PL** pig -AN.PL potato -IN.PL
   'I fed the pigs (AN) **potatoes** (IN).' (Maliseet-Passamaquoddy, Sherwood 1983:125)

b. C has no horizons; *v*P is a horizon for Voice and Infl

horizon
↓

C [$_{InflP}$ Infl [$_{VoiceP}$ 1SG 3PL Voice [$_{ApplP}$ ~~3PL~~ Appl [$_{vP}$ *v* [$_{RootP}$ **0PL**]]]]]

[PERS, PART]   [PERS]

[φ]

As laid out in (28), the search space of the highest probe, on C, is wider than that of the lower probes, so more structures are accessible for C. This explains why the inanimate theme can be indexed by peripheral agreement in the Eastern languages, as in (29). Note that the third-person goal is also accessible for C. The factors that determine the outcome of agreement on C are taken up in more detail in the next chapter (§5.3); the important point for now is that C is able to agree with the theme at all.

Keine's model is flexible: horizons can be probe-specific. In Eastern Algonquian languages like Maliseet-Passamaquoddy, this flexibility is manifested by the fact that RootP is a horizon for Voice and Infl but not for C. Another dimension of flexibility can be observed across languages. Unlike Maliseet-Passamaquoddy, where the C-probe has no horizon, it appears that a horizon does exist for C in languages such as Meskwaki where peripheral agreement is more constrained. As exemplified in (30), in a language in which RootP is a horizon for C as well, C will only be able to agree with the goal, resulting in the unavailability of the theme for peripheral agreement.

(30) TA+O: C agrees with the goal

    a.   *nepye·tahwa·wa*
         ne- pye·tahw -a·   -w   **-a**
         1-   bring   -3.OBJ -1SG **-AN.SG**
         'I brought it **for him**.' (Meskwaki, Dahlstrom 2009:231)

    b.   *v*P also is a horizon for C
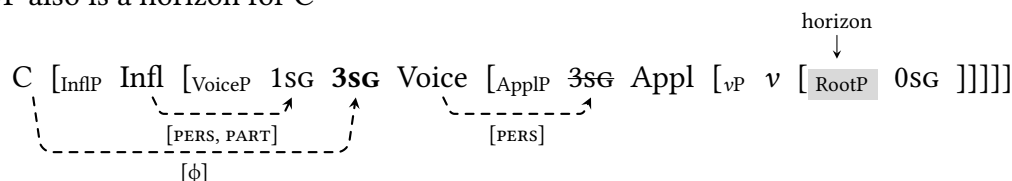
With accessiblity in ditransitives taken care of, let us move on to monotransitives, which are consistend with the proposals above. I consider AI+O verbs and TA verbs in turn and show that they both support the proposal that the probes on Voice and Infl cannot access elements within RootP.

When it comes to AI+O verbs, due to lacking the Voice layer, the external argument has been argued to be introduced by *v* (Tollan & Oxford 2018). An Unami Delaware AI+O example is given in (31a) and its schematic representation is shown in (31b). As shown in the schema, *v*P is not a horizon for Infl, since the subject in Spec-*v*P can be agreed with by Infl (realized by 1SG central agreement *nə-...-n*). In contrast, the secondary object of an AI+O verb can never be indexed by central agreement. This indicates that RootP is where the horizon lies, halting the search of Infl.

(31) AI+O: *v*P is not a horizon for Infl

    a.   *nəwaní·na·k*
         nə- wani· -n   **-a·k**
         1-   forget -1SG **-AN.PL**
         'I forgot **them** (AN).' (Unami Delaware, Goddard 2020:104)

b.   Infl can access *v*P-internal DP

horizon
↓

[$_{CP}$ C [$_{InflP}$ Infl [$_{vP}$ 1SG *v* [$_{RootP}$ 3PL Root]]]]
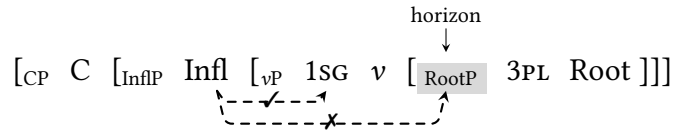
The second piece of evidence that RootP is the horizon for Voice/Infl comes from TA and TI verbs. In these verbs, the probe on Voice can target the primary object, which is assumed to be generated in the *v*P layer for reasons discussed in Section 4.1.1. The ability of Voice to agree with the primary object in *v*P (realized by the theme sign -*a·*) demonstrates that *v*P is not a horizon for Voice.

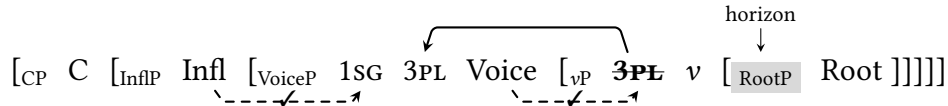(32)   TA direct: *v*P is not a horizon for Voice

a.   *nno·t·əmá·ɔk*
nə- no·təm -a·   -w   -**ak**
1-   guard   -3.OBJ -1SG -**AN.PL**
'I guard **them** (AN).' (Unami Delaware, Goddard 2021:64)

b.   Voice can access *v*P-internal DP

horizon
↓

[$_{CP}$ C [$_{InflP}$ Infl [$_{VoiceP}$ 1SG 3PL Voice [$_{vP}$ **3PL** *v* [$_{RootP}$ Root]]]]]

In summary, Keine's (2016, 2019) horizon model is similar to Chomsky's (2000, 2001) phase model in that both models take certain areas of the structure to be unavailable to the probe, but the models differ in what constitutes the delimiting edge. The PIC is problematic in explaining patterns in which the theme, which is below the edge of the lower phase, can be targeted. I have argued in support of a horizons analysis for two reasons. First, it gives flexibility to allow for probe-specific boundaries in accessing elements in the structure, thus handling differences such as the TA+O theme being inaccessible in Meskwaki but accessible in Maliseet-Passamaquoddy. Second, it captures the connection between a probe's search space and its syntactic height. Specifically, in Algonquian languages, only peripheral agreement (C), not the theme sign (Voice) or central agreement (Infl), can ever see as far as the secondary object.

4.4   Analysis: Microparameters of horizons

This section presents the analysis of the microparametric variations in the horizons for C by concentrating on the peripheral agreement patterns with secondary objects of TA+O verbs and AI+O verbs in three representative language varieties: Unami Delaware (§4.4.1), Oji-Cree (§4.4.2), and Nishnaabemwin (§4.4.3).

These three languages are selected as they each reflect a distinct pattern of peripheral agreement in accessing secondary objects. As shown in Table 4.5, Eastern languages like Unami Delaware allow peripheral agreement to access the secondary objects of both AI+O verbs and TA+O verbs. Nishnaabemwin shows a split: the secondary object of AI+O verbs but not of TA+O verbs is accessible for peripheral agreement. Lastly, Oji-Cree represents the case in which secondary objects of neither AI+O verbs nor TA+O verbs are accessible for peripheral agreement.

Table 4.5: Variations of peripheral agreement with secondary objects

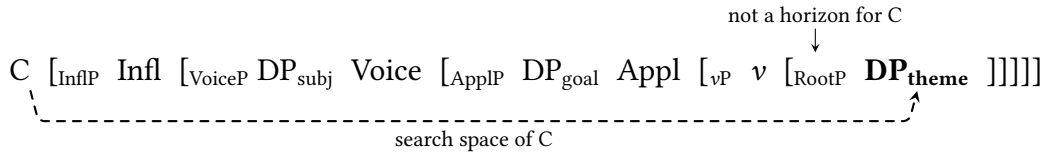|	**Eastern**	**Nishnaabemwin**	**Oji-Cree**
AI+O	✓	✓	✗
TA+O	✓	✗	✗

4.4.1 Eastern Algonquian type

This subsection argues that the probe on C in Eastern Algonquian languages does not have a horizon, meaning that it is capable of accessing secondary objects of both TA+O and AI+O verbs. The TA+O examples from the Eastern languages are repeated below. In both examples, the peripheral suffixes index the theme, *-əl* 'IN.PL' for Maliseet-Passamaquoddy in (33a) and *-al* 'IN.PL' for Unami Delaware in (33b).

(33) TA+O forms: peripheral agreement with secondary object

    a.   *nkissəmanəl piksək pəcetesəl*   Maliseet-Passamaquoddy

        n- kissəm -a   -n **-əl**   piks -ək   epeskəmakən -əl

        1- feed   -3.OBJ -1SG **-IN.PL** pig -AN.PL potato   -IN.PL

        'I fed **potatoes** (IN) to the pigs (AN).' (Sherwood 1983:125)

    b.   *nəmi·lá·na*   Unami Delaware

        nə- mi·l -a·   -n   **-al**

        1- give -3.OBJ -1SG **-IN.PL**

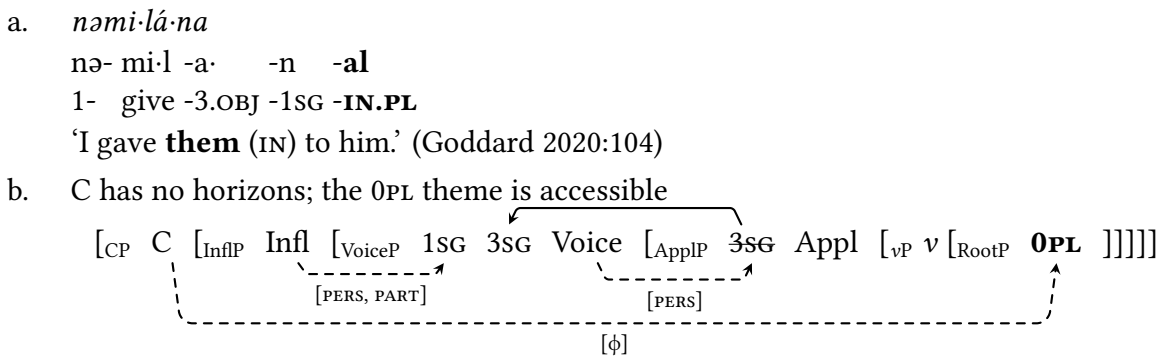   'I gave **them** (IN) to him.' (Goddard 2020:104)

Earlier in the previous section, I have proposed that RootP forms a horizon for the probe on Voice, explaining the fact that the theme is systematically unavailable for Voice whereas the goal is always indexed by Voice cross-linguistically. However, under the mechanism of horizons, as mentioned in Section 4.3.2, I propose that there are no horizons for the structurally higher probe on C in Eastern languages. Consequently, C is allowed to search into a wider range of structures, as schematized in (34), such as the RootP-internal theme.

(34) TA+O: C has no horizons blocking its search in Eastern languages

not a horizon for C
↓

C [$_{InflP}$ Infl [$_{VoiceP}$ DP$_{subj}$ Voice [$_{ApplP}$ DP$_{goal}$ Appl [$_{vP}$ v [$_{RootP}$ **DP$_{theme}$**]]]]]

search space of C

The Unami Delaware TA+O example is repeated as (35a) and its schematic representation is given in (35b), in which the solid arrow indicates movement while the dotted one indicates Agree. The exact derivation of the Eastern Algonquian TA+O forms is as follows. Starting from valuation of the lowest probe, Voice hosts the person-probe and it targets the third-person animate goal rather than the theme not only because the inanimate theme lacks the [Person] feature, but also be Voice cannot search into the RootP. After agreeing for [Person] with the 3SG goal, -*a·* '3.OBJ' is spelled out and the goal moves to Spec-VoiceP due to the [EPP] requirement (Oxford 2014, 2019c). As a result of this movement, the first-person subject and the third-person animate goal are equally close to the Infl-probe. The reason why the first-person subject is targeted by Infl is because it perfectly matches the probe, which is more articulated as [*u*Part, *u*Per], whereas the third-person animate goal is not targeted because it does not contain the matching [Part] feature (Oxford 2014, 2019c). Considering that Infl, like Voice, never targets the secondary object in TA+O verbs, RootP must be a horizon for Infl as well, preventing Infl from accessing RootP-internal elements.

(35) TA+O: C agrees with the theme

a. *nəmi·lá·na*
    nə- mi·l -a·   -n   -**al**
    1- give -3.OBJ -1SG -**IN.PL**
    'I gave **them** (IN) to him.' (Goddard 2020:104)

b. C has no horizons; the 0PL theme is accessible

[$_{CP}$ C [$_{InflP}$ Infl [$_{VoiceP}$ 1SG 3SG Voice [$_{ApplP}$ ~~3SG~~ Appl [$_{vP}$ v [$_{RootP}$ **0PL**]]]]]
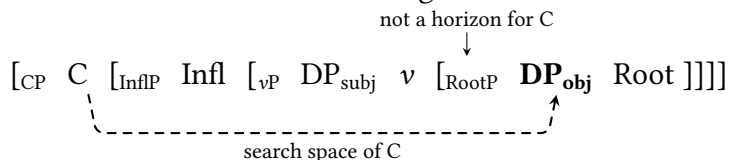
[PERS, PART]   [PERS]

[φ]

Most importantly, C does not have a horizon delimiting its search in the Eastern Algonquian languages, meaning that it can access all elements in the structure, including elements inside the RootP that Voice and Infl cannot access, thus explaining why the inanimate theme can be indexed by peripheral agreement in (35a). At this point, I do not explain why C chooses to agree with the theme rather than the goal or the agent; I simply observe that the horizons model makes this outcome possible. For simplicity reasons, the probe on C is assumed to be a flat φ-probe for now.

The factors that determine the result of agreement on C will be discussed in more detail in the next chapter.

Now let us turn our attention from one context for secondary objects (TA+O) to the other context (AI+O). Peripheral agreement with the object of AI+O verbs is in line with the analysis that Eastern Algonquian C is not restricted by a horizon. AI+O verbs are two-place predicates but structurally defective due to lack of the VoiceP layer. As stated in Section 4.1, the subject of AI+O verbs is introduced by vP and the object of AI+O verbs is base-generated inside the RootP. The accessibility mechanism of the C-probe in AI+O verbs for Eastern languages works similarly to that of TA+O verbs. As schematized in (36), RootP does not constitute a horizon for the probe on C, explaining why C has a wider search space and is therefore able to access the object of AI+O verbs.

(36)   AI+O: C has no horizons blocking its search in Eastern languages

$$[_{\text{CP}}\ \text{C}\ [_{\text{InflP}}\ \text{Infl}\ [_{v\text{P}}\ \text{DP}_{\text{subj}}\ v\ [_{\text{RootP}}\ \textbf{DP}_{\textbf{obj}}\ \text{Root}\ ]]]]$$

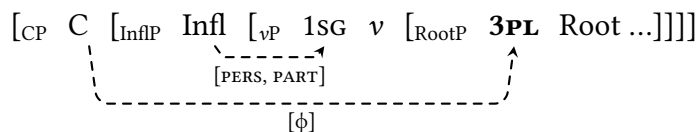not a horizon for C

search space of C

The Unami Delaware AI+O example is given in (37a): the peripheral suffix -*a·k* indexes the plural object. The schema in (37b) shows how the verb agreement is derived: Infl probes downward and sees the subject containing the matching [PERSON, PARTICIPANT] features and these features are copied to the probe. As a result, Infl is spelled out as a prefix-suffix combination *nə-...-n*. After InflP is merged, the probe on C starts its search. Since C does not have a horizon obstructing the search, the 3PL secondary object is visible. Valuation succeeds and ultimately the peripheral suffix -*a·k* is spelled out.

(37)   AI+O: C agrees with the object

    a.   *nəwaní·na·k*
           nə- wani· -n   -**a·k**
           1- forget -1SG -**AN.PL**
           'I forgot **them** (AN).' (Unami Delaware, Goddard 2020:104)

    b.   C: no horizons, the 3PL secondary object is accessible

$$[_{\text{CP}}\ \text{C}\ [_{\text{InflP}}\ \text{Infl}\ [_{v\text{P}}\ \text{1SG}\ v\ [_{\text{RootP}}\ \textbf{3PL}\ \text{Root}\ ...]]]]$$

[PERS, PART]

[ϕ]

To sum up, this section has explained why the syntactically lowest argument, the secondary object, is accessible for probe on C in Unami Delaware and Maliseet-Passamaquoddy. The probe
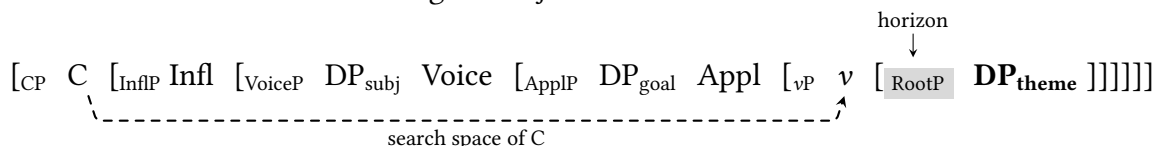
on C in these Eastern Algonquian languages does not have a horizon. Therefore, both the theme of a TA+O verb and the object of an AI+O verb can be freely accessed by C. In contrast, the probes on the lower heads Voice and Infl are delimited by RootP. The empirical behavior of distinct probes in Eastern Algonquian therefore support the height-locality connection predicted by the horizon theory: the higher the probe is located in the structure, the more elements are accessible to it.

4.4.2 Oji-Cree type

In Oji-Cree, unlike in Unami Delaware, secondary objects can never be targeted by peripheral agreement. To capture the inability of C to access RootP-internal DPs, I propose that the probe on C in Oji-Cree is like the probes on Voice and Infl in that it does have RootP as a horizon. Even though I exclusively discuss Oji-Cree data in this section, this account can be extended to the other languages that disallow peripheral agreement with secondary objects, including Meskwaki, Plains Cree, and Menominee.

Starting with Oji-Cree TA+O verbs, the schema in (38) illustrates that RootP forms a delimiting boundary that prevents the theme from being accessed by the probe on C. Consequently, C no longer has a wider search space but is confined to elements that are above RootP. Bear in mind that the probes on Voice and Infl behave like they do in the Eastern Algonquian languages, not able to search into the RootP area either. Since the focus here is on peripheral agreement, I will not repeat the horizons for Voice and Infl.

(38)   TA+O: RootP is a horizon blocking C in Oji-Cree

$$[_{CP} \; C \; [_{InflP} \; Infl \; [_{VoiceP} \; DP_{subj} \; Voice \; [_{ApplP} \; DP_{goal} \; Appl \; [_{vP} \; v \; [_{RootP} \; \mathbf{DP_{theme}} \;]]]]]]$$

horizon

search space of C

The Oji-Cree TA+O example is provided in (39a). Most importantly, peripheral agreement shows agreement with the goal rather than the inanimate theme. Even though the obviative and the plural inanimate are homophonous as -*an*, the preceding null central suffix presents clear evidence that the theme is not agreed with, because if an inanimate had been agreed with, the singular allomorph of the central suffix would have been realized as -*n*, the n-ending suffix. As shown in the schema of (39b), the derivation for Voice and Infl is the same as in Eastern languages: Voice targets the goal, which then moves to Spec-VoiceP due to the [EPP] requirement. Infl targets the argument that better matches the specification of person features. Even though neither of the proximate person or the obviative person possess the [PARTICIPANT] feature, the proximate argument containing [PERSON, PROXIMATE] features is agreed with because its person features

are more specified than that of the obviative argument, which only contains the [PERSON] feature (Lochbihler 2012). Lastly, since RootP is a horizon for C, the horizon prevents the RootP-internal domain from being accessed by C. This is why peripheral agreement in Oji-Cree is not capable of indexing the theme and thus has no choice but to target the goal, which is accessible because its position is higher than RootP.
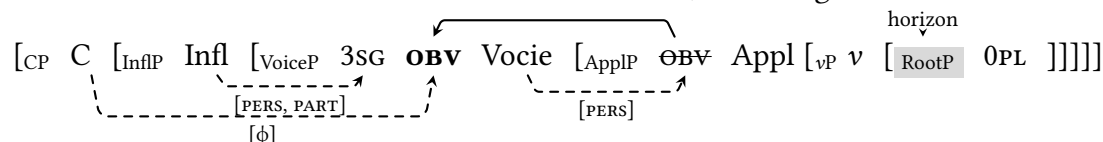
(39)   TA+O: C agrees with the goal rather than the theme

    a.   *Menii omiinaan Cawnan masinahikanan*
        Menii o- miin -aa -Ø -**an**   Cawn -an   masinahiikan -an
        Mary 3- give -3.OBJ -3SG -**OBV** John -OBV book   -IN.PL
        'Mary gives **John** (obviative) books.' (Oji-Cree)

    b.   RootP is a horizon for C: the 0PL theme is inaccessible, the OBV goal is accessible

$$[_{CP}\ C\ [_{InflP}\ Infl\ [_{VoiceP}\ 3SG\ \textbf{OBV}\ Vocie\ [_{ApplP}\ \cancel{OBV}\ Appl\ [_{vP}\ v\ [_{RootP}\ 0PL\ ]]]]]$$

horizon / [PERS, PART] / [φ] / [PERS]

Turning to AI+O verbs, consistent with the proposal for TA+O verbs, RootP is a horizon for the probe on C in Oji-Cree. As schematized in (40), the secondary object of an AI+O verb is inside of RootP and is therefore inaccessible to the Agree operation on C. The search space of C is limited to the areas above RootP.

(40)   AI+O: RootP is a horizon blocking C in Oji-Cree

$$[_{CP}\ C\ [_{InflP}\ Infl\ [_{vP}\ DP_{subj}\ v\ [_{RootP}\ \textbf{DP}_{\textbf{obj}}\ Root\ ]]]]$$
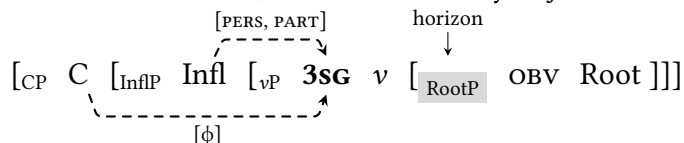
horizon / search space of C
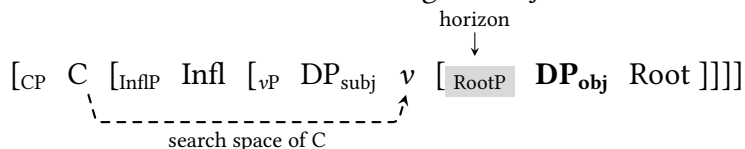
The Oji-Cree AI+O example is shown in (41a). Focusing on the bolded peripheral agreement, the suffix indexes the singular subject instead of the plural object. The schema in (41b) demonstrates that Infl targets the subject. Since RootP is a horizon for C in Oji-Cree, the RootP-internal elements are inaccessible for the probe on C. As a result, C can only target the accessible proximate subject, explaining the spell-out of the zero proximate singular suffix -Ø. Note that the Oji-Cree example below shows the absolute agreement pattern, characterized by the central agreement lacking a person prefix. Details regarding the morphology of the absolute inflection are ignored in this chapter and will be explained later in Section 6.2.

(41)   AI+O: C fails to agree with the object

    a.   *ataawew waapikoniin*
        ataawe -w̆ -**Ø**   wapikon -iin
        buy   -3 -**AN.SG**   flower   -IN.PL
        '**She** buys flowers (IN).' (Oji-Cree)

    b.   C: RootP is a horizon, the 0PL secondary object is inaccessible

$$[_{CP} \; C \; [_{InflP} \; Infl \; [_{vP} \; \textbf{3SG} \; v \; [_{\fbox{RootP}} \; \text{OBV} \; \text{Root} \;]]]$$

with annotations: [PERS, PART] pointing to 3SG, *horizon* pointing down to RootP, and [φ] below from C.

In summary, this subsection acounts for the fact that secondary objects in Oji-Cree are never accessible to C. I have argued that horizons may be microparameterized: unlike Eastern Algonquain C, which has no horizons, the probe on C in Oji-Cree has RootP as a horizon delimiting its search, bringing it in line with the probes on Voice and Infl. This explains the unavailability of secondary objects in both TA+O and AI+O verbs in Oji-Cree.

4.4.3   Nishnaabemwin type

Let us now turn to the last representative language: Nishnaabemwin. This language is interesting because it shows a split pattern in terms of availability of secondary objects for peripheral agreement. A TA+O example is given in (42a) and an AI+O example is given in (42b). We can see that Nishnaabemwin, TA+O verbs pattern with Oji-Cree in that peripheral agreement indexes the goal rather than the theme, but Nishnaabemwin AI+O verbs pattern with Eastern Algonquian in that peripheral agreement indexes the object. That is, a secondary object is accessible for peripheral agreement in Nishnaabemwin if it is an AI+O object, but not if it is a TA+O theme.

(42)   Peripheral agreement with secondary objects in Nishnaambemwin

    a.   *ngii-noojmotmawaa wniijaansan*
        n- gii   -noojimotamaw -aa   -Ø -**Ø**   w- niijaans -an
        1- PAST -cure.for   -3.OBJ -1SG -**AN.SG** 3- child   -OBV
        'I cured his child for **him**.' (Valentine 2001:658)

    b.   *nmiigwenag*
        n- miigiwe   -n   -**ag**
        1- give.away -1SG -**AN.PL**
        'I give **them** (AN) away.' (Valentine 2001:244)

Evidently, the proposal that RootP is a horizon for C cannot hold because the secondary object of an AI+O is accessible to C. I will argue that it is in fact *v*P that is the horizon for C in Nish-

naabemwin. Treating vP as the horizon accounts for the distinct patterns of peripheral agreement if we assume that horizons may vary even among subgroups within a category. Although previously finals were analyzed as v (Section 4.1.1), there are in fact two distinct sets of finals: the transitive finals (TA/TI) and the intransitive finals (AI/II). They have very different properties. To name two, firstly, the TA/TI finals define the gender of the object whereas the AI/II finals define the gender of the subject. Secondly, the TA/TI finals are often morphologically related to each other while the AI/II finals are not. As given in Table 4.6, the pair of the transitive finals, TA *-am* and TI *-ant*, are phonologically similar whereas the pair of AI final *-əsi·* and II final *-e·* shows less phonological resemblance.

Table 4.6: Verb classes and finals

Class	Stem	Final	Meaning
TA	*pakam-*	TA *-am*	'to hit someone'
TI	*pakant-*	TI *-ant*	'to hit something'
AI	*maxkəsi·-*	AI *-əsi·*	'something (AN) is red'
II	*maxke·-*	II *-e·*	'something (IN) is red'

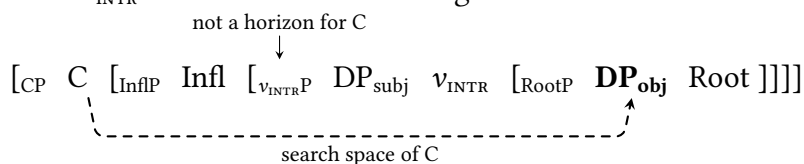(Examples are Unami Delaware, Goddard 2021:48-49)

Given the differences in the two sets of finals, two kinds of fine-grained "v"s can be distinguished: the transitive object-indexing v that will be labeled as v_{TRAN} and the intransitive subject-indexing v that will be labeled as v_{INTR} hereafter. With this assumption in place, I now propose that it is v_{TRAN} that forms a horizon for C in Nishnaabemwin. As the schema in (43) shows, this proposal will account for the Nishnaabemwin TA+O pattern as the theme originates below v_{TRAN}P and thus cannot be reached by C.

(43) TA+O: v_{TRAN}P is a horizon blocking C in Nishnaabemwin

$$\text{C} \; [_{\text{InflP}} \; \text{Infl} \; [_{\text{VoiceP}} \; \text{DP}_{\text{subj}} \; \text{Voice} \; [_{\text{ApplP}} \; \text{DP}_{\text{goal}} \; \text{Appl} \; [_{v_{\text{TRAN}}\text{P}} \; v_{\text{TRAN}} \; [_{\text{RootP}} \; \textbf{DP}_{\textbf{theme}} \;]]]]]$$

horizon

search space of C
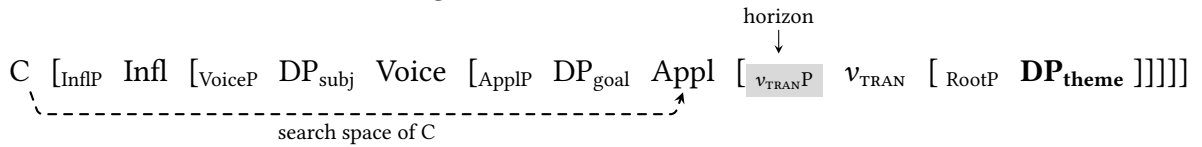
On the other hand, v_{INTR} does not constitute a horizon for C. This means that C is able to access the secondary object of an AI+O verb, since v_{INTR}P in an AI+O structure does not delimit the probe on C. The structure of an AI+O form is schematized in (44).
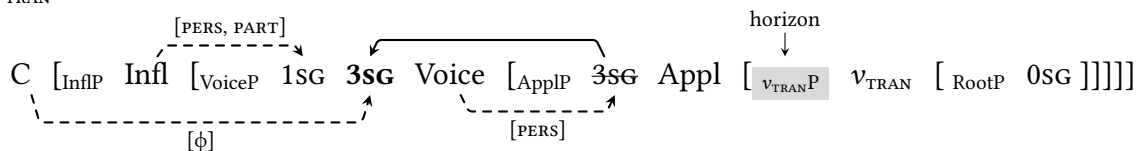
(44)   AI+O: v_{INTR} is not a horizon blocking C in Nishnaabemwin

not a horizon for C

$[_{\text{CP}}$ C $[_{\text{InflP}}$ Infl $[_{v_{\text{INTR}}\text{P}}$ DP$_{\text{subj}}$ v_{INTR} $[_{\text{RootP}}$ **DP$_{\text{obj}}$** Root $]]]]$

search space of C

With the status of horizons in Nishnaabemwin clarified, let us now derive the Nishnaabemwin TA+O and AI+O patterns in full. Returning to the TA+O example, repeated in (45a), peripheral agreement indexes the proximate goal rather than the obviative theme. The explanation is schematized in (45b). First, Voice targets the closest DP, the goal, copying its [PERSON] feature and attracting the goal to Spec-VoiceP. Next, Infl targets the subject and copies its [PERSON, PARTICIPANT] features. Finally, the probe on C seeks a goal. As laid out in the above, v_{TRAN}P is a horizon for C in Nishnaabemwin TA+O verbs. C thus has no choice but to target the goal, which is syntactically higher than vP, rather than the theme.

(45)   TA+O: C cannot agree with the theme

   a.   *ngii-noojmotmawaa wniijaansan*
        n- gii -noojimotamaw -aa   -Ø -Ø   w- niijaans -an
        1- PAST -cure.for   -3.OBJ -1SG -AN.SG 3- child   -OBV
        'I cured his child **for him**.' (Nishnaabemwin, Valentine 2001:658)

   b. v_{TRAN}P is a horizon for C: the 0PL theme is inaccessible

[PERS, PART]

horizon

C $[_{\text{InflP}}$ Infl $[_{\text{VoiceP}}$ 1SG **3SG** Voice $[_{\text{ApplP}}$ ~~3SG~~ Appl $[_{v_{\text{TRAN}}\text{P}}$ v_{TRAN} $[_{\text{RootP}}$ 0SG $]]]]]$
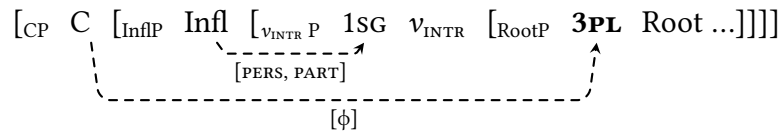
[φ]   [PERS]

The example in (46a) is an AI+O form in Nishnaabemwin, in which peripheral agreement indexes the object. The derivation is shown in (46b). Infl targets the subject, and since C is not confined by any horizons from accessing the object, the 3PL object is successfully targeted by the probe on C, manifested by the peripheral suffix -*ag*.

(46)   AI+O: C agrees with the object

   a.   *nmiigwenag*
        n- miigiwe   -n   -**ag**
        1- give.away -1SG -**AN.PL**
        'I give **them** (AN) away.' (Nishnaabemwin, Valentine 2001:244)

b.   C: no horizons, the 3PL secondary object is accessible

$$[_{CP} \ C \ [_{InflP} \ Infl \ [_{v_{INTR}P} \ 1SG \ v_{INTR} \ [_{RootP} \ \textbf{3PL} \ Root \ ...]]]]$$

[PERS, PART]

[ϕ]

In summary, peripheral agreement with secondary objects in Nishnaabemwin is possible for the object of an AI+O verb but not for the theme of a TA+O verb. To capture the divergence, I have proposed that a horizon can be specified as a subgroup of a given category. Specifically, I proposed for Nishnaabemwin that transitive *v*P is a horizon for C, which captures the inability of C to access the theme in TA+O forms. However, intransitive *v*P is not a horizon for C, leaving C is free to search into the structures that are further down, resulting in the object of an AI+O verb being accessible for peripheral agreement.

4.4.4   Section summary

This section explored the variation of peripheral agreement with secondary objects from three representative language varieties: Unami Delaware (Eastern Algonquian), and two Ojibwe dialects, Oji-Cree and Nishnaabemwin. I have argued that the patterns are best captured under a horizons analysis, for two reasons. First, the horizons model allows for probe-specific boundaries in accessing elements in the structure. Second, it captures the connection between a probe's search space and its syntactic height. In particular, I have proposed that there is microparametric variation in the horizon for C. In Unami Delaware, C has no horizon and thus can access the secondary objects of both TA+O and AI+O verbs. In contrast, C has RootP as a horizon in Oji-Cree, which prevents it from indexing all secondary objects. As for Nishnaabemwin, it reveals further microvariation in the specification of horizons, since it is only the transitive version of *v* that serves as a horizon for C.

4.5   Chapter summary

Concerning the cross-linguistic variations of peripheral agreement, three theoretical questions need to be explored: accessibility, feature matching, and post-syntactic operations. This chapter focused on the first question: what is the principal mechanism that determines the accessibility of the arguments for the probe?

I began by reviewing several possible accounts: the SCOPA, m-case, and phase theory. In response to inadequacies in these accounts, Section 4.3 turned to Keine's (2016, 2019) horizons model. First, I established the locality-height connection, which says that the higher a probe is, the more structures are accessible to it. I began with the TA+O pattern in the Eastern languages,

which clearly challenges the notion of phases. I have shown that the account of horizons excels over the PIC in that it nicely captures the conflict arising from the Unami TA+O form. In addition, the empirical observations regarding different Algonquian probes' search capacities are squarely in line with the height-locality connection predicted by a horizon theory: the highest probe on C is able to access more structures than the lower probes on Voice or Infl. Section 4.4 gave the analysis step by step for three representative patterns of peripheral agreement with secondary objects.

This chapter has accounted for the variation observed in peripheral agreement on TA+O verbs and AI+O verbs. The next chapter turns to the variation observed in TA/TI forms. I will argue that relativization of the probes works hand in hand with the Activity Condition to provide the answer to the second theoretical question of feature matching.

Chapter 5

Probe-conditioned patterns

This chapter concentrates on the question of feature matching. As introduced in Chapter 1, accessibility explains whether or not a goal is visible to the probe, but it does not necessarily determine if a goal will be agreed with. Beyond the criterion of accessibility, we must further consider how probes copy features of a goal. This chapter will show that the variability of peripheral agreement in agreeing with third-person objects of TA and TI verbs reflects the microparameterization of relativized probes across the languages. We will see that the treatment of primary objects differs even though they are all within the probe's search domain.

To investigate the cross-linguistic variation in peripheral agreement with primary objects, three representative languages are selected to demonstrate the probe-conditioned patterns. Table 5.1 summarizes the behavior of peripheral agreement with the object in distinct verb classes. In this table, a check mark indicates that the object is indexed by peripheral agreement. An X mark in a plain cell indicates that peripheral agreement is missing. An X mark in a gray cell indicates that peripheral agreement exists in the given context but indexes some other argument than the intended object.

Table 5.1: Variations of objects indexed by peripheral agreement in selected languages

| | TA | TI | TA/TI | AI+O | TA+O |
	SAP on 3	SAP on 0	3 on 0/3$'$	THEME	THEME
Unami Delaware	DEF✓	DEF✓	DEF✓	DEF✓	DEF✓
Plains Cree	✓	✗	✗	✗	✗
Maliseet-Passamaquoddy	✓	✓	✓	✓	✓

As seen in this table, because of the preservation of the absolute-objective contrast, the object is indexed by peripheral agreement in Unami Delaware if it is definite. In other words, if it is indefinite, peripheral agreement will be missing in the SAP forms or indexes the other definite third-person argument if there is one. In the other two languages, where the absolute-objective

142

contrast is not maintained, Plains Cree demonstrates a pattern in which the animate object can be indexed by peripheral agreement in the TA SAP forms. Otherwise, peripheral agreement is missing or indexes the other third-person argument. Maliseet-Passamaquoddy displays a pattern in which the object is agreed with across all verb classes. There are some complications involving plural subjects in languages like Oji-Cree and Menominee, which will be discussed in Chapter 6. The essence of the three patterns considered in this chapter is that, in Maliseet-Passamaquoddy, peripheral agreement can index any object, while in Unami Delaware, it can index any definite object, and in Plains Cree, it can index only a subset of primary objects (TA but not TI).

This chapter proceeds as follows. Section 5.1 provides the relevant theoretical background that will be important in understanding the analysis to follow. Section 5.2 lays out the core proposal that the variation across these languages reflects differences in the relativization of the probe (Béjar 2003; Béjar & Rezac 2009; Nevins 2011; Preminger 2011). Section 5.3 shows how the proposal applies to each language.

5.1 Theoretical assumptions

This section introduces the key theoretical accounts assumed in the analysis to follow. I will go over the crucial insights of feature geometry as well as the relativized probing put forth in Béjar & Rezac (2009) as a preparation for the proposal to follow (§5.1.1). Next, I will talk about the role of the Activity Condition (Chomsky 2000, 2001), which will be relevant in the derivation of third-person forms.

5.1.1 Person hierarchy and relativized probing

A typological generalization that holds across many languages is that SAP arguments and plural arguments are higher than third-person and singular arguments on person and number hierarchies respectively (Zwicky 1977; Comrie 1989; Harley & Ritter 2002). A number of works have shown that probes may be relativized to search for particular features (e.g. Béjar 2003; Béjar & Rezac 2009; Nevins 2011; Preminger 2011). For instance, if a probe searches for the [PL] feature, even though a nominal meets the accessibility condition, it still cannot be targeted if it lacks a matching [PL] feature. In what follows, I introduce Harley & Ritter's feature geometry and the core proposal put forth by Béjar & Rezac (2009), which will be important in understanding relativized probing when it comes to peripheral agreement.

In their groundbreaking work, Harley & Ritter (2002) developed a feature geometry which provides a principled universal explanation for patterns in pronominal paradigms. Feature geometries represent entailment relations among features: any feature linked to a feature higher in

the tree implies the presence of that higher feature. A simplified feature geometry for nominals is shown in (1). Under this geometry, first and second persons are specified as [PARTICIPANT]. I add to this assumption that all three persons have a more general person feature, which I represent as [PERSON] (Béjar 2003; Béjar & Rezac 2009; Nevins 2011; Preminger 2011).

(1)   A simplified feature geometry (based on Harley & Ritter 2002, Preminger 2011)
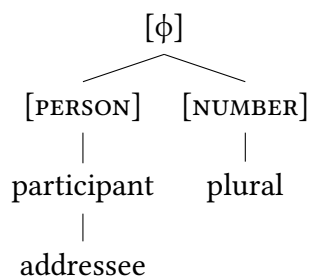
According to Harley & Ritter (2002), there are two alternatives for the contrast between the first and second persons: it can be represented by the [ADDRESSEE] feature, in which case second persons will be more richly specified than first persons, or by the [SPEAKER] feature, in which case first persons will be more richly specified than second persons. Given the evidence that the second person takes precedence in Algonquian (Wolfart 1973; Goddard 1979; Valentine 2001; Béjar & Rezac 2009; Lochbihler 2012; Oxford 2014; Xu 2016, among others), the most specified feature under [PARTICIPANT] is [ADDRESSEE], as shown in (1).

Béjar & Rezac (2009) account for agreement patterns that show a preference for indexing objects but shift to indexing subjects in certain argument combinations. Béjar & Rezac introduce the notion of articulated probes based on the empirical observations that different probes may search for different sets of features. The core idea is that each feature of the probe searches individually and can match a feature on a DP independently. The agreement process of an articulated probe is demonstrated in Table 5.2. The unvalued feature [uF] becomes valued when it matches with a feature of the goal [F] and this feature is copied to the probe. The characteristic of their system is cyclicity and locality. In this case, the probe is positioned between the subject and the object. In the first cycle of agreement, the probe searches for matching features in its c-command domain. If the object matches all of the probe's features, valuation of the probe is complete. However, if the object does not match all of the probe's features, any unvalued features on the probe—i.e. [u1] in the table—remain active and can go on to search upwards, targeting the subject in the specifier position of the probing head.

Béjar & Rezac's proposal has been applied to Algonquian languages in understanding agreement patterns that reflect hierarchies of person and number in the independent order (Béjar & Rezac 2009 and Lochbihler 2012 for Ojibwe; Hamilton 2015 for Mi'gmaq; Oxford 2014 for Al-

Table 5.2: Articulated probes (Béjar & Rezac 2009)

Subject	Probe		Object
[3]	[*u*3]	—	[3]
[2]	[*u*2]	—	[2]
[1]	—	[*u*1]	

gonquian languages in general) and the conjunct order (Xu 2016, 2018; Bhatia et al. 2018). The behaviors of theme signs (Voice) and central agreement (Infl) have often been used to illustrate the person hierarchy (Wolfart 1973; Zwicky 1977; Nichols 1980; Dawe-Sheppard & Hewson 1990; Rhodes 1994; Blain 1998; Valentine 2001, among others), shown in (2), which is read as the second person ranks higher than the first person, followed by the unspecified person (X), the animate proximate third person (3), the animate obviative third person (3′), and the inanimate third person (0).

(2)   **Algonquian person hierarchy**
      2 > 1 > X > 3 > 3′ > 0

Each step in this hierarchy is motivated by the patterning of particular verb forms. The pair of Nishnaabemwin forms in (3) supports the 2 > 1 ranking, since the second-person prefix *g-* appears in both forms. That is, the central agreement targets the second-person argument regardless of it being a subject as in (3a) or an object as in (3b).

(3)   2 > 1

      a.   *gwaabam*
           g̲- waabam -i   -Ø
           2- see   -1.OBJ -2SG
           'You (SG) see me.' (Valentine 2001:270)

      b.   *gwaabamin*
           g̲- waabam -in   -Ø
           2- see   -2.OBJ -2SG
           'I see you (SG).' (Valentine 2001:270)

The patterning of prefixes and theme signs provides evidence for the 1 > 3 ranking. In the Nishnaabemwin examples in (4), the same first-person prefix *n-* occurs, indicating that first person outranks third person. The theme sign is another piece of evidence, as the inverse theme sign appears when a lower-ranked argument acts on a higher-ranked argument. The inverse marker *-igw* appears in (4b), in which a third person acts on a first person, suggesting that the first person outranks the third person.

(4)   1 > 3

    a.   *nwaabmaa*
           n̲- waabam -⟨aa⟩ -Ø
           1- see   -3.OBJ -1SG
           'You (SG) see her/him.' (Valentine 2001:270)

    b.   *nwaabmig*
           n̲- waabam -⟨igw⟩ -Ø
           1- see   -INV -1SG
           'S/he sees me.' (Valentine 2001:270)

The patterning of theme signs provides evidence for the 3 > 3′ ranking. The Nishnaabemwin examples involving a proximate and an obviative argument in (5) pattern similarly to those in (4): the inverse theme sign *-igw* occurs in (5b) when an obviative acts on a proximate.

(5)   3 > 3′

    a.   *wwaabmaan*
           w̲- waabam -⟨aa⟩ -Ø   **-an**
           3- see   -3.OBJ -3SG -OBV
           'S/he (PROX) sees her/him (OBV).' (Valentine 2001:270)

    b.   *wwaabmigoon*
           w̲- waabam -⟨igw⟩ -Ø   **-an**
           3- see   -INV -3SG -OBV
           'S/he (OBV) sees her/him (PROX).' (Valentine 2001:270)

The evidence for the 3′ > 0 ranking also comes from the use of theme signs. The examples in (6) are from SW Ojibwe. The inanimate argument being ranked lower than the animate obviative argument is supported by the use of the inverse suffix *-igw* when inanimate acts on obviative, as in (6b).

(6)   3′ > 0

    a.   *owaapantaanini*
           o̲- waapant -⟨aa⟩ -in -ini
           3- see   -0.OBJ -3SG -OBV
           'S/he (OBV) sees it.' (Nichols 1980:282)

    b.   *owaapamikonini*
           o̲- waapam -⟨igw⟩ -in -ini
           3- see   -INV -3SG -OBV
           'It sees her/him (OBV).' (Nichols 1980:292)

Finally, the Nishnaabemwin examples in (7) clarifies the position of the unspecified or impersonal actor (noted as "X") in the person hierarchy. The examples in (7) all have an unspecified (X) actor. Forms in which X acts on 1 are marked as inverse (theme sign -*igoo*) while forms in which X acts on 3 or 3′ are marked as direct (theme sign -*aa*). These patterns indicate that X is ranked between 1 and 3 on the hierarchy.

(7)   1 > X > 3 > 3′

    a. *nwaabmigoo*
        n̲- waabam - igoo -Ø
        1- see   -INV -1SG
        'I am seen (= someone sees me).' (Valentine 2001:272)

    b. *waabmaa*
        waabam - aa   -Ø -**Ø**
        see   -3OBJ -3 -AN.SG
        'S/he (PROX) is seen (= someone sees him/her).' (Valentine 2001:272)

    c. *wwaabmaawan*
        w̲- waabam - aa   -w   -**an**
        3- see   -3.OBJ -3SG -OBV
        'S/he (OBV) is seen (= someone sees him/her).' (Valentine 2001:272)

All of the preceding examples work well with a Béjar & Rezac-style analysis, in which the hierarchy is understood to reflect an articulated probe (e.g. Béjar & Rezac 2009, Lochbihler 2012, and Bhatia et al. 2018 for Ojibwe; Coon & Bale 2014 and Hamilton 2015 for Mi'gmaq; Oxford 2014, Xu 2016 for Algonquian languages in general). Since the articulated probe searches for a goal with matching features, the nominals that rank higher on the person hierarchy are preferred because they better match the features of the probe. As seen in (8) (number features are ignored), all animate persons share the [PERSON] feature, SAPs share the [PARTICIPANT] feature, and second persons are more specified due to containing the additional [ADDRESSEE] feature. For third persons, proximate is more specified than obviative person due to the additional [PROXIMATE] feature (Lochbihler 2012). And inanimate third persons have no person features, thus deriving their ranking at the very bottom of the hierarchy (Lochbihler et al. 2021).
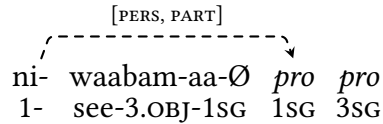
(8)   **Feature specification for Algonquian persons**

    a. 2nd-person: [PERSON, PARTICIPANT, ADDRESSEE]

    b. 1st-person: [PERSON, PARTICIPANT]

    c. proximate: [PERSON, PROXIMATE]

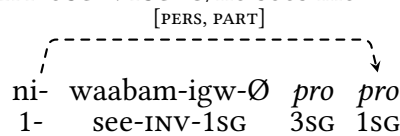   d. obviative: [PERSON]

    e. inanimate: no person features

The derivation of the Nishnaabemwin examples in (4), illustrating the 1 > 3 ranking, is schematized in (9). Focusing on prefixes that reflect Infl agreement, since the probe on Infl is articulated as [*u*PERSON, *u*PARTICIPANT], it targets the first-person DP because it fully matches the features of the probe, explaining why the first-person prefix *n-* is spelled out in both examples.

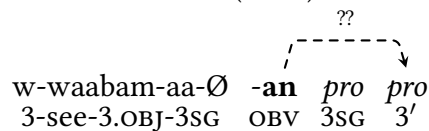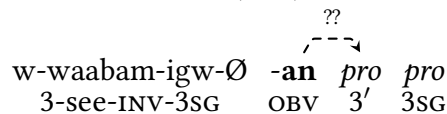(9) Nishnaabemwin Infl: [*u*PERSON, *u*PARTICIPANT]

    a. TA: 1SG→3PL: I see him/her
$$\overset{\text{[PERS, PART]}}{\overbrace{\hspace{3.5cm}}}$$

ni- waabam-aa-Ø *pro* *pro*
1-   see-3.OBJ-1SG 1SG 3SG

    b. TA: 3SG→1SG: S/he sees me
$$\overset{\text{[PERS, PART]}}{\overbrace{\hspace{4.5cm}}}$$

ni- waabam-igw-Ø *pro* *pro*
1-   see-INV-1SG   3SG 1SG

This account works well for theme signs and central agreement, which are governed by the classic Algonquian person hierarchy. However, it is less clear which features of the probe are needed to account for the patterning of peripheral agreement. The probe on C certainly does not require articulated person features, since it never targets SAP arguments. In addition, peripheral agreement sometimes shows exactly the opposite of the 3 > 3′ hierarchy that applies to theme signs. In the Nishnaabemwin forms schematized in (10), peripheral agreement actually demonstrates an anti-hierarchy effect, as it targets the obviative DP, which has less specified features than the proximate DP in both forms.

(10) Nishnaabemwin C: 3′ > 3

    a. TA: 3SG→3′: S/he (PROX) sees her/him (OBV)
$$\overset{??}{\overbrace{\hspace{2cm}}}$$

w-waabam-aa-Ø -**an** *pro* *pro*
3-see-3.OBJ-3SG OBV 3SG 3′

    b. TA: 3′→3SG: S/he (OBV) sees her/him (PROX)
$$\overset{??}{\overbrace{\hspace{1.5cm}}}$$

w-waabam-igw-Ø -**an** *pro* *pro*
3-see-INV-3SG   OBV 3′ 3SG

An analysis of peripheral agreement needs to clarify which features are involved such that peripheral agreement can skip over SAP DPs and can sometimes favor agreement with obviatives rather than proximates as in the above Nishnaabemwin examples.

5.1.2 Activity Condition

Chomsky's (2000, 2001) Activity Condition (AC) was introduced in Chapter 1 as one of the accessibility accounts. In the previous chapter, Keine's (2016, 2019) horizons model was argued to be the mechanism that determines whether or not a DP is visible for a probe. When it comes to a scenario in which both DPs are accessible (i.e. TA and TI verbs) and both have the features that the probe wishes to value, I will argue in Section 5.2 that relativization of the probes works hand in hand with the AC in explaining the variation seen in TA/TI forms. To pave the way for that proposal, this subsection reviews the concept of the AC and its role in the Agree operation.

The Activity Condition is relevant after a DP's abstract Case feature has been valued by probe that agreed with the DP. In order for a DP to be targeted by a probe, the DP has to be active. A DP is formally defined as being active if its Case feature has not been valued by a previous probe. As stated in (11), only DPs whose Case feature is unvalued are "active" and may undergo A-movement. In contrast, once a DP has received Case, it becomes "inactive" and is therefore unable to undergo further A-processes. The outcome of the AC is that it prevents a probe from agreeing with a goal that some other probe has already agreed with.
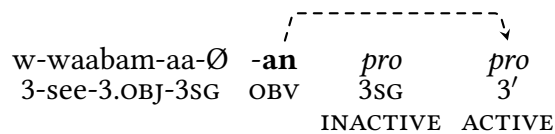
(11)   **Activity Condition** (Chomsky 2000:123, 127, 2001:6)
       DPs whose case feature is valued become inactive and thereby unable to undergo subsequent A-processes.
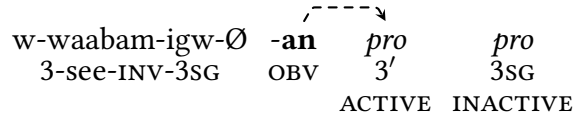
In line with the AC, I assume that a feature on a goal is deactivated for Agree after having taken part in Agree before. This means that the feature becomes invisible for further Agree operations. The AC especially sheds light on the anti-hierarchy effect mentioned above for Nishnaabemwin third-person forms (as also proposed for Ojibwe in Hammerly 2020). The previous examples in (11) are repeated below. Both examples involve a proximate argument and an obviative argument, and in both cases, peripheral agreement indexes the obviative argument, even though it is the proximate argument that ranks higher on the person hierarchy.

(12)   Nishnaabemwin C: 3′ > 3

       a.   TA: 3SG→3′: S/he (PROX) sees her/him (OBV)

       w-waabam-aa-Ø   -**an**   *pro*   *pro*
       3-see-3.OBJ-3SG   OBV   3SG   3′
                                INACTIVE   ACTIVE

b. TA: 3′→3SG: S/he (OBV) sees her/him (PROX)

w-waabam-igw-Ø -**an** *pro* *pro*
3-see-INV-3SG OBV 3′ 3SG
ACTIVE INACTIVE

The preference of peripheral agreement (C) to index the obviative DP can be attributed to the AC: although the proximate DP has richer features, it has already been agreed with by Infl and is therefore deactivated. In contrast, the obviative DP is active because it has not been agreed with by Infl, which makes it possible to serve as the goal of C. (There are also languages such as Plains Cree that do not share this pattern; these will be discusssed in Section 5.3.2.)

5.2 Proposal

This section lays out the core proposal, which is that the different patterns reflect two microparameters: one involving relativization of the probe and the other involving the Activity Condition (AC). This analysis builds on Oxford (2015). A detailed explanation for each representative language will be provided in Section 5.3.

Before turning to the proposal, one basic question needs to be addressed: why does the probe target third-person DPs and ignore SAP DPs? I argue that this question can be answered by the structural differences proposed in Oxford (2017c) (also in van Gelderen 2011:71 and Bjorkman et al. 2019:587) that third-person nominals have a DP layer while SAP nominals do not. Under this analysis, all persons have a ϕP projection but third-persons have an extra DP projection above the ϕP. In addition, Oxford (2017c) followed the split-DP hypothesis (Giusti 1996, 2005; Zamparelli 1995; Ihsane & Puskás 2001; Laenzlinger 2005; Alexiadou et al. 2007; Ihsane 2008), arguing for Algonquian that the DP layer can be separated into two projections: the higher projection is the locus of referentiality and deixis while the lower projection is the locus of definiteness, giving the overall structure in (13).

(13) Nominal structure under split-DP hypothesis (Oxford 2017c:20)

D referentiality, deixis
|
Def (in)definiteness
|
ϕ person, number
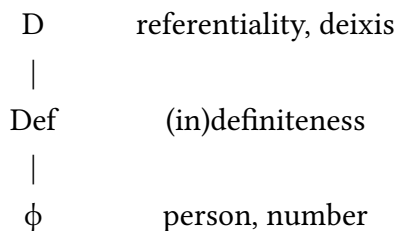
Under the analysis in (13), we can say that peripheral agreement is limited to the third-person nominals because these are the only nominals that have a [D] feature. If the probe that is responsible for peripheral agreement seeks [uD], it will accordingly only be able to agree with third-person arguments.

We are now prepared to address the cross-linguistic patterns of peripheral agreement with primary objects. Table 5.3 summarizes the patterns in two representative languages. In Maliseet-Passamaquoddy, the primary object is indexed by peripheral agreement in all contexts. However, in Plains Cree, peripheral agreement indexes the object only when the subject is an SAP and the object is animate.

Table 5.3: Primary objects indexed by peripheral agreement in selected languages

	TA	**TI**	**TA/TI**
	SAP on 3	SAP on 0	3 on 0/3′
Maliseet-Passamaquoddy	✓	✓	✓
Plains Cree	✓	✗	✗

To account for the difference between Maliseet-Passamaquoddy and Plains Cree, building upon Oxford (2015), I propose that the probe on C in Maliseet-Passamaquoddy seeks only the [uD] feature. This captures the ability of peripheral agreement to index the object regardless of gender or obviation. In contrast, the probe in Plains Cree is relativized more specifically for the [uProx] feature, which is carried only by proximate third persons. This explains why peripheral agreement in Plains Cree indexes the animate third-person object in TA SAP forms, because third persons are proximate in such contexts. In TA and TI third-person forms, the object is not proximate, so it follows that it cannot be indexed by peripheral agreement in Plains Cree.

The variation in third-person forms of TA and TI verbs needs further explanation. In these cases, both arguments are third persons and are thus both potential candidates for peripheral agreement. In Maliseet-Passamaquoddy, it is the obviative/inanimate object that is indexed, while in Plains Cree it is the proximate subject. How are these specific outcomes derived?

In Maliseet-Passamaquoddy, the [uD] probe on C is matched by both arguments in third-person forms. In this case, the AC explains why the probe on C targets the internal argument rather than the external argument: the proximate third-person subject, due to its higher rank on the person hierarchy, has already been agreed with by the probe on Infl. This makes the subject inactive and thus inaccessible to the subsequent probe on C. The object, in contrast, remains active and is thus selected as the goal of C.

The same explanation cannot apply in Plains Cree, where the AC is clearly violated given that peripheral agreement indexes the proximate subject rather than the object even though the subject was already agreed with by Infl. This outcome seems to arise because the subject is the

only argument that satisfies the [uProx] feature sought by C in Plains Cree. It appears, then, that the AC can be violated if this is the only way for a probe to find a matching goal.

The preceding paragraphs have set out the basic components of the account of peripheral agreement with TA and TI objects. The next section runs through the derivations of the relevant forms in more complete detail.

5.3 Analysis: microvariation of relativized probes

In this section, I present the analysis for three distinct languages, arguing that the different patterns of peripheral agreement in their ability to index primary objects are a result of relativized probing. Furthermore, the variations of peripheral agreement in third-person forms in these languages reflect the role of the Activity Condition. The three representative languages are discussed in turn: Maliseet-Passamaquoddy (§5.3.1), Plains Cree (§5.3.2), and Unami Delaware (5.3.3).

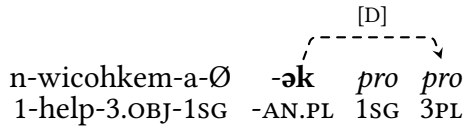### 5.3.1 Maliseet-Passamaquoddy type

The Maliseet-Passamaquoddy pattern in which the object is consistently indexed by peripheral agreement is summarized in Table 5.4. As proposed above, I assume that the probe on C in Maliseet-Passamaquoddy seeks the [uD] feature. In Oxford (2015), a comparable probe is proposed for Ojibwe, and I extend this proposal to Maliseet-Passamaquoddy. Ojibwe and Maliseet-Passamaquoddy are both languages in which peripheral agreement is capable of indexing the primary object across all forms. The [uD] probe accounts for the "omnivorous" nature of peripheral agreement in these languages: the probe can target third-person arguments of any type. I also argue that the AC plays a significant role in this system, privileging an active DP over an inactive DP in cases where both DPs matching the [uD] feature of the probe.

Table 5.4: Pattern of objects indexed by peripheral agreement in Maliseet-Passamaquoddy

|	**TA**	**TI**	**TA/TI**
	SAP on 3	SAP on 0	3 on 0/3$'$
Maliseet-Passamaquoddy	✓	✓	✓

The forms with an SAP subject are easiest to explain as there is only one DP that matches the feature requirement of the probe. Recall the SAP nominals lack a DP layer and therefore do not contain a matching [D] feature. As a result, C can only target the third-person DP. The TA SAP example in (14) illustrates the derivation: the object is agreed with by the probe because it contains the matching feature [D].

(14) Maliseet-Passamaquoddy TA SAP forms

e.g. 1SG→3PL: I help **them** (AN)

$$[D]$$

n-wicohkem-a-Ø   -**ək**   *pro*   *pro*
1-help-3.OBJ-1SG   -AN.PL   1SG   3PL

In the same way, in the TI SAP form in (15), the inanimate object is targeted because it contains the [D] feature that matches the probe, resulting in the realization of the the 0PL peripheral suffix -*əl*.

(15) Maliseet-Passamaquoddy TI SAP forms

e.g. 1SG→0PL: I want **them** (IN)

$$[D]$$

n-pawat-əm-n   -**əl**   *pro*   *pro*
1-want-0.OBJ-1SG -IN.PL   1SG   0PL
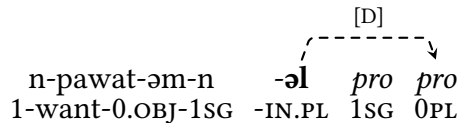
Now moving on to third-person forms, a TA example is given in (16a) and a TI example is given in (16b). Peripheral agreement indexes the object argument in these forms.

(16) Third-person forms: Maliseet-Passamaquoddy

a. *wicohkemawal*   TA
    w- wicohkem -a   -wa -**əl**
    3- help   -3.OBJ -3PL -**OBV**
    'They help **them** (OBV).' (Sherwood 1983:217)

b. *p'awatəmənəwal*   TI
    w- pawat -əm   -əniya -**əl**
    3- want -0.OBJ -3PL   -**IN.PL**
    'They want **them** (IN).' (Sherwood 1983:223)

In these forms, the subject and object both match the probe in having the [D] feature. It is the AC that accounts for why, in Maliseet-Passamaquoddy, it is always the object that is targeted in such cases. Even though both of the third-person arguments contain the matching [D] feature, the proximate subject has just been agreed with by the Infl-probe. Recall that Infl seeks [*u*Part, *u*Pers] features. The proximate subject is targeted by Infl because of its [Prox] feature, which is absent from the obviative argument (cf. Lochbihler 2012; Oxford 2014). Consequently, when it comes to the C probe, as schematized in (17), the proximate argument has already become inactive due to its agreement with Infl, while the obviative remains active and accessible. That

is why the obviative argument is selected as the goal of C in TA third-person forms (Hammerly 2020).

(17)   Why C targets the object DP in Maliseet-Passamaquoddy

[PART, PERS]

[C [... Infl [... DP$_{[prox]}$ DP$_{[obv]}$ ...]]]
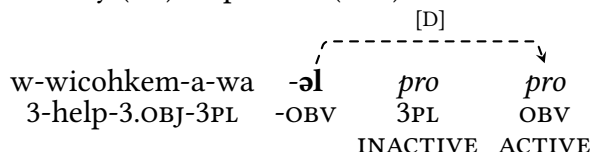   INACTIVE   **ACTIVE**

[D]
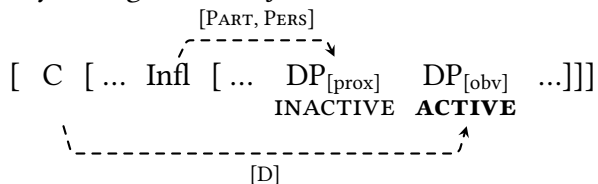
I propose that the AC is only relevant in cases where a probe has a choice between two matching goals. Put differently, the AC plays a deciding role when there is more than one DP in the probe's search space that matches its features. The AC is not strong enough to force a probe to agree with a non-matching DP instead of a matching but inactive DP. This proposal will be elaborated in Section 5.3.2 when the relevant Plains Cree data are discussed.
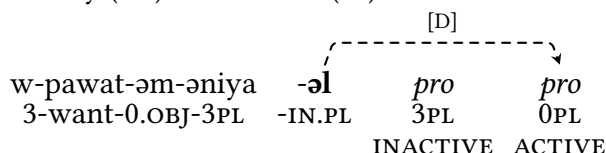
The relevant portion of the derivation of the Maliseet-Passamaquoddy third-person forms is schematized in (18). The 3PL subject has previously been agreed with by Infl, as manifested by the central agreement morphology: *w-...-wa* in (18a) for the TA verb and *w-...-əniya* in (18b) for the TI verb. For the probe on C, the AC privileges the active DP over the inactive DP, thus capturing why it is the obviative DP in (18a) and the inanimate DP in (18b) that are indexed by the peripheral suffix in Maliseet-Passamaquoddy.

(18)   Maliseet-Passamaquoddy third-person forms: [uD]-feature copying and the AC

    a.   TA: They (AN) help **them** (OBV)

[D]

w-wicohkem-a-wa   -**əl**   *pro*   *pro*
3-help-3.OBJ-3PL   -OBV   3PL   OBV
                        INACTIVE   ACTIVE

    b.   TI: They (AN) want **them** (IN)

[D]

w-pawat-əm-əniya   -**əl**   *pro*   *pro*
3-want-0.OBJ-3PL   -IN.PL   3PL   0PL
                        INACTIVE   ACTIVE

The role of the AC is reinforced by the patterning of TA+O forms. A Maliseet-Passamaquoddy TA+O example is given in (19a). The key point is that peripheral agreement indexes the lower theme rather than the higher goal. The reason again lies in the AC: the theme has not been agreed with by any probes while the goal has been agreed with by Voice. As shown in (19b), the theme
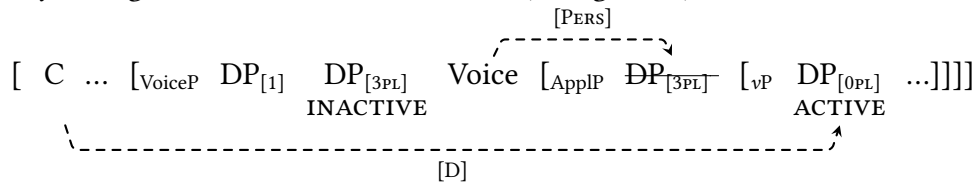
"potatoes" and the goal "pigs" both contain the [D] feature but it is the theme that turns out to be indexed by peripheral agreement, indicated by the suffix *-al* 'IN.PL'. The goal is skipped over by C because the goal's [Pers] feature has previously been copied by the probe on Voice, realized by the third-person theme sign.[1] Consequently, the goal is inactive for later operations and, therefore, the probe targets the theme, which is active because it has never been agreed with before.

(19) Maliseet-Passamaquoddy TA+O

    a. *nkissəmanəl piksək pəcetesəl*
        n- kissəm -a   -n **-əl**   piks -ək   epeskəmakən -əl
        1- feed -3.OBJ -1SG **-IN.PL** pig -AN.PL potato   -IN.PL
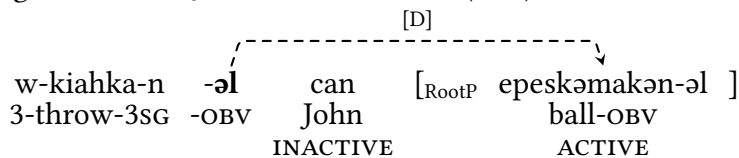   'I fed the pigs (AN) **potatoes** (IN).' (Sherwood 1983:125)

    b. Why C targets the lowest DP, the theme (Infl ignored)

$$[\text{ C } \ldots [_{\text{VoiceP}} \text{ DP}_{[1]} \quad \text{DP}_{[3\text{PL}]} \quad \text{Voice } [_{\text{ApplP}} \text{ DP}_{[3\text{PL}]} \text{ } [_{v\text{P}} \text{ DP}_{[0\text{PL}]} \ldots]]]]$$

                             [Pers]

                INACTIVE   ACTIVE

                                        [D]

Similarly, the preference of the probe for targeting the secondary object in AI+O verbs is again related to the AC. A third-person AI+O form is given in (20). Since the subject DP and the object DP both match the [D] feature of the probe, it is the AC that determines that the active DP, the object *epeskəmakənəl* 'ball', is agreed with by the probe, leading to the realization of C as the peripheral suffix *-əl* 'OBV'.

(20) Maliseet-Passamaquoddy AI+O
    e.g. 3SG→OBV: John threw **the ball** (OBV)

                          [D]

    w-kiahka-n   -**əl**   can   [_{\text{RootP}} epeskəmakən-əl]
    3-throw-3SG   -OBV   John   ball-OBV
                  INACTIVE   ACTIVE

To sum up, the probe in Maliseet-Passamaquoddy has been argued to be specified as [*u*D]. In SAP forms of TA and TI verbs, the probe targets the third-person argument because this is the only nominal that matches C. In third-person forms, the AC plays an important role in

---

[1]In comparison to the TA/TI patterns of peripheral agreement, the DP that is previously valued by Voice does not seem to strictly prevent it from being targeted by C. The object DP is considered active for C in TA/TI forms because the theme sign only agrees with person. In contrast, the subject DP is completely inactive as its person and number features have been used up by Infl. In (18), the prefix *w-* discharges the person feature and the central suffix *-(ənə)waw* discharges the number feature. The outcome of the number feature of the object DP being deleted makes the argument completely inactive for later operations.

determining which DP is agreed with by C. The AC not only explains the patterns of the TA and TI verbs but also the treatment of secondary objects in TA+O and AI+O verbs in Maliseet-Passamaquoddy. Ultimately, the apparent anti-locality and anti-hierarchy effects in languages like Maliseet-Passamaquoddy and Ojibwe (Nishnaabemwin and Oji-Cree) are epiphenomena of an activity effect: the probe tries, as much as possible, to avoid agreeing with the goals of other probes, even if this means looking quite far down into the structure to find an "untouched" goal.

5.3.2   Plains Cree type

This subsection attributes the patterning of peripheral agreement with primary objects in Plains Cree to the specification of the probe on C as [*u*Prox] (Oxford 2015). The Plains Cree patterns are summarized in Table 5.5: the proximate object of TA SAP forms can be indexed by peripheral agreement, indicated by the check mark, and the inanimate object of TI SAP forms cannot be indexed by peripheral agreement, indicated by the X mark. In TI/TA third-person forms, even though the inanimate/obviative object is not indexed by peripheral agreement, peripheral agreement appears on the verb, indexing the proximate subject, an outcome that is represented by a X mark with a gray background.

Table 5.5: Cline of objects indexed by peripheral agreement in Plains Cree

	TA	**TI**	**TA/TI**
	SAP on 3	SAP on 0	3 on 0/3$'$
Plains Cree	✓	✗	✗

Beginning with the TA SAP pattern, as exemplified by the 1SG→3PL form in (21), peripheral agreement indexes the 3PL object because it perfectly matches the [*u*Prox] feature of the probe.

(21)   Plains Cree: TA SAP forms
e.g. 1SG→3PL: I see them (AN)

[PROX]

ni-wâpam-â-w   -**ak**   *pro   pro*
1-see-3.OBJ-1SG   AN.PL   1SG   3PL

In contrast, the TI SAP example in (22) shows that peripheral agreement is missing when a 1SG subject acts on an inanimate object. Peripheral agreement fails because neither argument matches the probe's features.

(22) Plains Cree: TI SAP forms

e.g. 1SG→0PL: I see them (IN)

[PROX]

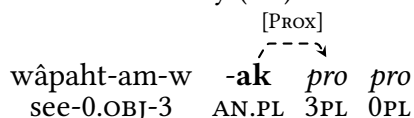ni-wâpaht-ê-n PROBE *pro* *pro*
1-see-0.OBJ-1SG   1SG 0PL
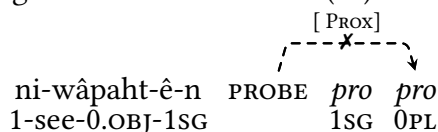
Turning to third-person forms, the fact that peripheral agreement indexes the proximate 3PL subject reflects the satisfaction of the [Prox] feature of the probe. The TA 3PL→OBV form is schematized in (23a): only the proximate argument matches the [Prox] feature of the probe. The TI 3PL→0PL form in (23b) works the same way: only the 3PL subject has the matching [Prox] feature, so C agrees with the subject.

(23) Plains Cree: TA and TI third-person forms

a. TA 3PL→OBV: They (AN) see them (OBV)

[PROX]

wâpam-ê-w -**ak** *pro* *pro*
see-3.OBJ-3 AN.PL 3PL OBV
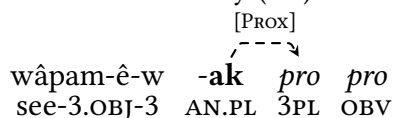
b. TI 3PL→0PL: They (AN) see them (IN)

[PROX]

wâpaht-am-w -**ak** *pro* *pro*
see-0.OBJ-3 AN.PL 3PL 0PL

The examples in (23) show that feature matching takes precedence over the AC in Plains Cree. Unlike in Maliseet-Passamaquoddy, where the AC favors agreement with the inactive goal in contexts where a probe finds two potential goals, the AC is clearly violated in Plains Cree when peripheral agreement indexes the subject rather than the object. The Plains Cree outcome indicates that the AC can be violated when such violation is the only way for a probe to match its features.

It is worth noting a case when neither of DPs match the [Prox] feature. This is exemplified in (24a), in which the 1SG subject acts on an obviative object. In this example, peripheral agreement takes place and indexes the obviative object. However, the schema in (24b) raises a problem for the articulated probe that has been argued so far: the obviative DP lacks the [Prox] feature, so why can peripheral agreement index it in this case?

(24) Plains Cree: SAP forms with an obviative object

    a. *niwapâmimâwa*
        ni- wâpam -im -â   -w **-a**
        1- see   -OBV -3.OBJ -1SG -OBV
        'I see her/him/them (OBV).' (Wolfart 1973:41)

    b. TA 1SG→OBV: I see her/him/them (OBV)

$$\text{[Prox]}$$

ni-wâpam-im-â-w   **-a**   *pro* *pro*
1-see-OBV-3.OBJ-1SG OBV 1SG OBV

One possible explanation is that a partial match arises if both arguments lack [Prox] but one argument has a feature that is entailed by [Prox]. Although the obviative DP lacks the [Prox] feature, it does contain the [Pers] feature, which the [Prox] feature is dependent on. In this circumstance, peripheral agreement with the obviative DP may be permitted since it matches a "watered-down" version of the [*u*Prox] probe. In contrast, the inanimate object is never agreed with by peripheral agreement in forms with an SAP subject in Plains Cree because it has neither [Prox] nor [Pers] features. This potential analysis runs into difficulty, however, in explaining why SAPs, which also have the [Pers] feature, cannot serve as the goal of peripheral agreement in such configurations. The correct solution for forms such as (24) is left as a problem for future research.

5.3.3 Unami Delaware type

This section analyzes the patterning of peripheral agreement in Unami Delaware, an Eastern language that preserves the absolute-objective contrast in which peripheral agreement is conditioned by definiteness. To account for this pattern, I adopt Oxford's (2015) proposal that C is specified as [*u*Def] in Unami Delaware.

    The patterning of peripheral agreement with primary objects in Unami are given in Table 5.6. The check mark indicates that peripheral agreement with the object is allowed. In contrast, the X mark with the plain background indicates that peripheral agreement with the object is disallowed. The X mark with a gray background indicates that peripheral agreement appears but indexes the subject rather than the object. The forms with a definite object, demonstrating objective inflection, are identical to the patterns in Maliseet-Passamaquoddy (§5.3.1), while the forms with an indefinite object, displaying absolute inflection, are similar to the patterns in Plains Cree (§5.3.2).

Table 5.6: Objects indexed by peripheral agreement in Unami Delaware

	TA	**TI**	**TA/TI**
	SAP on 3	SAP on 0	3 on 0/3$'$
definite object	✓	✓	✓
indefinite object	✗	✗	✗

In what follows, I will explain that the definiteness-driven variations in the SAP forms are an outcome of matching with the [*u*Def] feature, while the patterns in the third-person forms are a result of both feature matching and the AC.
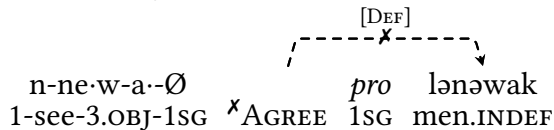
Starting with the TA SAP forms, the objective inflection is shown in (25a) and the absolute inflection is shown in (25b). Because the probe is specified as [*u*Def], the presence of a DP with the matching [Def] feature gives rise to peripheral agreement. In both examples below, since the first-person argument lacks the [D] feature, only the third-person argument is a potential goal. In (25a), the 3PL object is definite, thus matching the probe. Consequently, the probe is valued by the definite object and spelled out by the peripheral suffix -*ak* ' AN.PL'. However, in (25b), the third-person argument is indefinite, lacking a matching [Def] feature. Under this circumstance, Agree cannot take place, which is why no peripheral agreement appears.

(25)   Unami Delaware: TA SAP forms [*u*Def]

a.   definite object: I see **the men**

[DEF]

n- ne·w -a· -w   -**ak**   *pro* lənəwak
1-see-3.OBJ-1SG   AN.PL   1SG   men.DEF
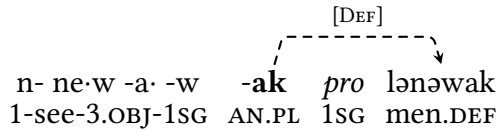
b.   indefinite object: I see some men

[DEF]

n-ne·w-a·-Ø   *pro*   lənəwak
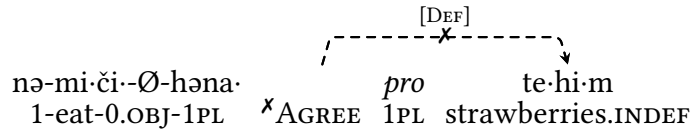1-see-3.OBJ-1SG   ✗AGREE   1SG   men.INDEF

The TI SAP forms follow the same pattern. Peripheral agreement appears when the object is definite, as in (26a), because the object's [Def] feature matches the probe. In contrast, peripheral agreement is absent when the object is indefinite, as in (26b), because the probe's [Def] feature is not matched.

(26)   Unami Delaware: TI SAP forms [uDef]

   a.   definite object: We found **the stones**

[DEF]

nə-maxk-am-əne·na·n   -**i·l**   *pro*   ahə́sna
1-find-0.OBJ-1PL   IN.PL   1PL   stones.DEF
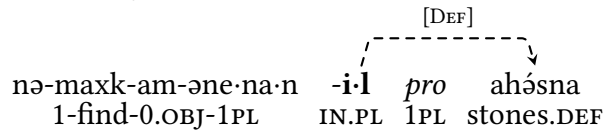
   b.   indefinite object: We ate strawberries

[DEF]

nə-mi·či·-Ø-həna·   *pro*   te·hi·m
1-eat-0.OBJ-1PL   ✗AGREE   1PL   strawberries.INDEF

Moving on to the third-person forms, the patterning of peripheral agreement is again determined by whether or not the DP contains the [Def] feature to match the probe. I provide the TA examples below for an illustration. The Munsee Delaware example in (27a) illustrates the absolute inflection. Between two third-person arguments, when one is definite and the other is indefinite, the choice is obvious. As schematized in (27b), the indefinite object is not agreed with because it does not match the [Def] feature. On the contrary, the definite proximate subject is agreed with since it perfectly matches the [Def] feature of the probe.

(27)   Munsee Delaware: TA third-person form, absolute

   a.   *máxkwal níhle·w*
      maxkw -al   nihl -a·   -w̆ -**Ø**
      bear   -OBV   kill -3.OBJ -3 -AN.SG
      '**He** killed a bear or some bears (OBV).' (Goddard 2007:210)

   b.   Feature matching: [uDef]

[DEF]

nihl-a·-w̆   -**Ø**   *pro*   maxkwal
kill-3.OBJ-3   OBV   3SG   bear.OBV.INDEF
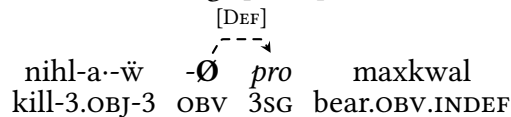
An interesting question arises in the objective inflection where both arguments have the [Def] feature sought by the probe. Which argument will C agree with in this case? As shown in (28a), it is the obviative argument that is indexed by peripheral agreement, indicated by the suffix -*al*. The selection of the obviative DP over the proximate DP follows the same explanation given for Maliseet-Passamaquoddy above: when both DPs match features with the probe, the AC determines that the probe will favor the DP that has not previously been agreed with. Since the proximate subject has been agreed with by Infl (*wə-…-w* ('3SG')), it is inactive and the probe will target the active goal, the obviative DP, as schematized in (28b).

(28)   Munsee Delaware: TA third-person form, objective

    a.   *wǎnihlá·wal né·l máxkwal*
           wə- nihl -a·   -w   -**al**   ne·l   maxkw -al
           3-   kill -3.OBJ -3SG -**OBV** DEM bear   -OBV
           'He killed **the bear(s)** (OBV).' (Goddard 2007:210)

    b.   Feature matching and the AC
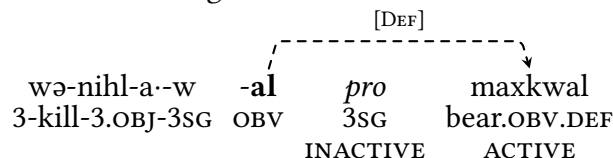
It is important to emphasize that in Unami Delaware, the AC is relevant only when the probe has a choice between two matching goals. Returning to the absolute third-person TA example in (27), the subject DP is definite while the object DP is indefinite. In this context, only the subject contains the [Def] feature. C cannot copy the feature from the indefinite object as it does not have the matching [Def] feature. As schematized in (29), even though the subject is considered inactive because it previously has been valued by Infl, it can be targeted by C because the AC is overridden by the criterion of feature matching.

(29)   AC is violable: Feature matching takes priority over the AC
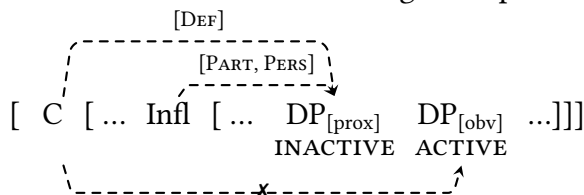
To sum up, we can draw the conclusion that the AC plays a secondary role in determining the valuation of the probe for peripheral agreement. The AC is not an inviolable principle but rather a violable parameter (cf. Baker 2008b; Oxford 2017a). This claim has been supported by empirical data through the lens of variation in peripheral agreement in Unami Delaware and Plains Cree.

5.4   Chapter summary

This chapter was dedicated to explaining variation in peripheral agreement with the primary object. The makeup of the nominal spine pinpoints the overall behavior of peripheral agreement in targeting third persons (3, 3′, 0) but never SAPs (1, 2), a pattern that was attributed to the presence of a DP projection only in third-person nominals. The account of peripheral agreement with primary objects was given for three representative languages: Maliseet-Passamaquoddy, Plains

Cree, and Unami Delaware. Departing from Oxford (2015), the treatment of the primary objects of TA/TI verbs was argued to reflect two microparameters, one involving relativized probing and the other involving the AC. It was shown that the AC is never violated in transitive forms in Maliseet-Passamaquoddy, but that violations are permitted in Plains Cree and Unami Delaware in cases where such violations are the only way that a probe can be valued by a matching goal. Ultimately, feature matching was shown to take precedence over the AC, with the AC serving as a sort of tiebreaker in cases where both arguments have the features sought by the probe.

In exploring the mechanisms that give rise to variability of peripheral agreement, the thesis has now looked into the first two aspects: (i) accessibility and (ii) feature matching. As an attempt to investigate the last theoretical question involving (iii) post-syntactic operations, the next chapter turns to the puzzles of peripheral agreement that arise from morphological factors.

Chapter 6

Post-syntactic operations

This chapter investigates the issues associated with peripheral agreement that result from post-syntactic operations. Previous chapters were dedicated to the microparameters giving rise to variability of peripheral agreement indexing various objects across different Algonquian languages. Regardless of which account is applicable, horizons, feature matching, or the Activity Condition, they are all dealing with mechanisms of the narrow syntax. However, some types of variation may not directly relate to syntax but may instead reflect morphology, since the morphological spell-out is not always rigidly an outcome of a syntactic operation but can reflect post-syntactic adjustments in a realizational model of morphology. Therefore, this chapter considers the post-syntactic operations that play a role in the patterning of peripheral agreement.

This chapter is structured as follows. Section 6.1 sketches important insights in the ground-breaking work of Distributed Morphology in Halle & Marantz (1993), which will be foundational to the rest of this chapter. Then, Section 6.2 concentrates on two problems that are closely connected with peripheral agreement. The first problem concerns the disappearance of peripheral agreement in languages like Southwestern Ojibwe when a plural subject is involved (described previously in Section 3.2). The second problem involves the absolute inflection of third-person forms, in which the realization of central agreement is missing the prefix. These two problems will be argued to result from a purely morphological phenomenon involving impoverishment. Next, Section 6.3 focuses on the correlation between the formative elements of the central suffix and the patterning of peripheral agreement. I propose that the formative elements are a result of contextual allomorphy (Halle & Marantz 1993; Bobaljik 2000) in which the realization of the central suffix (Infl) is dependent on the features of C.

6.1 Background: Distributed Morphology

This section introduces the points made by Halle & Marantz (1993) that are crucial for the subsequent sections. Halle & Marantz's paper is a foundational work of the theory of Distributed Morphology (DM). DM is a line of work building on the generative theory of syntax. The hallmark of DM is that is unifies syntax and morphology. This means that sentence structures and word structures are derived by the same syntactic operations. Concretely, Embick & Noyer (2007) show that every word can also be formed by syntactic operations like Merge and Move, and the morphological structure at PF thus embodies a syntactic structure. The central proposal of Halle & Marantz (1993) (as well as other prominent DM papers, e.g. Bonet 1991; Noyer 1992; Halle 1997; Embick & Noyer 2007) is that morphological structure is the interface between syntax and phonology (PF), as illustrated in (1). Put simply, DM claims that morphology is an intermediate stage in which post-syntactic adjustments may occur and ultimately affect the phonological forms.

(1)   Layout of the grammar (Embick & Noyer 2007:292)

        Syntactic Derivation

             |

          (Spell-Out)

          ⁄   ⁀

     | Morphology | LF

         |

        PF
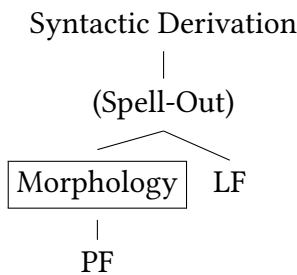
DM excels in providing explanations of mismatches between syntax and morphology. If isomorphism between PF and spell-out is missing (i.e. there lacks a clear one-to-one relationship between syntax and morphemes), it results from one of the operations that takes place in morphology (e.g. fission, fusion, impoverishment, etc.).

In their pioneering work, Halle & Marantz (hereafter H&M) argued that morphemes in the verb inflection in Algonquian correspond to functional heads in the syntax. They used the complex inflectional system from Potawatomi as one of their key empirical demonstrations. The basics of their syntactic analysis are essentially equivalent to the consensus in present-day analyses of the Algonquian system. As seen in the Potawatomi 2PL→3PL TA example in (2), the three agreement slots – theme sign (boxed), central agreement (underlined), and peripheral agreement (bolded) – are respectively identified by H&M as the functional nodes Agr_1, Agr_2, and Agr_3. Their insights are in line with the morphology-syntax mapping adopted in this thesis, in which the three morphological slots realize the functional heads Voice (Bruening 2005; Béjar & Rezac 2009; Ox-

ford 2014), Infl (Ritter & Wiltschko 2009, 2014; Coon & Bale 2014; Oxford 2014), and C (Branigan & MacKenzie 1999; Bliss 2013; Oxford 2017a; Hammerly 2020).

(2)   a.   Independent order (Halle & Marantz 1993:140)[1]

    k̲- wapm -‎$\boxed{a}$- -s·i   -m̲w̲a̲ -punin -**uk**
    2- see   -3.OBJ -NEG -2PL   -PRET   -3PL
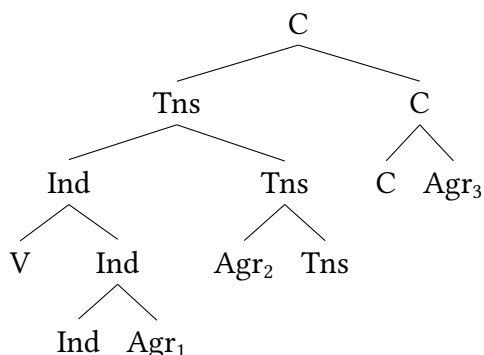   'You (PL) didn't see them (AN).'

    b.   Morpheme-syntax correspondence

(prefix)	V	theme sign	NEG	central	mode	**peripheral**
H&M: Cl		Agr$_1$		Agr$_2$		**Agr$_3$**
Now:		Voice		Infl		**C**

Because H&M's proposal was made before the advent of the contemporary probe-goal model, they have argued that these three Agr nodes are added in MS (morphological structure; i.e. post-syntactically after derivation) and adjoin to the appropriate functional head, as shown in (3). As just noted in the above, the syntactic structure of the independent order assumed by H&M basically resembles the structure widely acknowledged nowadays (e.g. Bruening 2005; Béjar & Rezac 2009; Oxford 2014; Coon & Bale 2014; Hammerly 2020). The syntactic nodes of "Ind" and "Tns" (Tense) are equivalent to Voice and Infl. H&M's proposed head Ind is ad hoc as it correctly matches the position of theme signs being between VP and NegP but has no identified semantics.[2] At the morphological level, Agr$_1$ adjoins to Ind, Agr$_2$ adjoins to Tns, and Agr3 adjoins to C. Each of these pairs of nodes is then fused as a single node prior to vocabulary insertion. Focusing on the analysis of peripheral agreement, H&M propose that Agr$_3$ adjoins to the functional head C and the Agr$_3$ node then agrees via concord with Agr$_1$ in features of animacy, number, and obviation.

---

[1] The glosses here are mine. In H&M's original glosses, the plural central suffixes were incorrectly segemented: *-m* was analyzed as '2PL' and *-wapunin* as 'PRETERITE'.

[2] In later developments, Voice not only accounts for the positioning of theme signs, but also offers the function of introducing the volitional external argument. See Section 4.1.2.

(3)   Inflected independent order verb at MS[3] (Halle & Marantz 1993:145)

```
                          C
                  _____|_____
                Tns               C
          _____|_____      ___|___
        Ind            Tns    C   Agr₃
      ___|___        ___|___
     V     Ind     Agr₂  Tns
         ___|___
       Ind   Agr₁
```

Although the overall structure is similar, I do not adopt the details of H&M's analysis of peripheral agreement. H&M posit that Agr_3 agrees in obviation and number with an argument that is also agreed with by Agr_1 in the position of Ind (Voice). Therefore, they propose a concord relation between Ind (Voice) and C. Counterevidence against such concord is that C-agreement takes place even when Ind (the theme sign, i.e. Voice) is absent. As illustrated by the Oji-Cree intransitive example in (4), the third-person animate argument is indexed by the peripheral suffix *-ak* despite the absence of a theme sign.

(4)   *nipaawak*   Oji-Cree
       nipaa -w -**ak**
       sleep -3 -**AN.PL**
       '**They** (AN) are sleeping.'

Therefore, C-agreement cannot be in a head-to-head concord relationship with Ind/Voice. Instead, I maintain the stance of treating peripheral agreement as a result of Agree between the probe on C and a DP, as determined by the mechanisms of accessibility and feature matching laid out in the previous two chapters.

Other than the crucial proposal connecting the morphemes to the syntactic nodes in Algonquian, H&M also made two other important claims that shed light on the realization of Algonquian peripheral agreement. The first claim is about IMPOVERISHMENT. H&M argued that impoverishment is crucially relevant for the plural subject interference seen in Potawatomi. (See Section 3.2 for discussion of this phenomenon in the languages surveyed in this thesis.) The second claim is about CONTEXTUAL ALLOMORPHY, in which the realization of one node is dependent upon properties of some other node. The following two sections build upon these two insights.

---

[3]I omit the functional head Neg for simplicity. In H&M's structure, Neg is projected above Ind and below Tns.

6.2   Impoverishment

This section discusses patterns that are associated with peripheral agreement and can be explained by impoverishment. The first pattern deals with the puzzle observed in several languages including SW Ojibwe and Menominee in which peripheral agreement is blocked in the presence of central agreement with a plural SAP (§6.2.1). The second pattern involves the realization of central agreement without a prefix, which happens in intransitive forms with a third person subject and absolute TA/TI forms with two third-person arguments (§6.2.2).

6.2.1   Interference of plural SAP subjects with peripheral agreement

This section extends H&M's analysis of the disruptive effect that certain vocabulary items have on peripheral agreement in Potawatomi to other Algonquian language varieties (Meskwaki, SW Ojibwe, Menominee, and Oji-Cree). The disappearance of peripheral suffixes in forms involving a plural subject is accounted for by impoverishment. The crucial observation in H&M (1993:154-157) is that the appearance of the vocabulary item -*mun* '1PL' in the central agreement slot blocks peripheral agreement. As illustrated for Potawatomi in (5), when the intended sentence is 'we see them', the AN.PL peripheral suffix -*uk* is forbidden, as shown in (5a). The grammatical form must omit the peripheral suffix when the 1PL central suffix -*mun* appears, as in (5b).

(5)   Potawatomi -*mun*: the blocking effect (Halle & Marantz 1993:155)

    a.   3PL peripheral suffix is blocked
        ˣn- wapm -a   -mun -**uk**
        1-   see   -3.OBJ -1PL -AN.PL
        Intended: 'We see them (AN).'

    b.   peripheral agreement must be suppressed
        n- wapm -a   -mun
        1- see   -3.OBJ -1PL
        'We see them (AN).'

The example in (6) shows that central suffixes indexing other plural arguments do not give rise to the same blocking effect. We see that the 2PL central suffix -*wa* does not suppress the expected 3PL peripheral suffix -*uk*.

(6)   Potawatomi 2PL -*wa* does not block peripheral agreement
    k- wapm -a   -wa -**k**
    2- see   -3.OBJ -2PL -AN.PL
    'You (PL) see them (AN).' (Halle & Marantz 1993:155)

It is worthwhile to point out that a different 1PL allomorph -*nan* (the n-ending form) is used when the grammatical role of the 1PL argument is the object. The Potawatomi 3PL→1PL form is illustrated in (7), in which peripheral agreement is not blocked when -*nan* suffix is employed.

(7)   Potawatomi 1PL -*nan* does not block peripheral agreement
        n- wapm -uk   -nan -**uk**
        1- see   -INV -1PL -AN.PL
        'They (AN) see us.' (Hockett 1948:142)

H&M explained that the difference between the two vocabulary items for 1PL Infl lies in the richness of the features expressed, which are provided in (8). The selection of vocabulary items for insertion follows the Subset Principle (cf. Section 1.2.4). As a result, the exponent -*nan* takes precedence over the exponent -*mun* due to its additional [ACC] feature. The vocabulary item -*mun* in (8b) occurs when 1PL Infl does not have the [ACC] feature – that is, when the 1PL argument that Infl agrees with is not an object.

(8)   Vocabulary items of Agr$_2$/Infl (Halle & Marantz 1993:151)

        a.   -*nan* ↔ [+1, +PL, +ACC]
        b.   -*mun* ↔ [+1, +PL]

H&M emphasize that it is not the phonological piece -*mun* that blocks peripheral agreement. Rather, it is the presence of a first-person plural *subject* on Agr$_2$, i.e. the central agreement (Infl), that leads to this suppression. The Potawotami example in (9) supports this claim. Here the 1PL argument is the object and the central suffix is realized as -*mun* rather than -*nan* for reasons that are specific to the preterite mode inflection that appears in this form. Despite the occurrence of -*mun*, the peripheral suffix is not suppressed. Peripheral agreement is thus not blocked by the -*mun* suffix itself, but rather by forms in which -*mun* expresses the person and number features of the subject.

(9)   Potawatomi: when -*mun* does not block peripheral agreement
        n- wapm -uk   -muna -punin -**uk**
        1- see   -INV -1PL   -PRET   -AN.PL
        '**They** (AN) saw us.' (Halle & Marantz 1993:156)

The above observation led H&M to propose that the effect of -*mun* on Agr$_3$, i.e. the peripheral agreement (C), is due to impoverishment, which is a systematic deletion of morphosyntactic features in the presence of other such features in the same morpheme or a governing morpheme (Halle & Marantz 1993:155). The impoverishment rule that they propose for the -*mun* forms is

shown in (10), which says that when Agr$_2$, i.e. the central agreement (Infl), has been valued with first-person plural nominative features, the features on Agr$_3$, i.e. the peripheral agreement (C), will be deleted, accordingly causing peripheral agreement to be absent from the verb inflection. The [NOM] feature is important and has to be included in this rule because it explains why there is no impoverishment in the inverse form in (9).

(10)   Impoverishment rule (Halle & Marantz 1993:155)

   Agr$_3$ $\rightarrow$ Ø / governed by   Agr$_2$

   |

   [+1]

   [+PL]

   [+NOM]

There exists another more recent DM analysis for Potawatomi -*mun*. Henze & Zimmermann (2010) argue that the features of both arguments have fused together as one head, and vocabulary insertion proceeds according to the hierarchy CASE > 1 > 2 > 3. Henze & Zimmermann propose that -*mun* is a "collateral feature discharge" (CFD) marker, a type of vocabulary item which is able to discharge all features remaining on the head and therefore make any further insertion impossible. The gist of this proposal, in terms of capturing the blocking effect, is that all features become unavailable after the insertion of -*mun*.

Henze & Zimmermann's proposal is not adopted in this thesis because it makes inaccurate predictions in Potawatomi and faces challenges from cross-linguistic data. One obvious counterargument against their analysis comes from (9), in which the preterite suffix -*punin* and the peripheral suffix -*uk* are inserted and are not blocked, contrary to Henze & Zimmermann's prediction if -*mun* was a CFD marker. Furthermore, their proposal also faces problems when it comes to the cross-linguistic blocking phenomenon. In particular, in Menominee, we will see that the blocking effect not only arises in the use of the 1PL central suffix -*mun*, but also in use of 2PL -*mwa·w*. We cannot assume that these two plural m-endings are CFD markers for Menominee because the blocking effect is restricted to TI inflection and does not take place in the environment of TA inflection.

H&M's impoverishment rule is useful in understanding the cross-linguistic phenomenon of peripheral agreement suppression when the 1PL m-suffix is involved. The crosslinguistic variation indicates that the impoverishment rule applies slightly differently in different languages. In what follows, I modify the impoverishment rule in (10) to account for four Algonquian language varieties: Meskwaki, SW Ojibwe, Menominee, and Oji-Cree. As in Potawatomi, the blocking effect on peripheral agreement in these languages is analyzed as the result of impoverishment in

which the features of C are deleted when Infl contains certain features. This deletion explains why vocabulary insertion for C cannot take place in these contexts.

In Meskwaki, peripheral agreement disappears in contexts similar to those found in Potawatomi, but the interference with peripheral agreement comes not just from the 1PL m-ending central suffix *-pena* (PA *-hmena·n*), as in (11a), but also the 2PL m-ending central suffix *-pwa* (PA *-hmwa·*), as in (11b).

(11) Meskwaki: peripheral agreement is blocked

    a. *newa·pama·pena*   1PL subject
        ne- wa·pam -a·   -pena
        1-   see   -3.OBJ -1PL
        'We see **him/them** (AN).' (Goddard 1994a:190)

    b. *newa·pama·pwa*   2PL subject
        ke- wa·pam -a·   -pwa
        2-   see   -3.OBJ -2PL
        'You (PL) see **him/them** (AN).' (Goddard 1994a:190)

The interference of the plural SAP subject with peripheral agreement in Meskwaki can be easily handled by H&M's proposal with the revision shown in (12): the [+1] feature of the previous rule in (11) should be changed to [PART], which will result in the impoverishment of C when either *-pena* '1PL' or *-pwa* '2PL' is inserted.

(12) Impoverishment rule in Meskwaki

    C → Ø /   Infl
                     |
             [PART]
             [+PL]
            [+NOM]

In SW Ojibwe, as in Potawatomi, the 1PL central m-suffix *-min* blocks peripheral agreement. However, while the Potawatomi examples were TA verbs, the blocking effect arises only with TI verbs in SW Ojibwe. As shown in (13), peripheral agreement is not allowed the in SW Ojibwe TI form with a 1PL subject in (13a), whereas the IN.PL peripheral suffix *-an* is allowed in the TI form with a 2PL subject in (13b).

(13) SW Ojibwe: 1PL -*min* blocks peripheral agreement

    a.   *niwaapantaamin*   1PL
        ni- waapant -aa   -min
        1- see   -0.OBJ -1PL
        'We see it/them (IN).' (Nichols 1980:282)

    b.   *kiwaapantaanaawaan*   2PL
        ki- waapant -aa   -naawaa -**an**
        2- see   -0.OBJ -2PL   **-IN.PL**
        'You (PL) see **them** (IN).' (Nichols 1980:282)

SW Ojibwe and Potawatomi are similar in terms of the 1PL central suffix -*mun* disrupting the pattern of peripheral agreement. There are three major differences between these two languages. First, as mentioned, the affected verb class is not the same. Peripheral agreement is not blocked in SW Ojibwe TA verbs. In the TA 1PL→3PL example in (14a), the peripheral suffix -*ik* 'AN.PL' is allowed. The suppression of peripheral agreement is limited to forms with inanimate arguments such as the TI form in (13a). For contrast, the Potawatomi TA 1PL→3PL example is repeated in (14b), in which the peripheral suffix is suppressed.

(14) Difference 1: Verb class

    a.   SW Ojibwe: peripheral agreement allowed
        ni- waapam -aa   -naan -**ik**
        1- see   -3.OBJ -1PL   -AN.PL
        'We see **them** (AN).' (Nichols 1980:289)

    b.   Potawatomi: peripheral agreement disallowed
        n- wapm -a   -mun
         1- see   -3.OBJ -1PL
        'We see them (AN).' (Halle & Marantz 1993:155)

Second, grammatical roles do not affect the pattern of peripheral agreement in SW Ojibwe but do in Potawatomi. In contrast to the Potawatomi inverse form shown previously in (9), peripheral agreement is blocked in SW Ojibwe when the verb involves the inverse marker. The inanimate subject form is shown in (15a), with the inanimate subject acting on the 1PL object. Crucially, the inanimate subject form shares an identical pattern with the TI form in disallowing the peripheral suffix. On the contrary, the inverse inflection behaves differently in use of peripheral agreement in Potawatomi. In contrast to the TA direct form shown in (14b), peripheral agreement is no longer blocked in the TA inverse form in the Potawatomi inverse form in (15b).

(15)   Difference 2: Grammatical role

    a.   SW Ojibwe: peripheral agreement disallowed
        ni- waapam -iko -min
        1- see   -INV -1PL
        'They/It see us.' (Nichols 1980:293)

    b.   Potawatomi: peripheral agreement allowed
        n- wapm -uk   -nan -**uk**
        1- see   -INV -1PL -AN.PL
        'They (AN) see us.' (Hockett 1948:142)

Third, the blocking effect seems to be subject to an adjacency constraint in SW Ojibwe. Unlike the indicative form in (13a), when the verb has preterite inflection, as in (16a), peripheral agreement is no longer blocked. Potawatomi, on the other hand, maintains the blocking effect in preterite forms, as shown in (16b), which lacks a peripheral suffix.

(16)   Difference 3: Preterite mode

    a.   SW Ojibwe: peripheral agreement allowed
        ni- waapant -aa   -minaa -pan -**en**
        1- see   -0.OBJ -1PL   -PRET -IN.PL
        'We saw them (IN).' (Nichols 1980:284)

    b.   Potawatomi: peripheral agreement disallowed
        n- wapm -a   -mna -pun
        1- see   -3.OBJ -1PL -PRET
        'We saw them (AN).' (Hockett 1948:142)

Based on these three differences, the impoverishment rule for SW Ojibwe 1PL forms needs to consider three aspects: the third-person DP must be inanimate; grammatical roles do not affect peripheral agreement; and there cannot be any functional heads, such as the preterite (the Mood head), disrupting the adjacency between Infl and C. These observations are captured by the impoverishment rule in (17). To capture SW Ojibwe's sensitivity to animacy, I modify H&M's rule, specifying that C is subject to feature deletion on the condition that the probe copies the features from the inanimate argument (i.e. [-anim]).[4] Furthermore, the environment, which is on the right-hand side of this rule, ensures that deletion only happens when Infl is adjacent to C, i.e. when Infl and C are joined directly together as part of a complex head.

---

[4]I follow the same notation used in H&M, using the binary features for coherence. The animacy contrast can be also captured by [±pers].

(17)   Impoverishment rule in SW Ojibwe

        C   →   Ø /   [$_C$ Infl C]
        | |
     [-anim]   [+1]
                               [+PL]

Menominee shows a similar blocking phenomenon with plural subjects. In Menominee TI verbs, peripheral agreement is blocked when the subject is first- or second-person plural. The Menominee TI SAP examples are shown in (18), indicating that the interference of the plural subject in Menominee not only comes from a first person, as in (18a), but also a second person, as in (18b). Note that the two exponents of central agreement share the same m-formative.

(18)   Menominee: Plural SAP subject blocks peripheral agreement

    a.   *nepo·nɛ·menaw*   1PL
          ne- po·n   -ɛ·   -menaw
          1- put.in.pot -0.OBJ -1PL
          'We put it/them (IN) in the pot.' (Bloomfield 1962:159)

    b.   *kepo·nɛ·muaw*   2PL
          ke- po·n   -ɛ·   -mwa·w
          2- put.in.pot -0.OBJ -2PL
          'You (PL) put it/them (IN) in the pot.' (Bloomfield 1962:159)

The impoverishment rule is shown in (19): the person features on Infl are specified as [PART] to capture the occurrence of blocking with both first- and second-person arguments.

(19)   Impoverishment rule in Menominee

        C   →   Ø /   Infl
        | |
     [-anim]   [+PART]
                          [+PL]

Finally, let us turn to Oji-Cree, which drops peripheral agreement when the subject is plural regardless of its person. The Oji-Cree examples in (20) illustrate that peripheral agreement is absent when the plural subject is first person as in (20a), second person as in (20b), or third person as in (20c). These examples involve inanimate objects, but bear in mind that peripheral agreement is also absent when a plural subject acts on an animate object.

(20) Oji-Cree: plural subject blocks peripheral agreement

    a.   *niwaapantaamin*   1PL subject
        ni- waapant -aa   -min
        1- see   -0.OBJ -1PL
        'We see it/them (IN).'

    b.   *kiwaapataanaawaa*   2PL subject
        ki- waapant -aa   -naawaa
        2- see   -0.OBJ -2PL
        'You (PL) see it/them (IN).'

    c.   *owaapataanaawaa*   3PL subject
        o- waapant -aa   -naawaa
        3- see   -0.OBJ -3PL
        'They see it/them (IN).'

To account for the Oji-Cree pattern, we can posit the deletion rule in (21): C is impoverished as long as Infl contains the [PL] feature, with person features playing no role. In this way, C cannot proceed for vocabulary insertion whenever Infl has been valued by a plural argument.

(21) Impoverishment rule in Oji-Cree

$$\text{C} \quad \rightarrow \quad \emptyset \; / \quad \text{Infl}$$
$$|$$
$$[+\text{PL}]$$

In summary, this subsection followed Halle & Marantz's (1993) proposal to attribute the disappearance of peripheral agreement in the context of a plural subject to the post-syntactic adjustment of impoverishment. The blocking effect observed in Potawatomi, Meskwaki, SW Ojibwe, Menominee, and Oji-Cree reflects various versions of a feature-deletion rule that erases the morphosyntactic features of C, making it impossible for vocabulary items to to be inserted, when certain person and number features are specified on Infl.

6.2.2 Central agreement without the prefix

This subsection deals with another instance of impoverishment. I argue that forms in which the central agreement lacks a person prefix have an analysis similar to that of the Spanish "spurious *se*" effect (Bonet 1991, 1995; Halle & Marantz 1994; Nevins 2011). The relevant impoverishment rule involves a particular type of configuration: when two adjacent functional heads agree with the same argument, the features of the lower head will be deleted.

As some background, the Spanish the third-person accusative clitic is *lo* and the third-person dative clitic is *le* (see examples in Section 1.2.4). The central observation that motivated the impoverishment analysis is that these two clitics cannot co-occur. Neither the combination of [✗]*lo le* nor that of [✗]*le lo* is allowed. Rather, as exemplified in (22), only the sequence of *se lo* is permitted with the unexpected occurrence of the clitic *se*.

(22) Co-occurrence of two third person clitics: *se lo*
A Pedro, el premio, **se lo** dieron
to Pedro the prize SE 3.ACC give.3PL
'They gave the prize to Pedro.' (Bonet 1995:608)

The second clitic, *lo*, is well expected as it expresses the theme (accusative). The first clitic, *se*, is surprising. In Bonet's analysis, *se* is the default/underspecified form in the Spanish clitic system because it is also used in other contexts, more broadly than just ditransitives (reflexive clauses, certain anti-causatives, and a number of other contexts). Nevins (2007) argued that the "spurious *se*" is rooted in a constraint prohibiting the adjacent occurrence of two identical person features, which is why the *le lo* cluster is disallowed. The violation can be repaired by deleting the person features of the first clitic. Since the third-person clitic then cannot be inserted, as a remedy, the underspecified form *se* is used.

The type of impoverishment that derives the spurious *se* effect can also handle the disappearance of person prefixes in Algonquian. As background, first consider forms in which Infl is spelled out as a prefix-suffix combination. In the Unami Delaware TA objective examples in (23), Infl-agreement (underlined) is manifested by a prefix that discharges the person feature (*nǝ-* for 1 and *wǝ-* for 3) and a central suffix that discharges the number feature (*-w* for 1SG and *-wǝwa·w* for 3PL).

(23) Prefixal Spell-out in Infl

    a. *nǝmi·lá·ɔk*
       <u>nǝ</u>- mi·l -a· -<u>w</u> -**ak**
       1- give.to -3.OBJ -1SG -AN.PL
       'I give to them.' (Unami, Goddard 1979:171)

    b. *mwi·la·wwá·ɔ*
       <u>w</u>- mi·l -a· -<u>wǝwa·w</u> -**al**
       3- give.to -3.OBJ -3PL -OBV
       'They give to him/them (obviative).' (Unami, Goddard 1979:171)

However, for intransitive verbs, there is a context in which the person prefix disappears in almost all Algonquain languages. In (24a), the first-person AI inflection shows the same pattern at that

in (23a), with the person feature and number feature respectively realized by the prefix and the central suffix. However, the third-person AI inflection in (24b) is quite different, as no prefix is present and the central suffix does not express number, which is instead indicated by the peripheral suffix. In such "disappearing prefix" forms, the central suffix is always realized as -*w̃*, as in (24b).

(24) Suffixal spell-out in Infl

    a. *nkəntkáhəna*
        <u>nə</u>- kəntka· -<u>hməna·</u>
        1- dance -1PL
        'We dance.' (Unami, Goddard 1979:167)

    b. *kəntké·yɔk*
        kəntka· -<u>w̃</u> -**ak**
        dance -3 -**AN.PL**
        '**They** dance.' (Unami, Goddard 1979:167)

I argue that the suffixal spell-out of Infl in such forms has a derivation similar to that proposed by Nevins (2007) for the Spanish spurious *se* effect. When Infl and C agree with the same DP, the features of the lower head on Infl are impoverished, thus preventing the usual prefix-suffix realization of Infl and leading to the insertion of the umlauting -*w̃* as the default vocabulary item (Oxford 2017a:716). This analysis is reminiscent of Oxford's (2017b) analysis of the Algonquian inverse marker, except that the analysis of the inverse marker applies to Voice and Infl whereas the analysis of -*w̃* applies to Infl and C. As a recap, an inverse example is illustrated in (25a). The premise of Oxford's analysis is that Voice always agrees with the object while Infl seeks out [*u*Part, *u*Pers] features. In the form in (25), Voice targets the 1PL object and Infl also targets the 1PL object as it contains richer person features. As schematized in (25b), the adjacent heads, Voice and Infl, copy the features of the same DP, resulting in the person feature of the lower head, Voice, being deleted.

(25) Voice is impoverished, -*iko* as an elsewhere form

    a. *niwaapamikomin*
        ni- waapam -iko -min
        1- see   -INV -1PL
        'They/It see us.' (SW Ojibwe, Nichols 1980:293)

b.   Voice and Infl targets the same argument, person feature is deleted on Voice

Infl   Voice   DP[0PL]   DP[1PL]
[1PL]   [1PL]
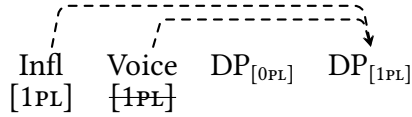
When Voice loses its features, as summarized in (26), the inverse marker *-iko* (PA *-ekw*) is inserted as an elsewhere form.

(26)   a.   Voice normally indexes the object (*-i* 1, *-eθ* 2, *-a·* 3).

      b.   When Infl targets the object, Voice is realized as the inverse marker *-ekw*.

I propose that the same sort of analysis can be given for cases in which third-person Infl-agreement is realized suffixally. As schematized in (27b), Infl targets the 3PL argument and copies its person feature. When C starts searching for [*u*Def], the 3PL DP contains the matching feature and is therefore agreed with. Since Infl and C have both agreed with the same 3PL DP, the features of this DP are erased from the lower head Infl, and consequently, the central agreement cannot be spelled as the usual prefix-suffix combination (*w-…-wəwa·w*). Analogical to spurious *se*, the umlauting central suffix *-ẅ* occurs as an elsewhere realization of Infl when the features of Infl have been impoverished under identity with those of C, just as the inverse marker *-ekw* is the elsewhere realization of Voice when the features of Voice have been impoverished under identity with those of Infl (Oxford 2020).

(27)   Infl is impoverished, *-ẅ* as an elsewhere form

      a.   *kəntké·yɔk*
         kəntka· -ẅ **-ak**
         dance   -3   -AN.PL
         'They dance.' (Unami, Goddard 1979:167)

      b.   Infl and C targets the same argument, person feature is deleted on Infl

C   Infl   DP[3PL]
[3PL]   [3PL]
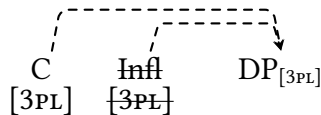
As for why the central agreement in *nkəntkáhəna* 'we dance' is not affected by impoverishment, it is because C never targets SAP arguments. The 1PL DP is thus only targeted once, by Infl. Therefore, Infl does not undergo impoverishment and can be realized by full-fledged prefix-suffix morphology.

To conclude, this section has adapted Nevins's (2007) analysis on the "spurious *se*" effect, attributing the suffixal exponence of Infl (missing a prefix) in certain third-person forms to impoverishment: when the two adjacent functional heads agree with the same DP, the features of the lower head are deleted and an underspecified vocabulary item is inserted. This explains why the central agreement (Infl), which is ordinarily realized as a prefix-suffix combination, is replaced by the suffix *-ẅ* whenever the peripheral agreement (C) indexes the argument that central agreement would normally be expected to index (i.e. the highest-ranked argument). This particular type of feature deletion explains two cases of agreement morphology that appear unexpectedly: the inverse marker **-ekw* as the elsewhere form when Voice is impoverished, and the umlauting third person central suffix **-ẅ* as the elsewhere form when Infl is impoverished.

6.3 Formatives as contextual allomorphy

This section turns to the correlation between central agreement and peripheral agreement. Section 2.3 introduced three sets of central endings (Goddard 1979) characterized by the formative element contained in them. The dependency of central endings on peripheral agreement is illustrated in Table 6.1. The m-endings, containing the formative **-ehm*, are used in AI as well as TA/TI absolute inflection when peripheral agreement is missing. The w-endings, containing the formative **-w*, are used in TA objective inflection when peripheral agreement indexes an animate primary object (or inverse subject). The n-endings, containing the formative **-ene·*, are used when peripheral agreement indexes the inanimate primary object of a TI verb, the inanimate subject of a TA inverse form, or the secondary object of an AI+O or TA+O verb.

Table 6.1: Formatives, distribution and correlation with peripheral agreement

Formative	Distribution	Peripheral agreement indexes
*-ehm	AI, absolute TA/TI	peripheral agreement absent
*-w	objective TA	lower-ranked animate primary argument
*-ene·	objective TI, ɪɴ actor, AI+O, TA+O	inanimate argument or secondary object

The analysis of the formative elements has been controversial: Algonquianists do not agree on their meanings and functions. Descriptively, Goddard (2007:251) treats them as an essential part of central agreement, reflecting traces of the diachronic origin of independent verb forms as nominalizations. Pentland (1999:239-242) has regarded **-ehm* as a "filler" without syntactic functions, **-w* as marking the higher-ranked argument, and **-ene·* as marking the lowest-ranked argument. Theoretical research on the analysis of the formatives is lacking. Bruening & Rackowski (2001) have argued for Wampanoag (Eastern Algonquian) that formatives spell out the Def head, which later adjoins to the functional head that is responsible for central agreement. The

spell-out rule that they propose for each formative element is given in (28), in which [+NACC] is a cover term for an NP that has either abstract nominative case (the subject) or abstract accusative case (the object).[5]

(28) Vocabulary insertion of Def (Bruening & Rackowski 2001:76)
  a. *-w* ⇔ [+specific, +animate, +NACC]
  b. *-unâ* ⇔ [+specific]
  c. *-m* ⇔ *elsewhere*

Vocabulary insertion in (28) proceeds following the Subset Principle (see Section 1.2.3). As the most specified vocabulary item, *-w* will be exponed when the object/subject NP is specific and animate. Then *-unâ* is the next most specified vocabulary item and will be exponed when the NP is specific but either not animate or not [+NACC], which covers secondary objects and obliques. Lastly, *-m* is the elsewhere vocabulary item, which will be inserted when the NP does not meet either of the contexts of the other two vocabulary items or when there is no NP at all.

Bruening & Rackowski's proposal captures the dependency of the formative elements on the argument indexed by peripheral agreement. However, three minor problems exist. First, the specification of [+NACC] is an ad hoc feature that is created to include the scenarios in which peripheral agreement may index the primary object of TA/TI objective forms or the obviative subject of a TA inverse form. This [+NACC] feature is not universally motivated. Second, Bruening & Rackowski's analysis was based on the syntactic structure proposed for Potawatomi in Halle & Marantz (1993), but the analysis of Algonquian clause structure has advanced in the subsequent decades. Third, the analysis does not generalize beyond Wampanoag and the Eastern languages that no longer preserve the absolute-objective contrast. I will propose an analysis that builds on Bruening & Rackowski and Halle & Marantz's insights, updating the framework and broadening it to apply across the family.

Concretely, I follow Bobaljik (2000) in arguing for an outward sensitivity of allomorphy: the allomorphs of the central endings are conditioned by the peripheral suffix, not vice versa. In the remainder of this section, I first present some background on contextual allomorphy (§6.3.1). Then, in presenting the analysis, I divide the patterns of allomorphy into two types represented by three language groups: three-way allomorphy in the Eastern Algonquian languages that maintain the absolute-objective contrast, e.g. Massachusett and Unami Delaware (§6.3.2), and two-way allomorphy in Plains Cree and Kickapoo (§6.3.3).

---

[5]The motivation of using [+NACC] is to identify the canonical grammatical roles of subjects and objects, excluding secondary objects or obliques since the latter two trigger the n-formative.

6.3.1 Background: Contextual allomorphy

This section gives a brief introduction to CONTEXTUAL ALLOMORPHY that shows outward sensitivity as proposed in Bobaljik (2000). The insertion of a vocabulary item that shows a dependency on its morphosyntactic context is not a rare phenomenon. Bobaljik (2000) discusses two instances of contextual allomorphy in the verbal agreement of Itelmen (a Chukotko-Kamchatkan language). The verb template for Chukotko-Kamchatkan is shown in (29), in which the prefix agreement indexes the subject and the suffix agreement can index the object of a transitive verb or the subject of an intransitive verb.

(29)   Template for Chukotko-Kamchatkan verbs (Bobaljik 2000:5)
        AGREEMENT-   (TAM-)<u>verb stem</u>(-TAM)   **-AGREEMENT**
        Subject   Subject/Object

The Itelmen agreement inflection in (30) suggests contextual allomorphy in that the bolded agreement suffix shows sensitivity to features of the prefix agreement but not vice versa. This crucial observation is made because the prefix morpheme for the first person is invariant as *t-* no matter the properties of the suffix. In contrast, the suffix agreement is dependent on features canonically expressed by the prefix: if the prefix expresses features of an A (subject of a transitive), the suffix agrees with the object as *-(ɣ)in*, as in (30a), but if the prefix expresses features of an S (subject of an intransitive), the suffix then agrees with the subject as *-k(ičen)*, as in (30b).

(30)   Itelmen: agreement suffix is sensitive to agreement prefix, not vice versa (Bobaljik 2000:5)

   a.   Transitive verb
        t'-   əlčqu -**(ɣ)in**
        1SG.S- see   -2SG.O
        'I saw you.'

   b.   Intransitive verb
        t-   k'oɬ -**k(ičen)**
        1SG.S- see   -1SG.S
        'I came.'

The second instance of contextual allomorphy concerns the Class II marker, an inflectional morpheme that occurs between the present tense morpheme and the agreement suffix. Class II markers demonstrate rich allomorphy and the shape of the Class II marker is sensitive to the person and number features of the adjacent agreement suffix. As exemplified in (31a), *-ki* is inserted in the environment of the suffix expressing features of a first-person subject and a third-

person plural object. On the other hand, *-čŋ* is inserted in the environment of the suffix indicating features of a second-person subject and a third-person singular object.

(31)   Itelmen: Class II morpheme is sensitive to agreement suffix (Bobaljik 2000:9)

    a.   1→3PL
        t-   tɸ   -s   **-ki** -čeʔn   (č'eβuzlaχ -aʔn kɬčl   -eʔn)
        1SG.S- bring -PRES -II -1>3PL.O (tasty   -PL rotten.heads -PL)
        'I'm bringing tasty rottem (mouse) heads.'

    b.   2→3SG
        tɸ   -s   **-čŋ** -in   (əŋqa)?
        bring -PRES -II -2SG>3SG.O (what)
        'What are you bringing?'

Bobaljik pointed out that both of the above cases of allomorphy show outwards-sensitivity. As represented in (32), the suffix is sensitive to features of the prefix, and the Class II marker is sensitive to features of the prefix and suffix. The table beside the hierarchical structure summarizes that allomorphy of C can be conditioned by B and A, which are both higher; allomorphy of B can be conditioned by A, which is higher (but not C which is lower); and allomorphy of A cannot be conditioned by either C or B as they are both lower. In both allomorphy scenarios, the exponed morpheme is dependent on the properties of the elements that are situated higher in the syntactic hierarchy.

(32)   Hierarchical structure (Bobaljik 2000:10)
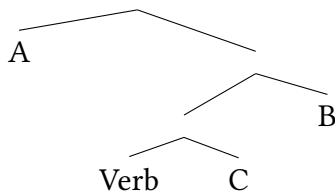
Position	Exponent of	Conditioned by
A Pref-	SUBJ-AGR	—
B -Suf.Agr	OBJ-AGR	A
C -Suf.Class	CLASS II	A and B

This outward sensitivity is proposed to reflect the cyclicity of vocabulary insertion, which is taken to begin with the root and proceed outward. Bobaljik (2000:3) follows the framework of DM and assumes that morphosyntactic features are expressed by vocabulary items. Once these features are spelled out, they are no longer a part of the morphosyntactic representation. More concretely, when a vocabulary item is inserted in C, the structural representation of A and B is still present. But after the vocabulary item is inserted in C, the morphosyntactic representation of C is gone. Therefore, when we proceed to spell out B, there are no C features left that could condition it. Therefore, contextual allomorphy cannot be inward-sensitive but must be outward.

6.3.2 Three-way allomorphy: Eastern Algonquian

This section gives the analysis of the Eastern Algonquain central endings, which show a three-way allomorphy. The conditioning of the Eastern Algonquian central endings will confirm the directionality of contextual allomorphy being outward.

Using Unami Delaware examples for an illustration, the central suffix (Infl) can be drawn from one of the three sets: the m-endings, the w-endings, and the n-endings (Goddard 1979, 2007). The sets are distinguished by the formative element appearing at the beginning of the central suffix. In the examples in (33), the shape of the 1PL central suffix is correlated with the patterning of peripheral agreement. Following the description in Table 6.1 above, in the TA absolute example in (33a), the m-ending -*hməna·* is used and peripheral agreement is missing. In the TA objective example in (33b), the w-ending -*wəna·n* is used and peripheral agreement indexes the lower-ranked primary argument: the animate third-person. Lastly, in the TI objective example in (33c), the n-ending -*əne·na·n* is used and peripheral agreement indexes the inanimate primary object.

(33) Unami Delaware: 1PL allomorphs

    a. *nno·t·əmáhəna*   TA absolute
<u>nə</u>- no·təm -a·   <u>-hməna·</u>
1- guard -3.OBJ -1PL
'We guard (a person/people).' (Goddard 2021:64)

    b. *nno·t·əma·wəná·nak*   TA objective
<u>nə</u>- no·təm -a·   <u>-wəna·n</u> **-a·k**
1- guard -3.OBJ -1PL   -AN.PL
'We guard **them**.' (Goddard 2021:64)

    c. *nəmaxkaməne·ná·ni né·l ahə́sna*   TI objective
<u>nə</u>- maxk -am   <u>-əne·na·n</u> **-i·l**   ne·l ahəsn -al
1- find -0.OBJ -1PL   -IN.PL   DEM stone -IN.PL
'We found **the stones**.' (Goddard 2021:70)

The allomorphy of central agreement (Infl) shows an outward sensitivity to the peripheral suffix (C). Similar outward sensitivity is also observed in the other two adjacent heads, Voice and Infl (see Oxford & Xu 2020 for an illustration of the sensitivity of Voice to features of Infl in the conjunct order). One may question whether the allomorphy of Infl could instead be triggered by Voice (the theme sign), but this alternative is not viable. In the Massachusett examples in (34), both verbs show the same theme sign -*ô* indexing the animate third-person (primary object in (34a) and goal in (34b)), but the allomorph of the central ending still differs: (34a) uses the w-formative and (34b) uses the n-formative. Importantly, the argument indexed by peripheral agreement differs in the two verbs: -*ak* in (34a) indexes the primary animate object while -*ash*

in (34b) indexes the secondary (inanimate) object. These examples conclusively show that the conditioning of the central suffix allomorphs must be dependent on the features of peripheral agreement on C.

(34)   Central suffix allomorphy is outward-insensitive

    a.   *n8wadchanoinonog*   w-formative

        <u>nu</u>- wadchan -ô   -<u>wunôn</u> -**ak**

        1-   keep   -3.OBJ -1PL   -AN.PL

        'We keep **them** (AN).' (Goddard & Bragdon 1988:519)

    b.   *nuttinnamawananouash*   N-formative

        <u>nut</u>- inamaw -ô   -<u>unánôn</u> -**ash**

        1-   give   -3.OBJ -1PL   -IN.PL

        'We give **them** (IN) to him.' (Goddard & Bragdon 1988:532)

Although the n-formative often co-occurs with inanimate peripheral agreement, it can co-occur with animate peripheral agreement as well. I repeat the Eastern Algonquian examples demonstrating the prevalent occurrences of the n-formative, previously described in §2.3.2. The Unami Delaware examples in (35) illustrate that the n-formative is clearly not tied to inanimates as it also occurs in certain contexts in which peripheral agreement indexes an animate argument: the secondary object of the AI+O verb in (35a) and the secondary object of the TA+O verb as in (35b).

(35)   N-formatives: animate secondary object

    a.   *nəwaní·na·k*   AI+O

        nə- wani· -<u>n</u>   -**a·k**

        1-   forget -1SG -AN.SG

        'I forgot **them** (AN).' (Goddard 2021:71)

    b.   *nəmi·lá·na*   TA+O

        nə- mi·l -a·   -<u>n</u>   -**al**

        1-   give -3.OBJ -1SG -OBV

        'I give **her/him/them** (OBV) to her/him//them (AN).' (Goddard 1979:159)

What's more, the Eastern Algonquian examples in (36) provide further support that the n-formative is not conditioned by animacy because a variety of constituents indexed by peripheral agreement are accompanied by the appearance of the n-formative. These constituents, the PP-like oblique as in (36a), the CP clause as in (36b), and the AdvP adjunct as in (36d), do not distinguish grammatical gender.

(36) N-formatives: the argument is irrelevent to animacy

    a.   *pɔ́k·ama·n*   Oblique

<u>wə</u>- pakam -a·   -<u>n</u> -Ø
3-   strike -3.OBJ -3SG -IN.SG
'He struck him **with it**.' (Unami, Goddard 2020:106)

    b.   *kəmac notəmeyakon ahtəli-metsəyayin*   Clausal complement

kəmac <u>n</u>- otəmeya -əko -<u>n</u> -Ø   ahtəli-   metsəya -yin
very   1- annoy   -INV -1SG -IN.SG repeatedly- arrive.late -2SG/CONJ
'**Your repeatedly arriving late** annoys me very much.' (Maliseet-Passamaquoddy,
Sherwood 1983:124)

    c.   *ktaləwa·p·ensí·nak kíči-xkwé·ɔk*   Adjunct

<u>kət</u>- aləwa·p·ens·   -<u>n</u> -**ak**   kə- íči-   axkwe·w -ak
2-   be.more.blessed -1SG -AN.PL 2- fellow- woman -AN.PL
'You (SG) are more blessed **than your fellow women**.' (Unami, Goddard 2020:105)

Building on the above observations, a complete summary of the allomorphs of the central endings is given in Table 6.2. The m-formative is used when peripheral agreement is missing. The w-formative is used when C agrees with a third-person animate primary argument (either the primary object in a direct form or the subject in an inverse form). Lastly, the n-formative has the widest distribution. Given the range of elements with which it co-occurs, the last column states "anything else", indicating that it has no relation to animacy.

Table 6.2: Formatives in Eastern Algonquian

Term	Distribution	Peripheral agrees with
M-formative	AI, TA/TI absolute	no peripheral agreement
w-formative	TA objective	3rd animate primary object
N-formative	TI objective, TA+O, AI+O TA inanimate actor forms	anything else

To account for the distribution of the formatives, I follow the insight of a contextual allomorphy analysis (Halle & Marantz 1993; Bobaljik 2000), arguing that the spell-out of Infl is conditioned by the features of the neighboring head C. The conditioning of the formative elements is summarized in Table 6.3. The vocabulary insertion in the table are ordered by the Subset Principle (see the explanation in Section 1.2.4): vocabulary insertion takes place only when the syntactic terminal contains the features described in the spell-out rule, and the item matching the greatest number of features specified in the terminal morpheme takes priority.

I propose that in a language with the absolute-objective contrast such as Unami Delaware, the w-suffix allomorphs of Infl are inserted when C has the features [Def] and [Pers]; that is, when

C has agreed with a definite DP in a "person-ful" way, which limits the candidate arguments to primary animate arguments. The assumption is that, when C agrees with a primary object or a subject, it copies the [Person] feature. Taken together, the morphosyntactic features [Def, Pers] will ensure that the w-endings appear only when C agrees with definite animate primary arguments (i.e. the TA objective inflection). The ɴ-formative is inserted when C has agrees for the feature [Def] but not for [Pers]. This means that C has agreed with a DP in a "non-person-ful" way, which will happen for inanimate subjects and primary objects since inanimates lack a [Pers] feature, and also for secondary objects regardless of gender, since they are too distant from C to be agreed with for person (according to the SCOPA, discussed further below). Lastly, the ᴍ-formative is inserted in the context in which C has not agreed with a DP at all (e.g. AI and TA/TI absolute inflection).

Table 6.3: Contextual conditioning of formatives in Eastern Algonquian

Allomorph	in the context of C
w-formative	[Def, Pers]
n-formative	[Def]
m-formative	no agreement

To show how this analysis applies, let us return to the Unami Delaware examples from (33), repeated in (37). Each example shows a different allomorph of the 1ᴘʟ central endings: *-hməna·* in (37a) using the m-formative, *-wəna·n* in (37b) using the w-formative, and *-əne·na·n* in (37c) using the n-formative.

(37) Unami Delaware: 1ᴘʟ allomorphs

a. *nno·t·əmáhəna*   TA absolute
    <u>nə</u>- no·təm -a· <u>-hməna·</u>
    1- guard   -3.ᴏʙᴊ -1ᴘʟ
    'We guard (a person/people).' (Goddard 2021:64)

b. *nno·t·əma·wəná·nak*   TA objective
    <u>nə</u>- no·təm -a· <u>-wəna·n</u> **-a·k**
    1- guard   -3.ᴏʙᴊ -1ᴘʟ   -ᴀɴ.ᴘʟ
    'We guard **them**.' (Goddard 2021:64)

c. *nəmaxkaməne·ná·ni né·l ahə́sna*   TI objective
    <u>nə</u>- maxk -am -əne·na·n **-i·l** ne·l ahəsn -al
    1- find   -0.ᴏʙᴊ -1ᴘʟ   -ɪɴ.ᴘʟ ᴅᴇᴍ stone -ɪɴ.ᴘʟ
    'We found **the stones**.' (Goddard 2021:70)

The vocabulary items for each 1ᴘʟ suffix are stated in (38). The m-ending *-hməna·* in (37a) is inserted because there are no arguments agreed with by C, given that both arguments fail to

satisfy the feature of the Unami Delaware probe: C seeks [*u*Def], but neither the SAP or the indefinite primary object has this feature. I use the notation [*u*ɸ] here to indicate that C has not agreed and still has unvalued ɸ-features. In (38b), the w-ending -*wəna·n* is inserted because C has the features [Def, Pers]. Lastly, in (38c), -*əne·na·n* is inserted because C-agreement takes place but does not involve the [Person] feature.

(38) Vocabulary items for Infl 1PL in Unami Delaware

    a.   *-wəna·n* ↔ / ___ C [Def, Pers]

    b.   *-hməna·* ↔ / ___ C [*u*ɸ]

    c.   *-əne·na·n* ↔ / ___ *elsewhere*

Up to this point, it is clear that the choice of the w-formative and the n-formative lies in whether or not C has agreed with a third-person argument in a "person-ful" way. Under this analysis, it is obvious why inanimate primary objects give rise to the n-suffix allomorphs of central agreement, because inanimates are assumed not to have [Person]. However, the AI+O example in (39) may be puzzling: since C agrees with a definite animate argument here, why is the central suffix realized as an n-ending rather than a w-ending as in a TA form?

(39)   Secondary objects lack [Person] feature *nəwaní·na·k*   AI+O
       nə- wani· -n̲   **-a·k**
       1- forget -1SG -AN.SG
       'I forgot **them** (AN).' (Goddard 2021:71)

The answer to this question, I propose, lies in another important difference between primary objects and secondary objects. In short, secondary objects, even when grammatically animate, cannot be agreed with for [Person]. In Section 4.1.1, I have argued that secondary objects originate in the gender-insensitive RootP domain which lies beyond the horizon of the person-sensitive heads Voice and Infl. In theory we might expect C to be able to copy the [Person] feature of an animate secondary object, but the SCOPA (see Section 4.2.1) states that person agreement cannot take place at a distance. It thus follows that when C agrees with a secondary object, it will do so in a "non-person-ful" way even if the secondary object is animate. The result is that peripheral agreement with secondary objects will always condition the n-endings, just like peripheral agreement with inanimate arguments does, since the [Person] feature is absent from C either way.

In the above, I have explained the vocabulary insertion for central suffix allomorphs in Unami Delaware. The analysis can be adapted to Maliseet-Passamaquoddy, an Eastern Algonquian language that has lost the definiteness-based contrast for TA/TI inflection (see the description

in Section 2.3.2 and examples in Section 3.1). A comparison of the vocabulary items for Unami Delaware and Maliseet-Passamaquoddy is given in Table 6.4. The only difference is that instances of [Def] in Unami Delaware correspond to [D] in Maliseet-Passamaquoddy, which extends the contexts for these vocabulary items to all cases in which a DP has been agreed with, regardless of its definiteness.

Table 6.4: VI variations for formatives in Eastern Algonquian

Allomorph	Unami C	Passm'dy C
w-formative	[Def, Pers]	[D, Pers]
n-formative	[Def]	[D]
m-formative	[$u\phi$]	[$u\phi$]

6.3.3 Two-way allomorphy: Cree and Kickapoo

This section considers two Central languages in which the original three-way allomorphy of the central suffixes has been reduced: Plains Cree and Kickapoo. Plains Cree, like all Cree dialects, has completely eliminated the m-formative, ending up with a two-way distinction in which central suffixes occur as either a w-ending or an n-ending. Kickapoo, in contrast, has completely lost the n-formative, ending up with a two-way system in which central suffixes occur as either an m-ending or a w-ending.

Plains Cree: w and n

Plains Cree is a language in which the m-formative was completely lost and has been replaced by the n-formative. The overall distribution of the formative allomorphs is summarized in Table 6.5. For comparison, the corresponding formative elements are also given for Maliseet-Passamaquoddy, which shows a three-way allomorphy (w, n, and m). Where Cree diverges is in the AI and AI+O forms: when C does not agree with the DP, the m-formative would normally appear, as in Maliseet-Passamaquoddy, but Cree instead shows the n-formative.

Table 6.5: Formatives: two-way allomorphy in Plains Cree

Example	1SG→3PL	3PL→1SG	1SG→0PL	0PL→1SG	1SG
Cree formative	W	W	N	N	**N**
Pssm'dy formative	W	W	N	N	M/N

The two-way allomorphy in Plains Cree can be analyzed as involving a simpler system of contextual allomorphy: the w-formative is inserted when C has agreed with a "person-ful" DP and the n-formative is inserted elsewhere, as shown in Table 6.6.

Table 6.6: Contextual conditioning of formatives in Plains Cree

Allomorph	in the context of C
w-formative	[Pers]
n-formative	*elsewhere*

In the examples involving singular SAP central suffixes in (40), the w-formative occurs in the TA inflection, as in (40a), while the n-formative occurs in the TI inflection, as in (40b), and in the AI+O inflection, as in (40c).

(40)   Plains Cree: 1/2sɢ allomorphs

    a.   *niwâpamâwak*   TA
        <u>ni</u>- wâpam -â   -<u>w</u> -**ak**
        1- see   -3.ᴏʙᴊ -1sɢ -ᴀɴ.ᴘʟ
        'We see **them**.' (Wolfart 1973:41)

    b.   *niwâpahtên*   TI
        <u>ni</u>- wâpaht -ê   -<u>n</u>
        1- see   -0.ᴏʙᴊ -1sɢ
        'I see it/them (ɪɴ).' (Wolfart 1973:41)

    c.   *kikî-atâwân cî maskisina?*   AI+O
        <u>ki</u>- kî-   atâwê -<u>in</u> cî maskisin -a
        2- ᴘᴀsᴛ- buy   -2sɢ ǫ shoe   -ɪɴ.ᴘʟ
        'Did you buy shoes?' (Okimāsis 2018:27)

The vocabulary items for the singular SAP central endings are given in (41). In (40a), *-w* is inserted because C has gained the [Pers] feature from the animate proximate object. However, C does not agree with inanimates in Plains Cree because they lack the [Prox] feature, which was proposed in the previous chapter to be the feature that the C probe seeks in Plains Cree. C therefore does not have a [Pers] feature that can condition the w-formative, so the elsewhere n-formative is inserted in (40b). As for the AI+O inflection shown in (40c), it follows the same idea: C does not agree with anything here, since the subject is an SAP and the secondary object lies beyond the horizon for C in Plains Cree, so there is again no [Pers] feature on C to condition *-w*. This is why *-n* is inserted instead.

(41)   Vocabulary items for Infl [1/2sɢ] in Plains Cree

    a.   *-w* ↔ / ___ C [Pers]
    b.   *-n* ↔ / ___ *elsewhere*

Finally, it is necessary to add a point on the consistency of the contextual allomorphy analysis presented so far. The fact that, when the contrast between *m* and *n* is lost, it is *n* that remains in Plains Cree, provides extra support for the proposal argued in this chapter that *n* is the least specified form while *m* is triggered by something specific (i.e. unvalued [$u\phi$]). Having analyzed *n* as the least specified form, it makes sense that *n* is the one that remains when neutralization takes place.

Kickapoo: w and m

Kickapoo is another language that has its allomorphy for formatives reduced to a two-way system. The difference between Plains Cree and Kickapoo is which vocabulary items are kept. For Kickapoo, it is the w-formative and the m-formative that are kept in the grammar. The distribution of the formative elements is summarized in Table 6.7. The corresponding realization of the formative elements in Maliseet-Passamaquoddy is given to illustrate how Kickapoo differs in use of the formative allormphs from a three-way system. The supporting Kickapoo examples will be shown in (42) to (44). The crucial changes in Kickapoo are seen in the following forms (in boldface in the table): the m-formative occurs in the contexts where the n-formative of a three-way allomorphy ordinarily occurs (TI direct forms and AI+O forms), except for the inanimate actor forms, in which the w-formative is used instead. In addition, the m-formative also occurs in the TA direct inflection when the SAP subject is plural.

Table 6.7: Formatives: two-way allomorphy in Kickapoo

Form	**TA DIR**	**TA INV**	**TI DIR**	**0 ACTOR**	**AI/AI+O**
Example	1SG→3PL	3PL→1SG	1SG→0PL	0PL→1SG	1SG
Kickapoo formative	W	W	**M**	**W**	**M**
Pssm'dy formative	W	W	N	N	M/N
Example	1PL→3PL	3PL→1PL	1PL→0PL	0PL→1PL	1PL
Kickapoo formative	**M**	W	**M**	**W**	**M**
Pssm'dy formative	W	W	N	N	M/N

The Kickapoo TA direct examples are shown in (42). When the first-person subject is singular, as in (42a), the w-ending -*w* is used, co-occurring with the peripheral suffix -*aki*. While the first-person subject is plural, as in (42b), the m-ending -*pena* appears, showing a similar interference phenomenon of plural subjects blocking peripheral agreement, which was discussed for a number of languages (Potawatomi, SW Ojibwe, Menominee, Oji-Cree; see the analysis in Section 6.2.1).

(42) Kickapoo TA direct inflection: 1SG vs 1PL subject

    a.   *nemiinaãki*
        <u>ne</u>- miin -aa   -<u>w</u> -**aki**
        1- give.to -3.OBJ -1SG -AN.PL
        'I give to **them** (AN).' (Voorhis 1967:99)

    b.   *nemiinaapena*
        <u>ne</u>- miin -aa   -<u>pena</u>
        1- give.to -3.OBJ -1PL
        'We give to him/them.' (Voorhis 1967:99)

As for TI inflection, regardless of whether the SAP subject is singular, as in (43a), or plural, as in (43b), the inanimate object is never agreed with by peripheral agreement in Kickapoo. In a way similar to that of Plains Cree, Kickapoo also forbids peripheral agreement from indexing inanimate objects. However, the formative element used for central suffixes are different between the two languages. Both Kickapoo TI examples in (43) use the m-endings: the singular suffix is morphologically unmarked and the 1PL suffix is *-pena* (PA **-mena*). This suggests that Kickapoo has maintained the proto-Algonquian absolute m-formative after losing the historical absolute-objective contrast.

(43) Kickapoo TI inflection: 1SG vs 1PL subject

    a.   *nemiici*
        <u>ne</u>- miici -Ø   -<u>Ø</u>
        1- eat   -0.OBJ -1SG
        'I eat it/them.' (Voorhis 1967:97)

    b.   *nemiicipena*
        <u>ne</u>- miici -Ø   -<u>pena</u>
        1- eat   -0.OBJ -1PL
        'We eat it/them.' (Voorhis 1967:97)

In two inverse forms of Kickapoo, exemplified in (44), peripheral agreement indexes the subject but, strikingly, the w-formatives occur in both forms even though the n-formatives are typically observed in the inanimate subject forms in other languages. In (44a), when a 3PL subject acts on a 1PL object, peripheral agreement appears and indexes the 3PL subject in the TA inverse form. In contrast, its corresponding form of the TA direct inflection (i.e. 1PL subject acts on a 3PL object) blocks peripheral agreement, cf. (42b).[6] The remarkable pattern is in the inanimate-actor forms, where the peripheral suffix indexes the inanimate subject. As illustrated in (44b), unlike other

---

[6]This is not unusual but shares the same cross-linguistic pattern with other languages that show plural subject interference with peripheral agreement. In these languages, peripheral agreement is allowed and indexes the animate third-person subject. In the meantime, the w-endings are used.

languages that use the n-endings whenever peripheral agreement is inanimate (cf. Section 3.3), Kickapoo uses the w-ending -*wenaan*, manifesting the replacement of the n-formative with the w-formative in this context.

(44)   Kickapoo inverse inflection: 3PL subject vs 0PL subject

    a.   *nemiinekonaanaki*
         <u>ne</u>- miin   -ekw -<u>wenaan</u> -**aki**
         1-   give.to -INV -1PL   -AN.PL
         'They (AN) give to us.' (Voorhis 1967:101)

    b.   *neθeekihekonaani*
         <u>ne</u>- θeekih -ekw -<u>wenaan</u> -**ani**
         1-   scare   -INV -1PL   -IN.PL
         'They (IN) scare us.' (Voorhis 1967:102)

The Nishnaabemwin example in (45) illustrates the more typical inflection of the inanimate subject form across the family, in which the n-ending is used.

(45)   *nwaabmigonan*
    <u>n</u>- waabam -igw -<u>in</u>   -**an**
    1- see   -INV -1SG -IN.PL
    'They (IN) see me.' (Nishnaabemwin, Valentine 2001:287)

Up to this point, this thesis has not discussed the analysis of peripheral agreement in detail for the dialect continuum of Meskwaki-Kickapoo. The inverse examples in (44) show that both animate third-person DPs and inanimate DPs are agreed with by peripheral agreement, suggesting that the Kickapoo probe should be [*u*D], insensitive to gender. I tentatively assume this analysis for Kickapoo and leave the details for future research. In analyzing the spell-out of the central suffixes, which is shown in (46), I propose that the w-endings are inserted when C successfully agrees with a DP and copies its [D] feature. As given in (46b), the insertion of the m-formative is the elsewhere case: the m-endings appear when C fails to agree or loses its features due to impoverishment.

(46)   Vocabulary items for Infl 1/2SG in Kickapoo

    a.   -*w* ↔ / ___ C [D]
    b.   -*m* ↔ / ___ *elsewhere*

Now reflecting on the allomorphs of the formative elements in Kickapoo, through removing [Pers] from the vocabulary item for -*w*, Kickapoo allows -*w* to occur in the contexts where -*n* would occur in the other languages. In addition, without a contrast between *m* and *n* anymore,

this leaves *m* simply as the elsewhere item. Tying together the two-way allomorph systems, Plains Cree has lost *m*, therefore enabling elsewhere *n* to occur in more contexts. Kickapoo has simplified the rule for *w*, thus enabling *w* to appear in contexts that would originally have called for *n*.

Finally, the appearance of the m-endings as well as a lack of peripheral agreement in the TA direct forms with a plural SAP subject can be explained by impoverishment. I argue that Kickapoo impoverishment follows the same rule given for Meskwaki in Section 6.2.1. Potawatomi and Meskwaki-Kickapoo demonstrate the same result of the blocking phenomenon, which affects direct inflection but not inverse inflection. Therefore, the impoverishment rule for Kickapoo shown in (47) also includes the [NOM] feature. Since the interference of plural subjects with peripheral agreement is also observed in the second-person plural, I use [Part] to ensure that the rule also explains the contexts of the plural subject in the second person.

(47)   Kickapoo: Impoverishment in Infl (based on Halle & Marantz 1993:155)

      C → Ø /   Infl
                 |
             [PART]
             [PL]
             [NOM]

The feature deletion rule in (47) then applies to TA and TI inflection with a plural SAP subject. I assume the DM model that feature deletion precedes vocabulary insertion: "impoverishment deletes morphosyntactic features on heads prior to vocabulary insertion" (Keine & Müller To appear:3). The previous examples of the direct transitive inflection are repeated below: TA in (48a) and TI in (48b). First, since the Infl has copied the [PART, PL, NOM] features, the [D] feature deletes in those forms. Second, vocabulary insertion proceeds: according to (47), the item of the m-ending *-pena* is inserted given that the features of C are deleted.

(48)   Kickapoo transitive with a 1PL subject

    a.   *nemiinaapena*
        <u>ne</u>- miin -aa   -<u>pena</u>
        1- give.to -3.OBJ -1PL
        'We give to him/them.' (Voorhis 1967:99)

    b.   *nemiicipena*
        <u>ne</u>- miici -Ø   -<u>pena</u>
        1- eat   -0.OBJ -1PL
        'We eat it/them.' (Voorhis 1967:97)

Impoverishment does not affect the inverse forms since the SAP object in an inverse form does not have the [NOM] feature that conditions the impoverishment rule. The presence of the [D] feature on C means, in Kickapoo, that the w-formative is inserted. The TA direct form with a singular SAP is not affected by impoverishment either, because the SAP does not have the [PL] feature that conditions the impoverishment rule; again, the [D] feature on C leads to the insertion of the w-formative. This analysis is problematic, however, for the TI singular SAP subject forms, as they are also predicted to show the w-formative. I leave it as an issue for future research why Kickapoo TI verbs systematically lack peripheral agreement for the inanimate object even though Kickapoo TA verbs are able to show peripheral agreement for an inanimate subject.

6.3.4 Section summary

To conclude, this section has investigated the dependency observed between the shape of the formative elements of the central endings and the properties of peripheral agreement. This dependency has been regarded as contextual allomorphy in which the spell-out of the inner head Infl is conditioned by the features of the outer head C. In particular, three languages (Unami Delaware, Plains Cree, Kickapoo) were examined, each showing a distinct allomorphy pattern. Diachronically, the central endings have three allomorph sets: the m-endings, the w-endings, and the n-endings. This historical *m-w-n* alternation is retained in some Eastern languages (e.g. Massachusett and Unami Delaware) with the conditioning of the allomorphs is motivated by definiteness of the object. Some languages, like Maliseet-Passamaquoddy, Ojibwe, and Menominee, still have the three-way *m-w-n* alternation, but their use is not conditioned by definiteness. Among certain non-Eastern languages, simplification has occurred, resulting in the three-way allomorphy being reduced to two-way allomorphy. Interestingly, Plains Cree maintains the *w-n* pair while Kickapoo maintains the *w-m* pair.

Regarding the proposed analyses, in Unami Delaware and Plains Cree, the w-formative has been explained as the spell-out when C has copied the most specified features; most importantly, C must has agreed in a "person-ful" way in order for the w-formative to be inserted. In Unami Delaware, when C has nothing to agree with, the m-formative is inserted. In addition, there is an intermediate scenario which leads to insertion of the n-formative as the elsewhere case: when C agrees with a DP agreed in a "non-person-ful" way (e.g. inanimates and secondary objects). In Plains Cree, the case is simpler: everything lacking [Pers] will fall to the elsewhere case and, accordingly, the n-formative is inserted. Lastly, in Kickapoo, if C copies over the [D] feature, the w-formative is inserted, while if C has failed to agree or its [D] feature is deleted due to impoverishment, the m-formative is inserted as the elsewhere item.

6.4   Chapter summary

This chapter presents the last piece of the three aspects of theoretical mechanisms, showing that variability of peripheral agreement may not always result from syntax (horizons, feature-matching, the AC) but can be a consequence of morphology. Two distinct morphological analyses were discussed. The first post-syntactic operation at issue concerns impoverishment, explaining the mismatches between morphology and syntax (§6.2). The second post-syntactic account explores the allomorphs of the central endings, which demonstrate sensitivity to the properties expressed by peripheral agreement (§6.3).

Following Halle & Marantz's (1993) proposal for Potawatomi, I argued in Section 6.2.1 that the blocking effect on peripheral agreement with a plural SAP argument is the product of impoverishment. This impoverishment leads features of C to be deleted when certain features are valued by Infl, and accordingly causes vocabulary insertion for peripheral agreement to fail. Due to the variations that exist among different language varieties, feature deletion in C can be specific. In Potawatomi (as well as Kickapoo), the peripheral agreement is blocked only in the context of TA direct forms. Therefore, H&M's analysis indicated that the features of Infl should contain the [NOM] feature. Conversely, for SW Ojibwe and Menominee, the blocking effect occurs in the TI inflection and the inverse inanimate subject forms when the given SAP argument is plural. Therefore, the features contained by Infl in these two languages do not include the [NOM] feature. In addition, C needs to have the [-anim] feature in order to be impoverished. The H&M analysis is promising to be extended to Oji-Cree and Munsee Delaware, in which peripheral agreement is blocked generally in all plural subjects of the TI forms. We may assume the rule is less specific as long as Infl contains the [PL] feature.

In addition, I have explored two cases in which the shape of central agreement is closely associated with peripheral agreement. Section 6.2.2 looked into the first case, in which the central agreement with a third-person DP exceptionally lacks the prefix (and the central suffix is umlauting -w̃). The absence of the prefix is also accounted for by impoverishment. Specifically, the suffixal -w̃ is comparable with the Spanish "spurious *se*" effect as analyzed in Nevins (2007) as well as the Algonquian inverse marker as analyzed in Oxford (2017b). Using the examples from Unami Delaware, I have proposed that the features of the lower head Infl are impoverished when C also agrees with the same DP. In such cases, the umlaut-triggering central suffix -w̃ occurs as the elsewhere form.

Section 6.3 dealt with the second case of central agreement paterns that show close a correlation with peripheral agreement (Goddard 2007). In Unami Delaware, there are three sets of allomorphs for the central suffixes and the conditioning of the shape of the formative elements in each ending demonstrates sensitivity to the properties of peripheral agreement. In Plains Cree

and Kickapoo, while the three-way allomorphy has been reduced to a two-way system, both languages have retained the w-formative and collapsed the other two formative elements as one. I have argued that the spell-out of the formative elements is a result of contextual allomorphy (Bobaljik 2000): the insertion of the formative item for Infl depends on the features contained in C.

Chapter 7

Conclusion

In this thesis, I investigated variability of peripheral agreement (Goddard 1979; Pentland 1999) in agreeing with a third-person DP. Peripheral agreement is used to mark the nominal categories of certain third-person participants, expressing features of number, gender, and obviation. After examining seven major representative Algonquian varieties from two groupings, two contributions have been made. Empirically, this thesis provides a comprehensive comparative description of peripheral agreement, which was not previously available in the literature. Theoretically, the rich cross-linguistic patterns in Algonquian peripheral agreement help to clarify distinct theoretical claims regarding accessibility and related topics; that is, the indexing of a particular DP by an agreement head reflects both syntactic and morphological mechanisms.

In pinpointing the mechanisms that give rise to the extensive variations examined, I have demonstrated that a combination of three analytical ingredients can account for the varying availability of peripheral agreement with the third-person object. First, the patterning of peripheral agreement with secondary objects follows from Keine's (2016, 2019) *horizons* model (plus the specification of the probe). Second, the patterning of peripheral agreement with primary objects follows from just the *specification of the probe*. Third, the cases where peripheral agreement disappears depending on features of the subject (1PL, SAP PL, PL) are best analyzed as *post-syntactic*.

7.1   Summary of thesis

After providing an introduction about the Algonquian language family and its verb inflection, Chapter 2 gave detailed descriptions on the distributions of peripheral suffixes. The set of peripheral agreement suffixes are productively used in nominal inflection and the independent verb inflection but are restricted in the participle inflection that uses the conjunct morphology. Then I turned to empirical observation on the correlation of the two agreement suffixes: the choice of

the formative elements appearing in the central suffixes is dependent on the agreement patterns of peripheral suffixes (Goddard 2007).

Chapter 3 provided the empirical foundation of this thesis: I have shown that a range of contexts finally leads to the complex patterning of peripheral agreement. Simply speaking, in the examined languages, the variations are contrasted by factors of definiteness (absolute vs. objective), the object's grammatical gender (TA vs. TI), verb class (primary objects vs. secondary objects), morphological markings (case type obliques vs. relative root complements), and interference of other inflectional categories (mode markers and the diminutive).

Chapter 4 began reviewing previous literature on Algonquian syntax and argument configuration. The patterning of inaccessibility of secondary objects in the non-Eastern languages is diagnosed as a result of microvariance of horizons. The secondary object originates structurally lower, inside of RootP, while the primary object originates syntactically higher, in the *v*P domain. The reason why secondary objects in Eastern languages like Maliseet-Passamaquoddy and Unami Delaware are accessible is because C does not have horizons preventing the probe from searching into the elements that are within RootP. In contrast, languages represented by Oji-Cree suggested that RootP is a horizon for C, causing the RootP-internal DPs to be inaccessible for the probe. Lastly, Nishnaabemwin brought further evidence on the microparametric variation of the horizon for C: whether or not a horizon exists also can be due to categorization of the *v*.

Accessibility makes a DP visible to the probe but it does not guarantee that the probe will agree with it. Chapter 5 examined the features required by the probe by focusing on the patterning of the primary object in three languages. This chapter extended Oxford's (2015) proposal, analyzing the patterning of peripheral agreement in these languages as reflections of microvariance of relativized probes. Among these, Maliseet-Passamaquoddy represents the pattern in which C has a flat probe as [uD], indicated by its omnivorous characteristic, targeting third-person DPs regardless of gender or definiteness. In contrast, the probe is relativized in the other two representative languages: the probe seeks to value the [uProx] feature in Plains Cree, therefore ignoring obviative and inanimate DPs, whereas the probe seeks to value the [uDef] feature in Unami Delaware, therefore ignoring indefinite DPs.

Finally, in Chapter 6, I explored the underpinning of the disappearance of peripheral agreement in the context of a plural subject. I have developed the analysis originally put forth in Halle & Marantz (1993), arguing that the mismatches arising in these forms are due to the post-syntactic operation called impoverishment. Then I discussed the suffixal spell-out of central agreement that lacked prefixes and regarded this phenomenon also as impoverishment (cf. Nevins 2007): the features of the lower head Infl are deleted in the configuration in which the adjacent heads have valued the same DPs. In this chapter, I also argued that the correlation of the central formative elements with peripheral agreement is a result of contextual allomorphy (Bobaljik 2000),

confirming that the conditioning of the spell-out of the inner head is sensitive toward the features of the outer head.

7.2 Broader implications

One of the theoretical objectives of this thesis was to explore the legitimacy of distinct theoretical accounts on accessibility which were empirically motivated by distinct languages and the potential interactions if there were any. The diverse patterns in the Algonquian language varieties enable the evaluation of distinct proposals involving different modules of grammar under the question of peripheral agreement.

On accessibility of DPs for probes, the Algonquian agreement system showed that visibility of DPs for probes is entirely syntactic and is determined most satisfactorily by the account of horizons (Keine 2016, 2019). The reason why the PIC of the phase theory (Chomsky 2000, 2001) was not appealing as an analysis for Algonquian languages was due to the empirical observation that secondary objects in TA+O verbs and AI+O verbs in Eastern languages are available for peripheral agreement. These patterns with secondary objects therefore challenged the notion of Chomsky's phases as a constraint on Agree, suggesting that the edge that disables the search of a probe is not exactly the edge of the probe.

In addition, the locality-height connections implied by Keine's horizon theory were profoundly in line with probes' search capacity in the languages that involve multiple Agree probes. The summary of the locality-height implication is repeated in (1). The syntactic height of the three probes from low to high are respectively Voice (theme sign), Infl (central agreement), and C (peripheral agreement). The observations on Algonquian agreement heads essentially reflect the implication of horizons: the higher the probe is located in the structure, the more elements are accessible to it.

(1)   The height-locality connection in Algonquian probes

      a.   **Voice** (theme sign) indexes the primary object (the object of TA/TI, the goal of TA+O) only

      b.   **Infl** (central agreement) indexes the subject and the primary object (in the inverse)

      c.   **C** (peripheral agreement) can index the subject, the primary object, and the secondary object (the object of AI+O and the theme of TA+O)

The second theoretical implication concerns feature matching of the probe-goal Agree model. The exploration of the cross-linguistic variations lead to the microparameters of the relativization of the probe. The behaviors of the probe on C essentially reflect Baker's (2008a, 2011) Structural

Condition on Person Agreement (SCOPA) in that the probe realizing the peripheral agreement is concerned with non-person φ-features (number, gender, obviation, definiteness), permitting agreement to take place at a distance.

Lastly, Algonquian languages have rich morphology for inflection and agreement. It is not surprising to find morphology-syntax mismatches in languages with such complex inflection systems. As an endeavor to disentangle the intricate connections between peripheral agreement and the allomorphs of the formative elements, this thesis supported Bobaljik's (2000) proposal that contextual allomorphy is outward-sensitive, concluding that vocabulary insertion of central agreement (Infl) is dependent on the features contained in the outer suffix of peripheral agreement (C).

7.3   Looking forward

Here I briefly comment on two broad issues that I hope to address in future work. The first concerns the Eastern-internal variations of peripheral agreement with oblique arguments. The second concerns the use of the three sets of peripheral endings in the independent inflection across languages.

In Section 3.6, I showed that Maliseet-Passamaquoddy and Unami Delaware pattern together in allowing the n-endings and peripheral endings to index oblique arguments. Within these Eastern languages, an interesting variation is found. A pair of Maliseet-Passamaquoddy examples are provided in (2). The RR type (the NP referenced by the relative root *wit-* 'with') in (2a) demonstrates that the oblique argument can be indexed by the collocation of the n-ending central suffix and peripheral agreement. In contrast, the case type (the NP bears the locative suffix *-ək*) does not trigger the same agreement morphology in (2b). Instead, peripheral agreement indexes the proximate NP *witməwin* 'bear'.

(2)   Two types of oblique arguments and their agreement patterns in Maliseet-Passamaquoddy

   a.   *nìl n-wit-ayyanénuuk nuhsimísok*   RR type
        nìl n- **wit-**   ayya -nénənw -**ak**   n-uhsimís-ok
        I   1- **with.RR-** play -1PL   -**AN.PL** 1-young.sibling-AN.PL
        'I play with **my younger siblings**.' (LeSourd 2020)

   b.   *məwin ksəyote məcəyehsəwəl wikək*   Case type
        məwin   ksəyota -w̆ -**Ø**   məcəyehsəw-əl   wik-**ək**
        bear   move.in -3 -**AN.SG**   Partridge-OBV   house-**LOC**
        '**Bear** moved in into Partridge's house.' (Sherwood 1983:123)

At this point, the question is: why do case-marked oblique NPs block agreement? Abstract Case (e.g. Chomsky 1981; Vinokurova 2005; Legate 2008) may be a promising approach in purpuit of this question. In short, there are two ways for nominals to be assigned Case, either via lexical Case by appearing in "Cased positions" (Polinsky & Preminger 2014:9), such as English PPs, or via structural Case by moving to a position where they can receive Case, such as the EPP (Extended Projection Principle) requirement demanding an overt nominative subject in English. Thinking forward, a possible direction is to argue that the case type oblique arguments appear in the Cased position as the complement of PP, whereas the RR type oblique receives abstract Case structurally from Root. Considering that PP is considered as a phase (Abels 2012:202-220; Bošković 2014), the inability of case-marked obliques to trigger the agreement suffixes may be due to being blocked by the PP-shell. In contrast, the RR obliques are accessible for agreement due to not being deactivated by the PP-shell.

Turning to the second question about the shapes of the peripheral endings, the three sets of endings (A-ENDINGS, I-ENDINGS, E-ENDINGS; Goddard 2003:39) occur in certain contexts: a-endings are commonly found in the noun inflection; i-endings are typically used in the conjunct participles. All three sets are observed in the independent inflection but the conditioning of these variants is less clear.

I mentioned that the *e*-variants are observed in Ojibwe to occur with the preterite mode (Nichols 1980: 290, 293; Sullivan 2016:178), as exemplified by SW Ojibwe in (3a). The occurrence of the *i*-variant is less common. After a preliminary examination of the SW Ojibwe paradigms, the i-endings seem to occur in the context of the TA neutral inflection involving a plural SAP argument and an animate argument. One example, given in (3b), shows the direct form, in which the 3PL peripheral suffix is realized as *-ik* when the subject is a plural first-person.

(3)   SW Ojibwe: i-variant and e-variant

    a.   *niwaapamaanaapanek*   e-ending
        ni- waapam -aa   -naan -pan -**ek**
        1- see   -3.OBJ -1PL -PRET -**AN.PL**
        'We saw **them** (AN).' (Nichols 1980:290)

    b.   *niwaapamaanaanik*   i-ending
        ni- waapam -aa   -naan -**ik**
        1- see   -3.OBJ -1PL -**AN.PL**
        'We see **them** (AN).' (Nichols 1980:289)

In Unami Delaware, the i-endings occur in broader yet different contexts (in TI, AI+O, or TA+O but not in TA). But similar to Ojibwe, the i-endings are associated with a plural central

participant because, as Goddard (2021:71) noted, it is the plural n-endings that give rise to the i-endings in Unami Delaware.

Since these peripheral endings are found in some context of the independent inflection, the next step is to collect data to compare their occurrences across the languages examined in this thesis. If patterns emerge, an explanation will be needed to underpin the reason for which set of the peripheral endings are selected.

To sum up, more investigation into the agreement with oblique arguments and the conditioning of the choice of the set of peripheral endings is needed. I hope to further the exploration of these two questions because they may shed further light on the complicated mechanisms involved in peripheral agreement and their theoretical implications.

Bibliography

Abels, Klaus. 2012. *Phases: An essay on cyclicity in syntax.* Berlin/Boston: de Gruyter.

Alexiadou, Artemis, Liliane Haegeman, & Melita Stavrou. 2007. *Noun phrase in the generative perspective.* Berlin: Mouton de Gruyter.

Anagnostopoulou, Elena. 2003. *The syntax of ditransitives: Evidence from clitics.* Berlin: de Gruyter.

Andrews, Avery D. 2007. The major functions of the noun phrase. In *Language typology and syntactic description*, ed. Timothy Shopen, volume I: Clause structure, 132–223. Cambridge, UK: Cambridge University Press, 2nd edition.

Baker, Mark. 2008a. *The syntax of agreement and concord.* Cambridge: Cambridge University Press.

Baker, Mark C. 1988. *Incorporation: A theory of grammatical function changing.* Chicago: University of Chicago Press.

Baker, Mark C. 2008b. The macroparameter in a microparametric world. In *The limits of syntactic variation*, ed. Theresa Biberauer, 351–373. Amsterdam: Benjamins.

Baker, Mark C. 2011. When agreement is for number and gender but not person. *Natural Language and Linguistic Theory* 29:875–915.

Béjar, Susana. 2003. Phi-syntax: A theory of agreement. Doctoral dissertation, University of Toronto.

Béjar, Susana, & Milan Rezac. 2009. Cyclic Agree. *Linguistic Inquiry* 40:35–73.

Bhatia, Sakshi, Leland Paul Kusmer, & Ekaterina Vostrikova. 2018. Indirect interaction of person and number. In *Proceedings of the Workshop on the Structure and Constituency of Languages of the Americas 21, University of British Columbia Working Papers in Linguistics 46*, ed. Megan Keough, Natalie Weber, Andrei Anghelescu, Sihwei Chen, Erin Guntly, Khia Johnson, Daniel Reisinger, & Oksana Tkachman, 56–72. Vancouver: UBCWPL.

Bhatt, Rajesh. 2005. Long distance agreement in Hindi-Urdu. *Natural Language and Linguistic Theory* 23:757–807.

Bjorkman, Bronwyn M., Elizabeth Cowper, Daniel Currie Hall, & Andrew Peters. 2019. Person and deixis in Heiltsuk pronouns. *Canadian Journal of Linguistics/Revue canadienne de linguistique* 64:574–591.

Blain, Eleanor M. 1998. The role of hierarchies and alignment in direct/inverse. In *Papers of the 29th Algonquian Conference*, ed. David H. Pentland, 43–56. Winnipeg: University of Manitoba.

Bliss, Heather. 2013. The Blackfoot configurationality conspiracy: Parallels and differences in clausal and nominal structures. Doctoral dissertation, University of British Columbia.

Bliss, Heather, & Will Oxford. 2017. Patterns of syncretism in nominal paradigms: A pan-Algonquian perspective. In *Papers of the 46th Algonquian Conference*, ed. Monica Macaulay & Margaret Noodin, 1–18. East Lansing: Michigan State University Press.

Bloomfield, Leonard. 1946. Algonquian. In *Linguistic structures of Native America*, ed. Harry Hoijer, 85–129. New York: Viking Fund Publications in Anthropology.

Bloomfield, Leonard. 1962. *The Menomini language*. New Haven: Yale University Press.

Bobaljik, Jonathan David. 2000. The ins and outs of contextual allomorphy. *University of Maryland Working Papers in Linguistics* 10:35–71.

Bobaljik, Jonathan David. 2008. Where's phi? Agreement as a post-syntactic operation. In *Phi theory: Phi-features across interfaces and modules*, ed. Daniel Harbour, David Adger, & Susana Béjar, 295–328. Oxford: Oxford University Press.

Bobaljik, Jonathan David. 2017. Distributed Morphology. *Oxford Research Encyclopedia of Linguistics*. Oxford University Press.

Boeckx, Cedric. 2004. Long-distance agreement in Hindi: Some theoretical implications. *Studia Linguistica* 58:23–36.

Bonet, Eulalia. 1991. Morphology after syntax: Pronominal clitics in Romance. Doctoral dissertation, Massachusetts Institute of Technology.

Bonet, Eulalia. 1995. Feature structure of Romance clitics. *Natural Language and Linguistic Theory* 13:607–647.

Bošković, Željko. 2014. Now I'm a phase, now I'm not a phase: On the variability of phases with extraction and ellipsis. *Linguistic Inquiry* 45:27–89.

Branigan, Phil, & Marguerite MacKenzie. 1999. Binding relations and the nature of *pro* in Innu-aimun. In *Proceedings of NELS 29*, ed. Pius Tamanji, Masako Hirotani, & Nancy Hall, 475–485.

Bresnan, Joan, & Lioba Moshi. 1990. Object asymmetries in comparative Bantu syntax. *Linguistic Inquiry* 21:147–185.

Brittain, Julie. 1999. A reanalysis of transitive animate theme signs as object agreement: Evidence from Western Naskapi. In *Papers of the 30th Algonquian Conference*, ed. David H. Pentland, 34–46. Winnipeg: University of Manitoba.

Brittain, Julie. 2001. *The morphosyntax of the Algonquian conjunct verb: A minimalist approach.* New York: Garland.

Brittain, Julie. 2003. A Distributed Morphology account of the syntax of the Algonquian verb. In *Proceedings of the 2003 Annual Conference of the Canadian Linguistic Association*, ed. Stanca Somesfalean & Sophie Burelle, 25–39.

Bruening, Benjamin. 2001. Syntax at the edge: Cross-clausal phenomena and the syntax of Passamaquoddy. Doctoral dissertation, Massachusetts Institute of Technology.

Bruening, Benjamin. 2005. The Algonquian inverse is syntactic: Binding in Passamaquoddy. Unpublished manuscript.

Bruening, Benjamin. 2007. Passamaquoddy as a split ergative language and its consequences for Marantz's ergative case generalization. Manuscript.

Bruening, Benjamin, & Andrea Rackowski. 2001. Configurationality and object shift in Algonquian. In *Proceedings of the Workshop on Structure and Constituency in the Languages of the Americas*, 71–83. Vancouver: UBC Working Papers in Linguistics.

Butt, Miriam. 1993. The structure of complex predicates in Urdu. Doctoral dissertation, Stanford University.

Chomsky, Noam. 1965. *Aspects of the theory of syntax*. Cambridge, MA: MIT Press.

Chomsky, Noam. 1981. *Lectures on Government and Binding*. Dordrecht: Foris.

Chomsky, Noam. 2000. Minimalist inquiries: The framework. In *Step by step: Essays on Minimalism in honor of Howard Lasnik*, ed. Roger Martin, David Michaels, & Juan Uriagereka, 89–155. MIT Press.

Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A life in language*, ed. Michael Kenstowicz, 1–52. MIT Press.

Chomsky, Noam. 2008. On phases. In *Foundational issues in linguistic theory. Essays in honor of Jean-Roger Vergnaud*, ed. Robert Freidin, Carlos Otero, & Maria Luisa Zubizarreta, 133–166. MA: MIT Press.

Collins, Chris, & Höskuldur Thráinsson. 1996. VP-internal structure and object shift in Icelandic. *Linguistic Inquiry* 27:391–444.

Comrie, Bernard. 1978. Ergativity. In *Syntactic typology: Studies in the phenomenology of language*, ed. Winfred Philipp Lehmann, 329–394. Austin: University of Texas Press.

Comrie, Bernard. 1989. *Language universals and linguistic typology*. Chicago: University of Chicago, 2nd edition.

Cook, Clare. 2014. *The clause-typing system of Plains Cree: Indexicality, anaphoricity, and contrast*. New York: Oxford University Press.

Coon, Jessica. 2010. Complementation in Chol (Mayan): A theory of split ergativity. Doctoral dissertation, Massachusetts Institute of Technology.

Coon, Jessica. 2017. Two types of ergative agreement: Implications for case. In *A pesky set: Papers for David Pesetsky*, ed. Claire Halpert, Hadas Kotek, & Coppe van Urk, 361–370. Cambidge, MA: MIT Working Papers in Linguistics.

Coon, Jessica, & Alan Bale. 2014. The interaction of person and number in Mi'gmaq. *NordLyd* 41:85–101.

Coon, Jessica, & Clint Parker. 2019. Case interactions in syntax. *Oxford Research Encyclopedia of Linguistics.* Oxford University Press.

Costa, David J. 1996. Reconstructing initial change in Algonquian. *Anthropological Linguistics* 38:39–72.

Croft, William. 1990. *Typology and universals.* Cambridge: Cambridge University Press.

Dahlstrom, Amy. 1994. Topic, focus and other word order problems in Algonquian. Voices of Rupert's Land, Winnipeg. The belcourt Lecture delivered before the University of Manitoba.

Dahlstrom, Amy. 1995. Motivation vs. predictability in Algonquian gender. In *Papers of the 26th Algonquian Conference*, ed. David H. Pentland, 52–66. Winnipeg: University of Manitoba.

Dahlstrom, Amy. 1996. Pragmatic issues in Fox relative clauses. Paper presented at the 28th Algonquian Conference. University of Toronto, Toronto.

Dahlstrom, Amy. 2006. The syntax of Algonquian ethnopoetics. In *Papers of the 37th Algonquian Conference*, ed. H. C. Wolfart, 131–147. Winnipeg: University of Manitoba.

Dahlstrom, Amy. 2009. OBJ without OBJ$_\theta$: A typology of Meskwaki objects. In *On-line proceedings of the LFG09 Conference*, ed. Miriam Butt & Tracy Holloway King, 222–239. Stanford: Center for the Study of Language and Information Publications.

Dahlstrom, Amy. 2010. Multiple oblique arguments in Meskwaki. In *Papers of the 42nd Algonquian Conference*, ed. Monica Macaulay & J. Randolph Valentine, 56–68. Albany, NY: State University of New York Press.

Dahlstrom, Amy. 2013a. Argument structure of quirky Algonquian verbs. In *From quirky case to representing space: Papers in honor of Annie Zaenen*, ed. Tracy Holloway King & Valeria de Paiva, 61–71. Stanford: Center for the Study of Language and Information Publications.

Dahlstrom, Amy. 2013b. Meskwaki syntax book. Manuscript.

Dahlstrom, Amy. 2019. Embedded questions in Meskwaki: Syntax and Information Structure. In *Papers of the 48th Algonquian Conference*, ed. Monica Macaulay & Margaret Noodin, 69–85. East Lansing: Michigan State University Press.

Dawe-Sheppard, Audrey, & John Hewson. 1990. Person and gender hierarchies in Micmac. *Journalof the Atlantic Provinces Linguistic Association* 12:1–12.

Deal, Amy Rose. 2015. Interaction and satisfaction in ϕ-agreement. In *Proceedings of NELS 45*, ed. Thuy Bui & Deniz Özyildiz, 179–192. Amherst, MA: GLSA.

Diesing, Molly. 1996. Semanitc variables and object shift. In *Studies in Comparative Germanic Syntax*, ed. Höskuldur Thráinsson, Samuel Epstein, & Steve Peter, 66–84. Dordrecht: Kluwer.

den Dikken, Marcel. 2019. The attractions of agreement: Why person is different. *Frontiers in Psychology* 10:1–18.

Dixon, R. M. W. 1994. *Ergativity*. Cambridge, UK: Cambridge University Press.

Embick, David, & Rolf Noyer. 2007. Distributed morphology and the syntax/morphology interface. In *The Oxford handbook of linguistic interfaces*, ed. Gillian Ramchand & Charles Reiss, 289–324. Oxford University Press.

Gallego, Ángel J. 2013. Object shift in Romance. *Natural Language and Linguistic Theory* 31:409–451.

van Gelderen, Elly. 2011. *The linguistic cycle: Language change and the language faculty*. Oxford: Oxford University Press.

Giusti, Giuliana. 1996. Is there a FocusP and a TopicP in the noun phrase? *University of Venice Working Papers in Linguistics* 6:105–128.

Giusti, Giuliana. 2005. At the left periphery of the Romanian noun phrase. In *On space and time in language*, ed. Martine Coene & Liliane Tasmowski, 23–49. Cluj-Napoca: Clusium.

Goddard, Ives. 1967. The Algonquian independent indicative. In *Proceedings of the 1st Algonquian Conference*, 66–106. Ottawa: National Museum of Canada.

Goddard, Ives. 1974. Remarks on the Algonquian independent indicative. *International Journal of American Linguistics* 40:317–327.

Goddard, Ives. 1978. Central Algonquian languages. In *Handbook of North American Indians*, ed. William C. Sturtevant, volume 15, 583–587. Washington, DC: Smithsonian Institution.

Goddard, Ives. 1979. *Delaware verbal morphology: A descriptive and comparative study*. New York and London: Garland Publishing Inc.

Goddard, Ives. 1980. Eastern Algonquian as a genetic subgrouping. In *Papers of the 11th Algonquian Conference*, ed. William Cowan, 143–158. Ottawa: Carleton University.

Goddard, Ives. 1983. The eastern Algonquian subordinative mode and the importance of morphology. *International Journal of American Linguistics* 49:351–387.

Goddard, Ives. 1987. Fox participles. In *Native American languages and grammatical typology*, ed. Paul Kroeber & Robert Moore, 105–118. Bloomington: University of Indiana Linguistics Club.

Goddard, Ives. 1994a. *Leonard Bloomfield's Fox lexicon: Critical edition*. Winnipeg: Algonquian and Iroquoian Linguistic Memoir 12.

Goddard, Ives. 1994b. The west-to-east cline in Algonquian dialectology. In *Papers of the 25th Algonquian Conference*, ed. William Cowan, 187–211. Ottawa: Carleton University.

Goddard, Ives. 1996. The classification of the native language of North America. In *Handbook of North American Indians*, ed. Ives Goddard, volume 17, 290–323. Washington, DC: Smithsonian Institution.

Goddard, Ives. 2002. Grammatical gender in Algonquian. In *Papers of the 33rd Algonquian Conference*, ed. H. C. Wolfart, 195–231. Winnipeg: University of Manitoba.

Goddard, Ives. 2003. Reconstructing the history of the demonstrative pronouns of Algonquian. In *Essays in Algonquian, Catawban and Siouan linguistics in memory of Frank T. Siebert, Jr.*,

ed. Blair A. Rudes & David J. Costa, 37–102. Winnipeg: Algonquian and Iroquoian Linguistics Memoir 16.

Goddard, Ives. 2007. Reconstruction and history of the independent indicative. In *Papers of the 38th Algonquian Conference*, ed. H. C. Wolfart, 207–271. Winnipeg: University of Manitoba.

Goddard, Ives. 2015. Arapaho historical morphology. *Anthropological Linguistics* 57:345–411.

Goddard, Ives. 2020. The paradox of partial similarity. Unami secondary-object marking and other clones of the n-endings. In *Papers of the 49th Algonquian Conference*, ed. Monica Macaulay & Margaret Noodin, 99–113. East Lansing: Michigan State University Press.

Goddard, Ives. 2021. *A grammar of Southern Unami Delaware (Lenape)*. Potoskey, MI: Mundart Press.

Goddard, Ives, & Kathleen Joan Bragdon. 1988. *Native writings in Massachusett*, volume 185. Philadelphia: American Philosophical Society.

Haas, Mary. 1958. Algonkian-Ritwan: the end of a controversy. *International Journal of American Linguistics* 24:159–173.

Haddican, Bill, & Anders Holmberg. 2019. Object symmetry effects in Germanic. *Natural Language and Linguistic Theory* 37:91–122.

Haddican, William, & Anders Holmberg. 2015. Four kinds of object asymmetry. In *Complex visibles out there. Proceedings of the Olomouc Linguistics Colloquium 2014: Language use and linguistic structure*, ed. Ludmila Veselovská & Markéta Janebová, 145–162. Olomouc: Palacký University.

Hale, Ken. 1983. Warlpiri and the grammar of nonconfigurational languages. *Natural Language and Linguistic Theory* 1:5–47.

Halle, Morris. 1997. Distributed Morphology: Impoverishment and fission. In *PF: Papers at the interface. MIT Working Papers in Linguistics*, ed. Benjamin Bruening, Yoonjung Kang, & Martha McGinnis, volume 30, 425–449. Cambridge, MA: MIT Working Papers in Linguistics.

Halle, Morris, & Alec Marantz. 1993. Distributed Morphology and the pieces of inflection. In *The view from building 20: Essays in linguistics in honor of Sylvain Bromberger*, ed. Kenneth Hale & Sammuel Jay Keyser, 111–176. Cambridge, MA: MIT Press.

Halle, Morris, & Alec Marantz. 1994. Some key features of Distributed Morphology. In *MIT Working Papers in Linguistics 21: Papers on phonology and morphology*, ed. Andrew Carnie & Heidi Harley, 275–288. Cambridge, MA: MITWPL.

Hamilton, Michael David. 2015. The syntax of Mi'gmaq: A configurational account. Doctoral dissertation, McGill University.

Hammerly, Christopher M. 2020. Person-based prominence in Ojibwe. Doctoral dissertation, University of Massachusetts Amherst.

Harbour, Daniel. 2008. Discontinuous agreement and the syntax-morphology interface. In *Phi-theory: Phi-features across modules and interfaces*, ed. Daniel Harbour, David Adger, & Susana Béjar, 185–220. New York: Oxford University Press.

Harley, Heidi. 1995. Abstracting away from abstract case. In *Proceedings of NELS 25*, ed. Jill Beckman, 207–221. Amherst, MA: GLSA.

Harley, Heidi. 2013. External arguments and the Mirror Principle: On the distinctness of Voice and *v*. *Lingua* 125:34–57.

Harley, Heidi, & Rolf Noyer. 1999. Distributed morphology. *Glot International* 4:3–9.

Harley, Heidi, & Elizabeth Ritter. 2002. Person and number in pronouns: A feature-geometric analysis. *Language* 78:482–526.

Haspelmath, Martin. 2005. Argument marking in ditransitive alignment types. *Linguistic discovery* 3:1–21.

Henze, Daniela, & Eva Zimmermann. 2010. Hierarchy-governed insertion and CFD markers in Potawatomi. In *2 in agreement*, ed. Sebastian Bank, Doreen Georgi, & Jochen Trommer, volume Linguistische Arbeits Berichte 88, 23–63. Leipzig: Leipzig University.

Hewson, John. 1987. Are Algonquian languages ergative? In *Papers of the 18th Algonquian Conference*, 147–153. Ottawa: Carleton University.

Hirose, Tomio. 2003. *Origins of predicates: Evidence from Plains Cree*. New York: Routledge.

Hockett, Charles F. 1948. Potawatomi III: The verb complex. *International Journal of American Linguistics* 14:139–49.

Holmberg, Anders. 1986. Word order and syntactic features in the Scandinavian languages and English. Doctoral dissertation, University of Stockholm.

Holmberg, Anders, Michelle Sheehan, & Jenneke van der Wal. 2019. Movement from the double object construction is not fully symmetrical. *Linguistic Inquiry* 50:677–721.

Ihsane, Tabea. 2008. *The layered DP: Form and meaning of French indefinites.* Amsterdam: Benjamins.

Ihsane, Tabea, & Genoveva Puskás. 2001. Specific is not definite. *Generative Grammar in Geneva* 2:39–54.

Johansson, Sara. 2011. Towards a typology of Algonquian relative clauses. In *Proceedings of the 16th Annual Workshop on the Structure and Constituency of Languages of the Americas*, ed. Meagan Louie & Alexis Black. Vancouver: University of British Columbia Working Papers in Linguistics.

Johns, Alana. 1982. A unified analysis of relative clauses and questions in Rainy River Ojibwe. In *Papers of the 13th Algonquian Conference*, ed. William Cowan, 161–168. Ottawa: Carleton University.

Jónsson, Jóhannes Gíli. 1996. Clausal architecture and case in Icelandic. Doctoral dissertation, University of Massachusetts Amherst.

Kaplan, Ronald, & Joan Bresnan. 1982. Lexical-functional grammar: A formal system for grammatical representation. In *The mental representation of grammatical relations*, ed. Joan Bresnan, 173–281. Cambridge, MA: MIT Press.

Keine, Stefan. 2016. Probes and their horizons. Doctoral dissertation, University of Massachusetts Amherst.

Keine, Stefan. 2019. Selective opacity. *Linguistic Inquiry* 50:13–61.

Keine, Stephan, & Gereon Müller. To appear. Impoverishment. In *The Cambridge handbook of Distributed Morphology*, ed. Artemis Alexiadou, Ruth Kramer, Alec Marantz, & Isabel Oltra-Massuet. Cambridge University Press.

Kratzer, Angelika. 1996. Severing the external argument from its verb. In *Phrase structure and the lexicon. Studies in Natural Language and Linguistic Theory*, ed. Johan Rooryck & Laurie Zaring, volume 33, 109–137. Dordrecht: Springer.

Laenzlinger, Christopher. 2005. French adjective ordering: Perspectives on DP internal movement types. *Lingua* 115:645–689.

Laka, Itziar. 2006. Deriving split ergativity in the progressive: The case of Basque. In *Ergativity: Emerging issues*, ed. Alana Johns, Diane Massam, & Juvenal Ndayiragije, 173–196. Dordrecht: Springer.

Launey, Michel. 1981. *Introduction à la langue et à la littérature aztèques*, volume 1. Paris: L'Harmattan.

Laurent, Joseph. 1884. *New familiar Abenakis and English dialogues*. Quebec, Canada: Leger Brousseau.

Legate, Julie Anne. 2008. Morphological and abstract Case. *Linguistic Inquiry* 39:55–101.

Legate, Julie Anne. 2014. *Voice and v: Lessons from Acehnese*. Cambridge, MA: MIT Press. Linguistic Inquiry Monographs.

LeSourd, Philip S. 2020. Explaining an unusual agreement pattern in Maliseet-Passamaquoddy. Paper presented at the 52nd Algonquian Conference. University of Wisconsin-Madison in Madison, Wisconsin (Online). October 23–25, October 2020.

Lochbihler, Bethany. 2012. Aspects of argument licensing. Doctoral dissertation, McGill University.

Lochbihler, Bethany, & Éric Mathieu. 2013. Wh-agreement in Ojibwe relative clauses: Evidence for CP structure. *The Canadian Journal of Linguistics* 58:293–318.

Lochbihler, Bethany, & Éric Mathieu. 2016. Clause typing and feature inheritance of discourse features. *Syntax* 19:354–391.

Lochbihler, Bethany, Will Oxford, & Nicholas Welch. 2021. The person-animacy connection: Evidence from Algonquian and Dene. *Canadian Journal of Linguistics/Revue canadienne de linguistique* 66:431–442.

López, Luis. 2012. *Indefinite objects. Scrambling, choice functions, and differential marking*. Cambridge, MA: MIT Press.

Mahajan, Anoop. 1990. The A/Ā-bar distinction and movement theory. Doctoral dissertation, Massachusetts Institute of Technology.

Massam, Diane. 2009. The structure of (un)ergatives. In *Proceedings of AFLA 16*, ed. Sandy Chung, Daniel Finer, Ileana Paul, & Eric Potsdam, 125–135.

Mathieu, Éric. 2008. The syntax of abstract and concrete finals in Ojibwe. In *Proceedings of NELS 37*, ed. Emily Elfner & Martin Walkow, 101–114. Charleston, SC: BookSurge Publishing.

Mathieu, Éric. 2012. Flavors of division. *Linguistic Inquiry* 43:650–679.

Mathieu, Éric. 2019. Humans, gods, and demons. In *Gender and noun classification*, ed. Éric Mathieu, Myriam Dali, & Gita Zareikar, 1–14. Oxford: Oxford University Press.

Matushansky, Ora, & Alec P. Marantz, ed. 2013. *Distributed Morphology today: Morphemes for Morris Halle.* Cambridge, MA: MIT Press.

McGinnis, Martha. 2001. Phases and the syntax of applicatives. In *Proceedings of NELS 31*, 333–350. Amherst, MA: GLSA.

Mithun, Marianne. 1999. *The Language of Native North America.* Cambridge: Cambridge University Press.

Moravcsik, Edith. 1974. Object-verb agreement. *Working Papers on Language Universals* 15:25–140.

Nevins, Andrew. 2007. The representation of third person and its consequences for person-case effects. *Natural Language and Linguistic Theory* 25:273–313.

Nevins, Andrew. 2011. Multiple agree with clitics: Person complementarity vs. omnivorous number. *Natural Language and Linguistic Theory* 29:939–971.

Nichols, John. 1980. Ojibwe morphology. Doctoral dissertation, Harvard University.

Nilsen, Campbell. 2017. The historical development of the Menominee independent indicative. Undergraduate senior thesis. University of Oklahoma.

Noyer, Rolf. 1992. Features, positions and affixes in autonomous morphological structure. Doctoral dissertation, Massachusetts Institute of Technology.

Odribets, Zlata, & Will Oxford. 2020. Algonquian languages are not ergative. Paper presented at the 52nd Algonquian Conference, University of Wisconsin-Madison, Madison (Online).

Okimāsis, Jean L. 2018. *Cree: Language of the Plains. nēhiyawēwin: paskwāwi-pīkiskwēwin.* Regina, Saskatchewan: University of Regina Press.

O'Meara, John. 1990. Delaware stem morphology. Doctoral dissertation, McGill University.

O'Meara, John. 1992. Intransitive verbs with secondary objects in Munsee Delaware. In *Papers of the 23rd Algonquian Conference*, ed. William Cowan, 322–333. Ottawa: Carleton University.

Oxford, Will. 2014. Microparameters of agreement: A diachronic perspective on Algonquian verb inflection. Doctoral dissertation, University of Toronto.

Oxford, Will. 2015. Probe competition as a source of ergative person splits. In *Proceedings of NELS 45*, ed. Thuy Bui & Deniz Özyildiz, 213–222. Amherst, MA: GLSA.

Oxford, Will. 2017a. The Activity Condition as a microparameter. *Linguistic Inquiry* 48:711–722.

Oxford, Will. 2017b. Inverse marking as impoverishment. In *Proceedings of the 34th West Coast Conference on Formal Linguistics (WCCFL 34)*, ed. Aaron Kaplan, Abby Kaplan, Miranda K. McCarvel, & Edward J. Rubin, 413–422. Somerville, MA: Cascadilla Proceedings Project.

Oxford, Will. 2017c. Size matters: Deriving person hierarchies from nominal structure. Manuscript.

Oxford, Will. 2019a. Algonquian languages. In *The Routledge handbook of North American languages*, ed. Daniel Siddiqi, Michael Barrie, Carrie Gillon, Jason Haugen, & Eric Mathieu, 504–523. New York, NY: Routledge.

Oxford, Will. 2019b. Fission in Algonquian and the status of morphological templates. In *Proceedings of the 23rd Workshop on Structure and Constituency in the Languages of the Americas (WSCLA 23)*, ed. D. K. E. Reisinger & Roger Yu-Hsiang Lo, 77–91. Vancouver: UBC Working Papers in Linguistics.

Oxford, Will. 2019c. Inverse marking and Multiple Agree in Algonquin: Complementarity and variability. *Natural Language and Linguistic Theory* 37:955–996.

Oxford, Will. 2020. Elsewhere morphology and alignment variation: Evidence from Algonquian. Keynote talk given at the NELS 51. University of Québec in Montréal (UQAM), Montreal.

Oxford, Will, & Yadong Xu. 2020. One probe to agree with them all: Kickapoo portmanteau agreement is syntactic. In *Proceedings of NELS 50*, ed. Mariam Asatryan, Yixiao Song, & Ayana Whitmal, volume 1, 255–264. Amherst, MA: GLSA.

Pandharipande, Rajeshwari, & Yamuna Kachru. 1977. Relational grammar, ergativity, and Hindi-Urdu. *Lingua* 41:217–238.

Pentland, David H. 1979. Algonquian historical phonology. Doctoral dissertation, University of Toronto.

Pentland, David H. 1999. The morphology of the Algonquian independent order. In *Papers of the 30th Algonquian Conference*, ed. David H. Pentland, 222–266. Winnipeg: University of Manitoba.

Polinsky, Maria, & Eric Potsdam. 2001. Long-distance agreement and topic in Tsez. *Natural Language and Linguistic Theory* 19:583–646.

Polinsky, Maria, & Omer Preminger. 2014. Case and grammatical relations. In *Routledge handbook of syntax*, ed. Andrew Carnie, Dan Siddiqi, & Yosuke Sato, 150–166. New York: Routledge.

Preminger, Omar. 2011. Asymmetries between person and number in syntax: A commentary on Baker's SCOPA. *Natural Language and Linguistic Theory* 29:917–937.

Preminger, Omer. 2012. Agreement as a fallible operation. Doctoral dissertation, Massachusetts Institute of Technology.

Proulx, Paul. 1980. The subordinative order of Proto-Algonquian. *International Journal of American Linguistics* 46:289–300.

Proulx, Paul. 1982. The origin of the absolute verbs of the Algonquian independent order. *International Journal of American Linguistics* 48:394–411.

Pylkkänen, Liina. 2008. *Introducing arguments*. Cambridge, MA: MIT Press.

Quinn, Conor. 2006a. Algonquian grammar without all the grammar. A script for a performance.

Quinn, Conor. 2006b. Referential-access dependency in Penobscot. Doctoral dissertation, Harvard University.

Rackowski, Andrea, & Norvin Richards. 2005. Phase edge and extraction: A Tagalog case study. *Linguistic Inquiry* 36:565–599.

Rhodes, Richard A. 1976. The morphosyntax of the Central Ojibwe verb. Doctoral dissertation, University of Michigan.

Rhodes, Richard A. 1990. Ojibwa secondary objects. In *Grammatical relations: A cross theoretical perspective*, ed. Katarzyna Dziwirek, Patrcik Farrell, & Errapel Mejías-Bikandi, 401–414. Stanford: CSLI.

Rhodes, Richard A. 1994. Agency, inversion, and thematic alignment in Ojibwe. In *Proceedings of the 20th Annual Meeting of the Berkeley Linguistics Society*, ed. Susanne Gahl, Andy Dolbey, & Christopher Johnson, 431–446.

Rhodes, Richard A. 1998. Clause structures, core arguments and the Algonquian relative root constructions. Winnipeg: Voices of Rupert's Land. The Belcourt lecture delivered to the University of Manitoba on 20 March.

Rhodes, Richard A. 2010. Relative root complement: A unique grammatical relation in Algonquian syntax. In *Rara & Rarissima*, ed. Jan Wohlgemuth & Michael Cysouw, 305–324. Berlin and New York: de Gruyter Mouton.

Rhodes, Richard A., & Evelyn M. Todd. 1981. Subarctic Algonquian languages. In *Handbook of North American Indians, volume 6: Subarctic*, ed. June Helm, 52–66. Washington, DC: Smithsonian.

Riedel, Kristina. 2009. The syntax of object marking in Sambaa: A comparative Bantu perspective. Doctoral dissertation, University of Leiden.

Ritter, Elizabeth. 2014. Featuring animacy. *Nordlyd* 41:103–124.

Ritter, Elizabeth, & Martina Wiltschko. 2009. Varieties of INFL: Tense, location and person. In *Alternatives to cartography*, ed. Jeroen van Craenenbroeck, 153–201. Berlin: de Gruyter.

Ritter, Elizabeth, & Martina Wiltschko. 2014. The composition of INFL: An exploration of tense, tenseless languages, and tenseless constructions. *Natural Language and Linguistic Theory* 32:1331–1386.

Russell, Kevin, & Charlotte Reinholtz. 1995. Hierarchical structure in a non-configurational language: Asymmetries in Swampy Cree. In *The Proceedings of the 14th West Coast Conference on Formal Linguistics*, ed. Jose Camacho, Lina Choueiri, & Maki Watanabe, 431–445. Stanford: CSLI.

Russell, Lena, Inge Genee, Eva van Lier, & Fernando Zúñiga. 2012. Referential hierarchies in three-participant constructions in Blackfoot: The effects of animacy, person, and specificity. *Linguistic Discovery* 10:55–79.

Salt, Luci, Elsie Duff, Marguerite MacKenzie, & Bill Jancewicz, ed. 2004. *Eastern James Bay Cree Dictionary, Northern dialect: Cree-English*, volume 1. Chisasibi: Cree School Board.

Sherwood, David Fairchild. 1983. Maliseet-Passamaquoddy verb morphology. Doctoral dissertation, Yale University.

Sullivan, Michael. 2016. Relativization in Ojibwe. Doctoral dissertation, University of Minnesota.

Tollan, Rebecca, & Will Oxford. 2018. Voiceless unergatives: Evidence from Algonquian. In *Proceedings of the 35th West Coast Conference on Formal Linguistics (WCCFL 35)*, ed. Wm. G. Bennett, Lindsay Hracs, & Dennis Ryan Storoshenko, 399–408. Somerville, MA: Cascadilla Proceedings Project.

Valentine, J. Randolph. 2001. Nishnaabemwin reference grammar. Doctoral dissertation, University of Toronto.

Vinokurova, Nadya. 2005. *Lexical categories and argument structure: A study with reference to Sakha.* LOT Dissertation Series. Utrecht: UiL-OTS.

Voorhis, Paul H. 1967. Kickapoo grammar. Doctoral dissertation, Yale University.

Wiltschko, Martina. 2012. Decomposing the mass/count distinction: Towards a formal typology. In *Countand mass across languages*, ed. Diane Massam, 146–171. Oxford: Oxford University Press.

Witzlack-Makarevich, Alena, & Ilja A. Seržant. 2018. Differential argument marking: Patterns of variation. In *Diachrony of differential argument marking*, ed. Alena Witzlack-Makarevich & Ilja A. Seržant, 1–40. Berlin: Language Science Press.

Wolfart, H. C. 1973. *Plains Cree: A grammatical study*. Transactions of the American Philosophical Society, new series, volume 63, part 5. Philadelphia.

Wolfart, H. C. 1996. Sketch of Cree, an Algonquian language. In *Handbook of North American Indians*, ed. Ives Goddard, volume 17, 390–439. Washington D. C.: Smithsonian Institution.

Woolford, Ellen. 1993. Symmetric and asymmetric passives. *Natural Language and Linguistic Theory* 11:679–728.

Xu, Yadong. 2016. Feature competition in Algonquian agreement. Master's thesis, University of Manitoba.

Xu, Yadong. 2018. A double-person feature analysis of Algonquian first-person plurals. In *Proceedings of 35th West Coast Conference on Formal Linguistics (WCCFL 35)*, ed. Wm. G. Bennett, Lindsay Hracs, & Dennis Ryan Storoshenko, 458–467. Somerville: Cascadilla Proceedings Project.

Xu, Yadong. 2021. Differential subject marking also depends on syntactic height: Evidence from Delaware. In *Proceedings of 38th West Coast Conference on Formal Linguistics (WCCFL38)*, ed. Rachel Soo, Una Y. Chow, & Sander Nederveen, 472–482. Somerville, MA: Cascadilla Proceedings Project.

Zamparelli, Roberto. 1995. *Layers in the determiner phrase.* Rochester, NY: University of Rochester dissertation.

Zeller, Jochen. 2015. Argument prominence and agreement: Explaining an unexpected object asymmetry in Zulu. *Lingua* 156:17–39.

Zwicky, Arnold M. 1977. Hierarchies of person. *Chicago Linguistic Society* 13:714–733.