### 0.0 Introduction

Blackfoot has a set of elements referred to as the "third-person non-affirmative endings." These are pronominal elements which attach at the end of the verbal complex, agreeing with a third person with respect to number and animacy (Frantz 1991).
-waiksaa $\quad 3^{\text {rd }}$ person, animate, plural (cf. Frantz -waiksaawa)
-waistsaa $\quad 3^{\text {rd }}$ person, inanimate, plural (cf. Frantz -waistsaawa)
-waatsiks $\quad 3^{\text {rd }}$ person, (in)animate, singular (to be revised) (cf Frantz -waatsiksi)

While the non-affirmatives can occur in negative statements, they cannot appear in the corresponding positive statements.
(2)
a) Nimaatsinowawaatsiks
Ni-maat-ino-a-waatsiks
1-NEG-see.vta-DIR(LOC>3)-3nonaff.sg
"I didn't see him/her"
b) *nitsinowawaatsiks
nit-ino-a-waatsiks
1-see.vta-DIR(LOC>3)-3nonaff.sg
Target: "I saw him/her"

Elements with this kind of distribution common cross-linguistically and referred to as Negative Polarity Items (NPIs). An example of an English NPI is 'ever'. While 'ever' can appear in negative statements, it cannot appear in corresponding positive statements.
(3)
a) I haven't ever seen the Pyramids.
b) *I have ever seen the Pyramids.

This distributional restriction is often described in terms of licensing; NPIs are said to be licensed by negation. Blackfoot's non-affirmative endings, then, appear to be straightforwardly NPIs. A deeper investigation, however, shows that they have two peculiar properties.

First, while Blackfoot's non-affirmative endings can be licensed by negation, it is not the case that they can be licensed by all types of negation:

| a)Nimaatsikakkomai'taikihpa ana | Meagan <br> Ni-maat-ikak-omai'taki-hpa | an-wa <br> that-3 |
| :--- | :--- | :--- |
| 1-NEG-just-believe.vai-nonaff:local |  | Meagan |
|  |  |  |
|  | maataakonowayuumiwaatsiks |  |
|  | maat-aak-onowa-oomi-waatsiks |  |
|  | "I can't believe that Meagan will |  |
|  |  |  |

b) Nimaatsikakkomai'taikihpa ana Meagan

Ni-maat-ikak-omai'taki-hpa an-wa Meagan
1-NEG-just-believe.vai-nonaff:local
that-3 Meagan
omaahksonowayuumsi(*waatsiks)
o-aahk-so-onowa-oomi-hs-yi-(*waatsiks)
3-n.fact-NEG-ever-marry(f)-cj-cj-(*3s:nonaff)
"I can't believe that Meagan will never get married"
While the non-affirmatives can be licensed by negation realized as the morpheme maat- such as in a), they cannot be licensed by negation realized as the morpheme $s a-$, such as in b).

Secondly, the referential semantics of the Blackfoot third person non-affirmatives are atypical compared to other NPIs. NPIs cross-linguistically are non-referential - they always take existential narrow-scope with respect to negation. The Blackfoot third person non-affirmative endings, by contrast, are always referential -they always take existential wide-scope with respect to negation, and are ungrammatical otherwise.
(5)
a) Nimaatsinowawaatsiks

Ni-maat-ino-a-waatsiks
1-NEG-see.vta-DIR(LOC>3)-3nonaff.sg
"I didn't see him/her"
b) *nimaatsaapiwaatsiks ninaa
ni-maat-iyaapi-waatsiks ninaa
c) nimaatsapihpa ninaa
ni-maat-iyaapi-hpa ninaa
1-NEG-see.vai-3nonaff.sg man
Target: I didn't see a man

1-NEG-see.vai-loc:nonaff man
"I didn't see a man" (= $-===\exists \neg)$

In (5a) above, the non-affirmative agrees with respect to a referential third person. (5b), by contrast, shows that the third-person non-affirmative is ungrammatical when construed with a nonreferential third person.

Previous attempts to account for the distributional and interpretational properties of NPIs are often explained in terms of syntactic c-command; in order to be licensed, NPIs must be c-commanded by negation (cf. Klima, Baker, Linebarger). Other attempts appeal to semantics - the licensing condition is reduced to a semantic property like downward entailment (cf. Ladusaw) or (non)veridicality (cf. Giannakidou). In this paper I argue that the Blackfoot third-person nonaffirmative endings must be licensed syntactically, not semantically, and that both of the aforementioned peculiar properties can be derived from the syntactic analysis. Specifically I argue that
the two negative morphemes maat- and sa-, formerly analyzed as being in complementary distribution (cf. Frantz, Taylor), actually negate different levels of clause structure, and that NPI licensing negation maat- is found in Comp. This leads to an analysis of the non-affirmatives as agreeing with a discourse subject (cf. Elouazizi \& Wiltschko 2006) - where I formalize a 'discourse subject' as the topic of a categorical judgment (cf. Kuroda, Ladusaw). Because the topics of categorical judgments are always presupposed, regardless of propositional operators like negation, the non-affirmatives are then predicted to have their atypical wide-scope property.

This paper is organized as follows:

Chapter one provides an introduction to Blackfoot, detailing aspects of the grammar relevant to this paper.

Chapter two provides an introduction to Negative Polarity Items, as well as previous approaches to analyzing them in the literature.

Chapter three investigates the distributional predicament noted above: the fact that the nonaffirmatives are licensed by negation realized as maat- but not as negation realized as $s a$-. I evaluate whether the difference in licensing between maat- and $s a$-is syntactic, or whether it is semantic. In the syntactic approach, I analyze maat- and sa- as negating different levels of clause structure (contra Frantz and Taylor), where maat- is in a position to c-command the non-affirmatives, but $s a$-is not. In the semantic approach, I analyze maat-and $s a$ - as being antiveridical and nonveridical respectively (cf. Giannakidou), where the non-affirmatives are only licensed by antiveridicality. Ultimately, I argue that the Blackfoot NPIs must be analyzed syntactically. Throughout this section I develop a syntactic analysis of negation in Blackfoot, where I argue that Blackfoot's NPI licensing negation is found in Comp, as argued by Déchaine \& Wiltschko 2001.

Chapter four deals with the consequences of chapter three. Following Elouazizi and Wiltschko 2006, my analysis of NEG in Comp leads to the proposal that Blackfoot's non-affirmatives must be agree with a discourse-subject. I argue that this discourse subject is a topic, in the sense of the topic of a categorical judgment (cf Ladusaw 1994, Kuroda 1992). This makes several predictions, including the prediction that the non-affirmatives, like topics, must be presupposed, and therefore have obligatory wide-scope. I conclude this section by drawing a parallel with Giannakidou's 1998 analysis of emphatic
n-words in Greek, pointing out that the Blackfoot non-affirmatives, like the Greek emphatics, are topical NPIs that require negation in order to be licensed, but must escape the scope of negation in order to be properly interpreted. The difference between the Blackfoot non-affirmatives and the Greek emphatics is that where it is the universal property of the Greek emphatics that must escape the scope of negation, with the non-affirmatives it is their existential property.

### 1.0 Introduction to Blackfoot

Blackfoot is an Algonquian language spoken on three reserves in Alberta, Canada, and one reservation in Northern Montana. The Northern Blackfoot, or Blackfoot proper, (Siksiká) Reserve is east of Calgary, the Blood (Kainaa) Reserve is between Cardston and Lethbridge, and the Piegan (Aapátohsipipiikani) Reserve is west of Fort Mcleod. The reservation in North-West Montana is called the Blackfeet (Aamskáápipiikani) Reservation.

Ethnologue estimates 5000 speakers of Blackfoot with possible monolinguals. This means that Blackfoot is relatively healthy in comparison with other First Nations languages - there are even reports of children learning the language, however the fluency rate of young children is quite low (Russell \& Genee 2006)

With respect to documentation, there are three major contributions: Uhlenbeck's 1938 A Concise Grammar, Taylor's 1969 Ph.D. dissertation and Frantz's 1991 Blackfoot Grammar, as well as related dictionaries. Uhlenbeck and Taylor focus on the Southern Piegan dialect of the language; Frantz generalizes over the four dialects, providing notes where dialectal differences may occur. Unless otherwise cited, the data for this study comes from the author's own field notes - the speaker consulted is from the Blood (Kainaa) Reserve.

The grammatical sketch provided below is based on Frantz's 1991 Blackfoot Grammar. The generalizations for the most part reflect the speech patterns of my language consultant. I indicate any incongruities if they are relevant to further discussion.

## The Nominal Domain

Blackfoot distinguishes two grammatical genders; animate and inanimate. While the gender of the majority of nouns corresponds to their real-life gender, there are a few nouns that are grammatically animate yet non-sentient ${ }^{1}$.

| Anima | (se | Animate nouns (non-sentient) |  | Inanimate nouns |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| ponoká | "elk" | moápssp | "eye" | nílp | "leaf" |
| natáyo | "lynx" | pokón | "ball" | mo'tokáán | "head" |
| nínaa | "man" | isttoán | "knife" | aohkíli | "water" |

(Data from Frantz 1991:8)
Blackfoot distinguishes singular from plural, and all nouns can take plural marking. This plural marking varies with the grammatical gender of the nouns.

| Animate nouns |  |  | Inanimate nouns |  |  |
| :--- | :--- | :--- | :--- | :---: | :---: |
| singular | plural | singular | plural |  |  |
| ponoká-wa | ponoká-íksi | níp-yi | níp-istsi |  |  |
| natáyo-wa | natáyo-iks | mo'tokáán-yi | mo'tokáán-istsi |  |  |
| nínaa-wa | nínaa-iksi | aohkíl-yi | Aohkílistsi |  |  |

(Data from Frantz 1991:8-9)
Nouns may also be marked as unspecified or non-particular with respect to their reference. If a noun is used such that there is not a particular, or actual entity in mind, the nouns take an $-i$ suffix, and they are not specified as either singular or plural ${ }^{2}$.

Within animate gender nouns, Blackfoot makes a distinction between proximate and obviative. Proximacy refers to a property of discourse-salience that the literature refers to inconsistently as either topicality, focus of interest, or prominence (Aissen 1997:706). Third person animate entities may thus be either proximate, which indicates a discourse-salient third person, or they maybe obviative, which indicates a less salient third person. Singular proximate nouns are morphologically marked with a suffix - wa, as in the table above. Singular obviative nouns are marked with $-y i$, like inanimate nouns. Blackfoot does not make this distinction morphologically when it comes to plural nouns; both proximate and obviative plural nouns take the suffix -iksi.

| Animate nouns - Proximate |  | Animate nouns - Obviative |  |
| :--- | :--- | :--- | :--- |
| singular | plural | plural | plural |
| ponoká-wa | ponoká-íksi | ponoká-yi | ponoká-íksi |
| natáyo-wa | natáyo-iksi | natáyo-yi | natáyo-iks |
| nínaa-wa | nínaa-iksi | nínaa-yi | nínaa-iksi |

(Data from Frantz 1991:8-13)

[^0]Blackfoot nouns may also be preceded by demonstratives; these also inflect for number, gender and proximacy ${ }^{3}$.

| Animate nouns - Proximate |  | Animate nouns - Obviative |  |
| :--- | :--- | :--- | :--- |
| singular | plural | plural | plural |
| om-wa ponoká-wa | om-iksi ponoká-iksi | om-yi ponoká-yi <br> that-3 elk-prox | om-iksi ponoká-íksi <br> that-pl elk-pl |
| "that/the elk (prox)" | "those elk(pl, prox)" elk-3" | "that/the elk (obv)" | that-pl elk-pl |
| "those elk(pl, obv)" |  |  |  |



The Blackfoot demonstrative stems indicate whether or not the noun in question is closer to the speaker (amo-), close to the addressee (anno-) or distant from both speech act participants (om-). Other information about the deictic sphere may also be encoded on the nominal domain, such as whether or not the noun in question is visible to the speaker.

```
(6) anná annáhka kínnahka?
    ann-wa ann-wa-hka k-ínn-wa-hka
    where-3s that-3s-invis 2-father-3s-invs
```

"Where is your father?"
(Frantz 1991:66)
Blackfoot's non-affirmatives vary for animacy and number, and are also sensitive to the deictic sphere.

## The Verbal Domain

Blackfoot; as an Algonquian language, distinguishes four different kinds of verb stems. These are classified according to transitivity and the grammatical gender of the arguments involved.

- Inanimate Intransitive verbs (II, glossed vii) have a single inanimate argument.
- Animate Intransitive verbs (AI, glossed vai) have a single animate argument.
- Transitive Inanimate verbs (TI, glossed vti) have an animate agent and an inanimate patient.
- Transitive Animate verbs (TA, glossed vta) have an animate agent and an animate patient.

[^1]

Note that only sentient (real-life animate) entities can be the agents of transitive clauses. Furthermore, unspecified/non-particular nouns cannot act as arguments at all. What we would expect to be a transitive verb, when the patient is an unspecified noun, acts grammatically like an intransitive, taking an AI stem ${ }^{4}$. This phenomenon is relevant for a study of negation Blackfoot - intransitive verb stems must be used instead of transitive verb stems whenever the patient is non-referential, such as when it is within the scope of negation.
(7) nimaatsapihpa ninaa
ni-maat-iyaapi-hpa ninaa
1-NEG-see.vai-loc:nonaff man
"I didn't see a man"

The utterance above is equivalent to saying that I didn't see any men. It lacks scope ambiguity and cannot be used if there was a certain man that I didn't see.

Blackfoot does not rely on either word order or a case-system to indicate grammatical relations. It uses a direct/inverse system, which relies on a person-animacy hierarchy (shown below) and directionality markers.

## Local (1st, 2nd person)>>3rd Person (Proximate)>>3rd Person (Obviative)>>Inanimate

(Goddard and Bragdon 1988, Cited in Bruening 2005)
If the AGENT is higher on the person-animacy hierarchy than the PATIENT, the verb will be marked with a direct marker.

[^2]| nitsinow $\boldsymbol{a}$ oma ninaa | $1{ }^{\text {st }}$ person | >> | $3^{\text {rd }}$ person(prox) |
| :---: | :---: | :---: | :---: |
| nit-ino-a om-wa ninaa | 4 |  | 4 |
| 1-see.vta-DIR that-3 man | $\downarrow$ |  | $\downarrow$ |
| "I saw the man" | AGENT | >> | PATIENT |

If the PATIENT is higher on the person-animacy hierarchy than the AGENT, then the verb will be marked with an inverse marker.

| nitsinok <br> nit-ino- $\mathbf{\underline { k }}$ <br> 1-see.vta-INV <br> "The man saw me" | oma n-wa ninaa <br> omat-3 man <br> that | $1^{\text {st }}$ person | $\gg$ | $3^{\text {rd }}$ person(prox) |
| :--- | :--- | :--- | :--- | :--- | :--- |

The direct/inverse markers (called theme markers in Algonquian tradition) are sensitive to person. The following is a table for the relevant theme markers in Blackfoot.

| Theme marker | DIRECT |
| :---: | :---: |
| -a- | A local ( $1^{\text {st }}$ of $2^{\text {nd }}$ ) person acts on an animate third person (loc>3) |
| -yii- | A proximate third person acts on an animate obviative third person ( $3>3$ ') |
|  |  |
| -'p- | A local person acts on an inanimate third person (loc>0) |
| -m- | An animate third person acts on an inanimate third person (3>0) |
|  |  |
| -oki ${ }^{5}$ - | A second person acts on a first person ( $2>1$ ) |
|  |  |
| Theme marker | INVERSE |
| -ok- | A third person acts on a local ( $1^{\text {st }}$ or $2^{\text {nd }}$ person) ( $3>\operatorname{loc}$ ) or <br> An obviative third person acts on a proximate third person ( $3^{\prime}>3$ ) |
| -0- | A first person acts on a second person (1>2) |

Blackfoot is thus a head-marking language such that grammatical relations are marked on the verbal head, as opposed to on the verbal dependents. The verbal complex has different places for person-agreement. The first locus of agreement is the personal proclitics. The personal proclitics are always the very first elements in the verbal complex, and encode person. For Blackfoot independent clauses, these are the $1^{\text {st }}$ person ni(t)-, and $2^{\text {nd }}$ person $\mathrm{ki}(\mathrm{t})$, where third person is unmarked. The second place of person-agreement is the number suffixes. These number suffixes encode both person and

[^3]plural number, and directly follow the theme marker. A Blackfoot transitive verbal complex, in an independent clause, thus has the following template:
personal proclitics - (preverbs) -verb stem - theme marker - number suffixes
Negation in Blackfoot is always found within the verbal complex, following the personal proclitics and preceding any other morphemes. The non-affirmatives always attach after the number suffixes. Other morphemes relevant to this paper are the interrogative Y/N morpheme (i)kata'-, and whquestions words, as these provide other contexts in which the non-affirmative endings are licit. The interrogative morpheme, like negation, is found directly after the personal proclitics in the verbal complex, however Wh-words ${ }^{6}$ are found distinct from the verb.
(9) Questions in Blackfoot
a) $\mathrm{Y} / \mathrm{N}$ Questions
kikátai'ihpiyipoááwa?
k-káta'-ihpiy-hpoaawa
2-Y/N-dance-2pl
"Did you ${ }_{2 p l}$ dance?"
b) Wh Questions

| Tsimá | kitsítokoyihpa? |
| :--- | :--- |
| tsimá | kit-it-okoyi-hpa |
| where | 2-there-dwell-nonaff |
| "Where do you live? |  |

(Frantz 1991:132-133)

### 2.0 Introduction to Negative Polarity Items

In this section I provide an introduction to Negative Polarity Items, as well as an overview of previous attempts to account for them in the literature. Negative Polarity Items (NPIs) are a subset of what are termed Polarity Items. Polarity Items are elements whose distribution is subject to a property generally conceptualized as polarization - either negation or affirmation (Giannakidou 1998:1). For example, the English polarity item 'any is restricted from occurring in affirmative sentences - while it can occur in negative contexts, or interrogative contexts, it is ungrammatical in positive contexts ${ }^{7}$.
(10) English Polarity item 'any'

## English PI 'any grammatical in negative contexts

I didn't see any children today.
b)

I don't think I saw any children today.

[^4]| Grammatical in Yes/No Questions |  |
| :--- | :--- |
| c) <br> Have you heard any strange noises? | d) <br> Do you think we'll hear any strange noises? |
| Not grammatical in positive contexts | f) <br> *I think I'll see any children today. |
| e) <br> *I saw any children today. |  |

Polarity items are common cross-linguistically. Below is an example from Serbian/Croatian Serbian/Croatian I-NPIs are grammatical in negative contexts, grammatical in interrogative contexts, but are ungrammatical in positive contexts.
(11) Serbian Croatian I-NPIs
(Progovac 1994:40-41)
Serbian/Croatian I-NPIs grammatical in negative contexts

| a) Milan ne | tvrdi | da | Marija poznaje |
| ---: | :--- | :--- | :--- |$\quad$| i(t)ko-ga |
| :--- |
| Milan not |
| claims that | Mary knows $\quad$ anyone-ACC

"Milan does not claim that Mary knows anyone"
Grammatical in Yes/No Questions
b)Da li Milan voli i(t)ko-ga

That Q Milan loves anyone-ACC
"Does Milan love anyone?"
Not grammatical in positive contexts
c)*Mila
Milan
tvrdi da Marija
poznaje
i(t)ko-ga
claims that mary
knows
anyone-ACC

Different polarity items are subject to different polarity contexts. Giannakidou 1998 makes a distinction between Affective Polarity Items (APIs) and Positive Polarity Items (PPIs) ${ }^{8}$. Affective Polarity Items are instantiated by examples such as English 'ever', and the Serbian/Croatian I-NPIs above; these elements are only grammatical in affective contexts, where affective is a characterized by a polarity context that includes both negative and interrogative features (Giannakidou 1998:4). Negative Polarity Items are the subset of APIs that are only grammatical in negative or negative-like contexts. Examples

[^5]of NPIs are the Greek emphatics (emphasis is indicated by allcaps) - while they are grammatical in negative contexts, they are not grammatical in interrogative contexts.
(12) Greek emphatic NPIs
 "Grandpa didn't see any of his grandchildren."
b) pijes $\quad$ pote $/ *$ POTE $\}$ sto Parisi?
went.2g ever in-the Paris
"Have you ever been to Paris?"
(Giannakidou 1998:57-58)
Other approaches in the literature rarely make this distinction between APIs and NPIs - the term NPI usually refers to any element that is disallowed in affirmative contexts. The difference between APIs and NPIs, when acknowledged, is often in terms of NPIs vs 'strict NPIs' (Progovac 1994:145) While acknowledging that this may be a misnomer, I adopt this convention of referring to such elements as NPIs, largely because it is so widespread. Thus I refer to the Blackfoot non-affirmatives as NPIs, although they are grammatical in both negative, as well as interrogative, contexts.
(13) Blackfoot's Non-affirmative Endings

| Licensed by local Negation |  |
| :--- | :--- |
| a) | b) |
| Nimaatsinowawaatsiks | Nimaatsinowawaiksaa |
| Ni-maat-ino-a-waatsiks | Ni-maat-ino-a-waiksaa |
| 1-NEG-see.vta-DIR(LOC>3)-3nonaff.sg | 1-NEG--see.vta-DIR(LOC>3)-3nonaff.pI |
| "I didn't see her" | "I didn't see them" |
| Licensed in Yes/No Questions |  |
| c) | d) |
| Kikatai'nookaatsiks | Okatai'nookaiksaa |
| k-ikata'-ino-ok-waatsiks | o-kata'-ino-ok-waiksaa |
| 2-Y/N-see.vta-INV(3,LOC)-3nonaff.sg | 3-Y/N-see.vta-INV(3>LOC)-3nonaff.pl |
| "Did he see you?" | "Did they see him?" |

Positive Polarity Items are elements that are restricted to affirmative contexts. An example is the English PPI 'some.' Unlike NPIs, which show ungrammaticality outside of their licensing context, PPIs like 'some' are grammatical with outside of their licensing contexts - however they cannot be interpreted as semantically within the scope of negation.
(14) English PPI 'some'
a. I saw someone.
b. I didn't see someone.
c. \# $\neg \exists \mathrm{x}(\operatorname{person}(\mathrm{x}) \wedge \operatorname{saw}(\mathrm{I}, \mathrm{x})$
d. $\exists \mathrm{x}(\operatorname{person}(\mathrm{x}) \wedge \neg \operatorname{saw}(\mathrm{I}, \mathrm{x})$

In the example above, the existential property of 'someone' cannot be interpreted as being within the scope of negation, as in (c). The existential property of 'someone' must be interpreted as outside the scope of negation, as represented in (d). This semantic-scope requirement generally extends (inversely) to NPIs as well - where PPIs cannot be semantically interpreted within the scope of negation, NPIs cross-linguistically must be semantically interpreted within of the scope of negation. (cf. Progovac 1994, Uribe-Ecchevarria 2001) This narrow-scope property of NPIs means that they never have an existential property that can be interpreted outside the scope of negation - thus they are always non-referential. This is illustrated below with the NPIs 'the slightest idea' and 'any'.
a) She hasn't the slightest idea.
b) \# ヨx $($ a slight idea( x$) \wedge \neg$ have(she, x$)$
c) She doesn't see anyone.
d) \# ヨx $(\operatorname{person}(x) \wedge \neg \operatorname{saw}($ she, $x)$

In the examples above, it cannot be read in a) that there exists a certain "slight idea" which someone does not have. Likewise, in c) there is not a certain person who is not being seen. Because 'the slightest idea' and 'anyone' do not refer to anything that exists, they are said to be 'non-referential' and 'within the scope of negation.' This holds true cross-linguistically - NPIs take existential narrow scope with respect to negation.
(16) NPIs cross-linguistically take existential narrow scope ( $\neg \exists)$

Turkish NPIs take narrow scope ( $\neg \exists)$
a) Hig kimse Ali-hi
Any person Ali-ACC
gör-me-di
see-not-PAST
"No one saw Ali.'

Catalan NPIs take narrow scope ( $\neg \exists)$

| b) | Ningú no ha <br> Nobody not vingut <br>  "Nobody has come."  |  |  |
| :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |

Japanese NPIs take narrow scope ( $\neg \exists)$
c) Daremo ko-nakatta

Anyone came-neg-(Past)
"No one came."
(Progovac 1994:34-36)

That being said, recall that the Blackfoot third person non-affirmative endings, by contrast, are always referential -they always take existential wide-scope with respect to negation, and are ungrammatical otherwise.
a) Nimaatsinowawaatsiks

Ni-maat-ino-a-waatsiks
1-NEG-see.vta-DIR(LOC $>3$ )-3nonaff.sg
"I didn't see him/her"
b) *nimaatsaapiwaatsiks ninaa
ni-maat-iyaapi-watsiks ninaa
1-NEG-see.vai-3nonaff.sg man
Target: I didn't see a man
c) nimaatsapihpa ninaa
ni-maat-iyaapi-hpa ninaa
1-NEG-see.vai-loc:nonaff man
"I didn't see a man"

In (17a) the non-affirmative agrees with respect to a referential third person. (17b), by contrast, shows that the third-person non-affirmative is ungrammatical when construed with a non-referential third person. The Blackfoot non-affirmatives, then, are problematic in that they have the distribution of NPIs, but are not interpreted semantically like other NPIs.

Approaches to NPIs in the literature generally fall into two types: syntactic licensing, and semantic licensing. Approaches by Baker (1970), Linebarger(1981, 1987) and Progovac (1994) are mainly syntactic, while approaches by Ladusaw (1980) and Giannakidou (1998) appeal to a semantic licensing condition. I address first the syntactic approaches, and then outline the semantic approaches.

### 2.1 Syntactic Approaches to NPI Licensing

## Klima 1964: 'In construction with' / C-commanding Negation

Klima 1964's account for the distribution of NPIs is syntactic; c-commanding negation, or some other element bearing a [+affective] element, licenses NPIs. This "affective" feature is not clearly
defined; however it includes both negative and interrogative features. While the term Klima actually uses is 'in construction with,' the syntactic relations of 'in construction with' can be directly translated into terms of c-command. Stating that an element $\mathbf{B}$ is 'in construction with' an element $\mathbf{A}$ is the equivalent of stating that $\mathbf{A}$ c-commands $\mathbf{B}$, where C-command is generally defined as follows:
(18) C-command
(Carnie 2002:75)
Node $\mathbf{A}$ c-commands node $\mathbf{B}$ if every branching node dominating $\mathbf{A}$ also dominates $\mathbf{B}$, and neither A nor B dominate the other.

The c-command requirement is intended to account contrasts such as the following:
(19)
a) *I didn't see Istvan or I ever went to Budapest
b) I didn't see Istvan or ever go to Budapest.

The ungrammaticality of a) contrasting with the grammaticality of b) shows that the licensing of the NPI 'ever' cannot be reduced to linear precedence - it cannot be the case that negation only precedes the NPI.
(20) Tree for "*I didn't see Istvan or I ever went to Budapest":
$\rightarrow$ 'Ever' preceded but not c-commanded by negation


In the syntactic structure of (20a), conjunction joins two IPs, where negation attaches below IP and above VP. The node that dominates negation is the first IP, which does not dominate the NPI that is dominated by the second IP. Thus negation does not c-command the NPI, resulting in the ungrammaticality of (20a).
(21)
a) Tree for "I didn't see Istvan or ever go to Budapest."
$\rightarrow$ 'Ever' preceded and c-commanded by negation


In the syntactic structure of (21b), on the other hand, conjunction joins twoVPs, where negation attaches above VP. The node that dominates negation, Neg', also dominates the conjoined VP in which the NPI 'ever' appears, accounting for the grammaticality of (21b).

## Baker 1970: C-commanding Negation and Negative Entailment

Baker 1970 also uses negation as the defining feature for licensing NPIs; NPIs are found when they are c-commanded by negation. Baker differs from Klima, however, in that according to Baker's analysis, NPIs can also be licensed in affirmative sentences, as long as the affirmative sentence entails a negative one. This is in order to account for data such as the following, where the NPI 'a red cent' is licensed in an affirmative sentence:
a) I was surprised that she contributed a red cent.
b) I had expected her not to contribute a red cent.

While a) is an affirmative sentence, it entails the negative sentence b), in which the NPI is licensed by c-commanding negation.

## Linebarger 1987: C-Commanding Negation and the Immediate Scope Constraint

Linebarger 1987, like Baker, argues that NPIs are only licensed when c-commanded by negation, or in sentences that contain implicatures with this structural requirement. Unlike Baker, Linebarger posits that this restriction holds at Logical Form (LF) and posits also another requirement such that there be no logical elements intervening between the c-commanding negation and the NPI, where logical elements are elements that can enter in scopal ambiguities. This is formalized as her Immediate Scope Constraint (ISC):
(23) A negative polarity item is acceptable in a sentence $S$ if in the LF of $S$ the sub-formula representing the NPI is in the immediate scope of the negation operator. An element is in the immediate scope of NOT only if (i) it occurs in a proposition that is the entire scope of NOT, and (ii) within this proposition there are no logical elements intervening between it and NOT. Logical elements are defined in Linebarger $(1981,30)$ as elements capable of entering into scope ambiguities.
(Linebarger 1987:338)

This constraint is meant to account for the ungrammaticality of examples such as (24) and (25) below:
(24) *He didn't budge an inch because he was pushed (but because he fell).
(25) *John didn't give a red cent to every charity. (Linebarger 1987:336)

As the 'because-clause' in (24) and the universal quantifier in (25) enter into scopal ambiguities with negation, their possible intervention between negation and the NPI violate the ISC and render (24) and (25) ungrammatical.

## Progovac 1994: A Binding-Theoretic Account

Progovac 1994, noting that the above approaches cannot account for contrasts like the following, argues that a c-command requirement is not enough, and that licensing must involve Comp.
(26) NPI licensing must involve Comp
a) I doubt that anyone is here.
b) $\quad$ I doubt anyone

She also notes that the approaches of Linebarger and Ladusaw (see next section) cannot predict cross-linguistic variation in NPIs. Progovac's binding-theoretic version of NPI licensing is an attempt to account for both of these issues. She argues that polarity items, like pronouns, are subject to Binding Theory. NPIs like 'ever' must be bound by negation, or some other truth-conditional operator in Comp within their governing category, in order to be licensed. They are thus parallel to anaphors in that they are subject to Principle A:
(27) Binding Principle A:

An anaphor must be bound in its governing category.
She analyzes PPIs as being parallel to pronouns and subject to Binding Principle B:
(28) Binding Principle B:

A Pronoun must be free in its governing category.

A governing category is defined as being delimited by the first potential antecedent, where the first potential binder for NPIs correlates to negation in Infl. The governing category, then, for NPIs, is IP
(29) Progovac's Model: IP the Governing Category for NPIs


Progovac's approach can account for cross-linguistic differences in NPIs because different NPIs may be subject to different binding conditions. The Serbian/Croation i-NPIs, for example, display distributional properties as if they were subject to binding principle B. I-NPIs cannot be licensed by clause-mate/local negation, but that they can be licensed by super-ordinate negation, or in questions.
(30) i-NPIs in Serbian/Croatian
i-NPIs not licensed by local negation:
a) $\quad$ Marija ne poznaje $\mathbf{i}(\mathbf{t}) \mathbf{k o}$-ga

Mary not knows anyone-ACC
"Milan never drives"
b) *Milan ikada ne vozi Milan ever not drives

I-NPIs licensed by super-ordinate negation
c) Milan ne tvrdi da Marija poznaje $\mathbf{i}(\mathbf{t}) \mathbf{k o g a}$.

Milan not claims that Mary knows anyone-ACC
"Milan does not claim that Mary knows anyone."
d) Milan ne tvrdi da Marija ikada vozi

Milan not claims that mary ever drives
"Milan does not claim that Mary ever drives."
(Progovac 1994:42)
i-NPIs licensed by non-negative licensers
e) Y/N Questions

Da li Milan voli i(t)ko-ga?
That Q Milan loves anyone-ACC
"Does Milan love anyone?"
(Progovac: 1994:64)
While Serbian/Croatian i-NPIs need to be bound, they are subject to Binding Principle B in that they cannot be bound within their governing category. Because they cannot be licensed by negation in IP (their governing category) they must be licensed by licensors outside of their governing category either negation in a super-ordinate Infl, or a truth-conditional operator in Comp. Progovac's bindingtheoretic account thus makes cross-linguistic predictions - because NPIs should be subject to either Binding Principle A or Binding Principle B, her analysis predicts that super-ordinate negation and nonnegative (eg. other truth-conditional Ops like +Q ) licensing will pattern together, while clausemate/local negation will pattern differently. NPIs subject to principle A will be licensed by local negation only, while NPIs subject to principle B will be licensed only by super-ordinate or nonnegative licensors. Progovac's framework also allows for variation from these generalizations - she posits that NPIs with quantificational properties may raise at LF in order to escape their local binding domain, and be licensed by either super-ordinate negation or non-negative Ops in Comp. NPIs that lack
quantificational force, or that are unable to raise for morphological reasons ${ }^{9}$, follow the generalizations above. An example Progovac gives of a quantifier-raising NPI is English 'any'
(31) 'Any' in English: LF Quantifier Raising
(Progovac 1994: 82)
'Any' licensed by local negation:
a) John didn't hurt anyone
'Any' licensed by super-ordinate negation:
b) Mary does not claim that John hurt anyone
'Any' licensed by non-negative licensers:
c) Did John hurt anyone?

Progovac proposes that English 'any' has two options for quantifier raising: it can move through the Spec of CP, or it can adjoin to IP. 'Any' can thus escape IP, its local binding domain, and be licensed by either super-ordinate negation or truth-functional operators in Comp, respectively.
(32) Tree: Super-ordinate Negation: 'any' raising through Spec CP


[^6](33) Non-Negative Licensing: 'any' Raising by IP-adjunction


The different distributions of NPIs cross-linguistically (like 'any') can then be attributed to their raising properties: whether they can raise at LF , and if so, whether they can move through Spec CP , and/or whether they can move by IP adjunction. NPIs that can move through spec CP can be licensed by super-ordinate negation, while NPIs that adjoin to IP can be licensed by non-negative operators in Comp. Cross-linguistic variation of polarity items thus fall out from different combinations of binding and raising properties.

## The Minimalist Program

The syntactic approaches above are all framed within Government and Binding Theory, or even earlier frameworks, within the generative tradition. The latest incarnation of the generative tradition is the Minimalist program (cf. Chomsky 1995). For the purposes of this paper, I assume a minimalist approach, along the lines presented in Adger 2003. The relevant theoretical notions are as follows:

Projection: Features from a daughter node project on to the other node in a syntactic object.
Full Interpretation: The structure to which the semantic interface rules apply contains no uninterpretable features.

Checking Requirement: Uninterpretable features must be checked and once checked, they can delete.

Agree: An uninterpretable feature F on a syntactic object Y is checked when Y is in a ccommand relationship with another syntactic object Z which bears a matching feature F .
(Adger 2003)

Checking can also occur under a 'checking by valuing' approach. Uninterpretable features in this case are unvalued, and the checking operation gives the uninterpretable feature the value of the interpretable checking feature, formalized as follows:

Agree: In a configuration

$$
\mathrm{X}[\mathrm{~F}: \mathrm{val}] \ldots \mathrm{Y}[\mathrm{uF}:]
$$

where ...represents c-command, then F checks and values uF , resulting in:
X[F:Val]...Y[uF:val]
(Adger 2003:169)
NPI licensing can then be syntactically formalized as follows: NPIs have an uninterpretable uNEG or (uAFF:) ${ }^{10}$ feature, which must be in a c-commanded by an interpretable NEG (or AFF) feature to be checked, so that the derivation can be successful.

### 2.2 Semantic Approaches to NPI licensing

Other approaches to NPI licensing grew from the observation that several NPIs are actually licensed in many more contexts than those that could be labeled as 'negative' or 'affective.' Under the approaches from this tradition, NPI are typically licensed by semantic, not syntactic, environments.

## Ladusaw 1980: Downward Entailment

Ladusaw (1980), focusing on the polarity item 'any', analyzes NPIs as being licensed by a semantic property of downward entailment. An element $f$ is defined as downward entailing if its use entails that what is true of a set X is also true of its subset Y .
(36) Downward Entailment

An element $f$ is downward entailing if, $f(\mathrm{X}) \rightarrow f(\mathrm{Y})$, where $\mathrm{Y} \subseteq \mathrm{X}$

For example, let X be the set of hockey players, and Y be the set of pro hockey players, such that Y is a subset of X . Then a downward entailing function like 'few' will entail that what is true of X (hockey players) is also true of Y (professional hockey players).
(37) $\mathrm{p}=$ Hockey players have teeth.

[^7]a) "Fewer than three hockey players have teeth" $\rightarrow$ "Fewer than three pro hockey players have teeth"
b) Fewer than three $(\mathrm{X}) \rightarrow$ Fewer than three $(\mathrm{Y})$, where $\mathrm{Y} \subseteq \mathrm{X}$

If it is true that "fewer than three hockey players have teeth", it will also be true that "fewer than three pro hockey players have teeth." Thus 'fewer than three' is downward-entailing. This semantic property of 'fewer than three' contrasts with the semantic properties of 'some':
a) "Some hockey players have teeth." $-/ \rightarrow$ "Some pro hockey players have teeth."
b) $\operatorname{Some}(X)-/ \rightarrow \operatorname{Some}(Y)$, where $\mathrm{Y} \subseteq \mathrm{X}$

In this case, if "some hockey players have teeth" it is not necessarily true that "some pro hockey players have teeth." It might be the case that all hockey players in possession of their teeth are not at professional caliber. Thus 'some' is not downward-entailing.

NPIs, according to this Ladusaw, must be within the semantic scope of some downward-entailing element in order to be licensed. If not, they are ungrammatical.
a) Fewer than three hockey players have any teeth
b) *Some hockey players have any teeth.

Licensing by negation is subsumed within this analysis, because negation is downward entailing.
a) "Hockey players don't have teeth." $\rightarrow$ "Pro hockey players don't have teeth."
b) $\neg(\mathrm{X}) \rightarrow \neg(\mathrm{Y})$, where $\mathrm{Y} \subseteq \mathrm{X}$

If "Hockey players don't have teeth" is true, then it is also true that "Pro hockey players don't have teeth." This analysis then correctly predicts that NPIs may be licensed by negation.

For the purposes of this paper I do not consider downward-entailment a possible semantic account for the Blackfoot non-affirmatives. Blackfoot's non-affirmatives are restricted to narrower circumstances than downward entailment. The Blackfoot equivalent of 'few,' while downward entailing, does not license the non-affirmatives.
(41)
a) Manaanistsiistapi matapiiks inoyiiks annisk awawahkattska Manaa-anistsiitapi matapii-iksi ino-yii-iksi ann-isk á-waawahkaa'tsis-ka? Only-be.vai person-PL see.vta-dir-PL that-certain dur-toy-nom?
"There's only a few people that have seen Santa Clause"
Target: "Few people have seen him (Santa Clause)"
b) *Manaanistsiistapiwaatsiks matapiiksi inoyiiksi

Manaa-anistsiitapi-waatsiks matapii-iksi ino-yii-iksi
Only-be.vai-3:nonaff.sg person-PL see.vta-DIR-PL
$\begin{array}{ll}\text { annisk } & \text { awawahkattska } \\ \text { ann-yi-hka } & \text { á-waawahkaa'tsis-hka } \\ \text { that-?-invis } & \text { DUR-toy-invis }\end{array}$
Target: "Few people have seen him (Santa Clause)"

## Giannakidou 1998: Non(veridicality)

Giannakidou's 1998 analysis of polarity items subsumes both notions of licensing by negation, and licensing by downward-entailment. She makes use of the notion of '(non)veridicality', analyzing polarity items as being either licensed, or anti-licensed by specific veridicality values. Non-emphatic APIs (affective polarity items) in Greek are licensed by nonveridicality, emphatic NPIs in Greek are licensed by antiveridicality, and English 'any' is anti-licensed by veridicality. She provides the following definitions, as a first approximation, for veridicality, nonveridicality and antiveridicality.
(42) DEFINITION 1 (for monadic operators) (Giannakidou 1998: 106)

Let $O p$ be a monadic propositional operator.
(i) Op is veridical just in case $\mathrm{Op} \mathrm{p} \rightarrow \mathrm{p}$ is logically valid. Otherwise Op is nonveridical.
(ii) A nonveridical operator $O p$ is antiveridical just in case $\mathrm{Op} \mathrm{p} \rightarrow \neg \mathrm{p}$ is logically valid.
(43) DEFINITION 2 (for dyadic connectives) (Giannakidou 1998: 107)

Let C be a dyadic truth-functional connective. The following statements hold:
(i) $\quad \mathrm{C}$ is veridical with respect to $\mathrm{p}[\mathrm{q}]$ just in case $\mathrm{pCq} \rightarrow \mathrm{p}[\mathrm{pCq} \rightarrow \mathrm{q}]$ is logically valid. Otherwise C is nonveridical.
(ii) A nonveridical connective C is antiveridical with respect to $\mathrm{p}[\mathrm{q}]$ just in case $\mathrm{pCq} \rightarrow$ $\neg \mathrm{p}[\mathrm{pCq} \rightarrow \neg \mathrm{q}]$ is logically valid.

An example of a veridical monadic propositional operator then, is yesterday and its Greek counterpart xthes.
a) I Theodora efije xthes

The Theodora left. 3 sg yesterday
b) I Theodora efije The Theodora left.3sg
c) Theodora left yesterday
d) Theodora left
(Giannakidou 1998:107)
Because "Theodora left yesterday" entails that "Theodora left", where $\mathrm{p}=$ "Theodora left" the following is logically valid:
(45)

Yesterday $\mathrm{p} \rightarrow \mathrm{p}$
Thus, yesterday is veridical.
An example ${ }^{11}$ of a veridical dyadic propositional operator is the conjunctive connective and.
(Giannakidou 1998:107)
a) Jacob sang and Ruth cried
b) Jacob sang
c) Ruth cried

Because "Jacob sang and Ruth cried" entails both that "Jacob sang" and that "Ruth cried", it is veridical with respect to both of its arguments.

An example of a non-veridical monadic propositional operator is perhaps.
(Giannakidou 1998:108)
a) Perhaps Roxanne left
b) Roxanne left.
"Perhaps Roxanne left" does not entail that "Roxanne left", so where $\mathrm{p}=$ "Roxanne left", the following is not logically valid.

$$
\begin{equation*}
\text { Perhaps } \mathrm{p} \rightarrow \mathrm{p} \tag{48}
\end{equation*}
$$

[^8]A dyadic propositional operator that is nonveridical with respect to both of its arguments is disjunction or.
(Giannakidou 1998:108)
a) Jacob jumped or Ruth fainted
b) Jacob jumped
c) Ruth fainted

Where $\mathrm{p}=$ "Jacob jumped" and $\mathrm{q}=$ "Ruth fainted", the following statements are not logically valid:
(50)
a) $p \vee q \rightarrow p$
b) $p \vee q \rightarrow q$

Giannakidou labels sentential negation it is not the case as the prototypical antiveridical operator:
(Giannakidou 1998:109)
a) Frank didn't bring flowers $\quad \rightarrow \quad \neg$ Frank brought flowers

A connective which is antiveridical with respect to its q argument is without.
(Giannakidou 1998:109)
a) Jacob spoke without opening his eyes.
b) Jacob spoke
c) Jacob opened his eyes

Where $\mathrm{p}=$ "Jacob spoke" and $q=$ "Jacob opened his eyes", the following statement is logically valid:
a) $\quad \mathrm{p}$ without $\mathrm{q} \quad \rightarrow \quad \neg \mathrm{q}$

In order to account for the disparate licensing of polarity items with respect to weak and strong intensional verbs, which by the definitions above, are both nonveridical, Giannakidou modifies her definition of (non)veridicality to accommodate the fact that utterances do not have truth-values in and of themselves - utterances have truth-values according to the epistemic state or belief model of an individual. The following definitions represent her modified version of (non)veridicality: relativized (non)veridicality:

## i) Belief Model

Let $\mathrm{c}=<\mathrm{cg}(\mathrm{c}), \mathrm{W}(\mathrm{c}), \mathrm{M}, \mathrm{s}, \mathrm{h}, \mathrm{w}_{\mathrm{o}}, \mathrm{f}, \ldots>$ be a context.
A model $M M_{B}(x) \in M$ is a set of worlds associated with an individual $x$, representing worlds compatible with what x believes.
ii) Dream Model

Let $\mathrm{c}=<\mathrm{cg}(\mathrm{c}), \mathrm{W}(\mathrm{c}), \mathrm{M}, \mathrm{s}, \mathrm{h}, \mathrm{w}_{\mathrm{o}}, \mathrm{f}, \ldots>$ be a context.
A model $M M_{D}(x) \in M$ is a set of worlds associated with an individual $x$, representing worlds compatible with what x dreams.
iii) Model of Reported Conversation

Let $\mathrm{c}=<\mathrm{cg}(\mathrm{c}), \mathrm{W}(\mathrm{c}), \mathrm{M}, \mathrm{s}, \mathrm{h}, \mathrm{w}_{\mathrm{o}}, \mathrm{f}, \ldots>$ be a context.
A model $\mathrm{M} \mathrm{M}_{\mathrm{RC}}(\mathrm{x}) \in \mathrm{M}$ is a set of worlds associated with an individual x , representing worlds compatible with what x takes the reported conversation to be.
(55)

DEFINITION 4: Relativized (non)Veridicality
(Giannakidou 1998:112)
Let $\mathrm{c}=<\mathrm{cg}(\mathrm{c}), \mathrm{W}(\mathrm{c}), \mathrm{M}, \mathrm{s}, \mathrm{h}, \mathrm{w}_{\mathrm{o}}, \mathrm{f}, \ldots>$ be a context.
i) A propositional operator Op is veridical iff it holds that $[[\mathrm{Op} p]]_{\mathrm{c}}=1 \rightarrow[[\mathrm{p}]]=1$ in some epistemic model $\mathrm{M}(\mathrm{x})$ ec; otherwise Op is nonveridical.
ii) A nonveridical operator Op is antiveridical iff it holds that $[[\mathrm{Op} \mathrm{p}]]_{\mathrm{c}}=1 \rightarrow[[\mathrm{p}]]=0$ in some epistemic model $\mathrm{M}(\mathrm{x})$ єc.
iii) Epistemic models are: belief models $M_{B}(x)$, dream models $M_{D}(x)$, models of reported conversation $\mathrm{M}_{\mathrm{RC}}(\mathrm{x})$, and nothing else.

With the modified definition, weak intensional verbs such as 'believe', 'dream', 'say' and 'know' become veridical, while strong intensional verbs like 'say' remain nonveridical.
(Non)veridicality can account for previous approaches to NPI licensing. Licensing by negation, as stated above, can be accounted for because sentential negation $(\neg)$ is the classic antiveridical operator:
$\neg \mathrm{p} \rightarrow \neg \mathrm{p}$ is logically valid.
The approach to licensing by downward-entailing contexts can also be accounted for because the set of downward entailing operators is a subset of the set of nonveridical operators. (See Valencia et al. 1994)

Eg. few $\mathrm{p} \rightarrow \mathrm{p}$ is not logically valid.
In summary, approaches to NPIs in the literature have appealed to both syntactic, and semantic properties. In the next section I address whether the distributional properties of Blackfoot's nonaffirmative endings can be explained syntactically, or semantically.

### 3.0 Licensing the Non-affirmatives: Syntax or Semantics?

Recall that while Blackfoot's Non-affirmative endings are licensed by negation, it is not the case that they are licensed by all negation. Specifically, while they are licensed by negation realized as the morpheme maat-, they are not licensed by negation realized as the morpheme $s a-{ }^{12}$.
(56) The non-affirmatives are licensed by maat- but not by $s a$ -
a) Nimaatsikakkomai'taikihpa ana Meagan

Ni-maat-ikak-omai'taki-hpa an-wa Meagan
1-NEG-just-believe.vai-nonaff:local
that-3
Meagan
maataakonowayuumiwaatsiks
maat-aak-onowa-oomi-waatsiks
NEG-fut-ever- marry(f)-3s:nonaff
"I can't believe that Meagan will never get married"
b) Nimaatsikakomai'takihpa

Ni-maat-ikak-omai'taki-hpa
1-NEG-just-believe.vai-nonaff:loc
omaahksonowayuumsi(* waatsiks)
o-aahk-saw-onowa-oomi-hs-yi-(*waatsiks)
3-n.fact-NEG-ever-marry(f)-cj-cj-*3s:nonaff)
"I can't believe that Meagan will never get married"
A question that arises, then, is whether the difference between maat- and sa- is syntactic, semantic, or both. I argue that while the difference between maat- and sa-generally corresponds to the different semantic notions of antiveridical negation and nonveridical negation respectively, their difference is ultimately syntactic - they negate different levels of clause structure. Subsequently, I argue that the non-affirmatives are licensed syntactically, not semantically. In this section I briefly

[^9]outline how the difference between maat- and $s a$-, and non-affirmative licensing, can be explained syntactically, and then I outline how the difference may be captured semantically. I then address problems with the semantic approach, followed by a formal syntactic analysis of negation and the nonaffirmatives in Blackfoot.

### 3.1 A Syntactic Difference between maat- and $s a$ -

If I formalize the negative dependency of the non-affirmatives as an uninterpretable uNEG feature which must be checked by an interpretable NEG feature, then it would follow that the non-affirmatives must be c-commanded by some element bearing a NEG feature in order to get their uNEG checked. (Note that the diagram to the right is only a rough first approximation that changes throughout the course of the
 analysis.)

The fact that maat-licenses the non-affirmatives, while $s a$ - does not, then can easily be explained if maat-c-commands the non-affirmatives, but sa-does not. This analysis requires maat- and $s a$ - to have different structural positions, contra previous claims that they are in complementary distribution (Frantz 1991:84, Taylor 1969:307) This requirement is supported by empirical evidence -maat- and sa-have different distributional properties, such as the fact that maat- is disallowed from dependent clauses. This holds true for both
i) clauses marked with subordinating morphology, and
ii) clauses dependent on an overt time adverbial.

The data below shows that maat- cannot occur in dependent clauses with subordinating morphology. The contrast between (57) a) and b) shows that the antecedent of a conditional, which is always marked with subjunctive subordinating morphology, must be negated with $s a-$, not with maat-

| a) | Nitaaksayinakoyi | kamsooyiniki |
| :---: | :---: | :---: |
|  | Nit-áak-sayinakoyi(mm) | kam-saw-ooyi-iniki |
|  | 1-FUT-be.invisible.vai | if-nEG-eat.vai-subj:1s |
|  | "I will be invisible if I |  |

b) *Nitaaksayinakoyi kammaatooyiniki

Nit-áak-sayinakoyi(mm) kam-maat-ooyii-iniki
1-FUT-be.invisible.vai if-NEG-eat.vai-subj:1s
"I will be invisible if I don't eat"
b') *Nitaaksayinakoyi maat(a)kamooyiniki
Nit-áak-sayinakoyi(mm) maat-kam-ooyi-iniki
1-FUT-be.invisible.vai NEG-if-eat.vai-subj:1s
"I will be invisible if I don't eat"
The same is true of adjunct 'before'-clauses, which are also marked with subjunctive subordinating morphology: they must be negated with $s a-$, not with maat-
a) Nitaaksiksayisistootoo somoóyisi(*waiksaa)

Nit-áak-iksayis-it-o'too Saw-oma-ooyi-si-(*waiksaa)
1-FUT-early?-then-arrive.vai NEG-yet-eat.vai-subj(3)-(*3:nonaff.pl)
"I'll get there early, before they eat"
b) *Nitaaksiksayisistootoo maatomoóyisi

Nit-áak-iksayis-it-o'too maat-oma-ooyi-si
1-FUT-early?-then-arrive.vai NEG-yet-eat.vai-subj(3)
"I'll get there early, before they eat"
Likewise, this is also true of dependent embedded complement clauses that are marked with conjunctive subordinating morphology. This is the distinction in the data presented earlier to show the licensing discrepancy of maat- and $s a$-. While (59) a) and b) are interchangeably used, meaning the same thing, a) has the independent clause morphology, while b) has dependent conjunctive clause morphology. The embedded clause marked with conjunctive morphology must be negated with $s a$-, not with maat-
a)
Nimaatsikakkomai'taikihpa
Ni-maat-ikak-omai'taki-hpa
1-NEG-just-believe.vai-nonaff:local

| ana | Meagan |
| :--- | :--- |
| an-wa | Meagan |
| that-3 | Meagan |

maataakonowayuumiwaatsiks
maat-aak-onowa-oomi-waatsiks
NEG-fut-ever- marry(f)-3s:nonaff
"I can't believe that Meagan will never get married"
b) Nimaatsikakomai'takihpa ana Meagan

Ni-maat-ikak-omai'taki-hpa an-wa Meagan
1-NEG-just-believe.vai-nonaff:loc
that-3 Meagan
omaahksonowayuumsi(*waatsiks)
om-aahk-saw-onowa-oomi-hs-yi-(*waatsiks)
3-n.fact-NEG- ever-marry(f)-cj-cj-(*3s:nonaff)
"I can't believe that Meagan will never get married"
The following data shows that this generalization also holds true of clauses that are dependent on an overt time adverbial. Unlike the clauses above, the relevant $s a$ - negated clauses do not have subordinating morphology, but cannot stand alone grammatically:
(60)
a) niyookskaiiksistsikoi(sts) íítsáotuutsi(*waatsiks)
niyookskai-iksistsiko-yi-(ists) íít-sa-oto-otsi-(*waatsiks)
three-day-0.sg(pl) then-NEG-go.to.swim.vai-(*3:nonaff.sg)
"He didn't go swimming for three days."
b) *ítsaotuutsi
íít-sa-oto-otsi
then-NEG-go.to.swim.vai
Target: He didn't go swimming

In (60a), the sa-negated clause 'he didn't go swimming' is dependent on the overt time adverbial 'three days'. Without the overt time adverbial, the $s a$-negated clause is ungrammatical, as seen in (60b). This is in contrast to the following data in (61). Like the previous examples, there are two parts to the utterance, the negated clause 'he didn't go swimming' and a time adverbial 'three days ${ }^{13}$. The difference is that in (61a) the clause is negated by maat-, instead of by $s a$-, and that unlike the example above, the negated clause can stand alone without an overt time adverbial (61b).
a) máátonowaotútsi(waatsiks) niyookskaiiksistsikoi(sts)
maat-onowa-oto-otsi-waatsiks niyooksa-iksistsiko-yi-(ists)
NEG-ever-go.to-swim.vai-3:nonaff.sg
"He didn't go swimming for three days."
b) máátonowaotutsiwaatsiks
maat-onowa-oto-otsi-(waatsiks)
NEG-ever-go.to-swim.vai-(3s:nonaff)
"He never went swimming."

[^10]Note, however, that the difference between maat- and sa-cannot be reduced to an independent/dependent distinction, as suggested by Déchaine and Wiltschko 2001 - while maat- is disallowed from dependent clauses; it is not the case that $s a$ - is disallowed from independent clauses.
(62) $S a$ - can occur in independent clauses
a) Kikaahkamapsayinowa(*waatsiks)

Ki-aahkamap-say-ino-a-(*waatsiks)
2-might-NEG-see.vta-DIR-(*3nonaff.sg)
"You might not see him"
b) Kitsimatsowainowa

Kit-imat-saw-a-ino-a
2-still-NEG-DUR-see.vta-DIR
"You don't almost see him"
The examples above are not marked with subordinating morphology, and do not appear to be dependent on any other constituent. Note also, that the above cases must be negated with sa-negation, maat- negation is ungrammatical:
a) *kimaataahkamapinowa

Ki-maat-aahkamap-ino-a
2-NEG-might-see.vta-DIR
Target: You might not see him
a') *kikaahkamapmaatsinowa
ki-aahkama'p-maat-ino-a
2-might-NEG-see.vta-dir
Target: You might not see him
b) *kimaatomatsinowa

Ki-maat-omat-ino-a
2-NEG-almost-see.vta-DIR
Target: You don't almost see him
This distributional disparity is further evidence that maat- and $s a$ - have different syntactic positions. I have found that where $s a$ - is used to negate independent clauses, negation does not have scope over the entire proposition ${ }^{14}$ :

[^11]He does not, however, indicate which morphemes will precede negation, or provide a way to predict which morpheme swill precede negation.
a) "I might not see him" $\neq$ "It is not the case that I might see him"
b) "I almost didn't hear him" $\neq$ "It is not the case that I almost heard him")

The meaning of (64) a) and b) cannot be paraphrased as "it is not the case that $p$ ", thus $s a$ - negation in independent clauses does not have propositional scope. Negation by $s a$ - in independent clauses, seems to have scope over something less than the entire proposition. This is in contrast to the meaning of independent clauses negated by maat-, where maat- does have propositional scope. The maat- negated independent clause can be paraphrased as "it is not the case that $p$. "

```
(65) nimaatssksini'pa
ni-maat-sskssini-'p-wa
1-NEG-know.vti-loc>0-3:nonaff
"I don't know" = It is not the case that I know
```

The proposal that maat- and sa-negate different levels of clause structure can account for both of the above generalizations. It is a common observation that in unambiguous cases, differences in syntactic position correlate to a difference in semantic scope. This has been formalized, for example, by Huang's General Condition on Scope:
(66) Huang 1982: General Condition on Scope

Suppose A and B are both QPs or Q-expressions, then if A c-commands B at SS, A also ccommands B at LF.

How the dependent/independent distinction can be explained is less obvious, but if negation realized as maat- is situated as high in the clause structure as Comp, as suggested by Déchaine \& Wiltschko 2001, then interactions with clause-typing is expected. In fact, because Blackfoot does not have overt complementizers, only subordinating morphology, I argue that maat- and the subordinating morphology both occupy C , the head of CP , which is the traditional position for complementizers. This, then, accounts for their
 complementary distribution. This proposal is supported by the fact that maat- is in complementary distribution with (i)kata'-, Blackfoot's Y/N question operator, where Y/N question operators are also
traditionally analyzed as situated in the head of CP . (Again, note that the diagram to the upper right is a rough working approximation.)
(67) Negation maat- and Y/N operator (i)kata'- in complementary distribution
a) *kata'maatsinoyiiwaatsiks
kata'-maat-ino-yii-waatsiks
Y/N-NEG-see.vta-3>3'-3:nonaff.st
Target: Did he not see him?
b) $\quad$ maatsikatai'noyiiwaatsiks
maat-ikata'-ino-yii-waatsiks
NEG-Y/N-see.vta-3>3'-3:nonaff.sg
Target: Did he not see him?
$S a$ - negation, if located structurally below C, would not have these clause-type restrictions, accounting for the fact that it can occur in both dependent and independent clauses. Because $s a$ - still results in sentential negation for dependent clauses, I have analyzed it as also residing high in the clause structure, but within IP as opposed to CP.

Note that this analysis of maat- and sa- as structurally distinct predicts that they could co-occur, contrary to claims that maat- and sa- are in complementary distribution (see Frantz 1991:84; Taylor 1969:307). This prediction is true - the two negative morphemes maat- and sa-can co-occur within a single clause:
a) máátsitoohkanistsómo'tsaakiwaatsiks
maat-it-oohk-aanist-saw-omo'tsaaki-waatsiks
NEG-there-?-manner-NEG-win.vai-3:nonaff.sg
"He didn't lose on purpose"
b) maataaksikkipeisowaisttso'kiniwaatsiks
maat-aak-ikippa'-saw-a-isttso'ini-waatsiks
NEG-fut-feign-NEG-dur-be.hungry.vai-3:nonaff.sg
"He won't pretend to not be hungry."
Note that it cannot be the case that the examples above are actually bi-clausal, as the non-affirmatives always attach at the right-edge of the clause that maat- attaches to, exemplified by the data below.
a) nimaatohsstapa ninaaksnowahsi(*waatsiks)
ni-maat-oht-sstaa-hpa nin-áahk-ino-a-hs-yi-waatsiks
1-nEG-means-want.vai-loc:nonaff 1-n.fact-see.vta-DIR-cj-cj-3:nonaff.sg
"I don't want to see him."
b) nimáátsikakssksinipaatsiks
ni-maat-ikak-ssksini-'p-wa-atsiks
1-NEG-even-know.vti-loc>0-3:nonaff.sg
"I didn't know that they both lost!"
c) maatááksikkípaaniistska'si
maat-aak-ikkipa-aanist-iitska'si
NEG-FUT-feign-manner-pretend.vai
ayakomo'tsaayaa
wayak-omo'tsaa-yaa
both-lose.vai-3pl
"He's not going to pretend that he's not hungry."
In a), the non-affirmative is ungrammatical when it attaches to the right-edge of the second, embedded, clause. The non-affirmative is grammatical, in contrast, in b) where it attaches to the right edge of the matrix clause. $(69 \mathrm{c})$ shows the bi-clausal equivalent of the monoclausal (68b).

In summary, if the non-affirmatives are licensed syntactically, the licensing disparity between maatand $s a$ - can be explained by their syntactic differences - while maat- is high enough in the clause to ccommand the non-affirmatives, $s a$ - is not, therefore while maat- can check the uninterpretable uNEG feature on the non-affirmatives, $s a$ - cannot. Thus $s a$-negated clauses cannot license the nonaffirmatives; the unchecked uNEG features remains uninterpretable, therefore the derivation crashes. This is represented below. Note that in the tree diagram maat- and the non-affirmative element are represented as sisters. This is done partly for simplicity, so that mysterious nodes between CP and IP need not be posited, but note also that this does not affect the analysis, since sisterhood is just a local form of c-command. (Again, note that the tree diagram below still undergoes further refinement - the analysis does not yet derive the correct surface structure)


### 3.2 A Semantic Difference between maat- and $s a$ -

Recall that the difference between maat- and $s a$ - in independent clauses was a semantic scopedistinction.
(70)
a) *kimaataahkamapinowa

Ki-maat-aahkamap-ino-a
2-NEG-might-see.vta-DIR
Target: You might not see him
b) Kikaahkamapsayinowa(*waatsiks)

Ki-aahkamap-sa-ino-a-(*waatsiks)
2-might-NEG-see.vta-DIR-(*3nonaff.sg)
"You might not see him"
("I might not see him" $\neq$ "It is not the case that I might see him")
c) *kimaatsimatsinowa

Ki-maat-imat-ino-a
2-NEG-almost-see.vta-DIR
Target: You don't almost see him
d) Kitsimatsoweinowa

Kit-imat-so-a-ino-a
2-still-NEG-DUR-see.vta-DIR
"You don't almost see him"
("I almost didn't hear him" $\neq$ "It is not the case that I almost heard him")
While maat-corresponds to propositional/sentential negation, sa-negation doesn't. The generalization, as formulated, is very imprecise. While maat- negation can be defined as negating propositions, $s a$ negation can only be defined as negating something less than the proposition. Note that the maat- and $s a$ - distinction is not a sentential/constituent distinction. Constituent negation in Blackfoot is not possible, the closest approximations requiring elaborate biclausal constructions.
(Elicited 2006-07)
a) iikaiyaahsi'takih otsowokska'si(*waatsiks)
iik-a-yaahs-i'taki-h ot-so-okska'si-(waatsiks)
very-dur-pleasing-feel.vai-? 3-NEG-run.vai-(3:nonaff.sg)
"He feels really good that he doesn't run"
Target: He enjoys not running (vs. He doesn't enjoy running)

Thus while positing maat- as sentential negation is not problematic, describing sa- as negating something less than the proposition is a shameful evasion. What, exactly, does sa- negate? Fortunately, the semantic difference between maat- and $s a$ - can be more formally defined, following Gianakidou 1998's notion of (non)veridicality. Specifically, while maat- negation produces antiveridicality, sanegation produces nonveridicality. Recall her definitions of (relativized) veridicality, nonveridicality and antiveridicality:

DEFINITION 4: Relativized (non)Veridicality
(Giannakidou 1998:112)

Let $\mathrm{c}=<\mathrm{cg}(\mathrm{c}), \mathrm{W}(\mathrm{c}), \mathrm{M}, \mathrm{s}, \mathrm{h}, \mathrm{w}_{\mathrm{o}}, \mathrm{f}, \ldots>$ be a context.
j) A propositional operator Op is veridical iff it holds that [[Op p] $]_{\mathrm{c}}=1 \rightarrow[[\mathrm{p}]]=1$ in some epistemic model $\mathrm{M}(\mathrm{x}) \mathrm{cc}$; otherwise Op is nonveridical.
ii) A nonveridical operator Op is antiveridical iff it holds that $[[\mathrm{Op} \mathrm{p}]]_{\mathrm{c}}=1 \rightarrow[[\mathrm{p}]]=0$ in some epistemic model $\mathrm{M}(\mathrm{x}) \mathrm{cc}$.
iii) Epistemic models are: belief models $\mathrm{M}_{\mathrm{B}}(\mathrm{x})$, dream models $\mathrm{M}_{\mathrm{D}}(\mathrm{x})$, models of reported conversation $\mathrm{M}_{\mathrm{RC}}(\mathrm{x})$, and nothing else.

The two morphemes that force sa-negation in an independent clause, 'might' aahkama'p, and 'almost' imat~omat, are scope-bearing elements that affect the veridicality value of the proposition they modify. If one states "You might see him," it is not entailed that "You (will) see him." Consequently 'might' renders the proposition independently nonveridical. Likewise, if one states "You almost see him," it is not logically entailed that "You see him." In fact, it entails "You do not see him." 'Almost' then, also renders the proposition within its scope as nonveridical (and antiveridical, antiveridical contexts being a proper subset of the contexts that are nonveridical).

$$
\begin{aligned}
& {[[\text { Might } \mathrm{p}]]=1 / \rightarrow[[\mathrm{p}]]=1} \\
& {[[\text { Almost } \mathrm{p}]]=1-/ \rightarrow[[p]]=1}
\end{aligned}
$$

When negation interacts with these elements that themselves affect veridicality, the negation cannot be construed as antiveridical. If one states "You almost don't see him" it does not entail that "You don't see him." [[almost $\neg \mathrm{p}]]=1 \rightarrow[[\mathrm{p}]]=0$ is not a valid statement in any belief model, so negation in such a case cannot be characterized as antiveridical. Similarly, if one states "You might not see him," negation cannot be characterized as antiveridical. [[might $\neg \mathrm{p}]]=1 \rightarrow[[p]]=0$ is not valid in
any belief model. Thus in cases where $s a$ - negation is required, the result is nonveridicality, whereas when maat- negation (sentential negation) is used, the result is antiveridicality. The same generalization can be seen with the antecedents of conditionals, which also require sa- negation: in these cases, negation also results in non-, not antiveridicality.
a) Nitaaksayinakoyi kamsooyiniki

Nit-áak-sayinakoyi (ik)kam-saw-ooyi-iniki
1-FUT-be.invisible.vii if-NEG-eat.vai-1s(subj)
"I will be invisible if I don't eat"
b) nitaahksikomaahkapii kamsowatokskasiniki
nit-aak-ik-omahk-a'pii (ik)kam-so-at-okska'si-iniki
1-FUT-intns-big-bisw.vii if-NEG-anymore-run.vai-subj
"I'm gonna be fat if I don't run anymore"

Giannakidou categorizes the antecedents of conditionals as nonveridical an account of their non-assertive nature. Because they are not assertive, the conditions expressed in them do not need to be met in a particular context, consequently it is never entailed that they are true (Giannakidou 1998:131). Because the antecedents of conditionals are already nonveridical, like the scope-bearing elements 'might' and 'almost' above, when they interact with negation, the result produced cannot be characterized as antiveridical. "If I don't run, I am going to be fat" does not entail that "I don't run;" $[[\neg \mathrm{p} \rightarrow \mathrm{q}]]=1 \rightarrow[[\mathrm{p}]]=0$ is not a valid statement.

Because the licensing by maat- and sa-seem to correlate to a semantic distinction of antiveridical negation and nonveridical negation respectively, it is tempting to reduce the licensing of the non-affirmatives to a semantic property: It may be that the non-affirmatives are only licensed in antiveridical contexts. This is how Giannakidou analyzes emphatic n-words in Greek - where nonemphatic n-words are licensed by nonveridicality, their emphatic counterparts are only licit in antiveridical contexts (Giannakidou 1998:97). Reducing the licensing condition of the Blackfoot nonaffirmatives to antiveridicality is then especially attractive, considering the fact that they, too, are emphatic in nature: in my speaker's dialect, the non-affirmatives are always optional (with maatnegation), and their inclusion results only in emphasis.

### 3.3 Problems with a Semantic Account

It is not the case, however, that the syntactic difference between maat- and sa-always corresponds to the anti/nonveridical semantic difference. In this section I illustrate such cases, and
show that where the syntax and semantics do not 'match up,' the licensing of the non-affirmatives depends on the syntactic properties of negation (whether or not negation is realized as maat- or $s a$-), and not the semantic properties (whether the context is antiveridical or nonveridical).

### 3.3.1 'Before'-clauses:

$S a$ - negation is always used to form 'before'-clauses in Blackfoot.
(Elicited 2007-02-15)

```
a) iikaiyistapoo ana Lucy otsaómoohka'pssi
    iikai-yistap-oo an-wa Lucy ot-sa-oma-oohk-a'pssi
    already-away-go.vai that-3 Lucy 3-NEG-ever-??-bism.vai
    "Lucy left the country before anything happened."
```

Giannakidou shows that while some 'before'-clauses are veridical, it is not the case that all of them are. Depending on the main-clause predicate, 'before'-clauses can be veridical, nonveridical or antiveridical.

A veridical 'before'-clause
a. Before we went to bed, Paul washed his teeth.

A nonveridical 'before'-clause
b. Lucie left the country before anything happened.

An antiveridical 'before'-clause
c. Ruth died before seeing her grandchildren.
(Giannakidou 1998:108-109)

The data in (a) shows the veridical use of 'before'. Where $\mathrm{p}=$ "Paul washed his teeth" and $\mathrm{q}=$ "We went to bed," 'before' entails that the clause in it scope is veridical. If "Paul washed his teeth before we went to bed" is true, "We went to bed" must also be true.
$[[\mathrm{p}$ before q$]]=1 \rightarrow[[\mathrm{q}]]=1$
The data in (b) shows 'before' as being nonveridical with respect to q , where "Lucy left the country" $=\mathrm{p}$, and "Anything happened" $=\mathrm{q}$. Whether or not "anything happened" is independent of whether or not "Lucy left the country."
$[[p$ before $q]]=1-/ \rightarrow[[q]]=1$

Main-clause predicates with a sense of finality to them, like 'die' usually produce antiveridical 'before'-clauses. In (c), where "Ruth died" = p, and "Ruth saw her grandchildren" = q, 'before' is antiveridical with respect to q .
$[[p$ before $q]]=1 \rightarrow[[q]]=0$.
Despite the fact that the context produced by $s a$ - in 'before'-clauses can be veridical, nonveridical or antiveridical ${ }^{15}$ in 'before'-clauses, the non-affirmatives are always disallowed.

Veridical use of 'before
a) Otsitsaomotoyaaksstssiihpi(*waatsiks)

Ot-it-sa-omo-oto-yaakihtsiyi-hp-yi-waatsiks
3-rel-NEG-yet-goto-bed.vai-cj.nom-0-3:nonaff.sg
itohkanowatum omistsi pisatskiitaanists
it-ohkan-owatoo-m om-istsi pisats-ihkitaa-N-istsi
rel- $\forall$-eat.vti-3>0 that-0pl fancy-bake.vai-nom-0pl
"Before he went to bed, he ate all of the cookies."
Nonveridical use of 'before'
(Elicited 2005-11, based on data from Frantz 1991:86)
b) Nitaaksiksayisisto'too saomoóyssi(*waiksaa)

Nit-áak-iksayis-it-o'too sa-oma-ooyi-yssi-waiksaa
1-FUT-early?-rel-arrive.vai NEG-yet-eat.vai-SUBJ(3)-3:nonaff.pl
"I'll get there early, before they eat"
Antiveridical use of 'before'
c) ikéístapi'ni
iik-á'-stap-i'ni
already-inch-??-die.vai
otsitsomowamisátupi (* waatsiks)
ot-it-so-omo-waamisatoo-'p-yi-waatsiks
3-rel-NEG-yet-ascend.vti-cj-0-3:nonaff.sg
omi míístaki
om-yi miistak-yi
that-0 mountain-0
"He died before he could climb that mountain."

[^12]d.) ikeistapyaapistsi
iik-a'-stap-yaapstsii
already-inch-??-be.blind.vai
otsomeinowahsi(*waatsiks)
ot-so-oma-ino-a-hs-yi-waatsiks
3-NEG-yet-see.vta-dir-cj-0-3:nonaff.sg
otsitapiimiks
ot-itapiim-iks
3-relative-pl
"He went blind before he saw his family"
variant:

```
iikeistapyaapistsi otsitsomeinowahpi(*waatsiks)
iik-a'-stap-yaapstsii ot-it-s0-oma-ino-a-hp-yi-waatsiks
already-inch-??-be.blind.vai 3-NEG-yet-see.vta-dir-cj-0-3:nonaff.sg
otsitapiimiks
ot-itapiim-iks
3-relative-pl
```

"He went blind already before he saw his family"
This provides evidence that the non-affirmatives are syntactically licensed, as opposed to being semantically licensed.

### 3.3.2 Other Dependent Clauses

There were two other cases of dependent clauses shown earlier, in which sa-negation had to be used instead of maat- negation. These were clauses dependent on an overtly specified time-adverbial and clauses that were dependent on a matrix clause. I will first address the time-adverbial-dependent clauses.
(77)
a) niyookskaiiksistsikoi(sts)
niyookskai-iksistsiko-yi-(ists) three-day-0.sg(pl)
íts_́áotuutsi(*waatsiks)
íít-sa-oto-otsi-(*waatsiks)
then-NEG-go.to.swim.vai-(*3:nonaff.sg)
"He didn't go swimming for three days."
b) *ítsaotuutsi
íít-sa-oto-otsi
then-NEG-go.to.swim.vai
Target: He didn't go swimming
c) máátonowaotútsi(waatsiks)
maat-onowa-oto-otsi-waatsiks NEG-ever-go.to-swim.vai-3:nonaff.sg
niyookskaiiksistsikoi(sts)
niyooksa-iksistsiko-yi-(ists)
three-day-0.sg (pl)
"He didn't go swimming for three days."
d) máátonowaotutsiwaatsiks
maat-onowa-oto-otsi-(waatsiks)
NEG-ever-go.to-swim.vai-(3s:nonaff)
"He never went swimming."
Giannakidou (2000) provides the follow definition for (non)veridicality, modified to relativized truthvalues for times:
(78)(Non)veridicality for temporal/aspectual operators (Giannakidou 2000:9)

Let F be a temporal/aspectual operator; t an instant or an interval.
i. F is veridical iff for Fp to be true at a time $\mathrm{t}, \mathrm{p}$ must be true at a (contextually relevant) time $\mathrm{t}^{\prime} \leq \mathrm{t}$. Otherwise Op is nonveridical. ii. A nonveridical operator $F$ is antiveridical iff for $F p$ to be true at a time $t$, $\neg \mathrm{p}$ must be true at a (contextually relevant) time t ' $\leq \mathrm{t}$.
iii. If $F$ is true of an interval $t$, then $F$ is veridical iff for all (contextually relevant) $t^{\prime} \subseteq t, p$ is true at $t^{\prime}$. Otherwise, $F$ is nonveridical. If for all (contextually relevant) $t^{\prime} \subseteq t, \neg p$ is true at $t^{\prime}$, then $F$ is antiveridical.

For "I didn't go swimming for two days" to be true, there cannot exist a time during those two days where I went swimming. This means that the context resulting from negation in both (a) and (c) is antiveridical.
$[[$ For two days $\neg \mathrm{p}]]=1$, iff $\forall \mathrm{t}^{\prime}, \mathrm{t}^{\prime} \subseteq \mathrm{t},[[\neg \mathrm{p}]]=1$.
The data in (a) shows, however, that the non-affirmatives are not grammatical with sa- negation despite the fact that it contributes antiveridical negation. This is further confirmation of the fact that the non-affirmatives are not licensed by the semantic condition of antiveridicality, but must be syntactically licensed.

The other type of dependent clauses previously mentioned were clauses dependent on a matrix verb. In some of these instances of $s a$ - negation can only be construed as antiveridical.

| a) | iikaiyaahsi'takih | otsowokska'si(*waatsiks) |
| :---: | :---: | :---: |
|  | iik-a-yaahs-i'taki-h | ot-s0-okska'si-(waatsiks) |
|  | very-dur-pleasing-feel.vai-? | 3-NEG-run.vai-(3:nonaff.sg) |
|  | "He feels really good that he doesn't run" |  |
|  | Target: He enjoys not runnin |  |

In the data above, if [[He feels really good that he doesn't run $]]=1 \rightarrow[[\mathrm{He}$ runs $]]=0$ is a valid statement. There can be no interpretation where the above statement being true does not entail that "He doesn't run." Again, the non-affirmatives are ungrammatical in such an utterance, despite the antiveridical context. Note that for some matrix verbs, there is leeway as to whether or not the complement taken is morphologically subordinate (and thus would require sa-negation) or morphologically an independent clause (and thus able to take maat- negation).The verb omai'taki 'believe' is an example; it may take either an independent complement, or a subordinate complement.
a) Nimaatsikakkomai'taikihpa ana Meagan

Ni-maat-ikak-omai'taki-hpa
1-NEG-just-believe.vai-nonaff:local

| an-wa | Meagan |
| :--- | :--- |
| that-3 | Meagan |

maataakonowayuumiwaatsiks
maat-aak-onowa-oomi-waatsiks
NEG-fut-ever- marry(f)-3s:nonaff
"I can't believe that Meagan will never get married"
b) Nimaatsikakomai'takihpa ana Meagan

Ni-maat-ikak-omai'taki-hpa an-wa Meagan
1-NEG-just-believe.vai-nonaff:loc that-3 Meagan
omaahksonowayuumsi(*waatsiks)
om-aahk-saw-onowa-oomi-hs-yi-(*waatsiks)
3-n.fact-NEG- ever-marry(f)-cj-cj-(*3s:nonaff)
"I can't believe that Meagan will never get married"

Again, because both utterances are semantically equivalent, only the morphosyntactic difference between maat- and sa- can account for whether or not the non-affirmatives are grammatical.

### 3.3.3 Questions

Further evidence that antiveridicality cannot be the licensing condition for the non-affirmatives can be seen in questions. The non-affirmatives are licensed in both $\mathrm{Y} / \mathrm{N}$ questions and Wh -questions:
(81) Grammatical in Y/N Questions
a) Kikatai'nookaatsiks
k-ikata'-ino-ok-waatsiks
2- $\underline{\text { //N}}$-see.vta-INV(3>LOC)-nonaff:3S
"Did he see you?"
b) Okatai'nookaiksaa
o-kata'-ino-ok-waiksaa
3-Y/N-see.vta-INV(3>LOC)-nonaff:3pl
"Did they see him?"
(82) Grammatical in Wh-Questions
a) tsimá itapoowaatsiks
tsimá itapoo-waatsiks
where go.vai-nonaff:3s
"Where did he go?"
b) tsá niitamo'tsaawaatsiks
tsá niit-omo'tsaa-waatsiks
what manner-lose.vai?-3:nonaff.sg
"How did he lose/get beat?"
If the non-affirmatives were licensed by antiveridicality, questions would have to be characterized as antiveridical. Recall Giannakidou's definition of relativized (non)veridicality.
(83) DEFINITION 3: Relativized (non)Veridicality
(Giannakidou 1998:112)
Let $\mathrm{c}=<\mathrm{cg}(\mathrm{c}), \mathrm{W}(\mathrm{c}), \mathrm{M}, \mathrm{s}, \mathrm{h}, \mathrm{w}_{\mathrm{o}}, \mathrm{f}, \ldots>$ be a context.
i) A propositonal operator Op is veridical iff it holds that $[[\mathrm{Op} \mathrm{p}]]_{\mathrm{c}}=1 \rightarrow[[\mathrm{p}]]=1$ in some epistemic model $\mathrm{M}(\mathrm{x}) \in \mathrm{c}$; otherwise Op is nonveridical.
ii) A nonveridical operator Op is antiveridical iff it holds that $[[\mathrm{Op} p]]_{c}=1 \rightarrow[[p]]=0$ in some epistemic model $\mathrm{M}(\mathrm{x})$ ec.
iii) Epistemic models are: belief models $M_{B}(x)$, dream models $M_{D}(x)$, models of reported conversation $\mathrm{M}_{\mathrm{RC}}(\mathrm{x})$, and nothing else.

Questions cannot be either veridical or antiveridical according to this definition. Because questions do not have truth-values, the antecedent for both definitions ( $[[\mathrm{Op} \mathrm{p}]]_{\mathrm{c}}=1$ ) can never hold. Giannakidou thus analyzes interrogatives along with other non-declaratives such as imperatives and exclamatives. Because all of these utterances lack truth-values, they cannot be considered as either veridical or antiveridical under Giannakidou's definitions, and are labelled averidical, a subset of nonveridicality characterized by the fact that lack veridicality. If one further tried to save the semantic account by positing the licensing condition to include both antiveridicality and averidicality, one would then expect the non-affirmatives to be grammatical in imperative statements, which they are not.

## (84) Miinikaksinoos(* ${ }^{\text {aatsiks }}$ ) <br> Miin-ikak-ino-oos-waatsiks <br> NEG:IMP-even-see.vta-IMP:2s:3-3:nonaff.sg <br> "You better not see him!"

The syntactic analysis, on the other hand, can account for the licensing properties. Recall that maat- negation and the $\mathrm{Y} / \mathrm{N}$ operator (i)kata'- are in complementary distribution:
(85) Negation maat- and Y/N operator (i)kata'- in complementary distribution
a) *kata'maatsinoyiiwaatsiks
kata'-maat-ino-yii-waatsiks
Y/N-NEG-see.vta-3>3'-3:nonaff.st
Target: Did he not see him?
b) *maatsikatai'noyiiwaatsiks
maat-ikata'-ino-yii-waatsiks
NEG- $\mathbf{Y} / \mathbf{N}$-see.vta-3>3'-3:nonaff.sg
Target: Did he not see him?

They would both then be in a position to c-command, and therefore license, the non-affirmatives. The non-affirmatives' uninterpretable uNEG feature would have to be reformulated as an uninterpretable affective [uAFF:] feature that is unvalued. This [uAFF:] feature then gets its value when it's checked by either the [NEG] feature of maat-, or the [Q] feature of (i)kata'-.


[NEG]





[NEG]


Wh-words, traditionally analyzed as occupying specCP, would likewise be in a position to c-command, and therefore license, the non-affirmatives. The [uAFF:] feature of the non-affirmatives would be valued with the $[\mathrm{WH}]$ feature of the Wh-words when it is checked.


Notice, however, that the analysis still fails to derive the proper surface structure - the non-affirmatives always attach to the right-edge of the clause. For this reason, I modify the analysis such that the nonaffirmatives do not merge with C , but with CP .



Because features can be projected from daughter nodes onto mother nodes, the [NEG] feature from maat- in the head of C can be projected up to CP , which is sister to the non-affirmative. This allows the [NEG] feature from maat- to check and value the [uAFF:] of the non-affirmative. The same is true for the [Q] feature of the Y/N operator (i)kata'-, and the [WH] feature of the wh-words. Notice that I represent $s a$ - negation in the diagram as an adjunct - this is because $s a$ - negation is recursive: it may occur more than once in a verbal complex.

$$
\begin{equation*}
s a \text { - negation is recursive } \tag{86}
\end{equation*}
$$

a) aahkama'pikkipsowaistso'kini
aahkama'p-ikkipa-so-a-isttso'kini
might-pretend-NEG-dur-hungry.vai
"He might be pretending to not be hungry." (eg. because I am such a bad cook)
b) aahkama'psoweikkipsowaisttso'kini
aahkama'p-saw-a-ikkipa-saw-a-isttso'kini
might-NEG-dur-pretend-NEG-dur-hungry.vai
"He might not be pretending to not be hungry." (eg. he may have actually already eaten)

Notice also that in the diagrams above, I represent the non-affirmatives as DPs. This is a consequence that falls out from:
i) my analysis of the non-affirmatives as situated within the C-domain, and
ii) Elouazizi \& Wiltschko's 2006 proposal for different types of agreement (see next section).

A second consequence that follows from i) and ii) is the proposal that I explore in the following section - that the non-affirmatives agree with a discourse subject, specifically a topic. I use topic in the sense of a topic that distinguishes a Categorical Judgment from a Thetic Judgment (cf Kuroda 1992, Ladusaw 1994), and argue that this second consequence accounts for the second peculiar property of the nonaffirmatives, i.e. their existential wide scope property.

### 4.0 Consequences for NEG and the Non-affirmatives in the C-domain

This section is organized as follows: First I provide an outline of the theoretical bases I draw upon for the above consequences - Elouazizi \& Wiltschko 2006's proposal for three different kinds of agreement; and the Thetic-Categorical distinction as presented by, among others, Kuroda 1992 and Ladusaw 1994. I then explore further consequences and predictions made by the proposal that the nonaffirmatives agree with a Topic.

### 4.1 Theoretical Framework: 3 Kinds of Agreement: Elouazizi \& Wiltschko 2006

Under the assumption that:
i) agreement is pronominal (Ritter 1995), and
ii) that there are three different types of pronouns, D-pronouns, $\Phi$-pronouns and N pronouns, each associated with different binding-theoretic properties (Déchaine \& Wiltschko 2002),

Elouazizi and Wiltschko propose that there are three types of agreement: D-agreement, $\Phi$-agreement and N -agreement, further positing an additional level of n -agreement.


Each type of agreement instantiates a different level of structure in the nominal domain and each corresponds to a different level of structure in the clausal domain: D-agreement maps on to Comp, $\Phi$-agreement maps onto Aux/Infl, n-agreement maps onto little v , and N -agreement maps onto V .


Each type of agreement is further associated with a different distribution, a different target for agreement, and different sensitivities, all of which fall out from the category of agreement and the corresponding level of clausal representation.

D-Agreement instantiates on C (complementizers), targets specCP (a discourse subject) for agreement, and is sensitive to clause type.
$\Phi$-Agreement instantiates on Infl (auxiliaries), targets specIP (the grammatical subject), and is sensitive to inflectional properties like tense.
n -Agreement instantiates on little v (transitive verbs), targets specvP (the AGENT), and is sensitive to verbal properties such as transitivity (and distinctions of ergative/absolutive).

N -Agreement instantiates on V (verbs, transitive or intransitive), targets specVP (an internal/absolutive argument, eg. THEME, or LOCATION), and is sensitive to lexical properties of the verb.

Recall that the Blackfoot non-affirmatives agree with a third person with respect to number and animacy:
(87) The Non-affirmatives agree with respect to number and animacy of a third person
a) nimaatsinowawaatsiks
ni-maat-ino-a-waatsiks
1-NEG-see.vta-DIR(LOC>3)-3nonaff.sg
"I didn't see her"
b) nimaatsinowawaiksaa
ni-maat-ino-a-waiksaa
1-NEG-see.vta-DIR(LOC $>3$ )-3nonaff.pl
"I didn't see them"
c) okatai'nookaiksaa
o-kata'-ino-ok-waiksaa
3-Y/N-see.vta-INV(3>LOC)-3nonaff.pl
"Did they see him?"

A question that arises, then, is what type of agreement do the non-affirmatives instantiate, $\mathrm{D}-, \Phi-, \mathrm{n}$ - or N -agreement? And, correlatingly, what do the non-affirmatives agree with?

Recall that in order to account for their distributional properties as negative polarity items, I have analyzed the non-affirmatives as situated within the CP-domain. This was to account for the fact that they are licensed by negation maat-in C, but not by negation $s a$-, which I posit as situated within the IP-domain. If I carry this over to an analysis of agreement, the relevant type of agreement is Dagreement. We would then expect the non-affirmatives to be of the category D , instantiate on C , correspond to a discourse subject in specCP, and be sensitive to clause type. The prediction that I am most interested in is the third one - that the non-affirmatives should correspond to a discourse subject in specCP. Recall, however, that I have posited the non-affirmatives as instantiating on CP, as opposed to C , in order to derive the correct surface structure.


If this actually is the case, then the non-affirmatives should not correspond to specCP, but to some other discourse subject. I argue that there is evidence for this. The specifier of CP is traditionally associated with wh-words, where wh-words are associated with Focus (cf. Bromberger 1992, Rizzi
2001). I argue that the non-affirmatives do not correspond to Focus, but to a different type of discourse subject, namely Topic.

### 4.2. The Thetic-Categorical Distinction

Topic and Focus are conventionally distinguished as being presupposed information, and new information respectively. The specific notion of Topic that I use is the notion of a Topic that distinguishes between a Categorical Judgment and a Thetic Judgment, following the Thetic-Categorical distinction as presented originally by Brentano (1874, 1924). This distinction has been addressed by others as well - more recent examples include Kuroda (1972, 1992), and Ladusaw (1994).

In this framework, there are two kinds of judgments with respect to utterances: thetic judgments and categorical judgments.

Thetic judgments consist only of the assertion or denial of an entity or event. They are merely existential statements, or "neutral descriptions." (Lambrecht 2001:612)

## e or $\quad$ e

Categorical judgments are of the traditional Aristotelian subject-predicate form, or topic-comment form. (topic-comment is used instead of subject-predicate to avoid confusion with a subject in the sense of a syntactic/specIP subject.)

For categorical judgments, a topic is identified, and then a property (comment) is either affirmed or denied for that topic.

## $\mathbf{T C} \quad$ or $\quad \mathbf{T} \neg \mathbf{C}$

This thetic-categorical distinction is in tune with native speaker intuitions - when asked for a meaning distinction between a minimal pair (one utterance with a non-affirmative and one without), my language consultant often suggests that one is used emphatically, as a statement, whereas the other is more of a description.
"here it's like you're making a statement (with waatsiks), but here (without waatsiks) you're just saying something casually."

Categorical judgment $=$ making a statement (about something)
Thetic judgment $=$ saying something casually (a description)

I suggest that this judgment falls out from the fact that the non-affirmatives agree with the Topic, and thus activate the speaker/hearer's distinction between Topic and Comment. Because utterances with non-affirmatives clearly have a Topic (to which they agree), they must be judged as categorical statements. Utterances without the non-affirmatives, on the other hand, do not have a trigger to activate this distinction, and thus are more likely to be judged as merely thetic descriptions.

### 4.3 Predictions: Testing the whether the non-affirmatives have topical properties

If the non-affirmatives agree with the topic of a categorical judgment, then they should act like topics. In this section I show that this is true on at least four counts: Like the topics of categorical judgments, the non-affirmatives

1) are obligatorily wide-scope (due to their presupposed nature)
2) do not correspond systematically to a thematic role
3) are felicitous with generic statements, and
4) need not refer only to entities.

### 4.3.1 Prediction 1: Topics are presupposed - they have an obligatory wide-scope reading

It is commonly observed that the topics of categorical judgments are presupposed - they are always referential and cannot be nonspecific or indefinite. (Ladusaw 1994, Giannakidou 1998)
a) categorical judgment
neko-wa asoko-de nemutte iru
cat-topic there-loc sleeping is
"the/*a cat is sleeping there"
b) thetic judgment

| neko-ga | asoko-de | nemutte | iru |
| :--- | :--- | :--- | :--- |
| cat-nominative | there-loc | sleeping | is |
| "The/a cat is sleeping there" |  |  |  |

In the data from Japanese above, the topic-marked NP neko in a) can only refer to a definite, referential cat. The nominative-marked NP neko in b), by contrast, can have either a definite reading, or nonspecific, indefinite reading.

If the non-affirmatives correspond to a topic, then, their existence should likewise be presupposed - they should obligatorily have a specific, referential target, since presupposed elements, by definition, are always referential, regardless of what kinds of propositional operators are present. This prediction is true:
(90)
a) Nitsinowa ani otomitaam ki ostoyi nimaatsinowawaatsiks

Nit-ino-a ann-yi ot-omitaam ki osto-yi nit-maat-ino-a-waatsiks
1-see.vta-DIR hat-3's 3s-dog and him-3's 1-NEG-see.vta-DIR-3nonaff.sg
"I seen his dog, but him, I didn't see"
b) *nimaatsapiwaatsiks ninaa
ni-maat-iyaapi-waatsiks ninaa
1-NEG-see.vai-3nonaff.sg man
Target: I didn't see a man

$$
=\neg \exists \mathrm{x}(\operatorname{man}(\mathrm{x}) \wedge \operatorname{saw}(\mathrm{I}, \mathrm{x})
$$

c) nimaatsapihpa
ninaa
ni-maat-iyaapi-hpa ninaa
NEG-see.vai-loc:nonaff
"I didn't see a man"
man

$$
=\neg \exists \mathrm{x}(\operatorname{man}(\mathrm{x}) \wedge \operatorname{saw}(\mathrm{I}, \mathrm{x})
$$

$$
=/=\exists \mathrm{x}(\operatorname{man}(\mathrm{x}) \wedge \neg \operatorname{saw}(\mathrm{I}, \mathrm{x})
$$

d) $\quad$ Nimaatsaapiwaiksaa
ni-maat-iyaapi-waiksaa
1-NEG-see.vai-3nonaff.pl
ninaiks
ninaa-iksi
Target: I didn't see any men
e) Nimaatsapihpa ninaiks

Ni-maat-iyaapi-hpa ninaa-iksi
1-NEG-see.vai-loc:nonaff man-PL
"I didn't see any men" (=/= "I didn't see some men."

As we have seen before, the non-affirmatives are always referential. In (90) a), the singular nonaffirmative is grammatical, agreeing with the referential third person ostoyi 'him'. In b) and c), by contrast, the singular non-affirmative is ungrammatical when it is used to agree with the non-referential 'a man' in 'I didn't see a man'. Note that in Blackfoot, the sentence is not ambiguous - it can only mean that there does not exist an $x$, such that $x$ is a man, and I saw x. Examples d) and e) show that this is also true of the animate plural non-affirmative - it is ungrammatical when it is used to agree to the nonreferential 'any men.' The topical nature of the non-affirmatives, then, predicts the second problematic property of the non-affirmatives: their atypical existential wide-scope property.

### 4.3.2 Prediction 2: Topics are not restricted to a specific thematic role

Lambrecht (2001) emphasizes the fact that there are no restrictions with respect to thematic relations when identifying the possible topic of a categorical judgment. Ladusaw makes a similar point with the following example from Japanese.
a) neko-wa inu-ga oikakete iru

Cat-topic dog-nominative chasing is
"The cat is being chased by the dog."
(Ladusaw 1994)
b) inu-wa neko-o oikakete iru
dog-topic cat-accusative chasing is
"The dog is chasing the cat."
c) neko-wa inu-ni oikakerarete iru
cat-topic dog-dative chase.passive is
"The cat is being chased by the dog."
(Yuri Ohono pc.)
In the above data, the topic marker -wa can mark either the THEME, as in a) and c), or the AGENT, as in $b)^{16}$. This is also true of the arguments that are targeted by the non-affirmatives. They do not seem to systematically correspond to either a syntactic or thematic role. In the data below, (92a) shows that the non-affirmative is grammatical when it corresponds to a plural AGENT, (92b) shows that it is grammatical corresponding to a plural GOAL, and (92c) shows that it is grammatical corresponding to a plural THEME. The data in (92d) shows that it is not the case that the non-affirmative always targets a plural argument, as here it targets the singular AGENT as opposed to the plural THEME.

[^13](92) The non-affirmatives are not restricted to a thematic role
a) Nimaatoh'okaiksaa oma mamii

Ni-maat-ohkot-ok-waiksaa om-wa mamii
1-NEG-give.vta-INV-3nonaff.pl that-3 fish
"They didn't give me the fish(sg)"
b) Nimaatohkutawaiksaa

Ni-maat-ohkot-a-waiksaa
1-NEG-give.vta-DIR-3nonaff.pl
"I didn't give the butterfly to them."
c) Kimaatohkutawawaiksaa

Ki-maat-ohkot-a-waiksaa
2-NEG-give.vta-DIR-3nonaff.pl
"You didn't give the rabbits to him!"
d) Maatsinoyiiwaatsiks

Maat-ino-yii-waatsiks
NEG-see.vta-33DIR-3:nonaff.sg
"He didn't see those singers"
omi apani
om-yi apánii
that-3's bfly
Agreement $\rightarrow$ goal, PL
anniksists aatsistaiksi
ann-iksi-sts aaatsista-iksi
that-PL-?? rabbit-PL
Agreement $\rightarrow$ theme, PL

$$
\text { Agreement } \rightarrow \text { agent, PL }
$$

L
aiksi
omiksi ainihkiksi
om-iksi á-inihki-iksi

hat-PL DUR-sing.vai-PL
Agreement $\rightarrow$ agent, SG

In short, the non-affirmatives, as predicted, are like topics in that they are not restricted to a certain thematic role. Other evidence that the non-affirmatives correspond to a topic, and not a certain thematic role, can be seen in the fact that the reference of the non-affirmatives is not fixed when offered in 'out-of-the-blue' contexts. While the above data was elicited under the pretense of an elaborate petswapping context, the data below was presented to the speaker 'out-of-the-blue.'(93) shows that in this case, the non-affirmatives may correspond to either 'the knife' oma ísttoan, with the singular nonaffirmative -waatsiks; or to 'the wood (pl)' omistsi miistsiists, with the plural inanimate non-affirmative -waistsaa. I argue that in such 'out-of-the-blue' contexts, no topic has yet been established, accounting for the fact that either non-affirmative is acceptable.
oma ísttoan máátaakohtsikahksini'pa(atsiks/istsaa) omistsi miistsiists
om-wa isttoan maat-aak-ooht-ikahksini-'p-wa(-atsiks/-istsaa) om-istsi miistsi-istsi that-3 knife NEG-FUT-means-cut.vti-loc>0-3:nonaff(-sg/-0pl) that-0PL wood-0pl "That knife will not be used to cut off the wood."

### 4.3.3 Prediction 3: Topics are felicitous with generic sentences

Kuroda (1992) notes that in Japanese only sentences marked with the "topic marker" -wa are grammatical for generic interpretations - he then goes on to state that all generic sentences are
topicalized. As such, generic sentences are generally seen as categorical judgments par excellance (Heycock \& Doron 2003:19).
(94)
a) kitune-wa akai
fox-topic red
"Foxes are red."
(Heycock \& Doron 2003:19)
This predicts that the non-affirmatives could agree with bare nouns with a generic reading. If generic statements are categorical, then they must have a topic to which the non-affirmatives may agree. This prediction is also borne out by the data. While the non-affirmatives usually cannot agree with bare nouns (eg. recall (90b) and (90d), they can be licensed when the bare nouns have a generic reading.
a) Ninaiks maataikskimawaiksaa mamiiks

Ninaa-iksi maat-á-iksimaa-waiksaa mamii-iksi
Man-PL NEG-DUR-hunt.vai-nonaff:pl fish-PL
aikakohmihkayaa mamiiksi
á-ikak-omiihkaa-yaa mamii-iksi
DUR-just-catch.vai-3PL fish-PL
"Men don't hunt fish, they catch fish."
b) imitaiks maatayaahsimmiiwaiksaa poosiks
imitaa-iksi maat-a-yaahssiM-yii-waiksaa poos-iksi
dog-pl neg-dur-please.vta-3>3'-3:nonaff.pl cat-pl
"Dogs don't like cats."
c) poosiks maatohkottotsimmaiksaa
poos-iksi maat-ohkott-otsiM-waiksaa
cat-pl neg-able-swim.vai-3:nonaff.pl
"Cats can't swim."
In the above data, the non-affirmatives agree with the generic entities denoted by the bare plurals.

### 4.3.4 Prediction 4: Topics are not restricted to referring to entities

Brandtler (2006) shows that topics need not necessarily refer to entities ${ }^{17}$.

[^14](96) Topics need not refer to entities
a) SVEN didn't buy the car - and in fact no-one did.
b) It wasn't Sven who bought the car - ?? and in fact no-one did.
(Brandtler 2006:193)
While in a) there is a Gricean implicature that someone bought the car, this is not the case for b). The implicature in a) can be easily cancelled, but since this cannot be done for b) it appears that in b) is presupposed that someone bought the car.

The part of the cleft-sentence that is presupposed is not the existence of Sven, but the existence of an event that consists of car-buying. Thus the car-buying is the topic, while the comment is the attribution of Sven.
(97) Topic-comment structure in Declarative vs Cleft sentences

| a. Topic | Comment |
| :---: | :---: |
| $\downarrow$ | $\downarrow$ |
| SVEN | car-buying |
| "SVEN bought the car." |  |


| b. Topic Comment |
| :--- | :---: |
| car-buying |
| "It was Sven that bought the car" |

This can also be seen in languages known for their topic-comment structure, such as Cantonese. In the data below, the topic is an event - "crossing the harbour" - not an entity.
(98) Cantonese topics do not have to refer to entities
$\begin{array}{llllll}\text { a) } & \text { dwo } & \text { hói } & \text { àh, } & \text { deihtit } & \text { jeui }\end{array}$ faai
"As far as crossing the harbour is concerned, the underground is the fastest."
(Matthews \& Yip 1994:67)
This implies that the non-affirmatives should likewise not be restricted to referring to entities they might also refer to events. This prediction is also true:
a) ana Tyler ki ana Edward maatáyaakomo'tsaakiwaiksaa an-wa Tyler ki an-wa Edward maat-wayak-omo'tsaaki-waiksaa that-3 Tyler conj that-3 Edward NEG-both-win.vai-3:nonaff.pl "Tyler and Edward both did not win"
b) nimáátsikakssksinipa(atsiks/*iksaa)
ni-maat-ikak-ssksini-'p-wa-(atsiks/iksaa)
1-NEG-even-know.vti-loc>0-nonaff-(3sg/3pl)
"I didn't know that they both lost!"
c) nimáátsikakaanihpa(atsiks/*iksaa)
ni-maat-ikak-waanii-hp-wa-(atsiks/iksaa)
1-NEG-even-say.vai-loc-nonaff-(3sg/3pl)
"I didn't say that they lost!"
ayakomo'tsaayaa
wayak-omo'tsaa-yaa
both-lose.vai-3pl
imo'tsaayaa
ii-omo'tsaa-yaa
past-win.vai-3pl

In data b) and c) above, the non-affirmatives agree with the singular event predicates as opposed to the plural third person subjects of the embedded clause. The data in a) shows that normally the morpheme -wayak 'both' (also in b) triggers plural agreement, even if the relevant arguments are morphologically singular.

Lambrecht (2001) makes a similar observation, emphasizing that it is not only entities that may be topics, but also situations and states of affairs. He also notes that while one might expect zero-place predicates, eg. weather predicates, to be thetic statements, this may not always be the case. According to his definition, thetic judgments require both the semantic subject and predicate to be in focus. Zeroplace predicates which lack a semantic subject cannot fulfill this requirement, and must therefore be construed as categorical judgments.

This then predicts that the Blackfoot non-affirmatives might also be able to appear with weather predicates. This prediction is also true: the non-affirmatives are grammatical with weather predicates, where there appears to be no third-person to which they may agree, other than an event predicate.
a) saohtsi maatsstoyiwaatsiks
saohtsi maat-sstoyii-waatsiks
outside NEG-be.cold.vii-3:nonaff.sg
"It's not cold outside"
b) maatatsstoyiwaatsiks
maat-at-sstoyii-waatsiks
NEG-anymore-be.cold.vii-3:nonaff.sg
"It's not cold anymore."
(101) Summary of the Non-affirmatives' topical properties

| Property | Topics | Blackfoot Non-Affirmatives |
| :--- | :---: | :---: |
| Obligatory Wide-Scope | $\checkmark$ | $\checkmark$ |
| Not restricted by thematic roles | $\checkmark$ | $\checkmark$ |
| Felicitous with Generic Sentences | $\checkmark$ | $\checkmark$ |
| Not restricted to referring to entities | $\checkmark$ | $\checkmark$ |

In summary, Blackfoot's non-affirmatives have several of the properties that are associated with topics, including their atypical (for NPIs) wide-scope property. These topical properties are in accordance with my analysis of the non-affirmatives as DP-agreement that instantiates on CP, which is motivated by their distributional properties as NPIs.

### 4.4 A Parallel with N-words in strict NC languages (Greek Emphatic NPIs)

Giannakidou (1998) provides a similar analysis for emphatic n-words that require strict negative concord (NC) constructions. Claiming that emphatic n-words do not have inherent negative semantics, but inherent universal semantics, Giannakidou analyzes emphatic n-words as topical universals that always escape the semantic scope of their licensor.

Giannakidou describes n-words as DPs or adverbs which appear under negation and may participate in negative concord structures - structures where negation is expressed more than once, but only interpreted once (Giannakidou 1998:56,177). She makes a distinction between emphatic and nonemphatic n-words; in Greek this difference is distinguished by the presence and absence of emphatic accent respectively.
(102) Emphatic and Non-emphatic n-words in Greek
(Giannakidou 1998:56)

| Emphatics | Non-emphatics |  |
| :--- | :--- | :--- |
| KANENAS 'no one, nobody' | kanenas | 'anyone, anybody' |
| KANENAS N 'no N-singular' | kanenans n $\quad$ 'any N-singular' |  |
| TIPOTA 'nothing' | tipota | 'anything' |
| POTE $\quad$ 'never' | pote | 'ever' |
| PUTHENA 'nowhere' | pothena | 'anywhere' |
| KATHOLU 'not at all' | kotholu $\quad$ 'at all' |  |

Emphatics and non-emphatics have both semantic differences and distributional differences emphatics are interpreted as semantically negative, while non-emphatics have semantics similar to that of English 'any'. Emphatics are also grammatically licensed in far fewer contexts. For example, emphatics are not licensed in interrogatives, whereas non-emphatics are.
(103) Different syntactic properties: Greek Emphatics vs Non-emphatics
$\begin{array}{lll}\text { a) } & \text { Pijes } & \text { [pote/*POTE] } \\ \text { Went.2sg } & \text { ever } & \text { sto parisi? } \\ & \text { to-the Paris }\end{array}$
"Have you ever been to Paris?"
b) Pjos pije $\{$ pote $/ *$ POTE $\} \quad$ sto Parisi?
Who went.3sg ever "Who has ever been to Paris?"
(Giannakidou 1998:58)

While emphatics are interpreted as negative, following Ladusaw (1992) Giannakidou claims that they do not have inherent negative semantics. This is motivated from the observation that they cannot contribute semantic negation on their own - they are ungrammatical without a sentential negative marker ${ }^{18}$. Instead, Giannakidou argues that emphatic n-words have inherent universal semantics, motivated by observations such as the fact that emphatic n-words can be modified by terms like 'almost/absolutely' and the fact that they cannot be used in predicative positions. According to Giannakidou, 'almost/absolutely' modification has been used as a standard diagnostic of universal quantifier since Dahl (1970) and Horn (1972).
(104) Emphatic n-words can be modified by 'absolutely/almost'

| a) Dhen idha | sxedon | \{KANENAN/*kanenan \} |
| :--- | :--- | :--- | :--- |
| Not saw.1sg almost | anybody |  |
| "I saw almost nobody." |  |  | (Giannakidou 1998:64)

Predicative positions, in contrast, have been shown by Partee (1987) and Hoeksema and Klein (1995) to be incompatible with universal quantifiers.
(105) Predicative nominals incompatible with the universal quantifier
a) Frank is $\{\mathrm{a} /$ *every $\}$ friend of mine
(Giannakidou 1998:65)
(106) Emphatic n-words cannot be used in predicative positions

| Dhen ine | \{kanenas/*KANENAS $\}$ | idhikos |
| :--- | :--- | :--- |
| Not be.3sg | any | specialist |
| "He is no specialist" |  | (Giannakidou 1998:65) |

[^15](107) Universal Quantifiers and Greek Emphatic N-words

|  | 'almost/absolutely' modifiable | compatible with predicative positions |
| :--- | :---: | :---: |
| $\forall$ quantifiers | Y | N |
| Emphatics | Y | N |
| non-emphatics | N | Y |

Because emphatic n-words share these characteristics with universal quantifiers, Giannakidou analyzes them as such. She notes that an important semantic property of emphatic n-words is that although they require negation in order to be licensed, their universal semantics always escape the scope of negation $(\forall \neg)$.
(108) Emphatic n-words escape the semantic scope of negation

| a)Dhen irthe <br> Not came.3sg <br> "Nobody came" | KANENAS <br> everybody |  |
| :--- | :--- | :--- | :--- |
|  |  | $\forall x[$ person $(x) \rightarrow \neg$ came (x) |

(Giannakidou 1998:212)
Giannakidou thus characterizes emphatic n-words as follows:
(109) Sensitivity in Emphatics

Emphatics are topical universals which can only combine with antiveridical predications ${ }^{19}$.
(Giannakidou 1998: 211)
So despite the fact that emphatic n-words require negation in order to be syntactically licensed, they must escape the scope of negation in order to be properly interpreted semantically. Giannakidou attributes this "escape-the-licensor" property as following from their topical nature (Giannakidou 1998:211-212).

The Blackfoot non-affirmatives are then quite similar; they have emphatic semantics, require negation in order to be syntactically licensed, but they must escape the scope of negation in order to be properly interpreted semantically. The difference between the non-affirmatives and emphatic n-words,

[^16]however, is that where the Greek emphatic n-words have a universal property that must escape the scope of negation, the Blackfoot non-affirmatives have an existential property.

Note, however, that the Greek emphatics still have existential narrow-scope with respect to negation - like other NPIs cross-linguistically, they cannot be construed as referential. Thus while the Greek emphatics may have universal wide-scope, as NPIs they still have existential narrow-scope. A question that arises, then, is whether or not the Blackfoot non-affirmatives, as NPIs, have any semantic property that takes narrow-scope with respect to negation. Investigation for this question is still preliminary, however note the following interesting property of the non-affirmatives: they are infelicitous when referring to a third person within the deictic sphere. The non-affirmatives, in order to be felicitous, must refer to someone outside the deictic sphere - represented in the data below by the morpheme $-h k a$, glossed 'not visible to speaker' by Frantz.

| \#kikatainokaatsiks | an-wa | Martina |
| :--- | :--- | :--- |
| Ki-kata'-ino-ok-waatsiks | ann-wa | Martina |
| 2-Y/N-see.vta-3:nonaff.sg | that-3 | Martina |

"Did Martina see you?"
Context: Martina is sitting quite close to the speaker and hearer
b) Kikatainokaatsiks annahk Martina

Ki-kata'-ino-ok-waatsiks ann-wa-hka Martina
2-Y/N-see.vta-INV-3:nonaff.sg that-3-invis Martina
"Did Martina see you?"
Context: Martina is in another room - not present in the deictic sphere
In the above examples, the relevant third person happened to be in the room at the time of the elicitation, and my consultant noted that the use of the non-affirmative in that context was strange. In order for the non-affirmative to be felicitous, the relevant third person had to be outside of the deictic sphere at the time of the utterance. This phenomenon can also be seen in the following data, where the non-affirmatives are sensitive to a distinction between Speech-Act-Participants (SAPs) and Non-SAPs:

| \#nimaataakohtsooihpaistsaa | nóótsists |
| :--- | :--- |
| Ni-maat-aak-oht-ooyi-hp-waistsaa | no'otsis-istsi |
| 1-NEG-FUT-means-eat.vai-loc-3:nonaff.0pl | my.hand-0pl |
| Target: I'm not going eat with my hands! |  |


| nimaatayaakohtsuihpaistsaa | ana ní́sisa | óótsists |
| :--- | :--- | :--- |
| ni-maat-ayaak-oht-ooyi-hp-waistsaa | an-wa | nissis-wa |
| o'otsis-ists |  |  |
| 1-NEG-C.FUT-means-eat.vai-loc-3:nonaff.0pl | that-3 | my.brother-3 | 3-hand-0pl

Context: I am too sick to feed myself, and my brother offers to feed me, but I am too proud to accept.
In the data above, the non-affirmatives are infelicitous when referring to the speaker's own hands, which would necessarily be within the deictic sphere, but are felicitous when referring to the speaker's brother's hands, which would not necessarily be within the deictic sphere. Thus it seems that where emphatic n-words in Greek take wide-scope with respect to universal semantics, but have a negated existential property, the emphatic non-affirmatives in Blackfoot appear, in contrast, to take wide-scope with respect to existential semantics, and have a negated 'deictic-sphere' property.
(112) Strict NC n-words as compared to Blackfoot Non-affirmative Endings

|  | NPIs? | emphatic? | Property within $\neg$ scope | Property outside $\neg$ scope |
| :--- | :---: | :---: | :---: | :---: |
| NC n-words | Y | Y | $\exists$ | $\forall$ |
| BF non-affs | Y | Y | deictic-sphere | $\exists$ |

### 5.0 Conclusion and Unresolved Issues

The main observation of this paper is that while the Blackfoot non-affirmative endings initially appear to have peculiar characteristics when compared to NPIs cross-linguistically, these peculiar characteristics can be derived from a syntactic analysis. In particular, I argue that analyzing Blackfoot negation maat- and sa- as residing in the CP and IP-domain respectively can explain why the nonaffirmatives are licensed only by maat- and not by $s a$ - negation. A consequence of this analysis is that the non-affirmatives must likewise be situated in the CP-domain, which has the further consequence that the non-affirmatives must agree with a discourse subject. I argue that this discourse subject is a Topic. The topical nature of the non-affirmatives then derives the second peculiar characteristic of the non-affirmatives: their existential wide-scope property. As topics, the non-affirmatives are always presupposed, and therefore referential, independently of propositional operators like negation.

This paper has left much undone - while I have investigated the syntactic distribution and atomic meaning of the non-affirmatives to some extent, I have said very little regarding their morphological form. Recall that one of the predictions made from the analysis of the non-affirmatives as instantiating
on CP is that the non-affirmatives should be DPs. I have yet to properly investigate this prediction, but note that Déchaine \& Wiltschko 2002 propose that pro-DPs are morphologically complex (Déchaine \& Wiltschko 2002:410). Analyzing the non-affirmatives as instances of pro-DP-agreement, then predicts that they are also morphologically complex. This is true - they are clearly morphologically complex:
(113) Possible morphological breakdown of the Non-affirmatives
a) waiksaa
Wa-iksi-yaa?
Nonaff-pl-3pl?
b)
waistsaa
Wa-istsi-yaa?
$3^{\text {rd }}$ person plural, animate

Nonaff-0pl-3pl?
$3^{\text {rd }}$ person plural, inanimate
c)
waatsiks
Wa-ats-iks?
Nonaff-??-??
$3^{\text {rd }}$ person singular (in)animate /event

The second components of the plural non-affirmatives appear to be the regular nominal endings $-i k s i$ 'animate plural' and -istsi 'inanimate plural', and I have found that the -wa glossed as 'nonaff' may appear by itself (in negative and interrogative contexts,) and appears to form part of the local person ( $1^{\text {st }}$ and $2^{\text {nd }}$ person) non-affirmative ending -hpa (i.e. $h p-w a$ ). Note also that Uhlenbeck states waatsiks (his -atsiks) as being the equivalent of an ending -ats, which lacks the final -iks. This is not grammatical in my consultant's dialect, but motivates the above morphological decomposition in (c). I have tentatively posited the third component of the plural non-affirmatives as being the third person plural clitic -yaa (cf. Frantz -yaawa), which attaches in positive (and sa-negated) contexts. The mysterious third component of the $3^{\text {rd }}$ person singular non-affirmative looks suspiciously like the 'animate plural' suffix -iksi, but seems to lack its semantics. Note that the proposed breakdown is very preliminary - I have not yet seriously investigated the issue of how the morphological makeup of the non-affirmatives might contribute to their internal, lexical semantics. In short, much is unsolved regarding the morphological composition of the non-affirmatives. The plausibility and consequences of a possible breakdown remains a subject to be explored.

Several syntactic issues also remain unresolved. While I have investigated the syntactic distribution of the non-affirmatives, I have only done so with respect to the negative morphemes maat-, sa, the interrogative (i)kata'- and the wh-words tská, tsimá, takáá, etc.. Blackfoot has several other morphemes with negative and/or interrogative meanings, whose distribution and relationship with the nonaffirmatives has yet to be closely studied.

Finally, regarding the semantic/pragmatic issues addressed, I have yet to take into consideration how the proposed Topic-Comment structure may impact other aspects of Blackfoot grammar. Are there other indications (outside of negation) in the language for such a distinction? Similarly, I have only
briefly touched upon the semantic interpretation of the non-affirmatives. Is there a language-internal reason why emphatic NPIs in Blackfoot seem to have (the very tentatively termed) 'deictic-sphere' semantics, as opposed to the more commonly encoded universal semantics? I tentatively suggest that the answer may lie within what kinds of semantic notions are encoded on the nominal domain. Note that while quantifiers like the universal operator $\forall$ are generally analyzed as being able to modify the nominal domain, in Blackfoot the universal quantifier ohkan- is nearly always found on the verbal complex. Glougie (2000), following Sportiche (1988) proposes that while the French universal quantifier tous is able to take either a DP or VP complement, in Blackfoot only the VP-complement option is available. The universal quantifier ohkan- principally modifies the verbal domain ${ }^{20}$. What is encoded on the nominal domain however, in Blackfoot, is a notion of deixis. Recall that the Blackfoot demonstrative stems indicate whether or not the noun in question is closer to the Speaker (amo-), close to the Addressee (anno-) or distant from both Speech Act Participants (om-), and also whether or not the noun in question is within the deictic sphere of the speaker ( $-h k a$, 'invisible'). Whether or not this phenomenon is mirrored in other aspects of Blackfoot grammar would be an interesting venue for further investigation.

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All trees generated with TreeForm
Derrick, Donald, (2006) Treeform, Syntax Tree Drawing Software. http://www.ece.ubc.ca/~donaldd/treeform.htm

## Appendix A: Non-affirmatives =/= Syntactic Proximate Argument

Topics, as presented by Kuroda 1992 and Ladusaw 1994, are not restricted to either thematic or syntactic roles. I have abstracted away from the notion of syntactic roles with respect to the Blackfoot data, largely because Blackfoot does not rely on a nom/acc or erg/abs case system, instead relying on its direct/inverse system to mark grammatical relations.
(114) The Algonquian Person-Animacy Hierarchy

Local (1st, 2nd person) $\gg$ 3rd Person (Proximate) $\gg 3$ rd Person (Obviative) $\gg$ Inanimate
(Goddard and Bragdon 1988, Cited in Bruening 2005)

While it is not immediately apparent how the grammatical notions of a nominative 'subject' and an accusative 'object' can be mapped onto the person-animacy hierarchy that drives the Algonquian direct/inverse system with respect to the non-affirmatives, one might argue that the non-affirmatives could be restricted to a syntactic role defined by the person-animacy hierarchy. Specifically, one might argue that the non-affirmatives always correspond to a syntactically defined 'proximate' third person. If this were the case, then my proposal that the non-affirmatives correspond to a topic would be seriously weakened. While I have not dealt with this issue extensively, I do not believe this is the case. The nonaffirmatives do usually correspond to a proximate third person, as opposed to an obviative third person, an expected phenomenon if the proximate/obviate distinction encodes information structure, as suggested by Bliss 2005. However, it is not the case that the non-affirmatives always correspond to the syntactically defined 'proximate.' The relevant case where the non-affirmatives do not correspond to a syntactic proximate involves the infamous Third-Person-Possessor Constraint. This is a phenomenon widespread across Algonquian languages in which a third person possessor is always obligatorily proximate, such that the possessed third person is always obviative. In these cases, if the third person possessor is not directly involved in the action, the Blackfoot non-affirmatives will correspond to the obviative possessed third person, not the proximate possessor third person. Thus the data in a) is grammatical, where the non-affirmative agrees with John's obviative plural brothers, but the data in b) is ungrammatical, where the non-affirmative agrees with the proximate possessor John.
a) ana Tsaan unuhpapiihpik an-wa Tsaan u-nohpapiihp-iksi that-3 John 3-sibling-pl 1-NEG-give.vta-inv-3pl:nonaff "John's brothers didn't give me a dog."
b) *ana Tsaan unuhpapiihpiks nimaatohkukkaatsiks)
imitaa an-wa Tsaan u-nohpapiihp-iksi ni-maat-ohkot-ok-waatsiks imitaa that-3 John 3-sibling-pl 1-NEG-give.vta-inv-3sg:nonaff dog Target: John's brother's didn't give me a dog

Thus it appears that the non-affirmatives are not restricted to referring to a syntactically defined 'proximate'. The issue of whether there may be other syntactically defined roles to which the nonaffirmatives are restricted, however, is an open question that I leave for further research.

## Appendix B: Progovac's Cross-Linguistic Generalizations and Blackfoot

The main purpose of this paper was to provide a syntactic account for the Blackfoot nonaffirmatives and negation. I have, therefore, not presented an analysis that accounts for variation in NPIs cross-linguistically, and where the Blackfoot non-affirmatives might be situated among them. It is interesting to note, however, that the analysis of Blackfoot negation in Comp, and the licensing pattern of the non-affirmatives fit in well with Progovac's Binding-Theoretic account of cross-linguistic variation in NPIs.

Recall Progovac's model for NPI-licensing:
(116) Progovac's Model: IP the Governing Category for NPIs


NPIs subject to principle A have to be bound within their governing category, where a governing category is defined as delimited by the first potential binder. For Progovac this first potential binder is negation in IP. Thus IP is the governing category for NPIs. Therefore NPIs subject to principle A are only licensed by local IP negation. NPIs subject to principle B, on the other hand, can not be bound within their governing category. Therefore they must to be bound elsewhere, by licensors
other than local IP negation. The available licensors outside of local IP negation are a truth-conditional operator in Comp [+Q], or negation in a super-ordinate IP. Progovac's model thus predicts that (barring quantifier raising) non-negative licensing (i.e. by an OP in Comp) will pattern with super-ordinate negation - a prediction that is borne out by her data.

Now, if Blackfoot negation maat- is found in Comp, as opposed to Infl, Progovac's model predicts a different pattern of licensing with respect to non-negative licensing and super-ordinate negation.
(117) Progovac's Model modified for Blackfoot: CP the Governing Category for NPIs


NPIs subject to principle A have to be bound within their governing category, where a governing category is then defined as delimited by the first potential binder. For Blackfoot, this would be either negation, or a truth-conditional Op in C. Therefore NPIs subject to principle A should be licensed by either local negation, or by a $[+Q]$ feature. This is the case - recall that the Blackfoot non-affirmatives are licensed by both negation and questions. This further predicts that the Blackfoot non-affirmatives should not be licensed by super-ordinate negation, as super-ordinate negation would be outside of their governing category. This is also the case:
(118) Nonaffirmatives not licensed by super-ordinate negation
a) Nimaatohkstapa
ninaaksinowahsi
Ni-maat-oht-sstaa-hpa
1-NEG-means-want.vai-loc:nonaff
nin-áahk-ino-a-hsi
1-n.fact-see.vta-loc>3-cj
"I don't want to see him."
b) *nimaatohstapa ninaaksnowahsiwaatsiks
ni-maat-oht-sstaa-hpa
1-NEG-means-want.vai-loc:nonaff
Target: I don't want to see him
nin-áahk-ino-a-hsi-waatsiks
1-non.fact-see.vta-DIR-cj-3nonaff.sg

Note that this distribution cannot be derived by positing that the non-affirmatives raise at LF by IP adjunction, as Progovac argues for Chinese renhe and Italian and Catalan n-words - the Blackfoot non-affirmatives are deictic, not quantificational, in nature. The fact that Blackfoot negation maat- is in Comp, then, also has support from Progovac's cross-linguistic generalizations. Whether or not Progovac's Government and Binding framework can be adapted to the minimalist perspective adopted here, however, remains yet another venue for future research.


[^0]:    ${ }^{1}$ I gloss inanimates as 0 , and do not specify gender for animates.
    ${ }^{2}$ I gloss plurals as PL, and do not specify when glosses are singular. Unspecified is glossed as UNS.

[^1]:    ${ }^{3}$ When considering the data that will follow in the rest of this study, the reader may want to note that in elicitation contexts, my language consultant often does not mark proximate/obviative on nouns. The proximate/obviative distinction is upheld within determiners, however.

[^2]:    ${ }^{4}$ It should be noted that the speaker consulted for this study often treats bare plurals like unspecified/non-particular nouns, if they are interpreted within the scope of negation. Another speaker of the same dialect does not use bare plurals in this manner, using only unspecified nouns within the scope of negation (Lena Russell pc). I am focusing on the speech patterns of my language consultant, but do not believe that this difference has significant consequences for the analysis.

[^3]:    ${ }^{5}$ I have labelled -oki- ( $2^{\text {nd }}$ person acting on $1^{\text {st }}$ person) a direct marker, and labelled $-0-\left(1^{\text {st }}\right.$ person acting on 2 nd person) as inverse, although the reader may like to note that there is some controversy as to which one is direct and which one is inverse - I do not address this further as it is outside the scope of this paper.

[^4]:    ${ }^{6}$ In Blackfoot these are t-words: takáá 'who', tsa 'what', tská 'why/howcome', tsima 'where', etc.
    ${ }^{7}$ This generalization abstracts away from several distributional properties of English 'any'. 'Any' is the polarity item that has received the most attention in the literature. Some approaches argue that there are two kinds of 'any', a NPI 'any' and a Free-Choice-Item (FCI) 'any' (cf Progovac 1994), which have different distributional properties. Other approaches argue that there is only one 'any,' (cf Giannakidou 1998). Luckily, this debate is not directly relevant for my purposes, so I have decided to abstract away from these issues.

[^5]:    ${ }^{8}$ I am abstracting away from what she terms 'non-affective polarity items.' This term refers to Free Choice Items (FCIs) and subjunctive relative clauses (Giannakidou 1998:41)

[^6]:    ${ }^{9}$ Serbian/Croatian ni-NPIs are analyzed as morphologically complex, where the anaphoric element is not a constituent, and therefore cannot raise (Progovac 1994:57)

[^7]:    ${ }^{10}$ where AFF stands for Klima's notion of 'affective'

[^8]:    ${ }^{11}$ The only dyadic operator that is veridical with respect to both arguments, according to Zwarts (1995).

[^9]:    ${ }^{12}$ Frantz notes that this morpheme is variously sa-, say- and saw-, where sa- appears before semivowels, say- appears before i, and saw appears elsewhere (Frantz 1991:86).

[^10]:    ${ }^{13}$ The order of the negated clause and the time adverbial as given in both examples indicates the unmarked word order, however both examples are grammatical with either order: negated clause + time adverbial, or time adverbial + negated clause.

[^11]:    ${ }^{14}$ Note that Frantz (1991) presents the difference between maat- and $s a$ - in matrix clauses as follows:
    maat- occurs when nothing other than personal prefixes precede negation.
    $s a$ - occurs when something other than personal prefixes precede negation.

[^12]:    ${ }^{15}$ Note that while $s a$ - is used to form before-clauses whether they be veridical, nonveridical or antiveridical, there do appear to be differences. Thorough research has yet to be done, but it seems that veridical before-clause must be nominalized, whereas both nominalized and non-nominalized before-clauses may be used for nonveridical contexts.

[^13]:    ${ }^{16}$ (91c) also shows that (91 a) is not a passive, such that the Japanese topic marker -wa might be marking a grammatical subject. Topics are also supposed to be unrestricted with respect to syntactic roles, however I have abstracted away from this fact with respect to the Blackfoot data. See Appendix A for evidence that the Blackfoot non-affirmatives are not restricted to syntactically defined roles either.

[^14]:    ${ }^{17}$ Note that Brandtler does not make a distinction between thetic and categorical judgments. He assumes that all utterances must have a topic-comment form, i.e. be a categorical judgment, at a semantic level of representation.

[^15]:    ${ }^{18}$ This is in contrast to n-words in non-NC Germanic languages like English, where ' nobody, and 'nowhere' can contribute negative semantics on their own.

[^16]:    ${ }^{19}$ See chapter 5 for a definition of veridical, nonveridical and antiveridical.

[^17]:    ${ }^{20}$ Or at least, it is very strongly preferred on the verbal complex. There appear to be some cases where ohkan- in the form of kan- may attach to nouns, but only in very limited circumstances. (Jennifer Glougie pc.)

