Morphological conditions on movement chain resolution: Inuktitut noun incorporation revisited*

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Abstract

Recent research on the Copy Theory of Movement has suggested that the realization of movement chains may be regulated by well-formedness conditions governing complex word formation, such as the Stray Affix Filter (e.g. Landau, 2006; Kandybowicz, 2007). While most of this work has been primarily informed by patterns of verb movement and doubling, this paper demonstrates that the same logic holds for extracted nominal constituents as well. Evidence for this idea comes from noun incorporation in Inuktitut (Eastern Canadian Inuit). I provide novel data showing that, in Inuktitut, incorporated nominals are syntactically active, able to participate in case and agreement alternations and undergo phrasal movement. Thus, in contrast to most prior characterizations of Inuit incorporation (e.g. van Geenhoven, 1998, 2002; Johns, 2007, 2009; Branigan and Wharram, 2019), I conclude that incorporated nominals in Inuktitut are not structurally reduced and that incorporation takes place to satisfy the morphological requirements of the incorporating verb (cf. Sadock, 1985, 1991). That these nominals nonetheless invariably surface within the verb complex even when extracted follows straightforwardly from the aforementioned interaction between chain resolution and morphological well-formedness.

1 Introduction

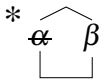
According to the Copy Theory of Movement (Chomsky, 1995, 2000, 2001), movement chains are created by merging copies of a syntactic element in multiple syntactic positions, rather than by leaving traces of the moving element. Certain copies within this movement chain are then rendered phonetically non-overt (i.e. deleted), with the choice of which copies to delete or spell-out determined by various grammatical considerations evaluated at PF (Abels, 2001; Boškovič, 2001; Bobaljik, 2002; Chomsky, 2005; Landau, 2006; Kandybowicz, 2007, 2008, 2009; Martinovic, 2017; van Urk, 2018; Scott, 2021; Bleaman, to appear, a.o.).[1]

This paper investigates one such consideration: how movement chain resolution may be regulated by conditions on the well-formedness of complex words. I focus in particular on the *Stray Affix Filter*—the requirement that affixes and other types of bound morphology be hosted by overt material (Lasnik, 1981, 1995; Baker, 1988). As developed by Boškovič (2001), Landau (2006), Kandybowicz (2007), and others, adherence to the Stray Affix Filter may prevent the deletion of a movement copy, if that copy happens to

*Acknowledgments will be included in a later version of this paper.

[1]There is also a body of literature theorizing that the surface position of displaced elements may be determined phonologically without adopting the Copy Theory of Movement (e.g. Cecchetto et al., 2009; Richards, 2010, 2016; Kandybowicz, 2017; Branan, 2018). This work is beyond the scope of this paper and will not be discussed here, although a major question for future research is whether the phenomena being investigated in this paper are amenable to such alternative analyses.

serve as a stem for an affixal element. Overall, this logic can be schematized abstractly in (1): if an element α forms part of a complex word with some other element β, then α must be morphologically overt.[2]

(1) 

I present evidence for this interaction, from noun incorporation in the (Eastern Canadian) Inuktitut varieties of the Inuit language. In Inuit, incorporation of a direct object is obligatorily triggered by a small set of affixal verbs, underlined in the examples below (Sadock, 1980, 1985, 1986, 1991; Bok-Bennema and Groos, 1988; Johns, 1999, 2007, 2009; Compton and Pittman, 2010b; Branigan and Wharram, 2019, a.o.). The main empirical contribution of this paper is that *incorporated objects in Inuktitut are syntactically active*. We will see that incorporated objects may participate in case, agreement, and transitivity alternations commonly analyzed as resulting from movement of the object (Bittner and Hale 1996a,b; Woolford 2017; Yuan 2018, 2022), may be promoted to subject position via passivization (i.e. undergo A-movement), and may be relativized (i.e. undergo Ā-movement). As an initial illustration, the examples in (2a-b) suggest that affixal verbs in Inuktitut may be passivized. The nominal (*ujamik* 'spider') incorporated into this passivized verb may bind a subject-oriented anaphor, suggesting that it has undergone *A-movement* to subject position.

(2) **Inuktitut: Passivization of incorporated nominal**

a. uumajuq **aasivar**-tu-qqau-juq
animal.ABS spider-consume-REC.PST-3S.S
'The animal ate a spider.'

b. **aasivar**-tuq-ta-u-juq nuliaqta-**mi**-nut
spider-consume-PASS.PART-be-3S.S mate-POSS.REFL-ALLAT
'The spider$_i$ is being eaten by its$_i$ mate.'

In (2b), the incorporated nominal displays signs of having undergone phrasal movement despite its surface appearance within the verb complex. This follows straightforwardly from the aforementioned logic of copy spell-out of complex words: if noun incorporation takes place to satisfy the morphological requirements of the affixal verb (in turn, consistent with the obligatory nature of incorporation in Inuit), then this should force lower copy spell-out in configurations in which movement has occurred.

This logic challenges previous approaches that derive noun incorporation itself via syntactic movement (whether head or phrasal), which presuppose the opposite order of processes (e.g. Baker, 1988; Johns, 2007, 2009; Barrie and Mathieu, 2016). More generally, the syntactically active nature of Inuktitut incorporated nouns suggests that they are not structurally reduced, contra most existing accounts of Inuit incorporation (Bok-Bennema and Groos, 1988; Bittner and Hale, 1996b; van Geenhoven, 1998, 2002; Johns, 2007, 2009; Compton and Pittman, 2010b; Branigan and Wharram, 2019).[3] If incorporated nouns in Inuktitut are syntactically identical to their non-incorporated (standalone) counterparts, then incorporation in Inuktitut must be morphological (rather than syntactic) in nature (as also proposed, for instance, by Sadock 1985, 1991 in his autolexical theory).

More broadly, the present investigation of incorporation in Inuktitut provides novel evidence for the idea that the resolution of movement chains is determined morphologically, as well as addresses a surprising em-

[2]Throughout most of this paper, I use square underbracketing, as in (1), to informally represent the affixation relationship between nodes in a structure; I remain neutral to the exact mechanism(s) of word formation until Section 6.

[3]The assumption that incorporated nouns in Inuit are syntactically smaller than their non-incorporated counterparts has been leveraged for a wide range of proposals, relating to argument licensing (Baker, 1988; Bittner and Hale, 1996b; Levin, 2015), the semantic interpretation of low nominal objects (van Geenhoven, 1998; Branigan and Wharram, 2019), the mechanisms underlying polysynthetic word formation (Compton and Pittman, 2010b), and beyond. However, if this view is indeed empirically untenable, then it should not factor into the argumentation underlying these proposals.

pirical gap within the existing body of work on this topic. Most of this work has been primarily evidenced by VP-movement (Abels, 2001; Landau, 2006; Kandybowicz, 2007; Hein, 2017; Bleaman, to appear) and pronominal cliticization (D^0-movement) (e.g. Bošković, 2001)—rather than movement of DPs.[4] In addition, most relevant discussions that do focus on how DP movement copies are realized at PF (e.g. Nunes, 1995; Bošković, 2002; Reintges, 2007; van Urk, 2018; Scott, 2021) do not engage with the specific issue of complex word formation. However, as we will see, the relevant noun incorporation pattern in Inuktitut does involve full DPs, extends across a wide range of DP-extraction types, and is visible regardless of the number of overt movement copies. It is also abundantly clear in Inuktitut that this effect should be attributed to the Stray Affix Filter, due to the systematicity of noun incorporation in the language as well as its polysynthetic nature more generally.

The remainder of this paper is organized as follows. §2 starts with an overview of prior work on the Stray Affix Filter and its effect on movement chain resolution, and highlights the potential contribution of Inuktitut noun incorporation to this line of inquiry. In §3, I show key morphosyntactic properties of Inuktitut (and Inuit as a whole). In §4-5, I present new data demonstrating that incorporated objects in Inuktitut are accessible to syntactic movement operations, and argue that these patterns instantiate the aforementioned interaction between the Stray Affix Filter and copy spell-out. Finally, in §6 I return to the derivation of noun incorporation in Inuktitut in light of these findings, and offer a postsyntactic approach.

2 The Stray Affix Filter and its effect on postsyntactic deletion

The Stray Affix Filter of Lasnik (1981) is a constraint against affixes and other types of bound morphemes surfacing without morphologically overt stems. While originally formulated to account for raising and lowering interactions between V^0 and T^0 at surface-structure (e.g. head movement and affix-hopping), it has more recently been reframed as a morphological condition operating at PF (e.g. Bobaljik, 2002). In this paper, we are interested in the idea that adherence to the Stray Affix Filter may affect postsyntactic deletion processes, such as those responsible for movement chain reduction. A particularly common strand of research aims to tie this constraint to *predicate (or VP) doubling* cross-linguistically, the idea being that the aforementioned V^0-T^0 affixation requirement may result in multiple copy spell-out of the fronted V^0.

I provide below a case study from Landau (2006) on VP-topicalization patterns in Hebrew. The example in (3a) shows the expected copy spell-out pattern of phrasal movement in Hebrew, with only the highest copy pronounced and all lower copies deleted. However, in (3b) we see that this may be overridden in select contexts, resulting in the spell-out of another instance of V^0, the head of the lower copy of the topicalized VP. Landau (2006) argues that this doubling pattern arises because adherence to the Stray Affix Filter may block copy deletion. Because the inflectional features of finite T^0 require an overt host, and because the V^0 of the lower VP copy serves as this host due to V^0-T^0 head movement, this instance of V^0 must be spelled out, (3c) (in contrast, the remainder of that VP copy is deleted). See also Abels (2001), Kandybowicz (2007), Hein (2017), and Bleaman (to appear) for related approaches to verb doubling constructions in other languages.[5]

(3) **Hebrew: Verb (non-)doubling in VP-fronting**

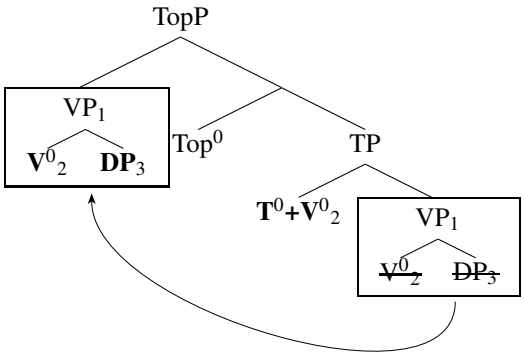
a. [$_{VP}$ **le'horid** et ha-maym], Gil hištadel ~~VP~~
INF.flush ACC the-water, Gil tried
'To flush the toilet, Gil tried.'

[4] Though see Bobaljik (2002).

[5] There are also some accounts of verb doubling that explicitly argue against the multiple copy spell-out analysis. For instance, Aboh and Dyakonova (2009), Lai (2019), and Kandybowicz and Torrence (2021) advocate for parallel chain formation, whereby movement movement chains stem from a single tail; Müller (2016) proposes that verb doubling may be reduced to phonological copying.

b. [$_{VP}$ **le'hasbir** et ha-kišalon], hu lo **hisbir**
INF.explain ACC the-failure he not PST.explain
'As for explaining the failure, he didn't explain.' (Landau, 2006)

c.



A similar effect can be found in the domain of VP-ellipsis—as expected, if movement chain resolution and ellipsis may be unified as both involving postsyntactic deletion under identity (Chomsky, 1995; Merchant, 2001; Saab, to appear). Banerjee (2021) discusses such a case in Hungarian: for many Hungarian speakers, elision of a 3rd person present copula under negation is not possible, due to the fact that the language has a dedicated negative copula portmanteau form in the 3rd person (compare the 3rd person construction in (4b) with a non-3rd person one in (4c)). The negative copula is not divisible, even though the syntactic heads forming the portmanteau fall on both sides of the VP-ellipsis boundary. Thus, as with the Hebrew examples in (3), complex word formation forces spell-out of otherwise deletable material.[6]

(4) **Hungarian: Portmanteaux are not divisible by ellipsis**

a. Ildi **nincs** itthon / Én **nem** vagyok atthon
Ildi NEG.be.PRES.3S at.home / 1S NEG be.PRES.1S at.home
'Ildi is not at home.' / 'I am not at home.'

b. Pisti itthon van, de Ildi **nincs** ~~at.home~~ / *NEG ~~be.PRES.3S at.home~~
Pisti at.home be.PRES.3S, but Ildi NEG.be.PRES.3S
'Pisti is at home, but not Ildi.'

c. Pisti itthon van, de én **nem** ~~be.1S at.home~~
Pisti at.home be.PRES.3S, but 1S NEG
'Pisti is at home, but not me.' (Banerjee, 2021, p. 12)

Beyond these verbal phenomena, the morphological dependency of pronominal clitics (often assumed to be derived by movement) on their hosts is also well-documented. For instance, Boškovič (2001) analyzes the placement of pronominal clitics in Serbo-Croatian languages in terms of movement copy spell-out, as determined by the surface positions of their verbal hosts. Similarly, Bennett et al. (2019) demonstrate that, in Irish, postverbal subject pronominal enclitics, which they take to incorporate into the verb via head movement, may survive verb-stranding VP-ellipsis, while full DP subjects may not.

In contrast, there is a striking paucity of research on the effect of this interaction on *movement of (full) DPs*. While most previous work on the resolution of DP movement chains has focused on a wide range of PF phenomena, it has generally not dealt with well-formedness conditions on bound morphology and the Stray

[6]While Banerjee (2021) does not explicitly frame the Hungarian data as a Stray Affix Effect, I believe that his discussion—which crucially relies on both portmanteau formation and ellipsis deletion being postsyntactic, and the former bleeding the latter—follows the same general logic as the approach pursued here.

Affix Filter in particular.[7] A few representative examples of the existing literature are provided below. For instance, Reintges et al. (2006) and Reintges (2007) propose that lower copy spell-out in Coptic may occur to circumvent the doubly-filled COMP filter, as in (5). Similarly, Scott (2021) analyzes some instances of resumptive pronouns in Swahili as lower partial copy spell-out, which may occur in P-stranding movement contexts in order to satisfy a disyllabic minimal word requirement in the language, as in (6).[8]

(5) **Coptic: Lower copy spell-out if C^0 is overt**

a. **eßol tɔn** a-tetən-ei e-pei-ma?
PCL where PERF-2PL-come to-DEM.SG.M-place
'From where did you come here?'

b. awo **nt**-a-u-ei **eßol tɔn**?
and REL-PERF-3PL-come PCL where
'From where did they come?' (Reintges, 2007, p. 252)

(6) **Swahili: Lower copy spell-out after monosyllabic P^0s**

Ni-li-mw-ona **mwanafunzi** amba-ye u-li-on-ana **na-*(ye)**
1SG-PRS-1-see 1.student AMBA-1 2SG-PST-see-RECP with-*(1)
'I saw the student who you met with.' (Scott, 2021, p. 819)

Overall, then, while the patterns provided above have contributed to our overall understanding of movement chain resolution at PF, there still remains a dearth of conclusive evidence that the Stray Affix interactions seen above with VP movement chains are replicable with DP movement chains. This is notable, given that the replicability of this pattern is fully expected under the assumption that phrasal movement chains are created equally, regardless of the syntactic category of the extracted element.

The remainder of this paper argues for this very interaction between DP movement and complex word formation, based on noun incorporation in Inuktitut. Although most previous work on Inuit incorporation has taken the incorporated nominals to be syntactically smaller than their standalone counterparts, in line with the above, the overall profile of incorporation in Inuktitut is incompatible with this characterization. Rather, the aforementioned interaction between movement and the Stray Affix Filter will be shown to be remarkably transparent in Inuktitut, due to the systematic and productive nature of noun incorporation and the availability of multiple types of movement in the language.

3 Morphosyntactic overview of noun incorporation in Inuit

I start by presenting relevant grammatical background on Inuktitut and Inuit more broadly, focusing on the connection between case, ϕ-agreement, and syntactic movement of the transitive object (e.g. Bittner and Hale, 1996a,b; Yuan, 2022). From there, I summarize key morphosyntactic properties of noun incorporation in Inuit, which differs in a number of ways from noun incorporation cross-linguistically (Sadock, 1980, a.o.). I also highlight the widely-held assumption that incorporated nominals in Inuit are structurally reduced

[7] To my knowledge, the only previous study of the interaction between DP movement and the Stray Affix Filter is Bobaljik's (2002) postsyntactic account of Holmberg's Generalization, a constraint on verb movement and object shift in Scandinavian. Under Bobaljik's proposal, movement of the lexical verb forces object shift to be covert (formulated as spell-out of the in situ copy), since overt object shift to the VP-edge would block postsyntactic Merger between T^0 and V^0. However, the nature and underpinnings of Holmberg's Generalization remain under much debate; see, for instance, Vikner (2017) for a recent overview of issues and competing analyses, including counterarguments against Bobaljik's (2002) approach.

[8] There are other proposed motivations for the partial spell-out of lower movement copies. For instance, Kandybowicz (2007, 2009) ties this to the *that*-trace effect in Nupe, while van Urk (2018) proposes that multiple partial copy spell-out in successive-cyclic Ā-movement occurs in order to satisfy phonological EPP requirements of phase heads (e.g. v^0, C^0).

compared to their standalone counterparts—as one of the contributions of this paper is to show that this assumption is untenable in Inuktitut.

3.1 Background

The Inuit dialect continuum (belonging to the Inuit-Yupik-Unangan language family) spans the North American Arctic and Greenland; Inuktitut is the name commonly used for the Inuit varieties spoken around Nunavut and other areas of the Eastern Canadian Arctic.[9] Unless explicitly indicated, the uncited data presented in this paper were elicited by the author during three fieldwork trips between August 2016 and October 2017 in the community of Iqaluit, Nunavut. Supplementary data were later elicited remotely (online) in 2018 and 2019. These elicited examples represent produced sentences and grammatical judgments from seven speakers of various North Baffin, South Baffin, and Kivalliq varieties of Inuktitut.[10]

Inuit displays base SOV word order, though SVO word order (in addition to other deviations) is also commonly attested (e.g. Fortescue, 1993). Inuit is traditionally described as polysynthetic, with productive noun incorporation, a larger number of suffixal verbs, adjectives, and adverbs, and individual complex words (verbs) that may express propositional-level meanings (Fortescue 1992, 2017; Compton and Pittman 2010b; Compton 2012; see also Mahieu and Tersis 2009). Some representative examples are given in (7).

(7) **Inuktitut: Polysynthetic complex words**

a. qarisauja-ralaa-kulu-tuqa-nnguaq
computer-small-adorable-old-pretend
'an old adorable small pretend computer' (such as a toy computer) (SB; Compton 2016, p. 183)

b. sini-kanni-gasua-riaqaq-tuq
sleep-again-try-should-3s.S
'S/he should try to sleep again. (SB; Compton 2015, p. 559)

As indicated above, complex nouns and verbs contain a root at the leftmost edge of the word, followed by various derivational and inflectional suffixes. Inuit morpheme order generally adheres to the Mirror Principle, with left-to-right morpheme order straightforwardly mapping to the order of syntactic heads if we assume a right-headed structure. This is illustrated by the simplified structure in (8), corresponding to the sentence in (7b).[11] Verbal agreement is found in the CP-domain (Johns 2007; Compton 2016; Yuan 2018, 2021, 2022).[12]

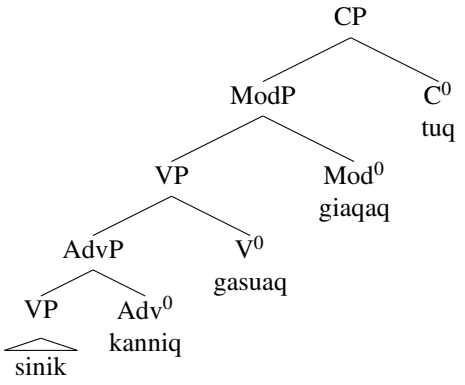
[9] A broader term, Inuktut, has been recently adopted and also includes Western Canadian Inuit varieties not considered here.

[10] Throughout the paper, I indicate for each uncited example from my fieldwork the specific Nunavut community that the Inuktitut speaker who produced it hails from. The abbreviations I use are as follows: AB = Arctic Bay, CH = Coral Harbour, IG = Igloolik, IQ = Iqaluit, PG = Pangnirtung, PI = Pond Inlet. For cited examples from published sources that do not indicate specific Inuktitut-speaking communities, I indicate broader regions using the following abbreviations: L = Labrador, NB = North Baffin, SB = South Baffin. The inclusion of this information is intended to serve two purposes. First, it accounts for small morphophonological differences across varieties (although these differences do not affect the morphosyntactic generalizations formed in this paper). Second, and more pertinently, some of the empirical findings in this paper are unattested in the existing literature on Inuit noun incorporation. It is not clear at this time whether this is due to dialectal variation and whether the Inuktitut data reported in this paper are replicable for other Inuit varieties (indeed, Jerrold Sadock [p.c] has suggested that these patterns do not exist in Kalaallisut). The speaker information included here is thus intended to aid any future research in this area.

[11] For the purposes of this paper, modifiers such as adverbs are treated as heads along the clausal spine rather than phrasal adjuncts, following Cinque (1999) (pace Compton 2017).

[12] As discussed by Compton (2016), Yuan (2021), and others, that agreement is in the CP-domain is evidenced not only by its rightmost position within the verb but also the fact that it tends to surface as portmanteaux with clause type morphology.

(8) **Structure of complex word in Inuktitut (= (7b))**



Inuit displays an ergative case patterning, as shown in (9a-b); throughout this paper, I refer to the transitive construction in (9b) as an *ergative construction*. These examples also show that ϕ-agreement indexes both ABS and ERG arguments. The ergative construction in (9b) alternates with an *antipassive construction*, as in (9c); here, the logical transitive subject, now ABS, is the only argument indexed by ϕ-agreement, while the logical object bears the so-called 'modalis' (MOD) case and is not encoded by agreement morphology.

(9) **Inuktitut: Intransitive, ergative, and antipassive constructions**

a. **igalaaq** surak-tuq
window.ABS break-3S.S
'The window broke.'

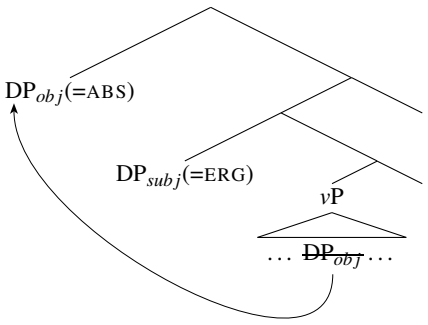
b. Taiviti-**up** **igalaaq** surak-tanga
David-ERG window.ABS break-3S.S/3S.O
'David broke the window.'

c. **Taiviti** igalaar-**mik** surak-si-juq
David.ABS window-MOD break-AP-3S.S
'David broke the window.' (AB)

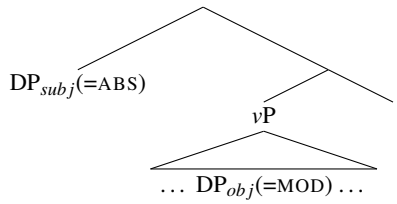
This paper takes the case and agreement differences that typify the ergative vs. antipassive alternation to reflect the structural height of the transitive object, following much previous work on this topic in Inuit and in Inuit-Yupik-Unangan more broadly (Murasugi 1992, 1997; Bittner 1994; Bittner and Hale 1996a,b; Manga 1996; Woolford 2017; Yuan 2018, 2021, 2022). Specifically, the distinction between low and high objects concerns whether the object remains in its base-generated position vs. whether it has undergone *syntactic movement*. Below, (10a) illustrates how an ABS object of an ergative construction moves from its base-generated position to the clausal periphery, such that it c-commands the ERG subject; in contrast, (10b) shows that MOD objects of antipassive constructions are structurally low:

(10) **Derivation of ergative and antipassive constructions**

a.



b.



Object movement is not necessarily evidenced by changes in sentence-level word order. Rather, the occurrence of this movement step is diagnosable by a constellation of syntactic and semantic properties of ABS objects, as well as of ergative constructions more generally.[13] For instance, the movement-derived high locus of ABS objects accounts for the *syntactically ergative* nature of Inuit, in that only ABS arguments are accessible to certain syntactic operations, such as relativization. It also straightforwardly captures the well-known fact that ABS objects are generally interpreted as taking *wide scope* over the other elements in the sentence, as this follows simply from c-command (Bittner, 1987, 1994; Bittner and Hale, 1996a,b).[14] We will examine these properties in greater detail in §4, as they will be relevant to noun incorporation.

Finally, the distribution of ERG case on transitive subjects will be useful to developing our analysis of noun incorporation in §4 and beyond. In this paper, I will assume that ERG case assignment is *dependent* in nature, assigned to the subject in the presence of an additional *v*P-external argument (Marantz 1991; Baker 2015; Baker and Bobaljik 2017; Yuan 2018, 2022).[15] Under this view, assignment of ERG case to the subject is contingent on the occurrence of object movement, while, in the absence of object movement, the transitive subject receives unmarked (ABS) case.

3.2 Noun incorporation in Inuit

In Inuit noun incorporation constructions, the incorporated nominal is the leftmost morpheme in the verb complex, adjacent to the verb. That the nominal is indeed incorporated can be inferred by its lack of inflectional morphology in these contexts, as well as by the occurrence of regular morphophonological processes that apply at the morpheme boundary between the noun and the verb but do not apply across word boundaries (Dorais, 1985, 1986; Bobaljik, 1996).[16] In (11) below, the incorporated object lacks the MOD case morphology found on the stranded modifier, which typically displays case concord with the nominal it modifies. In addition, the final segment of the nominal is deleted in this context (/k/ $\rightarrow \emptyset$).[17]

(11) **Noun incorporation in Inuit**

Ulak **ujami**-liu-qqau-juq piu-ju-**mik**
Ulak.ABS necklace-make-REC.PST-3S.S beautiful-PART-MOD
'Ulak made a beautiful necklace.' (necklace = *ujamik*) (CH)

Cross-linguistically, noun incorporation tends to be optional and permitted with a variety of transitive (and, in some languages, unaccusative) verbs, as illustrated in (12) with Mapudungun. It is often assumed that incorporated nominals are structurally reduced, given that they generally surface as bare forms within the verb complex. A particularly influential proposal by Baker (1988), for instance, takes incorporated nominals to be N^0s (see also Baker et al. 2005; Baker 2009); alternative analyses that take incorporated nominals to be phrasal (NPs) rather than bare heads similarly assume that they lack a DP-layer (e.g. Barrie and Mathieu, 2016; Branigan and Wharram, 2019).

[13] There is also variation across Inuit (as well as across the broader Inuit-Yupik-Unangan language family) with respect to the relative distributions of these constructions (Johns 1999, 2001, 2006, 2017; Carrier 2012, 2017, 2020; Woolford 2017; Yuan 2018, 2022). This is not discussed in this paper for reasons of space, but is compatible with the empirical findings and the analysis provided here.

[14] This semantic effect has also been described as pertaining to specificity (Manga, 1996; Beach, 2011), definiteness (Fortescue, 1984; Hallman, 2008), D-linking (Yuan, 2018, 2021, 2022), and topicality (Berge, 1997, 2011; Johns and Kučerová, 2017; Carrier, 2020).

[15] See Baker and Bobaljik (2017) and Yuan (2018, 2022) for various arguments in favour of a dependent treatment of ERG case assignment in Inuit-Yupik-Unangan, as well as Bittner and Hale (1996a,b) for a precursor of this idea.

[16] See also Arnhold et al. (to appear) on prosodic diagnostics for word boundaries.

[17] The exact effect depends on the initial segment of the following morpheme, and moreover varies by Inuit dialect. For discussion of the exact morphophonological processes that surface, as well as their variation across Inuit, see Dorais (1985, 1986) and Bobaljik (1996).

(12) **Mapudungun: 'Canonical' noun incorporation**

a. Ñi chao kintu-le-y **ta.chi pu waka**
my father seek-PROG-IND.3SS the COLL cow
'My father is looking for the cows.'

b. Ñi chao kintu-**waka**-le-y
my father seek-cow-PROG-IND.3SS
'My father is looking for the cows.' (Baker et al. 2005 p. 139, citing Salas 1992)

Incorporation constructions are often analyzed as *intransitive*, the idea being that the reduced object cannot serve as a proper internal argument of the verb. In Hiaki, for instance, transitivity is morphologically encoded on the verb; when the object is incorporated, the intransitive morpheme is used, (13).

(13) **Hiaki: Incorporation constructions are intransitive**

a. Peo **maso-ta / maso-m** peu-**ta**-k
Peo deer-ACC deer-PL butcher-TRAN-PERF
'Peo butchered a / some deer.'

b. Peo **maso**-peu-**te**-k
Peo deer-butcher-INTR-PERF
'Peo deer-butchered.' (Haugen and Harley 2013, p. 138, citing Jelinek 1998)

Incorporation constructions in Inuit have similarly been characterized as intransitive, as they display the case and agreement patterning otherwise found in the *antipassive* construction. In (11) above, the subject is ABS, the object is not indexed by verbal agreement morphology, and the stranded modifier of the object is MOD. The long-standing idea that antipassivized objects are demoted in some way has been extended to incorporated objects, with many authors advocating for a unified analysis of the two (Bittner and Hale 1996b; van Geenhoven 1998; Branigan and Wharram 2019, cf. Baker 1988).[18] For this reason, I will often refer to intransitive incorporation constructions in Inuit as antipassive (as we will later see that these constructions can be ergative as well).

In contrast to the examples in (12)-(13), an important defining feature of Inuit noun incorporation is that it is *obligatory* with a small set of verbs, and otherwise impossible with all other verbs (e.g. Sadock, 1980, 1986, 1991; Johns, 2007, 2009). This is illustrated in (14). Because incorporating verbs in Inuit require affixation to an object, they will be referred to in this paper as *affixal*.[19]

(14) **Inuit noun incorporation is obligatory**

a. **pitsi**-tu-vunga
dried.fish-consume-IND.1S.S
'I'm eating dried fish.'

b. ***pitsi-mik** tu-vunga
dried.fish-MOD consume-IND.1S.S
Intended: 'I'm eating dried fish.' (L; Johns 2007, p. 541)

Following the analysis of Johns (2007, 2009) and Cook and Johns (2009), the affixal incorporating verbs

[18]There are, however, other analyses of Inuit that take antipassive constructions to reflect an alternative means of internal argument licensing, rather than demotion of an argument to non-core status (Bok-Bennema 1991; Spreng 2006, 2012; Yuan 2018). In this paper, I do not provide a concrete analysis of antipassive constructions.

[19]Note that the obligatoriness of incorporation in Inuit is tied to some property of the verb, rather than any properties of the nouns in question. Inuit is therefore distinct from languages that have certain classes of *nouns* that must incorporate. For instance, in Southern Tiwa, inanimate nouns (as well as some other classes of nouns) must undergo incorporation (e.g. Allen et al., 1984).

are all semantically bleached (with few s-selectional requirements) and may be analyzed as light verbs (v^0s) (cf. Hale and Keyser, 1993). This property of incorporating verbs is illustrated in (15) with *liri* 'do.'[20] In contrast, the verbs that do not incorporate are lexical verbs and contain root material, in line with their non-affixal status.

(15) **Inuktitut: Incorporating verbs are light verbs**

a. nunasiuti-liri-junga
car-do-1S.S
'I am working on (i.e. fixing) a car.' (IQ)

b. amuumaju-liri-junga
clam-do-1S.S
'I'm preparing clams.' (IQ)

c. uqalimaaga-liri-junga
book-do-1S.S
'I'm writing a book.' (IQ)

Affixal verbs in Inuit extend beyond just the ones that incorporate a noun. The examples in (16) show that there are also affixal elements that may attach to verbal stems, as well as larger sequences containing tense morphology; see Woodbury and Sadock (1986), Pittman (2006, 2009), Cook and Johns (2009), and Compton and Pittman (2010b) for discussion. Following Pittman (2006, 2009) in particular, I assume that such constructions involve the syntactic embedding of *v*Ps and TPs, respectively, as reflected in the bracketing in (16). Thus, 'noun incorporation' in Inuit is a subtype of a broader pattern of complex word formation, with the verbs given below differing solely in their c-selectional requirements. In that sense, there is no theoretically significant distinction between the noun-incorporating verbal affixes and other verbal affixes in the language; it is simply that the former takes a nominal complement.

(16) **Inuktitut: Affixal verbs incorporating *v*P and TP constituents**

a. [$_{vP}$ Jaani-up nunasiuti-nga aqi]-gasuaq-tara
Jaani-GEN car-POSS.3S.ABS fix -try-1S.S/3S.O
'I am trying to fix Jaani's car.' (IQ)

b. [$_{TP}$ igalaaq siqumi-ta-u-qqau]-niraq-tara
window.ABS shatter-PASS.PART-be-REC.PST -say-1S.S/3S.O
'I said that the window was shattered.' (IG)

Turning now to the nominals that may undergo noun incorporation, I highlight here three facts that are particularly relevant for our purposes. First, as shown by Compton (2013), incorporated nominals are not bare heads or bare roots. In (17), we see that a variety of suffixes (e.g. both derivational and inflectional morphology) may be incorporated alongside a noun, suggesting that the incorporated constituent must be an XP, that is, phrasal.[21]

(17) **Inuktitut: Incorporated nouns are phrasal**

a. **[iglu-tsiava-nngua]**-qaq-tuq
house-great-pretend-have-3S.S
'(S)he has a great pretend house.' (SB; Compton 2013, p. 3)

[20] Other incorporating verbs that are featured in this paper include *u* 'be', *qaq* 'have', *tuq* 'consume', *taaq* 'get', *liuq* 'make.' See Johns (2007, pp. 547–556) for a more comprehensive list.

[21] Barrie and Mathieu (2016) arrive at the same conclusion for incorporated nouns in Onondaga (Iroquian) and Ojibwe (Algonquian), based on similar evidence.

b. **[niri-ja-tsaq]**-siuq-tunga
eat-TRNS.PTCP-potential-look.for-1S.S
'I am looking for something that can be eaten.' (SB; Beach 2011, p. 355)

Second, incorporated nominals in Inuit may serve as antecedents for pronouns once introduced into the discourse (Sadock, 1980, 1985, 1986, 1991; Johns, 2007). Thus, incorporation does not involve compounding. This is illustrated in (18):

(18) **Inuktitut: Incorporated nominals are referential**

a. Johnny **uvirniru**$_i$-liu-laur-mat
Johnny.ABS shirt-make-PST-CAUS.3S.S
'Johnny made a shirt$_i$.'

b. nulia-nga angirra-rami ***(pro$_i$)*** taku-llu-ni-uk
wife-POSS.3S.ABS home-CAUS.4S.S see-CTMP-4S.S-3S.O
'And his wife came home and she saw it$_i$.' (PI; Johns 2007, p. 539)

Finally, the nominal may be as large as a DP: the examples in (19a-b) demonstrate that proper names and pronouns may all undergo incorporation and still retain their referential semantics.[22] Note that there may be variation across Inuit in this respect: Johns (2009, p. 190) suggests that the ability for such DPs to be incorporated may be more productive in Inuktitut than in other varieties such as Kalaallisut (see also fn. 30 of this paper for related discussion of this point).

(19) **Inuktitut: Definite DPs may be incorporated**

a. Qallupilluq **Miali**-tu-niaq-pa?
Qallupilluq.ABS Miali-consume-NR.FUT-INT.3S.S
'Is Qallupilluq [a sea monster] going to eat Miali?' (SB; Johns 2009, p. 191)

b. Guuti **uvanga**-liu-lauq-tuq
God.ABS 1S.PRON-make-PST-3S.S
'God made me.' (AB)

Despite these properties, almost all previous approaches to Inuit noun incorporation have nonetheless treated the nominal within the verb complex as structurally reduced in some way. The assumption that they are syntactically smaller than standalone nominals has been leveraged to capture their lack of number and case morphology, as well as the overall intransitive (antipassive) appearance of incorporation constructions. For instance, van Geenhoven (1998, 2002) analyzes incorporated nominals in Inuit as bare N^0s, while Johns (2007, 2009) argues that they are bare roots. As such accounts cannot capture the phrasal data given in (17), they will not be further considered. There are also phrasal analyses: Bok-Bennema and Groos (1988), Compton and Pittman (2010b), and Branigan and Wharram (2019) all independently conclude that incorporated nouns in Inuit are reduced constituents that lack DP shells,[23] whereas Compton (2013) suggests, given the existence of the patterns exemplified in (19), that they may be DPs after all but still lack an outer layer such as a K(ase)P (cf. Bittner and Hale, 1996b).

In contrast to these proposals, this paper claims that, at least in Inuktitut, incorporated objects *cannot* be plausibly analyzed as structurally reduced in any of the ways outlined above. This is because incorporated nominals in Inuktitut behave syntactically like their standalone counterparts—accessible to the same range

[22]Moreover, as first discussed by Sadock (1980), a closed class of incorporating verbs (most of which encoding motion or position) also permits incorporated nominals to retain possessive morphology. This type of pattern will be revisited in §6.2.

[23]In the specific implementation by Branigan and Wharram (2019), antipassivized and incorporated nouns are generated with a DP layer, but D^0 may then be syntactically deleted via a special mechanism.

of case, agreement, and movement operations. These data also demonstrate that incorporation constructions are *not inherently intransitive (i.e. antipassive)*, and that incorporated objects are true internal arguments of the verb. That these nominals surface within the verb complex, regardless of their syntactic behaviour, is simply due to the affixal nature of the verb.

Finally, putting all of these observations together, this leads to the conclusion that incorporation in Inuktitut takes place in a dedicated *morphological* component of the grammar—i.e. it is not syntactic, but it is also not lexical in nature. This conclusion is broadly consistent with Sadock (1985, 1991), the only other analysis (to my knowledge) of Inuit noun incorporation that does not assume structural deficiency of the incorporated element. Specifically, Sadock's autolexical theory hypothesizes that syntax and morphology operate in tandem and semi-independently, resulting in non-isomorphisms between syntactic and morphological representations. While I agree that the morphological appearance of an incorporation construction is not necessarily reflective of its syntax, the full range of facts to be provided in this paper is most compatible with approaches that take the mapping between syntax and morphology to be *unidirectional* and *transparent*, as assumed in frameworks such as Distributed Morphology (Halle and Marantz, 1993). I return to this point in §6.

4 Ergative incorporation constructions

I start by demonstrating that noun incorporation constructions in Inuktitut are not strictly intransitive (i.e. antipassive); rather, they permit *ergative vs. antipassive* case and agreement alternations. Although case morphology is not directly visible on incorporated objects, these alternations become evident upon considering the overall case and agreement patterns that arise in the clause. I moreover argue that these properties are most straightforwardly derived if the object undergoes *syntactic movement*, despite its incorporated appearance, given syntactic and semantic parallels with standalone ABS objects (Bittner cf. 1994; Bittner and Hale cf. 1996a,b; Woolford cf. 2017; Yuan cf. 2018, 2021, 2022).[24]

4.1 Case and agreement alternations

As noted above, noun incorporation constructions in Inuit have typically been characterized as appearing intransitive or antipassive in nature, as shown in examples such as (11) above. However, Johns (2009) and Beach (2011) have both independently observed that incorporated nominals in Inuktitut may in fact be cross-referenced by object agreement, as illustrated in (20); Johns (2009) additionally notes that they may co-occur with passive morphology and occur in relative clauses, which I will return to later in this paper.[25] These data do not figure into any other literature on Inuit incorporation and it is not clear whether they hold in other varieties beyond Inuktitut.

(20) **Agreement with incorporated objects in Inuktitut**

a. iqaluk-tuq-**para**!
fish-consume-IND.1S.S/3S.O
'I'm eating the fish!' (SB; Johns 2009, p. 195)

b. kuu-kkuuq-**tara**
river-go.through-1S.S/3S.O
'I am going through the river.' (SB; Beach 2011, p. 369)

[24] That being said, as the movement patterns found in Inuktitut are not (to my knowledge) attested in other Inuit varieties, they motivate a deeper examination of morphosyntactic variation across Inuit, an area that remains relatively understudied compared to the synchronic morphosyntax of the language (though see Johns (2006, 2017), Carrier (2017, 2020), and Yuan (2018, 2022) on variation in ergativity across Inuit).

The data shown above are left unanalyzed by both authors, and, since there are no overt subjects in these examples, it is difficult to draw any conclusions about their transitivity status. However, I present new data that demonstrate that these constructions are in fact *ergative*. To start, the occurrence of object agreement with an incorporated object is quite productive, attested with a number of other verbs, such as *liri* 'do' and *taaq* 'get', as shown in (21)-(22).[26] The example in (22b), featuring 3P agreement with the object, additionally demonstrates that the object agreement cannot be analyzed as a default (e.g. 3S) form. Finally, the (b) examples below feature a slight difference in meaning from their non-ergative counterparts above (the translations provided by the speakers who produced the Inuktitut sentences), a point which we will return to in §4.2.

(21) **Inuktitut: Case/agreement alternations with *liri***

a. (*pro*) nunasiuti-liri-juma-junga
(1S.ABS) car-do-want-1S.S
'I want to work on a/the car.' (CH)

b. (*pro*) nunasiuti-liri-juma-**jara**
(1S.ERG) car-do-want-1S.S/3S.O
'That car, I want to work on it.' (CH)

(22) **Inuktitut: Case/agreement alternations with *taaq***

a. (*pro*) ujami-taa-ruma-junga
(1S.ABS) necklace-get-want-1S.S
'I want to get a necklace/necklaces.' (AB)

b. (*pro*) ujami-taa-ri-juma-**jakka**
(1S.ERG) necklace-get-TR-want-1S.S/3P.O
'I want to get these necklaces.' (AB)

Crucially, (23) and (24) demonstrate that the constructions containing object agreement are truly ergative constructions, with the transitive subject bearing ERG *-up* and modifiers of the incorporated object appearing as ABS ((23a) is repeated from (11)). This more broadly reveals that noun incorporation in Inuktitut is not necessarily detransitivizing, but may rather *alternate* between antipassive vs. ergative, just like non-incorporating transitive verbs in the language. Therefore, previous analyses of Inuit likening noun incorporation to antipassivization (e.g. van Geenhoven 1998; Branigan and Wharram 2019) only capture half of the overall picture.

(23) **Inuktitut: Ergative incorporation constructions with *-liuq* 'make'**

a. Ulak **ujami**-liu-qqau-juq piu-ju-**mik**
Ulak.ABS necklace-make-REC.PST-3S.S beautiful-PART-MOD
'Ulak made a beautiful necklace.' (CH)

[25]The pattern of object agreement shown here is distinct from that observed by van Geenhoven (2002) in her work on Kalaallisut. The crucial difference is that, in the data discussed by van Geenhoven, as in (i), the object-referencing morphology indexes the indirect object of a ditransitive (a raised possessor, in van Geenhoven's analysis), not the incorporated nominal itself.

(i) **Kalaallisut: Object agreement with raised possessors**
Piita-p **nerrivit** mingu-iar-sar-**pai**
Piita-ERG table.PL.ABS dirt-remove-HAB-IND.3S.S/3P.O
'Peter usually removes dirt from the tables.' (van Geenhoven, 2002, p. 776)

[26]However, not all incorporating verbs may participate in this type of alternation. For instance, *qaq* 'have' is strictly intransitive. See Nicoll and Wharram (2016) on delineating different subtypes of noun-incorporating verbs.

b. Ula-**up** **ujami**-liu-qqau-**janga** piu-juq
Ulak-ERG necklace-make-REC.PST-3S.S/3S.O beautiful-PART.ABS
'Ulak made this beautiful necklace.' (CH)

(24) **Inuktitut: Ergative incorporation constructions with *-tuq* 'consume'**

a. Taiviti **sivalaar**-tu-ruma-juq
David.ABS cookie-consume-want-3S.S
'David wants to eat the cookie/cookies.' (AB)

b. Taiviti-**up** **sivalaar**-tu-ruma-**jangit**
David-ERG biscuit-consume-want-3S.S/3P.O
'David wants to eat these cookies.' (AB)

The availability of ERG case in these constructions (henceforth, 'ergative incorporation constructions') moreover suggests that noun incorporation does not disrupt the syntactic mechanism responsible for ERG case assignment. For instance, if ERG is dependent, assigned to the subject through case competition with another nominal (as briefly mentioned in §3.1), then the incorporated object must be able to participate in the dependent case algorithm. This is in contrast to the cross-linguistically more common picture of incorporation blocking ERG case assignment to the subject, as exemplified in the Chukchi data below (Levin, 2015; Baker and Bobaljik, 2017).

(25) **Chukchi: No ERG subjects in incorporation contexts**

a. ətləg-**e** **mətqəmət** (kawkaw-ək) kili-nin
father-ERG butter.ABS bread-LOC spread.on-3S>3S
'The father spread the butter (on the bread).'

b. ətləg-**ən** (kawkaw-ək) **mətqə**-rkele-nen
father-ABS bread-LOC butter-spread.on-3S>3S
'The father spread butter (on the bread).' (Polinskaja and Nedjalkov, 1987)

4.2 Against a hyponymous doubling analysis

Before moving on, however, we must dispel an alternative analysis that is compatible with the data presented thus far: it is plausible that the target of object agreement is not the incorporated noun, but rather a *distinct argument*, as furthered by Rosen (1989), Chung and Ladusaw (2004), and Barrie (2015) for incorporation constructions in a variety of languages. According to this view, the incorporated noun is a classifier or modifier of some other standalone nominal, which is the true object of the verb. Evidence for this approach comes from the possibility of *hyponymous doubling*, in which the incorporated noun is understood as less specific (or more generic) than the standalone doubled noun. Examples from Mohawk, Chamorro, and Onandaga are given below in (26).

(26) **Hyponymous doubling of incorporated objects**

a. **sha'teku ni-kuti** **rabahbót** wa-hv-**[i]tsy**-a-hninu-' ki rake-'niha
eight PART-ZPS bullhead FACT-MSS-fish-∅-buy-PUNC this my-father
'My father fish-bought eight bullheads.' (Mohawk; Baker 1996, p. 310)

b. Gäi-**ga'** yu' **kätu**
AGR.have-pet I cat
'I had a pet cat.' (Chamorro; Chung and Ladusaw 2004, p. 76)

c. wa^{ʔ}-k-**naskw**-a-hnino-^{ʔ}-ne^{ʔ} **kwihskwihs**
FACT-1SG.AG-animal-EPEN-buy-PUNC-NE pig
'I bought a pig.' (Onandaga; Barrie 2015, p. 241)

In the same spirit, the true object in the Inuktitut examples above could be a null *pro*, or perhaps a stranded numeral or modifier if one is present (the latter idea is consistent with Compton's (2012) proposal that numerals and adjectival participles are nominal in category[27]).

However, this alternative is challenged by the fact that hyponymous doubling is generally not permitted in incorporation constructions in Inuktitut to begin with, as shown by the ungrammatical nature of (27) below. This example was constructed in parallel with the cross-linguistic data above, with the incorporated object *niqi* 'meat' intended to serve as a classifier doubled by the standalone nominal *tuktuminiq* 'caribou meat'. The commentary provided by the speaker who provided the grammaticality judgment for this sentence moreover indicates that the ill-formedness stems specifically from the doubling of the two nominals.[28]

(27) **Inuktitut: No hyponymous doubling of nominals**
*__tuktu-miniq__ __niqi__-tu-ruma-jara
caribou-former.ABS meat-consume-want-1S.S/3S.O
Intended: 'I want to meat-eat this caribou meat.' (IQ)
Speaker's comment: "Sounds like, 'this caribou meat, I want to eat the meat'."

Furthermore, if the ability to undergo noun incorporation is itself a diagnostic for some element being nominal in category, then the data in (28)-(29) demonstrate that numerals and modifiers are not nouns (contra Compton 2012): incorporating these elements may result in ungrammaticality or else yield a semantically odd interpretation. If they are not nominal, then they cannot be analyzed as the true arguments of the incorporating verbs shown above.[29]

(28) **Inuktitut: Non-suffixal modifiers are not nominal**
a. **nutaar-mik uviniru**-taa-ruma-junga
new-MOD shirt-get-want-1S.S
'I want to get a new shirt.' (PI)
Alternative hypothesized meaning: 'I want to shirt-get a new thing.'

b. *__nutaar__-taa-ruma-junga
new-get-want-1S.S
Intended: 'I want to get a new thing.' (PI)

[27] Specifically, Compton (2012) proposes that they are DPs in apposition with the DPs that they apparently modify.

[28] The impossibility of hyponymous doubling has also been noted by Sadock (1985, 1991) for Kalaallisut. However, this seems to be a point of variation across the language family, as Woodbury (2004) shows that hyponymous doubling is permitted in Cup'ik (a variety of Central Alaskan Yupik):

(i) **Cup'ik: Hyponymous doubling of incorporated objects**
a. **can'giira-neng** **neqe**-ngqerr-ameng
blackfish-MOD.PL fish-have-CONSEQ.3REFL.PL.S
Literally: 'when they have fish, blackfish'

b. *__neq-neng__ __can'giira__-ngqerr-ameng
fish-MOD.PL blackfish-have-CONSEQ.3REFL.PL.S
Literally (intended): 'when they have blackfish, fish' (Woodbury, 2004, p. 163)

[29] In §6.2, I will show that modifiers that are derived from nouns cannot be incorporated in Inuktitut either.

(29) **Inuktitut: Numerals are not nominal**

a. **pingasut sivalaar**-tu-ruma-jakka
three.ABS biscuit-consume-want-1S.S/3P.O
'I want to eat these three cookies.' (AB)
Alternative hypothesized meaning: 'I want to cookie-eat these three.'

b. #**pingasu**-tu-ruma-jakka
three-consume-want-1S.S/3P.O
Intended: 'I want to eat these three (cookies).' (AB)
Speaker's comment: "This sounds like I am eating the number 3." [30]

Together, these facts cast doubt on a hyponymous doubling analysis of Inuktitut incorporation. As such, I conclude that the case and agreement patterns shown above genuinely target the incorporated object. This, in turn, predicts that incorporated nominals should be accessible for other kinds of syntactic operations, such as syntactic movement. Below, I argue that this is borne out.

4.3 Object movement in ergative incorporation constructions

Above, it was shown that ergative incorporation constructions feature ERG case on the transitive subject. As mentioned in §3.1, much previous work on Inuit morphosyntax has proposed that ERG case assignment to the subject is directly related to movement of the object to a structurally high position (Bittner e.g. 1994; Bittner and Hale e.g. 1996a,b; Woolford e.g. 2017; Yuan e.g. 2018, 2022). I now demonstrate that this movement step takes place in ergative incorporation contexts as well, based on heretofore unnoticed syntactic and semantic parallels with independent (non-incorporated) ABS objects.

First, this approach captures a well-known semantic distinction between MOD and ABS objects in Inuit. As mentioned in §3.1, I follow Bittner (1994) in characterizing the relevant effect in terms of scope. In the Kalaallisut examples in (30), MOD objects take narrow scope under negation, while ABS objects take wide scope.[31] This is straightforwardly derived by moving the object to a position structurally higher than negation.

(30) **Kalaallisut: Interpretation of antipassive and ergative objects**

a. suli Juuna **atuakka-mik ataatsi-mik** tigu-si-sima-nngi-laq
still Juuna.ABS book-MOD one-MOD get-AP-PERF-NEG-3S.S
'Juuna hasn't received (even) one book yet.' ($\neg > \exists$)

b. suli Juuna-p **atuagaq ataasiq** tigu-sima-nngi-laa
still Juuna-ERG book.ABS one.ABS get-PERF-NEG-3S.S/3S.O
'There is one particular book Juuna hasn't received yet.' ($\exists > \neg$) (Bittner, 1994, p. 35)

Importantly, this contrast also holds in incorporation constructions in Inuktitut, as already indicated by the translations of the ergative incorporation constructions provided above. This is more clearly shown by (31), which illustrate scopal relations. The incorporated object of the ergative incorporation construction in (31b) is interpreted as taking wide scope relative to negation and the modal *-gunnaq*, on par with the standalone ABS object shown in (30b). This is made evident by the contexts provided by the Inuktitut speaker who produced these constructions, when asked for felicitous scenarios in which each sentence could be uttered.[32]

[30] In contrast to the semantic ill-formedness of (29b), Sadock (1991, p. 94) shows that the incorporation of a numeral is permitted in Kalaallisut. I leave a closer examination of this distinction between Inuktitut and Kalaallisut for future work.

[31] Bittner (1994, p. 138) also reports that a similar contrast can be shown with modals.

[32] The non-ergative construction in (31a) is actually semantically ambiguous in that the incorporated object may also take wide scope over negation (in contrast, (31b) is not semantically ambiguous). This pattern dovetails perfectly with the similarly semanti-

(31) **Inuktitut: Incorporated objects may take narrow or wide scope**

a. *Felicitous context provided by speaker:* "Ulak has a seafood allergy."
Ulak **iqalu**-tu-runna-nngit-tuq
Ulak.ABS fish-consume-MODAL-NEG-3S.S
'Ulak can't/won't eat (any) fish.' ($\diamond/\neg > \exists$) (CH)

b. *Felicitous context provided by speaker:* "Ulak won't eat salmon if there is Arctic char around."
Ula-up **iqalu**-tu-runna-nngit-tanga
Ulak-ERG fish-consume-MODAL-NEG-3S.S/3S.O
'Ulak won't eat a particular fish.' ($\exists > \diamond/\neg$) (CH)

The object movement analysis also accounts for the *syntactically ergative* nature of Inuit, as reflected by the fact that *only* ABS *subjects and* ABS *objects* may be extracted in relative clauses (Creider, 1978; Fortescue, 1984; Johns, 1987, 1992; Bittner and Hale, 1996a; Murasugi, 1997, a.o.).[33] There is much evidence from other syntactically ergative languages (e.g. certain Mayan languages) showing that this kind of restriction can be directly derived from the uniformly structurally high locus of ABS subjects and objects (Tada 1993; Coon et al. 2014, Coon et al. 2021); see Murasugi (1992, 1997) for an Inuit-specific analysis that explicitly builds on this assumption.

Turning again to noun incorporation in Inuktitut, the example in (32), from Johns (2009), illustrates the ability for incorporated objects to be relativized. Here, the relativized element is overtly realized within the embedded clause, due to the incorporating nature of the embedded verb. The presence of object agreement indicates that this is an ergative incorporation construction and, in turn, that the incorporated nominal is syntactically an ABS object.

(32) **Inuktitut: Relativization of incorporated objects**

[$_{RC}$ **uqalimaaga**-siuq-**tara**] pi-taqa-nngit-tuq
book-look.for-1S.S/3S.O PRON-EXIST-NEG-3S.S
'The book that I am looking for isn't there.' (NB; Johns 2009, p. 193)

This is corroborated by the data in (33) below. The sentence in (33a) first reinforces that relativized incorporated objects are essentially ABS objects in ergative incorporation constructions. More importantly, however, the ungrammatical construction in (33b) shows that non-ABS incorporated objects cannot be relativized. In the latter, the would-be relativized incorporated object is (by analysis) MOD, as indicated by the ABS case of the subject and intransitive appearance of the embedded verb.[34]

(33) **Inuktitut: Incorporated relativized object must be ABS**

a. tii-tu-ruma-jara [$_{RC}$ Jaani-**up** **tii**-taa-ri-qqau-**janga**]
tea-consume-want-1S.S/3S.O Jaani-ERG tea-get-TR-REC.PST-3S.S/3S.O
'I want to drink the tea that Jaani got.' (IQ)

cally flexible interpretation of (non-incorporated) antipassive objects in Inuktitut, as discussed by Johns (1999, 2006, 2017), Beach (2011), Carrier (2017), Yuan (2018, 2021, 2022), and many others. As shown by these authors, this property is connected to a more general point of variation in the relative distributions of antipassive and ergative constructions in Eastern Canadian Inuit. It is therefore unsurprising that non-ergative and ergative incorporation constructions display parallel behaviour.

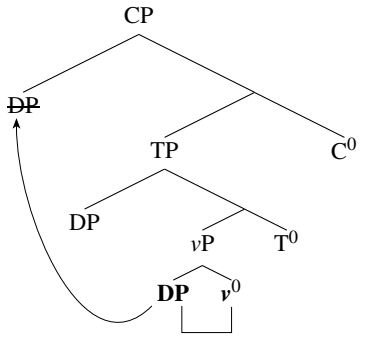
[33] In Inuit, this restriction is not found in wh-questions or other types of constructions that could be analyzed as involving Ā-movement; it is only seen in relativization.

[34] We will return to relativization in incorporation contexts in §5.2. I also revisit the occurrence of the nominals incorporated into the matrix verb—the pro-form *pi* in (32) and a copy of the relativized noun in (33).

b. *tii-tu-ruma-jara [$_{RC}$ **Jaani** **tii**-taa-qqau-**juq**]
tea-consume-want-1S.S/3S.O Jaani.ABS tea-get-REC.PST-3S.S
Intended: 'I want to drink the tea that Jaani got.' (IQ)

In sum, the fact that objects of ergative incorporation constructions are interpreted with wide scope and may be relativized, on par with independent ABS subjects and objects, suggests that they are structurally high, despite surface appearances. This may be most straightforwardly accommodated if the incorporated objects undergo syntactic movement, following movement-based analyses of ergative constructions in non-incorporating contexts (Bittner 1994; Bittner and Hale 1996b; Woolford 2017; Yuan 2018, 2021, 2022).[35] That they are overtly realized within the verb complex is, I propose, simply a matter of lower copy spell-out, taking place to satisfy the Stray Affix Filter. This is illustrated in (34), an update of (10). Because the lower copy of the DP serves as the host for the bound morphology in v^0 (affixation is again schematized with square bracketing), it is that copy that is pronounced; the higher copy is then deleted in accordance with general principles of chain reduction (e.g. Nunes, 1995; Landau, 2006). Note that, following Yuan (2021, 2022), the landing site of object movement is represented below as Spec-CP, though this is not central to the analysis.

(34) **Derivation of ergative incorporation construction**



If incorporated objects are structurally identical to standalone ones, then we must conclude that such nominals are not structurally reduced, contrary to most prior accounts of Inuit incorporation. Rather, whether a nominal is incorporated or not depends entirely on the morphological requirements of verb—i.e. whether it is affixal or non-affixal—as also independently proposed by Sadock (1985, 1991). In the next section, I provide two additional incorporation patterns that further solidify these conclusions.

5 Further interactions with syntactic movement

In addition to the movement step hypothesized to underlie ergative constructions, this section shows that incorporated nominals in Inuktitut may undergo *passivization* (§5.1) and *relativization* (§5.2). That these involve genuine cases of A-movement and Ā-movement, respectively, can be seen through standard diagnostics for these types of movement. The range of relativization patterns seen in incorporating contexts in Inuktitut additionally reveals multiple strategies of movement chain reduction operative in the language.

[35] It is worth mentioning that, given the data shown up until this point, non-movement analyses may also capture the interpretation of (incorporated and non-incorporated) ABS objects. For instance, Wharram (2003) proposes that (standalone) ABS objects in Inuit are in situ but are interpreted via choice functions, with the choice function variable housed in D^0 and bound by a structurally high operator (cf. Matthewson, 1999), thus capturing their wide scope interpretation. Similarly, Deal (2016b) proposes that the Ā-extraction restriction in syntactically ergative languages can be captured without necessarily positing that the ABS argument is structurally high, if Ā-probes are simply case discriminating in the sense of Bobaljik (2008) and Preminger (2011, 2014). However, these analyses would not be able to capture the incorporation data to be presented in §5, which unambiguously involve phrasal (A- and Ā-) movement with clear(er) syntactic consequences.

5.1 A-movement of incorporated nominals

In addition to the ability for incorporated nominals to be be indexed by object ϕ-agreement, Johns (2009) observes that incorporation constructions in Inuktitut may also contain passive morphology, as illustrated in (35). However, Johns does not provide an analysis of these data, and they are not (to my knowledge) discussed in other literature on Inuit incorporation.

(35) **Inuktitut: Passivization of incorporated nouns in Inuktitut**

a. [tuttu-miniq]-tuq-**ta-u**-juq
caribou-former-consume-PASS.PART-be-3S.S
'The caribou meat is being eaten.' (NB; Johns 2009, p. 195)

b. ujami-liuq-**ta-u**-juq
necklace-make-PASS.PART-be-3S.S
'The necklace is being made.' (SB; Johns 2009, p. 195)

Crucially, a closer examination reveals that these constructions involve *genuine A-movement* of the internal argument to subject position, coupled with spell-out of the lower movement copy. This is thus an instance of covert A-movement (e.g. Bobaljik, 2002; Polinsky and Potsdam, 2013; Deal, 2013, 2017; Kishimoto, 2013).

To demonstrate this, I first establish some diagnostics of movement to subject position (i.e. Spec-TP).[36] The active-passive pair of examples in (36a-b) show that, in addition to surfacing with ABS case and being cross-referenced by subject agreement, a passivized subject may serve as an antecedent for a lower anaphor contained within the oblique agent (the anaphor in question is encoded by reflexive possessive morphology *-mi*). Thus, passivization in Inuktitut may create new c-command relations between DPs, just as we would expect given the general profile of A-movement.

(36) **Inuktitut: Passives involve A-movement to subject position**

a. angajuqa-tua-mma sua-qqau-jaanga
parent-only-POSS.1S/3P.ERG scold-REC.PST-3S.S/1S.O
'Only my parents scolded me…' (IG)

b. **asi-kka** suak-ta-u-qqau-nngit-**tuit** angajuqa-**mi**-nut
other-POSS.1S/3P.ABS scold-PASS.PART-be-REC.PST-NEG-3P.S parent-POSS.REFL-ALLAT
'The others$_i$ were not scolded by their$_i$ parents.' (IG)

Crucially, these properties of passivization are also displayed by nominals incorporated into passivized verbs. The examples in (37b) and (38b) show that passivized incorporated nominals may be indexed by subject agreement, as indicated by the presence of 3P ϕ-agreement when the noun is understood as plural. The examples in (38) further demonstrate that, as expected, stranded modifiers and numerals associated with passivized incorporated nominals are ABS.

(37) **Inuktitut: Passivized incorporated nominals with subject agreement**

a. Ulak **ujami**-liu-qqau-juq
Ulak.ABS necklace-make-REC.PST-3S.S
'Ulak made a necklace/necklaces.' (CH)

b. **ujami**-liuq-ta-u-**jut**
necklace-make-PASS.PART-be-3P.S
'The necklaces are being made.' (CH)

[36] For independent evidence for a dedicated subject ([EPP]) position in Inuktitut, see Yuan (2018).

(38) **Inuktitut: ABS stranded modifiers of passivized incorporated nominals**

a. **una** aasiva-tuq-ta-u-qqau-juq
DEM.ABS spider-eat-PASS.PART-be-REC.PST-3S.S
'This spider was being eaten (e.g. if you can see remnants of it).' (IQ)

b. **pingasut** ujami-liuq-ta-u-jut
three.ABS necklace-make-PASS.PART-be-3P.S
'Three necklaces are being made.' (CH)

Finally, and most strikingly, in (39) we see that passivization of an incorporated noun may also create a new antecedent for binding of a lower anaphor within the oblique agent. This provides direct evidence that the incorporated nominal has indeed undergone A-movement to a higher position, even though the movement step is not visible. This binding pattern is additionally incompatible with analyses of passive constructions that do not involve movement: for instance, it shows that the passivized incorporation construction in (39b) cannot be treated as an impersonal passive.[37] See also Potsdam and Polinsky (2012) and Polinsky and Potsdam (2013) for similar observations for covert A-movement (raising-to-subject) constructions in Adyghe.

(39) **Inuktitut: Passivized incorporated nominals may bind lower anaphor**

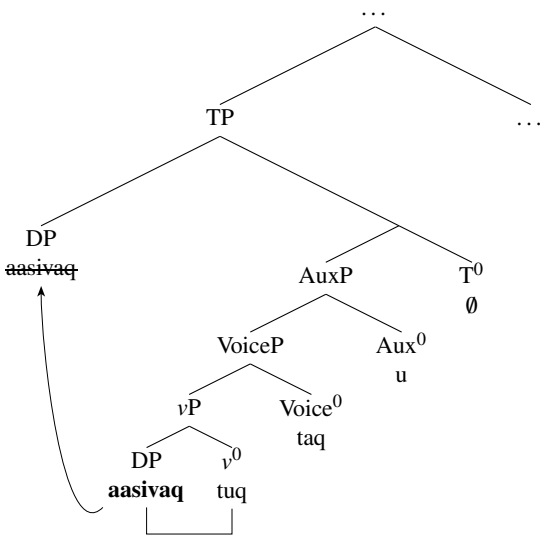
a. uumajuq **aasivar**-tu-qqau-juq
animal.ABS spider-consume-REC.PST-3S.S
'The animal ate a spider.' (IQ)

b. **aasivar**-tuq-ta-u-juq nuliaqta-**mi**-nut
spider-consume-PASS.PART-be-3S.S mate-POSS.REFL-ALLAT
'The spider$_i$ is being eaten by its$_i$ mate.' (AB)

The derivation of a passivized incorporation construction is given in (40). I assume that the internal argument is base-generated as the complement of the affixal verb (v^0), and that the passive morphology is located in Voice^0. I moreover take the landing site of passivization to be Spec-TP. As with the derivation in (34) above, the lower movement copy is spelled-out, while the higher copy is presumably deleted in accordance with principles of economy.

[37] An important caveat here is that the binding pattern in (39b) was accepted by some—but not all—speakers consulted, even ones that otherwise do permit passivized incorporated verbs, as in (37b); however, two of the speakers who did not accept (39b) found the topic of the sentence to be distasteful, rather than deeming the construction grammatically ill-formed. If the pattern in (39b) is genuinely ungrammatical for a subset of speakers but accepted by others, this may potentially reflect two distinct passive constructions (one with syntactic movement and one without). I leave a deeper examination of this issue for future research.

(40) **A-movement in Inuktitut noun incorporation**



Finally, it has been noted by Polinsky and Potsdam (2013) that, in contrast to overt A-movement, covert A-movement constructions are cross-linguistically rare and generally difficult to ascertain. An additional contribution of the present discussion of Inuktitut noun incorporation, then, is that it offers a novel morphosyntactic diagnostic of covert A-movement based on a cross-linguistically generalizable interaction—and is thus potentially replicable in other morphologically complex languages. I will return to this last point at the end of the paper.

5.2 Ā-movement of incorporated nominals

In §4.2, we encountered data suggesting that incorporated nominals may be relativized, and that such elements are obligatorily ABS due to an ergative extraction restriction. The examples from (33a) and (32) above are provided again in (41):

(41) **Inuktitut: Relativization of incorporated arguments**

a. **tii**-tu-ruma-jara [$_{RC}$ Jaani-up **tii**-taa-ri-qqau-janga]
tea-consume-want-1S.S/3S.O Jaani-ERG tea-get-TR-REC.PST-3S.S/3S.O
'I want to drink the tea that Jaani got.' (IQ)

b. [$_{RC}$ **uqalimaaga**-siuq-tara] **pi**-taqa-nngit-tuq
book-look.for-1S.S/3S.O PRON-EXIST-NEG-3S.S
'The book that I am looking for isn't there.' (NB; Johns 2009, p. 193)

In these particular examples, the relativized argument is morphologically realized within *both* the embedded clause and matrix clause, due to the incorporating nature of both verbs. In (41a), the nominal *tii* 'tea' is incorporated into both the matrix and embedded verbs, resulting in the appearance of doubling. In (41b), the full nominal *uqalimaagaq* 'book' is incorporated into the embedded verb, while the incorporated nominal in the matrix clause is the morpheme *pi*. I now propose that incorporation constructions of this sort truly involve Ā-movement to the clausal periphery (i.e. Spec-CP) and that they, too, result from adherence to the Stray Affix Filter. Once again, I demonstrate that relativized incorporated nouns in Inuktitut display syntactic and semantic parallels with standalone nominals—both in Inuktitut and cross-linguistically.

The examples below first establish, as a baseline, that non-incorporated relativized elements in Inuit may surface in a variety of positions. In (42a), the relativized argument is understood as ABS within the relative

clause (RC) but is case-marked MOD according to its matrix clause position, indicating an externally-headed configuration for the RC.[38] In contrast, in (42b) the relativized argument is clearly realized within the RC, given its placement relative to the RC-internal adverb *sivataabiulauqtumi* 'last week'.

(42) **Inuktitut: Variable surface positions for relativized argument**

a. kapi-si-juq **nanur-mit** [$_{RC}$ __ Jaani-up taku-janga]-nit
stab-AP-3S.S p.bear-MOD (*ec*.ABS) Jaani-ERG see-PART.3S.S/3S.O-MOD
'She stabbed the polar bear that Jaani saw.' (SB; Yuan 2013)

b. [$_{RC}$ Jaani-up taku-lauq-tanga **anguti** sivataabi-u-lauq-tu-mi]
Jaani-ERG see-PST-PART.3S.S/3S.O man.ABS week-be-PST-PART-MOD
tabba-u-liq-tuq
there-be-PROG-3S.S
'The man that Jaani saw last week is right there.' (PG)

It is not clear exactly what factors govern the variation illustrated above in (42). However, what is important for our purposes is that the *loci of incorporation* are a determinant for the spell-out position(s) of a relativized argument. Consider the pair of examples in (43a-b) below. In (43a), the embedded verb *-taaq* 'get' is affixal, while the matrix verb *imiq* 'drink' is not; in this construction, the relativized argument is realized within the RC, incorporated into the embedded verb. In contrast, (43b) features an incorporating matrix verb and non-incorporating embedded verb; here, the relativized argument is overtly realized external to the RC.

(43) **Inuktitut: RC-internal and RC-external patterns of copy realization**

a. imi-ruma-junga [$_{RC}$ ibbit **tii**-taa-ri-lauq-tanga]-nit
drink-want-1S.S 2S.ERG tea-get-TR-PST-3S.S/3S.O-MOD
'I want to drink the tea that you got.'

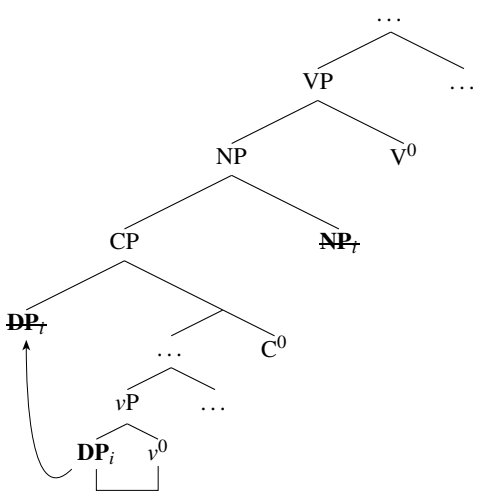
b. **tii**-tu-ruma-junga [$_{RC}$ ibbit niuvi-lauq-tanga]-nit
tea-consume-want-1S.S 2S.ERG buy-PST-3S.S/3S.O-MOD
'I want to drink the tea that you bought.' (IQ)

Within the analysis developed thus far, these examples simply reflect two different ways of spelling out a single movement chain. As illustrated below in (44), (43a) involves the pronunciation of the lowest movement copy, within the RC, while, in (43b), it is the RC-external head that is pronounced.

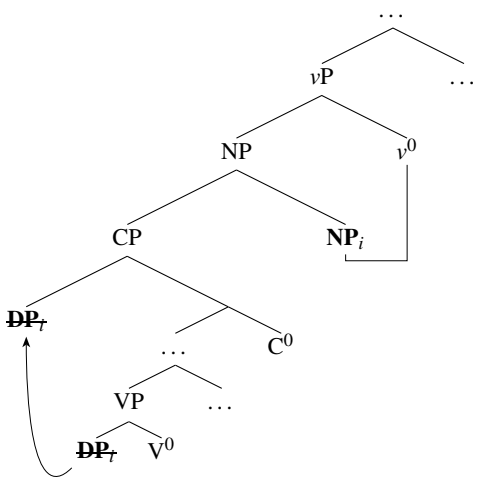
[38] Bittner and Hale (1996a, p. 546, 583) analyze constructions of this sort as internally-headed due to binding facts, which would suggest that the relativized arguments are generated inside of the relative clause prior to moving to the clause edge. The analysis presented here supports this idea: we will see that incorporation may dictate whether the relativized argument is phonologically realized inside or outside of the relative clause. In other words, I assume that all relative clauses in Inuit share a common syntactic derivation, with variation in the surface position of the relativized argument being determined postsyntactically. As I discuss further below, this is in contrast to cross-linguistic work on internally-headed relative clauses that take them to be syntactically and semantically distinct from their externally-headed counterparts (Basilico, 1996; Shimoyama, 1999, a.o.).

(44) **Copy realization options in RC**

a.



b.



Indeed, the overall profile of noun incorporation in relativization constructions in Inuktitut allows us to adjudicate between different analyses of relative clause formation, as already foreshadowed by the trees in (44). The fact that the relativized argument may be realized within the relative clause entails that the element undergoing Ā-movement is a full nominal. The structures in (44) reflect a *matching* analysis of relativization, consisting of a base-generated RC-external nominal head co-indexed with a RC-internal Ā-extracted nominal (Hulsey and Sauerland, 2006; Deal, 2016a); however, a purely *raising* analysis, as posited by Bhatt (2002), is also compatible with the Inuktitut facts.[39] However, approaches in which the Ā-extracted element is null, such as the null operator analysis of Chomsky (1977), are incompatible with the Inuktitut facts.

[39]Indeed, such approaches to relativization are supported by the possibility of variable spell-out patterns within relative clauses cross-linguistically. For instance, Deal (2016a) shows that relative pronouns in Nez Perce may be realized in both the embedded Spec-TP and Spec-CP positions, as in (i). In Nez Perce, the relative pronoun co-occurs with a clause-external head.

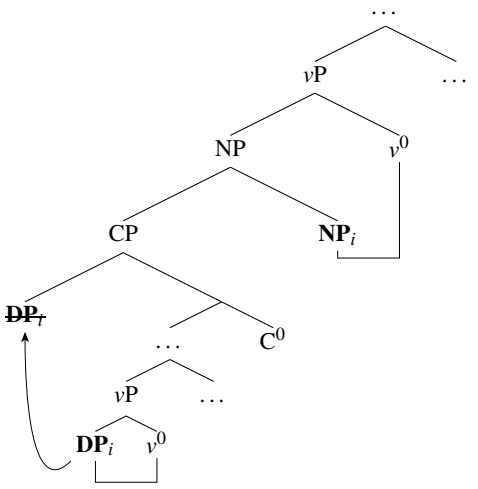
(i) **Nez Perce: Variable spell-out positions of relativized arguments**

a. picpic [**yox̂** ke kine __ hi-pinmix-saqa]
cat.NOM RP.NOM C here AGR-sleep-TAM
'the cat that was sleeping here'

b. picpic [ke **yox̂** kine __ hi-pinmix-saqa]
cat.NOM C RP.NOM here AGR-sleep-TAM

Our analysis of relativization may be extended to the data presented in (41) above. I suggest that these examples instantiate *multiple copy spell-out*, triggered because both matrix and embedded verbs are incorporating. This can be represented as in (45):

(45) **Multiple copy spell-out in relativization construction**



Moreover, to capture the slightly different patterns in (41a) and (41b), I propose that Inuktitut permits *two distinct multiple spell-out possibilities*, although further data are needed to fully assess this idea. In particular, while (41a) shows the overt movement copies being fully spelled-out (with this option being represented in (45)), I suggest that the incorporated element *pi* in (41b) is a *partially-realized movement copy*, consistent with previous approaches analyzing this element as an expletive pronoun or generalized proform (Johns, 2007; Compton and Pittman, 2010a). This is in line with much prior work arguing that members of a movement chain may sometimes be realized as a pronoun (or some other structurally deficient element), rather than deleted altogether (e.g. Kandybowicz, 2008; van Urk, 2018; Baier, 2018; Mendes and Ranero, 2021).[40] In the Senegambian language Seereer, for instance, successive-cyclic Ā-movement of a full DP leaves pronominal copies in the periphery of every clause, as illustrated in (46). Similarly, certain instances of pronominal resumption have been analyzed as a partial movement copy rather than a genuine resumptive pronoun, as in Scott's (2021) treatment of the Swahili data provided earlier in (6) (see also Koopman (1984), Sichel (2014), and Davis et al. (2020) for further cross-linguistic discussion).

(46) **Seereer: Intermediate movement copies resemble pronouns**

xar$_i$ foog-o [$_{CP}$ yee **ten**$_i$ Yande a lay-u [$_{CP}$ yee **ten**$_i$ Jegaan a ga'-u __$_i$
what think-2SG.SBJ.EXT C 3SG Yande 3SBJ say-EXT C 3SG Jegaan 3SBJ see-EXT
]]

'What do you think Yande said Jegaan saw?' (Baier, 2018, p. 2)

Applying this idea to the pattern in (41b) in Inuktitut raises a number of new questions: for instance, (i) when (and why) are incorporated movement copies spelled out as full nominals vs. pronouns, and (ii) and

'the cat that was sleeping here' (Deal, 2016a, p. 428)

[40]Following van Urk's (2018) implementation of such patterns, the realization of a DP movement copy as a pronoun is due to the deletion of a subconstituent of the DP, assuming that pronouns are D^{0}s with elided NP complements (Elbourne, 2005). This is schematized in the (simplified) structure in (i):

(i) **Pronominal copies as partial deletion**

is the proposed partial copy spell-out operation available in both matrix and relative clauses alike? I leave these questions for future research.

Before concluding this section, I introduce—and ultimately argue against—an alternative way of accounting for the Inuktitut data shown in this section. Specifically, it has been observed that, in many languages with both head-external relative clauses (EHRCs) and head-internal relative clauses (IHRCs), the RCs have distinct interpretations (Basilico, 1996; Shimoyama, 1999; Hastings, 2004; Bogal-Allbritten and Moulton, 2017); this semantic difference is most evident when the relativized argument is modified by a quantifier. In (47) below, from Japanese, the position of the quantifier (i.e. whether it surfaces within or outside of the relative clause) determines the interpretation of the sentence, with the clause-internal quantifier in (47b) only able to take clause-internal scope. This type of pattern has led to proposals that EHRCs and IHRCs are structurally distinct from each other: while EHRCs are derived Ā-movement, IHRCs are not.

(47) **Japanese: Different interpretations of EHRCs/IHRCs with 'most'**

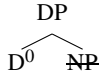
a. Taro-wa [[Yoko-ga reezooko-ni irete-oita] **kukkii-o hotondo**] paatii-ni motte itta
Taro-TOP Yoko-NOM refrigerator-NI put-AUX cookie-ACC most party-LOC brought
'Taro brought most cookies that Yoko had put in the refrigerator to the party.'

b. Taro-wa [[Yoko-ga reezooko-ni **kukkii-o hotondo** irete-oita]-no]-o paatii-ni
Taro-TOP Yoko-NOM refrigerator-NI cookie-ACC most put-AUX-NM-ACC party-LOC
motte itta
brought
'Yoko put most cookies in the refrigerator and Taro brought them to the party.' (Shimoyama, 1999, p. 149-150)

Conversely, in Inuktitut, IHRCs that arise due to the presence of an embedded affixal (incorporating) verb *do not* display the interpretive effect shown in (47b) above. As demonstrated in (48), quantifiers associated with incorporated nominals in Inuktitut are interpreted as though they take relative clause-external scope. The larger context for the relativization example in (48b) is first provided in (48a), in order to exclude the clause-internal interpretation of the quantifier. Crucially, the fact that (48b) is felicitous suggests that, despite its surface position within the relative clause, the relativized nominal is being interpreted in a structurally higher position, outside of the relative clause.

(48) **Inuktitut: "IHRCs" with numeral 'only one' take head-external scope**

a. Kiuru **tallima-nik ujami**-liu-laur-mat takkua tamarmik
Carol.ABS five-PL.MOD necklace-make-PST-CAUS.3S.S DEM.PL.ABS all.ABS
niuviaksa-ri-laur-tangit
for.sale-TR-PST-3S.S/3P.O
'Having made five necklaces, Carol had them all for sale…'



More precisely, van Urk (2018) assumes a more articulated DP-internal structure (KP > NumP > *n*P > $\sqrt{}$), wherein number features are located in Num^0 and person features are located in *n*P. Languages may vary in the exact size of the deleted portion, yielding different ϕ-specifications of the remaining pronominal copies.

b. ...kisiani Taiviti-up niuvi-lauq-tanga [$_{RC}$ Kiuru-up **atausi-tuaq**
...but David-ERG buy-PST-3S.S/3S.O Carol-ERG one-only.ABS
ujami-liu-lauq-tanga]
necklace-make-PST-PART.3S.S/3S.O
'...but David bought only one necklace that Carol made.' (AB)
Not: 'Carol made {only one necklace}$_i$. David bought it$_i$.'

This follows straighforwardly from the analysis developed in this section, that the IHRCs in Inuktitut that result from incorporation involve Ā-movement followed by spell-out of the lowest movement copy, as in (44a) above. We do not predict any semantic differences between the EHRCs and IHRCs if the surface position of the relativized argument is solely determined through morphological factors. Interestingly, although the present treatment of Inuktitut departs from the line of analysis furthered by Basilico (1996) and others, it is in the spirit of even earlier approaches to IHRCs that take the relative head to undergo covert Ā-movement via LF-movement (e.g. Broadwell, 1985; Cole, 1987; Cole and Hermon, 1994). As pointed out by both Basilico (1996) and Shimoyama (1999), there may be cross-linguistic variation in how IHRCs are derived: therefore, we may assume that the contrast between Japanese and Inuktitut simply reflects two distinct strategies in forming relative clause constructions.

5.3 Interim summary

This paper has presented several pieces of evidence that incorporated nominals in Inuktitut may undergo phrasal movement. This movement analysis accounts for antipassive vs. ergative case and agreement alternations, and is moreover supported by the syntactic and semantic profile of incorporated nominals in passives and relative clauses. That these nominals are ultimately realized within the verb complex, even after undergoing syntactic movement, is due to the Stray Affix Filter. This, in turn, is imposed by the morphological requirements of the incorporating (affixal) verbs. Noun incorporation in Inuktitut therefore offers novel evidence for the idea that conditions on complex word-formation may interact with the resolution of movement chains.

6 A postsyntactic analysis of noun incorporation (in Inuktitut)

I have been assuming throughout this paper that noun incorporation in Inuktitut takes place in the postsyntactic component of the grammar. In this section, I provide a concrete implementation of this idea. Building on some key insights from Sadock (1985, 1991) but also diverging from his autolexical theory in crucial ways, I develop an account based on Morphological Merger between structurally adjacent heads (e.g. Bobaljik, 2002; Harizanov and Gribanova, 2019). I also demonstrate that the proposed account captures various additional properties of noun incorporation in Inuktitut.

6.1 Insights from Sadock (1985, 1991)

As mentioned in §3.2, most previous approaches to Inuit noun incorporation treat the incorporated element as structurally reduced relative to their non-incorporated counterparts (Bok-Bennema and Groos, 1988; van Geenhoven, 1998, 2002; Johns, 2007, 2009; Compton and Pittman, 2010b; Compton, 2013; Branigan and Wharram, 2019). However, we have seen throughout this paper that the full range of patterns found in Inuktitut are not compatible with such approaches, since they incorrectly assume that incorporated nouns are inaccessible to syntactic operations such as case assignment, ϕ-agreement, and movement.[41]

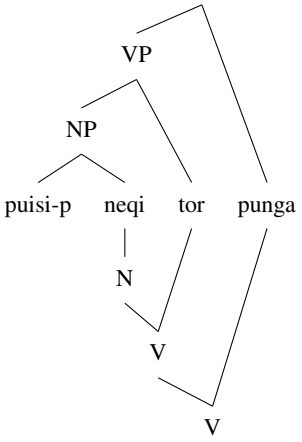
[41] In addition, for certain accounts such as Compton and Pittman (2010b), the idea that incorporated objects are structurally reduced follows from a broader theory of complex word-formation. Specifically, Compton and Pittman (2010b) argue that complex

The only existing proposal I am aware of that divests from this assumption is the autolexical theory of Sadock (1985, 1991), which posits that the grammar contains distinct modules of syntax and morphology (and semantics), operating autonomously and in parallel. This is intended to account for proposed mismatches between syntactic structures and morphological forms. Based on an investigation of Kalaallisut, Sadock argues that Inuit noun incorporation represents one such mismatch, as schematized in the dual structures in (49b) below: although the nominal *neqi* 'meat' forms a syntactic constituent with its possessor, the morphological module causes it to be realized within the verb complex (thus stranding the possessor). This theory therefore permits incorporated objects in Kalaallisut to display syntactic properties that are otherwise found in standalone objects in the language, such as their discourse-referentiality (see (18) in §3.2 and related discussion), by simply positing that the surface morphological string is created autonomously from the syntax.

(49) **Dual structures in Autolexical Theory (Sadock, 1991, p. x of preface)**

a. puisi-p neqi-tor-punga
seal-GEN meat-consume-INDIC.1S.S
'I ate seal meat.' (Kalaallisut)

b. *(syntax)*



(morphology)

The postsyntactic analysis to be developed in this paper is in the same spirit as Sadock's theory; in particular, it retains the idea that incorporation in Inuktitut arises from a morphological operation, whose application does not consider the syntactic behaviour of the object in question. However, the present account diverges from Sadock's theory in a fundamental way: it assumes a *unidirectional and transparent* mapping from the syntax to the morphological (i.e. postsyntactic) component (cf. Halle and Marantz, 1993). Crucially, it predicts that interactions between syntax and morphology should be systematically constrained, in that the former necessarily precedes the latter (and not vice versa). Furthermore, it allows us to unify the Inuktitut facts with the various other morphological effects on movement chain resolution and ellipsis discussed throughout §2, which need not pertain to affixation in particular; these are cross-linguistic connections that would otherwise be lost.

word-formation in Inuit results from a syntax-PF mapping rule that realizes syntactic phases (DPs, CPs) as single phonological words and subphasal material as bound morphemes. Noun incorporation arises because such nouns are NPs rather than DPs (i.e. non-phasal), meaning they must surface within a complex word corresponding to the larger CP-phase. This theory is, however, undermined by the findings of this paper that incorporated nouns are syntactically identical to non-incorporated nouns.

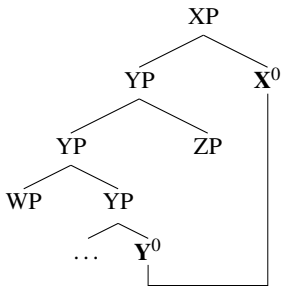
6.2 Incorporation via Merger

Under a postsyntactic theory of complex word-formation, affixation may be derived by a process of *Morphological Merger*, in which two structurally adjacent heads are rebracketed to form a complex head (cf. Marantz, 1988). The elements within this newly created complex head are realized as morphologically bound. The formulation given in (50) comes from Bobaljik (2017):[42]

(50) **Morphological Merger (definition from Bobaljik 2017)**
A syntactic complementation relation: [X^0 YP]
may be realized in the morphology as an affixation relation:
X affixed to Y, the head of YP: [[Y] X] or [[X [Y]]

Though (50) represents a configuration in which X^0 lowers to Y^0, the question of whether Merger proceeds upward or downward does not matter for our purposes. The only crucial assumption I make is that specifiers and adjuncts that may structurally intervene between two otherwise adjacent heads are *invisible to*—i.e. *ignored by*—the Merger operation; below, I will demonstrate that, in Inuktitut, adjuncts and specifiers immediately c-commanded by affixal verbs are never able to incorporate. Thus, in the schematization in (51), neither ZP nor WP (adjunct to YP and specifier of Y^0, respectively) would block Merger between X^0 and Y^0.[43]

(51) **Merger between ignores intervening specifiers and adjuncts**



The idea that Merger ignores intervening adjuncts is assumed by Embick and Noyer (2001), Bobaljik (1995, 2002), and Harizanov and Gribanova (2019); for these authors, this indicates that Merger is sensitive to structure and does not operate over linear strings.[44] I assume that this is the case in Inuktitut as well. Indeed, as already shown in (28)-(29), adjectival and numeral modifiers are not able to undergo incorporation in lieu of the modified nominal itself. The examples in (52) additionally demonstrate that no adjuncts of any category—even nominal ones—can be incorporated in Inuktitut. Although nominals such as *guulu* 'gold' can in principle be incorporated, as in (52a), they can no longer do so when functioning as adjuncts, (52b-c).[45]

[42] Many variants of this basic operation have been proposed; see, for instance, Bobaljik (1995, 2002), Embick and Noyer (2001), Matushansky (2006), Harley (2013), Harizanov and Gribanova (2019), and others. In some of this work, distinct names are given to the specific variants. Below, I use "Merger" as a neutral label, abstracting away from these differences.

[43] This structure is right-headed to be consistent with Inuktitut.

[44] Indeed, on this basis, Embick and Noyer (2001) differentiate between what they call, "Lowering Merger" and "Local Dislocation Merger", whereby only the former is sensitive to syntactic structure and is able to ignore adjuncts.

[45] In apparent contrast to the pattern shown in (52), Johns (2007, p. 560, fn. 45) provides the data in (i), claiming that (ib) involves incorporation of an adjective. However, this is not an obvious conclusion, given that there is no modified nominal present. Rather, I believe that *savirajaq* 'metal' *is* the nominal object in this construction. This is supported by the fact that its modification by *-tuinnaq* 'only' does not yield the adverbial meaning, 'noun only of metal'.

(i) **Inuktitut: Apparent incorporation of adjectives**

(52) **Inuktitut: Adjuncts cannot be incorporated**

a. **guulu**-taa-ruma-junga
gold-get-want-1S.S
'I want to get some gold.'

b. **guulu-mik** ujami-taa-ruma-junga
gold-MOD necklace-get-want-1S.S
'I want to get a gold necklace.'

c. *ujaming-mik **guulu**-taa-ruma-junga
necklace-MOD gold-get-want-1S.S
Intended: 'I want to get a gold necklace.' (IQ)

That specifiers are also invisible to Merger is slightly more controversial. Bobaljik (1995, 2002), for instance, differentiates between specifiers and adjuncts to account for the observation that English subjects (in Spec-TP) disrupt Merger between T^0's features (in C^0) and the lexical verb, triggering *do*-support, while adverbs adjoined to TP do not:

(53) **English: Specifiers vs. adjuncts in blocking Merger**

a. When **does** Sam **eat** ham?
b. Sam never **eats** anything. (Bobaljik, 2002, pp. 211-212)

In contrast to the English pattern, however, specifiers in Inuktitut do not ever incorporate. This is striking in cases in which they can be shown to be both c-commanded by an affixal verb and structurally closer to it than the nominal that does ultimately incorporate. This configuration arises in double object constructions (DOCs) in Inuktitut, as discussed by Carrier (2016). First, Carrier demonstrates that DOCs pass a number of diagnostics in favour of a *low applicative* structure (Pylkkänen, 2002, 2008), as in (54): here, notice that the applied argument (in Spec-ApplP) is structurally more local to V^0 than the direct object.[46]

---

a. **qiju-mik** pauti-qaq-paa
wood-MOD paddle-have-INT.3S.S
'Are there any wooden paddles?'

b. **saviraja-tuinna**-qaq-tuq
metal-only-have-3S.S
'There's only a metal one.' (SB; Johns 2007, p. 560)

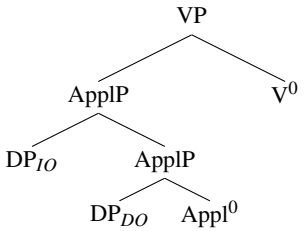
On parity with (52c), we would expect the incorporation pattern in (ib) to be impossible if there is an overt noun, as schematized in the constructed example in (ii). I leave verification of this pattern for future research.

(ii) **Inuktitut (constructed): No incorporated adjectives modifying overt nouns?**

*pauti-mik **saviraja**-qaq-tuq
paddle-MOD metal-have-3S.S
'There's a metal paddle.' (constructed)

[46]Specifically, Carrier (2016) demonstrates that, although the applied argument c-commands the direct object (based on binding patterns), both arguments must be c-commanded by the verb. Unlike high applicatives in Inuktitut, DOCs in the language cannot be formed with unergative and stative verbs (Pylkkänen, 2008), and also accord with Oehrle's generalization (Oehrle, 1976; Harley, 2002), in that the indirect object cannot encode a location.

(54) **Low applicative structure (based on Pylkkänen 2008)**



Crucially, Carrier (2016) also observes that, when the verb is affixal, only the direct object of a DOC is able to incorporate, (55a); attempting to incorporate the applied argument yields ungrammaticality, (55b). Assuming that the structure in (54) extends to noun incorporation constructions, this would indicate that the applied argument is skipped by the Merger operation(s) that the verb and direct object are subject to.

(55) **Inuktitut: Applied arguments in low applicatives do not incorporate**

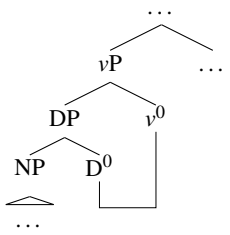
a. Miali-up **Diane** ujami-liuq-taa
Miali-ERG Diane.ABS necklace-make-3S.S/3S.O
'Miali made Diane a necklace.'

b. *Miali-up ujami-mit **Diane**-liuq-taa
Miali-ERG necklace-MOD Diane-make-3S.S/3S.O
Intended: 'Miali made Diane a necklace.' (SB; Carrier 2016, p. 3)

There are multiple possible ways of accommodating this pattern. For instance, Bobaljik (2002) posits that *head-directionality* plays a role in whether specifiers are (in)visible to the Merger operation. Assuming that all specifiers are left-pointing, Bobaljik argues that a specifier may intervene between the Merger of two left heads but not between the Merger of two right heads. This is broadly compatible with Inuktitut, which is uniformly right-headed. Alternatively, Harizanov and Gribanova (2019) (see fn. 32 on p. 489 and §4.2) directly build the invisibility of specifiers into their theory of complex word-formation by defining the relevant operation (termed "Amalgamation" in their paper) to apply between structurally adjacent heads. Although I do not adjudicate between these approaches here, the above discussion serves to provide a general account of how both adjuncts and specifiers fail to incorporate in Inuktitut.

The overall result, then, is that complex word-formation in Inuktitut proceeds via iterative instances of Merger between structurally adjacent heads. Noun incorporation, in turn, refers specifically to Merger between v^0 and the head of its complement when that complement is *nominal* (this head, in turn, undergoes Merger with the head of its own complement).[47]

(56) **Noun incorporation in Inuktitut via Merger**



Crucially, this postsyntactic approach to noun incorporation straightforwardly accounts for the interaction

[47]Recall also from (16) in §3.2 that some affixal verbs may also incorporate verbal sequences, with these constructions involving the embedding of a *v*P or TP. Under the present analysis, these would simply involve v^0 undergoing Merger with a non-nominal head such as another v^0 or a T^0.

between incorporation and movement chain resolution, proposed at the outset of this paper. Noun incorporation via Merger takes place only after all syntactic operations, including syntactic movement, have occurred. If we assume that adherence to the Stray Affix Filter—a constraint on morphological well-formedness—is evaluated after Merger, it follows that the Stray Affix Filter prevents any movement copies from being deleted in the chain resolution algorithm. An additional advantage of this account is that it may be readily extended to the cases of complex word-formation across ellipsis boundaries introduced in §2, assuming that ellipsis is also postsyntactic (e.g. Merchant, 2001; Saab, to appear).

6.3 The loss of inflectional morphology on incorporated nominals

To end this section, I briefly return to a property of noun incorporation in Inuktitut that has yet to be explained under the current analysis. Recall that incorporated nominals in Inuktitut generally lack inflectional (e.g. number and case) morphology—a fact that has led to most authors assuming that such nouns are structurally reduced. However, it is important to note that this pattern does not hold in all incorporating contexts. For instance, as demonstrated in (57), nominals bearing possessive (possessor/possessee) agreement may be incorporated into the copular verb *-u* 'be':

(57) **Inuktitut: Incorporated nouns inflected with possessive agreement**

a. Kiuru **[angaju-nga]**-u-quuji-juq
Kiuru.ABS elder-POSS.3S/3S-be-seem-3S.S
'Carol resembles her elder relative.'

b. Kiuru **[angaju-ngi]**-u-quuji-juq
Kiuru.ABS elder-POSS.3S/3P-be-seem-3S.S
'Carol resembles her elder relatives.' (AB)

In addition, as discussed by both Sadock (1980) and Johns (2007), affixal verbs that encode location or direction in Inuit may incorporate nominals bearing oblique cases, shown in (58),[48] as well as nominals bearing possessive agreement, (59a). It is moreover instructive to compare (59a) with (59b), repeated from (49a) above, which shows that possessed nouns incorporated into other verbs do not retain the expected possessive agreement morphology.

(58) **Inuktitut: Location/direction-encoding verbs permit case morphology on incorporated nouns**

a. **[Toronto-mi]**-it-tunga
Toronto-MOD-V-1S.S
'I'm in Toronto.'

b. **[illu-ni]**-it-tut
house-MOD.PL-V-3P.S
'They are in the houses.' (SB; Johns 2007, p. 561)

(59) **Kalaallisut: Location/direction-encoding verbs permit possessive agreement on incorporated nouns**

a. Kalaallit **nuna-a**-liar-poq
Greenlander.PL.GEN land-POSS.3S/3S-IND.3S.S
'He went to Greenland (i.e. to the Greenlanders' country).' (Sadock, 1980, p. 314)

[48] That the incorporated nouns in these constructions bear case is evidenced by the occurrence of an allomorphic alternation normally displayed by oblique case markers. The choice of allomorph also indicates the plurality of the nominal base, e.g. South Baffin Inuktitut *illu-mik* 'house (MOD)' vs. *illu-nik* 'houses (MOD)'.

b. puisi-p **neqi**-tor-punga
seal-GEN meat-consume-INDIC.1S.S
'I ate seal meat.' (Sadock, 1991, p. x)

Therefore, the lack of inflectional morphology on incorporated nominals cannot be understood as a general property of noun incorporation in Inuktitut, since it does not hold universally. On this basis, I propose that the absence of inflectional morphology is the product of a morphological rule that applies in select contexts, rather than a general syntactic property of the nouns in question. As a concrete suggestion for the purposes of this paper (though many other possible analyses are available), I assume that the incorporated nouns contain all requisite syntactic projections (including those whose heads are typically exponed as inflectional morphology), but certain terminals may be postsyntactically deleted via a postsyntactic operation of *obliteration*, in the sense of Arregi and Nevins (2012). When obliteration applies, the result is the absence of inflectional morphology on an incorporated noun.

7 Conclusion

This paper has novel evidence for the idea that movement chain resolution may be shaped at PF by conditions on morphological well-formedness, such as the Stray Affix Filter. Whereas most prior work on this topic has focused on VP-movement or clitic movement, a close examination of noun incorporation in Inuktitut has revealed that DPs incorporated into the verb complex display a similar interaction. This analysis crucially necessitates a departure from the typical treatment of incorporated nouns (in Inuit and cross-linguistically) as structurally reduced compared to their standalone counterparts. Incorporated and non-incorporated internal arguments participate in parallel case and agreement alternations and may both be passivized and relativized. The only syntactic distinction between the two is in whether the selecting verbal head is affixal or not—in turn, corresponding to whether it is light (v^0) or lexical (V^0), following Johns (2007).

This paper has concomitantly argued Inuktitut incorporation is derived postsyntactically, contrary to the common assumption that noun incorporation is generated by head or phrasal movement (e.g. Baker, 1988; Baker et al., 2005; Barrie and Mathieu, 2016). Specifically, I have modeled incorporation (and complex word-formation more generally) as formed by postsyntactic Merger between structurally adjacent heads (e.g. Marantz, 1988; Embick and Noyer, 2001; Bobaljik, 2002; Harizanov and Gribanova, 2019). A postsyntactic approach to noun incorporation in Inuktitut not only accounts for the syntactically active profile of incorporated elements, but it offers a way of capturing the interaction between affixation and copy pronunciation.

I conclude by exploring a prediction that arises from this proposal: given the straightforward and unidirectional nature of the syntax-PF interactions developed above, we might expect the existence of syntactically active incorporated nominals in other languages as well. Put differently, any language that can be shown to have postsyntactically-derived incorporation should in principle permit incorporated nouns to be syntactically active, since all syntactic operations (e.g. movement) should take place prior to incorporation. I suggest that this prediction is indeed borne out, and provide two potential cases from Nuu-chah-nulth (Southern Wakashan) and Fijian (Oceanic).

As pointed out by Johns (2007), there are other polysynthetic languages that have verbs that obligatorily trigger incorporation. In addition to Nuu-chah-nulth and Chukchi (Chukotko-Kamchatkan), the languages mentioned by Johns, a broader survey suggests that the Northern Wakashan language Kwak'wala (Littell, 2016), the Salishan language Bella Coola (Mithun, 1997), and the Iroquoian language Oneida (Barrie, 2011) may also have obligatorily incorporating affixal verbs. I focus on Nuu-chah-nulth here, given the availability of relevant data. First, (60) establishes that verbs in the language may indeed be classified as either

obligatorily incorporating or non-incorporating:[49]

(60) **Nuu-chah-nulth: Affixal verbs trigger noun incorporation**

a. **maḥt'a**-'aap-mit-ʔiiš čakup
house-buy-PST-3.IND man
'A man bought a house.'

b. maakuk-mit-ʔiiš čakup **maḥt'ii**
buy-PST-3.IND man house
'A man bought a house.' (Wojdak, 2008, p. 78)

Following Wojdak (2008), incorporation in Nuu-chah-nulth takes place postsyntactically. We predict, then, that nouns incorporated into affixal verbs in Nuu-chah-nulth should remain syntactically active, just as they do in Inuktitut. This seems to be borne out. For instance, Wojdak (2008) observes that incorporated objects in Nuu-chah-nulth may take wide scope relative to subject quantifiers, as demonstrated in (61).

(61) **Nuu-chah-nulth: Wide scope reading available for incorporated objects**

muunaa-taq-mit-ʔiiš hišuk čaakup-iiḥ c'awa-naʕaaɬ-∅-ʔaɬ
motor-fix-PST-3.IND all.DUR man-PL one-handle-3.ABS-PL
'All the men were working on an engine. They were all working on the same one.' (∃ > ∀)
(Wojdak, 2008, p. 60)

In addition, Wojdak (2008) suggests incorporated objects in Nuu-chah-nulth may be passivized and relativized (though she does not provide the kind of supporting evidence given for Inuktitut in §5). The examples in (62a-b) demonstrate that noun incorporation constructions may contain passive morphology, concomitant with subject agreement and demotion of the agent. Wojdak considers the construction in (62b) to truly involve syntactic movement, concluding, "the syntactic movement of *k'ʷaq* does not affect its spell-out position hosting the affixal predicate" (p. 202). Similarly, in (63b), we see that a morpheme *yaq*, described by Wojdak as a relative pronoun, may be incorporated within a relative clause if the verb is affixal (if the verb is non-affixal, as in (63a), the relative pronoun is standalone and serves as the host for various inflectional morphemes). The fact that the incorporated nominal is a relative pronoun, not a full nominal, presumably reflects a cross-linguistic difference between Nuu-chah-nulth and Inuktitut (§5.2) in the type of element undergoing Ā-extraction in relativization contexts.

(62) **Nuu-chah-nulth: Passivization of incorporated nouns**

a. **k'ʷaq**-'iic-ʔiiš kʷaaʔuuc
s.h.eggs-consume-3.IND grandchild
'Grandchild is eating spawned herring eggs.'

b. **k'ʷaq**-'iic-ckʷi-'at-ʔiiš ʔuuš-qḥ-'at
s.h.eggs-consume-EVID-PASS-3.IND some-do.by-PASS
'Spawned herring eggs must have been eaten by someone.' (Wojdak, 2008, p. 201)

[49] There are some key differences between obligatory incorporation between Nuu-chah-nulth and Inuktitut, however. For instance, in contrast to Inuktitut (as discussed in §4.2), Wojdak (2008) demonstrates that adjectives and other modifiers may be incorporated in lieu of the noun (which is stranded in such cases). Per Wojdak (2008), the relevant word-formation process in Nuu-chah-nulth must be distinct from the Merger operation proposed for Inuktitut in §6.2, since it concatenates linearly adjacent strings rather than structurally adjacent terminals.

(63) **Nuu-chah-nulth: Relativization of incorporated nouns**

a. ƛ'iiḥ-umɬ-ʔiiš [šuwis [**yaq-čiɬ-mit-ii** maakuk čakup-ʔii]]
red-RD-3SG.IND shoes REL-AUX-PST-3SG.IRL buy man-DET
'The shoes the man bought are red.'

b. k^{w}inʔaɬ-mit-ʔiiš John [**łučʔin** [**yaq**-'aap-mit-ʔiitk]]
like-PST-3.IND John dress REL-buy-PST-2SG.RL
'John liked the dress you bought.' (Wojdak, 2008, pp. 93, 57)

Therefore, like Inuktitut, incorporated nouns in Nuu-chah-nulth appear to be syntactically active, and are spelled-out within the verb complex due to the affixal nature of the verbs in question.

Syntactically active incorporated nouns can also be found in non-polysynthetic languages, as seen through van Urk's (2020) analysis of Fijian. In Fijian, a predicate-initial language, proper names and pronouns in object position must surface as *immediately adjacent* to the verb stem. As the data point in (64a) shows, they cannot surface with an article, otherwise present when these nominals are in subject position and required with common nouns, (64b). These examples also demonstrate that postverbal adverbial elements such as directional particles cannot intervene between the verb and its object when it is a proper name or pronoun. van Urk (2020) analyzes this pattern as a type of DOM, in that proper names and pronouns (higher in a salience hierarchy than common nouns) must be formally licensed through immediate adjacency with the verb, in lieu of abstract Case assignment (cf. Levin, 2015; Kalin, 2018). In Fijian, then, the obligatoriness of incorporation is not due to some morphological property of the verb, but due to a morphosyntactic requirement on particular classes of nouns.

(64) **Fijian: Proper names and pronouns adjacent to verb**

a. e a **kau-ti** **Jone / au** mai ko Eroni
3SG PST bring-TR.PR Jone 1SG DIR ART.PR Eroni
'Eroni brought Jone/me.'

b. e a **kau-ta** mai **na** **ilokoloko** ko Eroni
3SG PST bring-TR.N DIR ART.N pillow ART.PR Eroni
'Eroni brought the pillows.' (van Urk, 2020, p. 314)

Van Urk proposes that the adjacency effect arises from the application of Local Dislocation (Embick and Noyer, 2001) between the verb and the postverbal object; this allows the object to become part of the extended verbal projection, thereby licensing it. Importantly for our purposes, van Urk also demonstrates that Local Dislocation may apply across a clause boundary, meaning that proper names and pronouns in embedded derived positions (e.g. Spec-CP) may also surface as adjacent with the matrix verb. As illustrated throughout (65), embedded wh-pronouns that have moved to the clausal periphery may optionally appear without an article. As expected given the baseline pattern in (64), articleless wh-pronouns cannot be separated from the matrix verb by a postverbal adverb, (65b-c).

(65) **Fijian: Movement of embedded wh-pronoun feeds Local Dislocation**

a. au a gai **kila-a** nanoa [$_{CP}$ **ko** **cei** e talei-taka ko Eroni]
1SG PST GAI know-TR.N yesterday ART.PR who 3SG like-TR.N ART.PR Eroni
'I found out yesterday who Eroni likes.'

b. au a gai **kila-i** [$_{CP}$ **cei** e talei-taka ko Eroni] nanoa
1SG PST GAI know-TR.PR who 3SG like-TR.N ART.PR Eroni yesterday
'I found out yesterday who Eroni likes.'

c. *au a gai **kila-i** nanoa [$_{CP}$ **cei** e talei-taka ko Eroni]
1SG PST GAI know-TR.PR yesterday who 3SG like-TR.N ART.PR Eroni
Intended: 'I found out yesterday who Eroni likes.' (van Urk, 2020, p. 339)

The examples in (65) thus show the crucial pattern that reinforces and extends the basic syntax-PF interaction defended throughout this paper. Similar to the Inuktitut (and Nuu-chah-nulth) facts, nominals that undergo the Local Dislocation with the verb in Fijian are syntactically active. Additionally, Fijian demonstrates that syntactic movement of the nominal may even *directly feed* the Local Dislocation operation: only after Ā-movement to Spec-CP can the wh-element be licensed via adjacency with the higher verb.

Altogether, then, the existence of the Nuu-chah-nulth and Fijian patterns offers additional support for the analysis of Inuktitut incorporation put forth in this paper, by demonstrating its cross-linguistic import. We may, in turn, expect a deeper investigation of incorporation phenomena in other languages to reveal other cases of syntactically active incorporated nouns, to be verified in future work.

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