Argument PP, Agree, and Incorporation*

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Kyumin Kim. 2017. Argument PP, Agree and Incorporation. Studies in Generative Grammar, 27.2 000-000. The Morphological Visibility Condition (MVC) (Baker 1996) requires incorporation to co-occur with agreement in order to render a phrase visible for theta role assignment. However, what is missing in the MVC is an account of why incorporation and agreement should co-occur. By recasting the relation between incorporation and agreement in current minimalist terms (Chomsky 2000, 2001), this paper shows that incorporation can be understood as a consequence of Agree. Thus, under the proposed view, incorporation is predicted to occur upon Agree. Building on the Blackfoot (Algonquian) facts, I argue that p head of an argument PP enters Agree resulting p incorporation to the verb. By motivating a language specific feature [m(ental state)], a p head appears incorporated to the verb as a result of [m]-Agree. Thus, the proposed analysis supports the recent view that incorporation belongs in narrow syntax (Roberts 2010).

Keywords: PP, pP, Agree, incorporation, argument, sentient

1. Introduction

This paper examines the relation between incorporation and agreement with a particular focus on p incorporation, taking the Morphological Visibility Condition (MVC) in Baker (1996) as a starting point. What the MVC essentially proposes is that both agreement and incorporation take place together for theta

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visibility (which will be detailed in section 2). According to the MVC, for instance, the P head of an argument PP must incorporate into a verb in order to be visible for theta role assignment, as schematically shown in (1); meanwhile, agreement (Agr₁) with the complement of P(DP₁) makes DP₁ visible for theta role assignment from the P. Thus, in satisfying the MVC, incorporation and agreement co-occur, but there seems to be no account of why the two should co-occur.

(1) Agr₁-P-V [PP <P> DP₁]

Building on Blackfoot (Algonquian) facts, this paper proposes that the relation between agreement and incorporation is closer than the MVC suggests. It shows that incorporation can be understood as a reflex of Agree (Chomsky 2000, 2001), and under this account, agreement is expected to take place upon the Agree operation. More specifically, this paper proposes that a p (a head of PP) incorporation in Blackfoot can be understood as a result of Agree (in terms of [m(ental)-state] feature); thus, p-incorporation accompanies ([m]-)agreement.

This paper is organized as follows. Section 2 discusses the MVC in Baker (1996), and identifies the core problem which concerns this paper. Section 3 examines P incorporation data in Blackfoot, and discusses why the MVC cannot account for these data. Section 4 provides an analysis of P incorporation in Blackfoot in terms of Agree, by motivating a language-specific feature [m(ental state)]. Section 5 concludes.

2. Baker's MVC and distribution of PPs

Polysynthetic languages such as Mohawk, Nahuatl, or Mayali are characterized as morphologically complex, in contrast to better studied languages such as English (see (3)). For example, these languages exhibit extensive incorporation (of nouns or adpositions), and argument agreement morphemes appear as affixes. In accounting for the difference in morphological complexity of the polysynthetic languages as compared to English-type languages, Baker (1996) proposed the Morphological Visibility Condition (MVC) as in (2). According to Baker (1996), the MVC is a macro-parameter that characterizes polysynthetic languages differently from English type languages.

(2) The Morphological Visibility Condition (MVC)
A phrase $X$ is visible for $\Theta$-role assignment from a head $Y$ only if it is co-indexed with a morpheme in the word containing $Y$ via:

(i) an agreement relationship, or

(ii) a movement relationship

(Baker 1996: 17)

Taking an argument of the verb as an example, what the MVC as in (2) essentially states is that an argument can be assigned a theta role by the verb, only if the argument is related to an agreement morpheme or an incorporated morpheme on the verb.\(^1\) I discuss how the MVC is satisfied in Baker (1996). For this purpose, let us consider a more concrete example from a polysynthetic language, Mayali, spoken in Northern Australia, as illustrated in (3).

\[
(3) \text{na-mage daboldabok bandi-marne-gani-ginje-ng}
\]

\[
\begin{array}{l}
\text{I-that old.people 3PL.Subj/3PL.Obj-BEN-meat-cook-PAST/-PERF} \\
\text{They cooked meat for the old people.'} \\
\end{array}
\]  

(Baker 1996:439)\(^2\)

In (3), the PP argument ‘for the old people’ is assigned a beneficiary role from the verb, *ginje* ‘cook’. The fact that the sentence is grammatical suggests that it satisfies the MVC. According to Baker (1996), with respect to the verb, the benefactive P head *nunwe*- of the argument PP incorporates into the verb; as a result, the PP is visible for theta role assignment from the verb (2).\(^3\) The complement of P ‘the old people’ should be also visible thematically from the P, which can be rendered possible by its being in an agreement relationship with the P (Baker 1996). This is the case shown in (3): the portmanteau agreement morpheme, *lundi*, is prefixed to the benefactive P *nunwe*.\(^4\) As illustrated, under

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\(^1\) Thus, in polysynthetic languages, agreement will be reflected on morphology, although it is not clear whether agreement in these types of languages is always overt or null. This paper assumes overt agreement, as the provided data relevant to the MVC in Baker (1996) seems to suggest so. Further research is required to resolve this issue, which is beyond the scope of this paper and this issue will not be further questioned in this paper.

\(^2\) Glasses in (1) are modified to be consistent with the rest of the examples in this paper.

\(^3\) Like other polysynthetic languages, this language also has noun incorporation. Descriptively, the theme ‘meat’ incorporates into the verb satisfying the MVC. See Baker (1996) for structural account of sentence like (3) with respect to the MVC, which I do not discuss for the purpose of this paper. In Blackfoot, noun incorporation is sporadic, and the examples provided in this paper do not show noun incorporation. Therefore, this issue will not be discussed further in this paper.

\(^4\) This is a typical property of an applicative construction (e.g., Baker 1988, Marantz 1993) in which a P is incorporated into the verb, its complement agrees with the verbal complex, and the
the MVC, incorporation takes place in order to satisfy the theta visibility, and agreement happens for the same reason. The MVC as formulated in (2) is to satisfy theta visibility of an argument. For a PP argument, thus, the MVC will always force both agreement (between P and its DP complement) and incorporation (of P to V), as just discussed with (3), as there are always two relations to be satisfied in terms of theta visibility: one is relation between P and its complement, and the other is a relation between V and its PP argument. Consequently, incorporation and agreement co-occur, which captures the properties of similar constructions in many polysynthetic languages shown in Baker (1996). However, what seems to be missing is an account of why incorporation should co-occur with agreement or vice versa. Under the MVC, there is no direct relation between incorporation and agreement that makes it possible for them to co-occur. Rather, agreement and incorporation come together as byproducts in satisfying the MVC, i.e., satisfying theta visibility.

In what follows, building on evidence from Blackfoot (Algonquian), I propose that the relation between incorporation and agreement is closer than the MVC suggests. Recasting incorporation into the current view of Agree (Chomsky 2001, 2002), I argue that incorporation is a reflex of Agree, similar to what is proposed in Roberts (2010), where noun incorporation is understood in terms of Agree.

3. PPs in Blackfoot and a problem for the MVC

Blackfoot is an endangered language spoken in Southern Alberta and Montana, and belongs to Algonquian language family, which is renowned for its morphological complexity (e.g., Jelinek 1992). For instance, similar to (prototypical) polysynthetic languages, Algonquian languages show a certain amount of incorporation, and obligatory argument agreement morphemes appear as affixes.

5 Baker (1996) argues that adjunct PPs are exempted from the MVC, by showing that they neither incorporate nor agree. I do not question whether the MVC forces both agreement and incorporation for other types of arguments, which is beyond the scope of this paper.

6 The question is whether Blackfoot can be considered a polysynthetic language; that is, the parametric setting for the language is set to obey the MVC. Relevant to this issue, Baker (1996) mentioned that with respect to the MVC, Algonquian languages may exhibit argument agreement for theta assignment. However, it was speculated that incorporation in these languages may not be allowed. This paper suggests that P incorporation exists along with agreement in Blackfoot. Also see Hirose (2003) for noun incorporation in Cree, another Algonquian language. I leave this issue for future
Moreover, word order in the language is relatively free, like other polysynthetic languages.

I first discuss certain properties of Blackfoot that are essential to follow the discussion made in the rest of this paper. In Blackfoot, nouns are categorized into two grammatical classes: animate and inanimate. Nouns in the inanimate class are inanimate objects or things. Nouns in the animate class may be humans or animals, but may also be certain inanimate objects. For instance, nouns such as ‘wagon’ belong to the animate noun class, although they are semantically inanimate (Frantz 2009). Grammatical animacy is visible on verbs, as in other Algonquian languages; for example, the motion verbs discussed in this paper are marked with an Animate Intransitive (AI) morpheme. This morpheme, often not easily separable from the verb stem (see (4))\(^7\), indicates that the verb that it appears with is intransitive and that the subject of the verb is grammatically animate.\(^8\) In (4), the verb ‘go’ is in the AI form: the verb has a subject ‘those boys’ where the nominal ‘boy’ is grammatically animate, and the verb is intransitive having no object. Instead, this sentence has a goal PP ‘to the river’. The goal of the motion ‘the river’ is introduced by a goal P expressed as a prefix itap- on the verb. Goal P in Blackfoot is always an affix, as shown by the fact that it cannot appear as separate from the verb (5) (Frantz 2009, Kim 2015a).\(^9\)

\[(4)\] ann-iksi saahkomaapi-iksi itap-oo-yi anni niitahtaayi

DEM-PL boy.AN-PL goal-go.AI-3PL DEM river.IN

'Those boys went to the river.' (Kim 2015a)

\[(5)\] *itap anni niitahtaayi ‘to the river’

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\(^7\) In Blackfoot literature, Blackfoot data is usually presented with an additional first line which indicates the orthographic spelling following Frantz (2009), but I omit this line due to the reasons of space. Unless otherwise noted, all data presented in this paper is from the author's fieldwork. Morpheme breakdowns in this paper are not exhaustive and morphemes irrelevant to this paper are not indicated. The following abbreviations are used in the paper: 1/2/3 = 1st/2nd/3rd person; AI = intransitive animate; AN = animate ACCOMP= accompaniment; ASSOC = associative; BEN = benefactive; DEM = demonstrative; IN = inanimate; INST = instrument; Obj = Object; PL = plural; PAST = past; PERF = perfect; S = singular; Subj = subject; TH = theme marker.

\(^8\) In Algonquian languages, this type of morpheme is called “final”, and there are 4 types of finals including the AI morpheme (Bloomfield 1946). As motion verbs in Blackfoot belong to AI verbs (Kim 2015a), other types of finals are not discussed in this paper.

\(^9\) In some Algonquian languages, a similar type of a prefix is called “relative roots” (Rhodes 2010).
Baker (1996) distinguished argument IPs from adjunct IPs, by relying on the obligatoriness of the PP in the argument structure of the verb. For Blackfoot, I apply this property to identify whether a PP is an argument or not, as obligatory and optional status among IPs is clear. Goal IPs, as in (4), can be considered arguments, as they are required by motion verbs such as ‘go’ (Kim 2015a).10 In contrast, adjunct IPs such as instrument IPs are optional (Kim 2014a), as shown in (6b). In (6b), an instrument nominal ‘the arrows’ is introduced by the instrument prefix (oht), and the instrument PP is optional.11 Following previous studies on IPs (e.g., Tungseth 2008, Kim to appear b), I assume that an argument PP merges as a complement of V.

(6) a. Anna-iki saahkanapi-iki *((itap)-oo-yi/*wa *((anni niitahtaayi)
   DEM-PL boy.AN-PL goal-go.AI-3PL/3S DEM river.IN
   ‘Those boys went to the river.’ (Kim 2015a)

b. nit-(oht)-yissino’to-a-wa anna saahkanapi (ann-istsi apssi-istsi)
   1-INST-catch.TA-TH-3S DEM boy.AN DEM-PL arrow.IN-PL
   ‘I caught the boy (by means of the arrows).’ (Kim 2015b)

As shown in (6a), Blackfoot, an argument goal P itap- incorporates to the verb; thus, in terms of the MVC, the argument goal PP is thematically visible to the verb. Unlike argument IPs in Mayali (3), however, the argument goal PP in Blackfoot does not fully satisfy the MVC, failing to satisfy (i) agreement in (2). For example, the goal DP in Blackfoot in (6a) does not show φ-agreement with the head P that incorporates onto the verb. No form of agreement can appear adjacent to the goal P itap; for instance, 3rd person singular -wa or 3rd person plural -yi cannot appear with itap, e.g., *wa-itap-V or *itap-wa-V. Moreover, in (6a), the verb agrees with the subject ‘those boys’, as the 3rd person plural suffix -yi indicates. The 3rd person singular suffix -wa that might agree with the goal DP is ungrammatical. Then, a Blackfoot sentence such as in (6a) violates the

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10 In Blackfoot, motion verbs such as ‘come’, ‘descend’, ‘ascend’ or ‘climb’ are expressed by the root verb oo ‘go’ prefixed with a different direction morpheme: e.g., waannis-oot(go) ‘ascend/climb’ (see (9)). The prefixes such as waannis- indicate direction only (but no goal of direction, see (9)) (Frantz and Russell 1995, Kim 2015a, b).

11 In Blackfoot, like all other Algonquian languages, theme markers (abbreviated as TH) appear obligatorily with transitive verbs, but not with intransitives including AI verbs (see (6a) vs. (6b)). This is because they indicate the direction of action described by the verb between two participants in the clause. For example, the marker -a on the verb in (6b) indicates that the direction of the action is from first person ‘I’ to third person ‘the boy’. If the direction of the action is reversed (e.g., ‘The boy saw me’), a different theme marker appears.
MVC: the complement of the goal P ‘the river’ cannot be theta visible from the P, as there is no agreement relationship between the P and its complement. Despite violating the MVC, the sentence in (6a) is grammatical, which suggests that we may need to find another way to account for the data. In section 4, I provide an account for this observed problem by utilizing Agree (Chomsky 2000, 2001) and by motivating a language-specific feature [m(ental) state].

Before moving on to the next section, I discuss the structure of the goal PP in the language on which I built my analysis. I adapt the structure of goal PPs in Blackfoot (Kim 2014a, to appear b) as shown in (7). A goal PP in the language is proposed to project a functional projection p building on previous studies of spatial PPs (e.g., Koopman 2000, Svenonius 2007, 2010).

\[
(7) \ [\text{vr} \ V \ [\text{vr} \ Figure \ p] \ [\text{vr} \ P \ \text{Ground}] \]
\]
\[
go \ 'John' \ itap- \ Ø \ anni niitahtanyi 'the river'
\]

(Kim to appear b)

The head P introduces Figure in its specifier and Ground in its complement PP. A Figure is an entity in motion or an entity that is located with respect to the Ground (Talmy 1985). The Ground is the reference object for the location of a Figure. For instance, in (7), ‘John’ is a Figure in motion occupying the specifier of P. The DP ‘the river’ is the Ground where the Figure ‘John’ is located, and it occupies the complement of P.

4. Argument PP incorporation via [m]-Agree

In this section, I propose that a goal PP is licensed by [m]-Agree. I assume that Agree is defined as in Chomsky (2000, 2001), in which the uninterpretable features of a probe are valued and checked by a goal with matching interpretable features, and by establishing an Agree relation with such a goal. I assume that Agree can be established not only between a head and its specifier, but also between heads. As for the latter case, I follow Roberts (2010) in which

\footnote{See Svenonius (2007, 2012) for detail of how this structure is motivated, e.g., placing a theme argument of the verb in the specifier of P}. For the purpose of this paper, I do not discuss the previous studies in any great detail.

\footnote{As in Kim (to appear), I assume that P is null, and that the P would head-move to P}

\footnote{There are various formal approaches to achieve Agree relations, for example, cyclic Agree in Béjar and Rezac (2009), Multiple Agree in Hitachi (2001), and Upward-probing in Zeijlstra (2012) and
(noun) incorporation or head movement phenomena can be viewed as the result of an Agree relation. As will be shown in this section, a goal $p$ appears to incorporate into the verbal complex consisting of $V\nu$ as a consequence of the Agree relation with a sentient DP and $\nu$ in terms of the [m] feature.

41. Feature [m] and Agree in Blackfoot

I argue that the goal $p^p$ of motion verbs in Blackfoot is licensed by Agree (Chomsky 2001) (see (4)). Although there is no $\phi$-Agree with the $p^p$s in the language as shown in the previous section, I argue that in Blackfoot, a [m(ental state)] feature [m] (Reinhart 2002), which is adapted for a sentient DP in Blackfoot (Ritter 2015), actively participates in a relevant Agree relation in licensing a goal $p^p$ of a motion event.

Sentience refers to real-world or semantic animacy, or the ability to sense or perceive (Speas and Tenny 2003). Reinhart (2002) proposed that a sentient participant whose mental state is relevant for the event bears an [m] feature. For example, the agent participant of an event denoted by a verb such as cry or laugh, or the experiencer participant of an event indicated by a verb like love, fear etc. bear the feature [m]. Various parts of Blackfoot grammar have been identified as sentient-oriented (e.g., Johansson 2008, Ritter and Rosen 2010, Bliss 2013, Kim 2014b, Witschko and Ritter 2016). For example, the subjects of transitive verbs and certain intransitive verbs identified as unergatives in the language must be sentient, and instruments or causers are not allowed as subjects for such verbs (Frantz 2009, Ritter and Rosen 2010). Building on these previous studies, it is proposed that the [m] feature is a selectable feature of sentient DPs in Blackfoot (Ritter 2015), and that this sentient property must be visible in narrow syntax (Witschko and Ritter 2016).

I propose that this is the case for sentient subjects of motion verbs, in line so on. The Agree relation proposed in this section may be expressed in one of these approaches or combination with them, as long as it can account for an Agree relation between a head and a sentient DP in the specifier of the head and the one between heads such as $p$ and $\nu$.

See Roberts (2010) for technical details, and how other relevant issues - e.g., head movement as a PF phenomenon in Chomsky (2000), or differences in V-raising between English and French - can be dealt with.

Under Roberts's (2010) proposal, for the head movement as Agree analysis to work, the features of the moved element (e.g., $p$ in this paper) must be a subset of the features of the Probe (e.g., $\nu$ here) this may be the case, as $p$ has [sem] and $\nu$ has [sem, wAn], but I leave this issue for a future research. Barrie and Mathieu (2012) showed that this issue is a problem for Roberts's analysis of noun incorporation as head movement.
with Kim (2015a). To illustrate, consider the examples in (8). In (8a), the subject of the motion verb is sentient, ‘that boy’, and the goal of the motion ‘the hill’ is introduced by the goal prefix itap. However, the sentence becomes ungrammatical when the subject is non-sentient, as illustrated in (8b). In (8b), the subject is ‘that wagon’, and the same goal \( \pi_P \) as in (8a) appears. The subject belongs to the grammatically animate noun, which should be allowed by the AI verb ‘go’, contrary to the fact. Thus, the contrast between (8a) and (8b) suggests that the subjects of motion verbs must be sentient.

(8) a. Anna saahkomaapi itap-oo-wa oomi isspakkoyi
   DEM boy.AN   goal-go.AI-3S DEM hill.IN
   Lit. ‘That boy went to that hill.’
   b. *Anna ainaka’si itap-oo-wa oomi isspakkoyi
   DEM wagon.AN goal-go.AI-3S DEM hill.IN
   Intended: ‘That wagon went to that hill.’ (Kim to appear b)

Moreover, the following data in (9), together with the data in (8), indicate that the goal \( \pi_P \) of a motion verb in the language is licensed only if its subject is sentient (Kim 2015a, to appear a). In contrast to the ungrammatical example in (8b), in (9), a non-sentient subject ‘the wagon’ is allowed. This type of subject is only possible in the absence of a goal \( \pi_P \), as the contrast between (8b) and (9) shows. Unlike (8b), in (9), the goal prefix itap- is absent, and thus a goal DP is not allowed. Instead, the verb is prefixed with a direction morpheme waamis- ‘upwards’, a type of direction prefix that cannot introduce a goal, unlike the prefix itap- (Frantz 2009, Kim 2015a), as indicated in (9). Thus, the data in (8)-(9), suggest that in Blackfoot, a goal \( \pi_P \) is allowed only when the subject is sentient.

In particular, note that the contrast between (8b) and (9) highlights the difference between grammatical animacy and sentience in the language: sentience behaves differently from grammatical animacy, and this fact plays an important role in the proposed analysis (see section 4.2).

(9) Anna ainaka’si waamis-oo-wa (*anni niitahtaayi)
   DEM wagon.AN   up-go.AI-3S DEM river.IN
   ‘That wagon is moving upwards.’ (Kim to appear a)

Building on the data in (8)-(9), I propose that sentient subjects of motion verbs that allow a goal \( \pi_P \) have mental capacity, as represented by the feature [m]. In particular, in the context of a motion event, a participant that bears the
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[m] feature is capable of terminating the event of which he/she is a participant, in contrast to a non-sentient participant that does not bear [m]. Under this view, the goal \( P \) of a motion event is licensed by a sentient DP with the [m] feature only.

4.2 Probes for feature [m]

In this section, I formalize the proposal discussed in the previous section: a goal \( P \) is licensed by a sentient participant with the [m] feature. In particular, I argue that the probes for the feature [m] are \( P[m] \) and agentive \( \nu[m] \). I first show the derivation with a probe \( P[m] \), which is relatively less complex than that with another probe \( \nu[m] \). I next motivate \( \nu[m] \) as a probe for the feature [m] in the structure of motion verbs, and show how \( \nu[m] \) works with \( P[m] \) in order to license a goal \( P \) whose head appears as a prefix to the verbal complex \( V-\nu \).

Recall the structure of the goal \( PP \), as discussed in section 3. The structures are repeated as (11) with the addition of the feature [m], and the relevant examples to the structures are repeated in (10).

\[
\begin{align*}
(10) & \quad \text{(a)} & & \text{Anna saahkomaapi itap-oo-wa oomi isspahkoyi} & & \text{DEM boy.AN GOAL-go.Al-3S DEM hill.IN} \\
& & & \text{Lit. ‘That boy went to that hill.’} \\
& b. & & *Anna ainaka’si itap-oo-wa oomi isspahkoyi & & \text{DEM wagon.AN GOAL-go.Al-3S DEM hill.IN} \\
& & & \text{Intended: ‘That wagon went to that hill.’} \\
(11) & \quad \text{(a)} & & [\_P \_P anna saahkomaapi[m] [\_ \_ P oomi isspahkoyi]} & & \text{‘that boy’ itap- ‘that hill’} \\
& & & \text{‘that boy’ itap- ‘that hill’} \\
& b. & & *[\_P \_P anna ainaka’si [\_ \_ P oomi isspahkoyi]} & & \text{‘that wagon’ itap- ‘that hill’}
\end{align*}
\]

In (11a), the subject of the motion event anna saahkomaapi ‘that boy’ merges in the specifier of \( P \), and the goal of the motion oomi isspahkoyi ‘the hill’ merges in the complement of \( P \). The DP ‘that boy’ in the specifier of \( P \) is sentient, and thus has an [m] feature. Having a matching feature, the DP is in an Agree relation with the probe \( P[m] \); the uninterpretable feature on \( P \) is valued and checked. In contrast, as in (11b), the non-sentient DP anna ainaka’si ‘that wagon’ has no [m] feature; thus, the uninterpretable feature on \( P \) cannot be valued and checked, and the derivation crashes. This account captures the fact that the goal
of motion introduced by the prefix *itar* is allowed only in the presence of a sentient participant.

### 4.2.1 Probe v [um]

In this section, I propose that agentive *v* is another probe for the feature [m]. My empirical evidence for this proposal builds on previous studies of motion verbs in Kim (to appear a). Kim shows that a sentient participant that allows a goal *P* is agentive, and thus cannot be a theme.

Core empirical evidence comes from the compatibility with different types of affixes that license the different roles of nominals in the language: the accompaniment suffix and the associate prefix. In Meadows (2010), the accompaniment suffix was shown to introduce an accompaniment argument to agent subjects; the accompaniment is interpreted to perform the event together with the agent subject. In other words, it has the same role as an agent subject. On the other hand, the associative prefix was shown to introduce an associate argument to themes; the associate participates in the event in the same manner as the theme does, i.e., it is an undergoer of the event. The two affixes are illustrated in (12) and (13) respectively. First, in (12a), the accompaniment suffix – *m* is compatible with an unergative verb, such as ‘work’, that has an agentive subject. In (12a), the suffix introduces an accompaniment ‘my son’ to the agent ‘my daughter’ of the verb ‘work’. However, the suffix is ungrammatical when it appears with an unaccusative verb that typically has a theme subject, such as ‘fall’ in (12b). In (12b), the suffix introduces an agent accompaniment to the theme subject, ‘that boy’, and the sentence is ungrammatical. The contrast between (12a) and (12b) suggests that the accompaniment suffix introduces an agent.

(12) a. Nitana iihpok-a’po’taki-m-yii-wa nohkoyi. My daughter.AN with-work.AI-ACCOMP-TH-3s my son.AN

‘My daughter worked with my son.’ (Frantz 2009:104)

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17 In Blackfoot, the status of usual agent-identifying tests in the literature is not clear. For example, it is not clear whether an agent-oriented adverb such as ‘on purpose/intentionally’ exists at all; my consultants could not spell out this type of adverb. Further, imperative or ‘try to’ phrases do not seem to identify only an agent, as it is possible to use these with psych-predicates (Kim 2014b).

18 Note that the accompaniment suffix requires a prefix *iihpok* ‘with’ on the same verb, (Frantz 2009, Meadows 2010). The status of this prefix is not clear, and I do not question this issue.
b. Accompaniment final (agent) + fall.AI (theme)

*anna saahkomaapi  iihpok-innisi-m-yii-wa  nohkoyi
that boy.AN  with-fall.AI-ACCOMP-TH-3S  my son.AN
Intended meaning: 'That boy fell with my son.'

(Kim to appear a)

Now consider the associative prefix illustrated in (13a). In contrast with the accompaniment suffix in (12a), the associative prefix in (13a) introduces an associate 'that boy' to the theme subject, 'that ball', and the sentence is grammatical. The grammaticality suggests that the subject 'that boy' has the same role with the associate, i.e., theme. The sentence in (13b) further supports the view that an associate must be a theme. In (13b), the associative prefix appears on the unergative verb 'work' whose subject is an agent, and the prefix introduces an associate 'my son' to the subject. The sentence is ungrammatical, as expected. The ungrammaticality is because the subject is an agent which is not the same role as that of the associate. Thus, the contrast between (13a) and (13b) indicates that the associative prefix introduces a theme.

(13) a. anna pokon  iihp-innisi-wa  anna saahkomaapi
That ball.AN  ASSOC-fall.AI  that boy.AN
'That ball fell with the boy.'

b. Associative linker (theme) + work.AI (agent)
*Nitana  iihp-a’po’taki-wa  nohkoyi.
My daughter.AN  ASSOC-work.AI-3s  my son.AN
Intended meaning: 'My daughter worked with my son.'

(Kim to appear a)

When these tests are applied, sentient DPs that allow goal Ps turn out to be agentive (Kim 2015a). This is illustrated in (14). The motion event with the goal P as in (14a) is compatible with an agent-identifying accompaniment suffix, as shown in (14b), but incompatible with a theme-identifying associate prefix, as shown in (14c). In (14b), an accompaniment suffix introduces an accompaniment oksissyi 'his mom' to the subject of the motion event anna saahkomaapi 'that boy'. The grammaticality of the sentence suggests that 'that boy' is agentive. In (14c), on the other hand, the associate prefix introduces an associate theme 'his mom' to the subject 'that boy'. The sentence is ungrammatical, which suggests that the sentient subject cannot be a theme, like an associate. Thus, the data in (14b) and (14c) together suggest that the subject of the motion verb 'go' in sentence
(14a) cannot be a theme, but an agent.

(14) a. Anna saahkomaapi itap-oo-wa anni isspahkoyi.
DEM boy.AN GOAL-go.AI-3S DEM hill.IN
'That boy went to the hill.'
b. Accompaniment morpheme (identifying an agent)
Anna saahkomaapi iihpok-itap-oo-m-yii-wa
DEM boy.AN ACCOMP-GOAL-go.AI-ACCOMP-TH-3S
anni isspahkoyi oksisstyi.
DEM hill his mom.AN
Intended Meaning: 'That boy and his mom]went to the hill.'
c. Associative morpheme (identifying a theme)
*Anna saahkomaapi iihp-itap-oo-wa
DEM boy.AN ASSOC-GOAL-go.AI-3S
anni isspahkoyi oksisstyi.
DEM hill.IN his mom.AN
Intended Meaning: 'That boy went to the hill with his mom.'

(Kim to appear a)

Building on the result of this test shown in (14), I propose that the motion verbs that license a goal vP project an agentive vP (Chomsky 1995). As discussed in section 3, agents in the language must be sentient, and this is reflected on agentive v via \([m]\) feature as shown in (15).20

(15) \([vP v[\text{[m]}] \cdots V ]\)

4.3 Derivation of argument vPs via Agree

Having two probes for the feature \([m]\), we have the following two components for the derivation of the motion event that allows the goal vP (16):

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19 The associate 'his mom' might be interpreted as an agent in our world knowledge. Even if this were possible, the fact that (14c) is ungrammatical suggests that the world knowledge cannot override the morphosyntactic interpretation. That is, if the associate 'his mom' were interpreted as an agent, (14c) would be grammatical. This would be because the associate has the same role as the subject 'that boy'.

20 A similar proposal has been made in Wiltschko and Ritter (2015). Unlike the present paper concerned with argument goal vPs with respect to the \([m]\)-feature Agree, their focus is to account for the activeness of sentience in various parts of Blackfoot grammar as recognized in previous studies.
(16) a. \[ vp \cdots v[uAN] \cdots V \]

\[ \text{(16) a. [vp DP [m] [uAN] vp DP]}] \]

b. \[ [vp DP [m] [uAN]] \]

I argue that the two structures in (16) constitute the core of the motion event that licenses the goal \( P \). I propose that \([m]-\text{Agree}\) between \( p \) and \( v \) results in incorporation of \( p \) into \( v \), as illustrated in (17) for the example in (10a).

(17) a. \[ [vP <V> [pP < DP[m, AN]] > [\phi < [uAN: m]] > [vP P DP]]] \]

\[ (\phi) \text{‘that boy’} \]

\[ \text{(17) a. [vp DP [m, AN]] [uAN-\text{-Agree}]} \]

b. \[ \text{‘that boy’ [uAN-\text{-Agree}]} \]

In (17a), as discussed previously, the subject \( DP \) ‘that boy’ with the feature \([m]\) merges in the specifier of \( pP \) and values \([uAN]\) on \( p \). In the next step of the derivation, as in (17b), \( p \) with the valued \([m]\) feature moves to \( v \), checking and valuing \([uAN]\) on \( v \), which captures the fact that \( P \) (\( itap- \)) is discontinuous from its complement (‘that hill’) (see (10a)).

21 Obligatory incorporation of \( p \) in Blackfoot is thus a consequence of the Agree relation between \( p \) and \( v \) mediated by \([uAN]\). The subject of \( p \) ‘that boy’ cannot check/value \([uAN]\) on \( v \) as its \([m]\) feature is deactivated after participating in Agree with \( P \) (e.g., Georgi 2013): the deactivated status is indicated as \([m]\). However, the subject (‘that boy’) can check/value \([uAN]\) on \( v \) as it is a grammatically animate noun bearing \([AN]\). This \([AN]-\text{Agree}\) accounts for the AI form of the verb \((V)\) (e.g., \( \alpha\text{-AI} \) in (10a)), which is in line with the previous approaches to \( v \) in Blackfoot (e.g., Ritter and Rosen 2010). For example, Ritter and Rosen (2010) proposed that among the AI verbs, unergative AI verbs project an agentive \( v \) and this \( v \) is morphologically instantiated by an AI morpheme. I propose that AI morphology on the motion verbs also realizes agentive \( v \) and argue that this is achieved by Agree in terms of the \([AN]\) feature. The derivation will crash with a non-sentient subject ‘that wagon’ which, despite being an animate noun in the language, does not have an \([m]\) feature that can value and check \([uAN]\) on \( p \); this captures the ungrammatical case in (10b).

Recall the discussion that the MVC incorrectly predicts that motion events

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21 Under standard assumptions, once the uninterpretable feature on a head is checked, it should be deleted. However, assuming Roberts (2010), \([m]\) feature on \( p \) remains, checking uninterpretable feature on \( v \).
involving an obligatory argument goal PP in Blackfoot would be ungrammatical, contrary to the fact. I showed that recent minimalist assumptions involving Agree can capture the distribution of argument goal PPs in the motion events in Blackfoot: p/P incorporation is the result of Agree with the language-specific feature [m]. The MVC cannot provide an account for why agreement and incorporation should co-occur. Under the proposed analysis, however, the co-occurrence is well expected: agreement is expected to accompany incorporation as incorporation is the reflex of Agree. Thus, in Blackfoot, p incorporation is the result of [m]-Agree, and the exponent for the agreement in this case is the prefix *itap* that realizes p.

5. Conclusion

I showed that the MVC cannot account for the distribution of goal PPs in Blackfoot. I proposed that the distribution of the PP can be captured by minimalist assumptions such as Agree, by motivating a language-specific feature [m]. Under the proposed account, agreement is expected to occur upon incorporation, unlike the MVC, which suggests that incorporation merely co-occurs with agreement. One of the major contributions of this paper is that preposition incorporation can be understood in narrow syntax, as proposed for noun incorporation (Roberts 2010). Thus, in a broad perspective, this paper contributes to the recent debate regarding the status of incorporation/head movement in narrow syntax (e.g., Chomsky 2000, 2001, Mahajan 2000, Harley 2004, Matushansky 2006, Baker 2009, Roberts 2010, Barrie and Mathieu 2012).

References


22 Thus, Blackfoot may be different from Baker’s polysynthetic languages in features that participate in agreement with respect to a PP, e.g., [m] vs. [∅]. Exploring the consequences of this is beyond the scope of this paper.


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