The Interaction of Relativization and Noun Incorporation in Southern Hokkaidō Ainu

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Abstract   This paper focuses on relativization in Southern Hokkaidō Ainu. Specifically, evidential expressions constitute the scope of this study since within this semantic domain a morphosyntactic layout reminiscent of internally-headed relative clauses (IHRCs) is found. Moreover, the structure of some evidential expressions suggests that what gives rise to an IHRC in those instances is classificatory noun incorporation (CNI). Following from past studies on Ainu, where IHRCs and CNI are never discussed, and with reference to cross-linguistic approaches to relativization and incorporation, this study addresses the interaction of these two processes in Southern Hokkaidō Ainu and suggests their reconsideration.

Keywords   Relative clauses. Noun incorporation. Morphosyntax. Ainu. Complement clauses.

Summary   1 Scope and Aim of the Paper. – 2 The Indirect Evidentials of SHA. – 2.1 Semantics and Pragmatics. – 2.2 Morphophonology. – 3 Past studies on Ainu RCs and NI. – 3.1 Accounts on RCs. –3.2 Accounts on NI. – 4 The Morphosyntax of Indirect Evidentials. – 4.1 Structural Generalizations. – 4.2 Non-canonical Structures. – 5 Analysis. – 5.1 Possessive Constructions. – 5.2 Pseudo-Noun Incorporation and Noun Incorporation Proper. – 5.3 The Interaction of Relativization and Incorporation. – 6 Conclusions.

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1 Scope and Aim of the Paper

This paper[1] investigates relativization in Southern Hokkaidō Ainu (henceforth SHA), with special attention to its interaction with noun incorporation. The Chitose, Nibutani, and Biratori dialects constitute my scope of investigation, as they plainly exhibit this interaction. The Nibutani and Biratori dialects are part of a larger dialect family referred to as the Saru dialect and, together with the Chitose dialect, can be grouped under the Southern Hokkaidō dialect family in light of their similarities in the grammar and lexicon (Asai 1974). The language data for this study come from a number of corpora of Ainu folktales collected between the 1950s and the 2000s from Ainu native speakers.

One more restriction I apply to the scope of this study concerns the semantic domain within which I address relativization and incorporation – that is, indirect evidentiality. Evidentiality is the linguistic category that has to do with source of information and with how information is acquired. Via evidentiality a speaker normally indicates where she has obtained information from and what was the physical or non-physical channel that allowed the acquisition of said information (Aikhenvald 2004). Within its evidential system, that also comprises direct evidentiality (Dal Corso 2018), SHA displays four indirect evidential forms (see § 2.1). In a number of indirect evidential constructions (henceforth IECs) where these forms are employed we observe a structural layout that suggests relativization has taken place giving rise to what resembles an internally-headed relative clause (IHRC); an exceptional circumstance for a language like Ainu that is reported to only exhibit (externally-)headed RCs (Bugaeva 2004, 94). Moreover, the morphosyntactic structure that allows this kind of RC construction seems to be instantiated by the presence of classificatory noun incorporation (CNI), a type of NI never before attested in Ainu.

As a start, in § 2 I consider the semantics, pragmatics, and morphophonology of SHA indirect evidentials. Section 3 presents a literature review of past studies on RCs and NI in Ainu, following from which I first present the most common morphosyntactic structure of IECs (§ 4.1). Then I move on to highlighting the oddities that some "non- canonical" evidential constructions display (§ 4.2). Section 5 is dedicated to the analysis of these non-canonical constructions, after which I provide a definition for the process of NI and outline my assumptions on RCs. By the end of this section, I argue that SHA features a case of IHRC construction within the domain of indirect ev-

identiality and that this is due to the presence of CNI in the same syntactic environment. Section 6 concludes. Though I shortly address the possible diachronic morphosyntactic development of IECs, the available data provide insufficient evidence to advance any specific claim on this matter. Therefore, I chiefly maintain a synchronic perspective throughout my analysis.

2 The Indirect Evidentials of SHA

2.1 Semantics and Pragmatics

The domain of SHA indirect evidentiality includes source of information based on conclusions drawn from what the speaker sees, hears, tastes, smell, touches, or from what it is reported to her via conversation.

The dialects of SHA taken into account in this study count four indirect evidentials: *siri an*, *siri ki*, *humi as*, and *hawe as*. Historically, these evidentials originate from three nouns that semantically relate to sensorial perceptions – *sir* 'appearance', *haw* 'voice', and *hum* 'sound'. For these evidentials a number of alloforms are attested in the reference corpora (see § 2.2). *Siri an* and *siri ki* are used when physical circumstances allow the speaker to infer an event through sight. In addition, *siri an* indicates information relating to an event acquired through reasoning prompted by sight. *Humi as* indicates inference based on hearing, smell, touch, taste or some kind of internal "sixth sense", while *hawe as* indicates inference based on hearing or that an event is reported verbally. Example (1), featuring *siran*, serves as a first illustration of IECs of SHA.

1. | *Epitta* | *siwnin* | *sinrus* | *ne* | *a* | *p* | *anakne* | *easir* | *ka*, |
    |----------|----------|----------|------|-----|-----|----------|--------|-------|
    | all | be.green | moss | COP | PRF | NMLZ | TOP | really | even |

so-ho	*a-kar*	*apekor*	***siran***.
3/floor-POSS	4S-3SO/make	just-like	IND.RSN

    'It was all (covered) in green moss but really it seemed just like a carpet had been unrolled'. (Tamura 1985, 54)

As discussed in Dal Corso (2018), SHA indirect evidentials subsume different levels of source reliability, which partly depend on the inner semantics of the perception nouns involved in their formation. The same indirect evidential forms are also found synchronically to fulfill the function of aspectual markers or lexical verbs, in this latter case thus becoming the independent predication of the clause. In these instances their evidential function is lost. The polyfunctionality of *siri an*, *siri ki*, *humi as*, and *hawe as*, that from a wider perspective are better seen as perception predicates, is hard to ascribe

to a specific diachronic development but, as it will become clear later, has much to do with the morphosyntax of the constructions featuring these forms.

2.2 Morphophonology

In this subsection, I briefly examine the morphophonology of SHA indirect evidentials. Indirect evidentials are made up by a nominal and a verbal element. A number of alloforms of *siri an*, *siri ki*, *humi as*, and *hawe as* are attested in the corpora, that are partially ascribable to the phonological environment where the evientials are found. Phonological processes can explain namely the elision of the initial /h/ in *humi as* and *hawe as*. Rather, alloforms differ from "main" forms morphologically in whether the nominal element in the construction retains possessive morphology (e.g. *siran* vs. *siri an*). The only exception is represented by *siri iki* and *sir-iki*, alloforms of *siri ki*. Besides the possessive morpheme, here the morphological change also affects the verbal element, as we may find the intransitive *iki* 'do' instead of the synonymous transitive *ki*. As I discuss in more detail in the following subsections, the presence or absence of possessive morphology on the nominal element influences the morphosyntax of the indirect form as a whole.

Within indirect evidential forms, the nouns *sir*, *haw*, and *hum* always retain their stress (e.g. *sirí ki*, *hawé as*) while the verb remains unstressed. This happens consistently notwithstanding the presence or absence of possessive morphology (see below), which has the only effect to cause a stress shift from the first to the second syllable of the nominal constituent (e.g. non-possessive *háwas* vs. possessive *hawé as*).

The nominal elements *sir* 'appearance', *hum* 'sound' and *haw* 'voice' may appear in their non-possessive forms (as reported here) or in the shortened possessive forms, listed below.

sir-i	from *sir-ihi*	'the appearance of'
hum-i	from *hum-ihi*	'the sound of'
haw-e	from *haw-ehe*	'the voice of'

This short form results from the omission of the segment *-hV* from the possessive morpheme *-(V)hV*, a phenomenon commonly attested in Saru Ainu (Tamura 2000, 85) and Chitose Ainu (Bugaeva 2004, 20). Since it is suffixed to a nominal root ending in a consonant, the possessive morpheme originally takes the *-VhV* realization when it accompanies the perception nouns, so that, although shortened, the presence of the possessive morpheme is overtly signaled as the re-

maining -*V* segment following the root. Indirect evidential forms feature three separate verbs. The intransitive verbs *an* 'exist' and *as* 'stand' occur when the nominal constituents are respectively *sir* or *hum* and *haw*, while we find the transitive *ki* or the intransitive *iki* 'do' in *siri ki*. Omission of the verbal constituent is not attested for any of the indirect evidentials.

Before I move on to discussing the morphosyntax of the IECs, let us review the past studies on Ainu RCs and NI.

3 Past studies on Ainu RCs and NI

3.1 Accounts on RCs

Ainu is said to only display headed RCs (Bugaeva 2004, 94) and, with the exception of the alienable possessor and standard of comparison, all positions named in Keenan and Comrie's (1977) accessibility hierarchy can be relativized via the zero anaphora strategy (i.e. gap strategy) (Bugaeva 2015, 80). A basic distinction is the one between relativization of arguments (2) and non-arguments (3).

2. *[A-kotan-u-ta   ikotuypa]RC*   **okkaypo-umurek**_{RH}   *okay*.
   4-village-POSS-in   3PS/have.no.goods   young.person-be.couple   3PS/exist.PL
   'In my village lives a young couple who has no possessions'. (Tamura 1985, 40)

3. *[**Ani**   ku-yup-o*   *kamuy   tukan]*_{RC}   *teppo*_{RH}.
   with   1S-elder.brother-POSS   bear   3SS/3SO/shoot   gun
   'The gun with which my elder brother shot the bear'. (Bugaeva 2004, 95)

If the relativized noun is an argument of the verb in the RC, its function is marked via the gap strategy as in (2). If, on the contrary, the relativized noun is a non-argument, its original function in the RC is signaled via the retention of overt morphosyntax, as in (3) the postposition *ani* 'with'. The morphosyntactic markers must appear for a correct recoverability.

Since they are recognizable as adnominal constructions, Ainu RCs look very similar to noun-complement constructions (Matsumoto 1997), in that they attach a modifying clause to a head noun with no specific expression of the relation between the two. This kind of construction is referred to by Comrie (1998, 76) as the general noun-modifying clause construction (or GNMCC). However, GNMCCs are also said to lack extraction, so that the head noun cannot be seen as formerly included in the modifying clause. As proven by the strategies for the relativization of arguments and, even more clearly, non-

arguments (where we see morphosyntactic retention), Ainu RCs do not fit the model of prototypical GNMCCs.

Bugaeva (2015) departs from these observations and takes into account RCs and nominalization proper in SHA, comparing them with non-prototypical GNMCCs that involve head nouns with specific grammatical functions and semantics. In particular, Bugaeva addresses Ainu noun-complement constructions that exhibit a possessive noun which simultaneously heads a clause and was not previously contained in this latter. According to her analysis, the possessive morpheme on the head noun cross-references the whole preceding clause (i.e. the clause is the possessor of the head noun).

4. *[Kamuy-utar   nuwap   kor okay]ᵢ   **haw-e**ᵢ   a-nu.*
   god-PL   3PS/groan   PRG   3S/voice-POSS   4S-3SO/hear
   'I heard the voices of gods' groaning' [lit.: 'I heard the voice (that) gods were groaning'.] (Bugaeva 2015, 79)

When words like *hawe* 'the voice of' and other perception nouns are used as heads of noun-complement clauses, it is difficult to categorize them as complementizers due to the morphosyntactic properties they retain, like the possibility of being followed by nominal particles (Bugaeva 2015, 92). This further distances SHA noun-complement constructions from prototypical GNMCCs. Nonetheless, Bugaeva concludes her discussion of perception nouns employed as heads of noun-complement clauses with some remarks on grammaticalization.

5. *[Pirka   aynu   a-ne]   **hum**   **as**.*
   be.good   person   4S-COP   sound   3SS/stand
   'I felt like a good person' [lit.: '(There) stood the sound (such as) me being a good person'.] (Bugaeva 2015, 100)

In light of constructions such as (5), she argues that the possibility of having the head noun in the non-possessive form (e.g. [clause] + *hum as*) is the actual sign of an emerging GNMCC.

3.2 Accounts on NI

Early accounts on NI appear in descriptions of Ainu such as Tamura (1973), Murasaki (1979), or Refsing (1986). Tamura and Murasaki single out Ainu verbs such as *sirpirka* 'be good weather' as having the morphological property of not allowing the use of personal affixes as a formal way of referencing arguments. The morphological unacceptability of personal affixes is assumed to indicate that these verbs do

not require a subject or object syntactically.[2] Both Tamura and Murasaki discuss the process behind the formation of these verbs as a case of compounding, where a formerly intransitive verb combines with a noun which was originally its subject.

6. *Sirpirka*.
    be.good.weather

7. *Sir   pirka*.
    condition   3SS/be.good
    'The weather is good'. (Tamura 1973, 119)[3]

As the first scholar to discuss noun+verb combinations explicitly in terms of NI, Bugaeva (2004) recognizes zero-valency verbs as involving NI of a noun with the syntactic function of subject into an intransitive verb. As one piece of evidence in support to the presence of NI, Bugaeva (2004, 29-30) points at the stress pattern of zero-valency verbs. In cases like (6) only the first component of the complete verb (i.e. *sir*) bears the stress, while in cases like (7) both constituents are stressed. A unitary stress pattern signals that NI has occurred.

While Bugaeva addresses suprasegmental features as evidence for NI, Kobayashi (2008) returns to morphology and semantics by considering the incorporated noun of zero-valency verbs in terms of its semantic role, case marking, and grammatical function. In particular, Kobayashi (2008, 212) singles out those zero-valency verbs which involve incorporation of a noun that formerly has the semantic role of possessee. Before NI occurs, the noun is recognized as the subject of the intransitive verb, and it is marked as nominative at the case level.[4] The following schemes are taken from Kobayashi and exemplify how the functions of the noun are different before (8) and after (9) NI happens.

8. *A-**kem-a**   pase*.
    4-leg-POSS   3PS/be.heavy
    'My legs are heavy'.

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	a-	*kem-a*	*pase*
semantic role	possessor (of theme)	theme	
case level	genitive		
grammatical funct.		subject	

9. **Kema**-pase-an.
    leg.POSS-be.heavy-4S
    'My legs are heavy.'

	kema-	*pase*	*-an*
semantic role	theme		possessor (of theme)
case level			nominative
grammatical funct.			subject

The most relevant outcome of Kobayashi's report is that NI seems to systematically affect the grammatical function of the noun that undergoes incorporation (*kema* is not SUBJECT anymore after NI occurs), while the semantic role of this noun remains unchanged (*kema* is always THEME). As a result, the erstwhile possessor (i.e. 'I') is promoted to the grammatical function of subject and it is assigned nominative at case level, as indicated by the personal agreement marker -*an* in (9). However, any explicit claim about the syntactic properties of the incorporated noun is lacking from the analysis.

4 The Morphosyntax of Indirect Evidentials

4.1 Structural Generalizations

In this section I proceed with presenting the most common morphosyntactic layout IECs exhibit. This is illustrated in (10). In this and other following examples I gloss evidentials to show their inner morphology for the sake of clarity.

10. *[Aynu   iwak]_{psr}   **hum_{pss}-as**   hine…*
    person   3SS/arrive   sound-stand   and.then
    'It seemed a person arrived, and then…' (Tamura 1984, 20)

Phonologically, evidentials such as *humas* exhibit a unitary stress. Specifically, the stressed element is always the perception noun (i.e. *húmas*) (see § 2.2). As pointed out in § 3.2, we can take such stress pattern as a piece of evidence that perception nouns are incorporated into the verb that constitutes the evidentials. Syntactically, the evidential form is adjacent to the clause over which it has its scope semantically, enclosed in square brackets in (10), while morphologically

the perception noun within the evidential appears in its non-possessive form. Therefore, we see that this structure is in all analogous to the non-prototypical GNMCCs surveyed by Bugaeva (2015) in that a perception noun heads a clause and, at the same time, has clearly not been extracted from this latter (see § 3.1). Allegedly, this would be a development from structures like (4), where the perception noun retains the possessive morpheme that cross-references the whole clause which it is the head of. The underlying structure of (10) would then be one where the clause containing the scope predicate of the evidential is the element covering the function of possessor, while the perception noun would be the possessee. I illustrate these functions by indexing the possessor (*psr*) and the possessee (*pss*) in (10), delaying further arguments in favor of this assumed structure to § 5.1.

As it is, the morphosyntax of IECs appears quite linear. However, one question arises naturally at this point. If we take the sentence in (10) to be the result of grammaticalization of an analogous structure where the noun *hum* 'sound' still retained possessive morphology that co-referenced the preceding clause *aynu iwak* 'a person arrived', and if we assume *hum* to be now incorporated into the verb *as* 'stand', then what is the resulting syntactic status of the clause *aynu iwak*? This is just one of the issues we need to address, together with less evident ones that I discuss in § 4.2.

4.2 Non-canonical Structures

4.2.1 Stranded Possessors

Let us start our overview of non-canonical IECs by addressing the syntactic status of the clause that is semantically under the scope of evidentiality. If we take this clause as the possessor in an erstwhile possessive construction (§ 4.1), the incorporation of the (possessee) perception noun would leave it stranded. If this were the case, such behavior would be at odds with the assumed properties of NI in Ainu. In fact, NI as discussed in the literature is never reported to permit stranding of any type of modifier (e.g. determiners, numerals, relative clauses). Consider (11) and (12).

11. ***Tu***   *cep*   *a-koyki.*
    two   fish   4S-3PO/catch
    'I caught two fish'.

12. ****Tu***   *cepkoyki-an*.
    two   fish.catch-4S
    'I caught two fish'.

In (12) the otherwise grammatical *cepkoyki* 'to catch fish' makes the sentence ill-formed. Here incorporation of *cep* 'fish' into the transitive *koyki* 'to catch' is not possible as the former is modified by the numeral *tu* 'two'. If the modifier *tu* 'two' is left stranded as a result of incorporation, the sentence is unacceptable.

4.2.2   NI – Inconsistency Within the Evidential Domain

While we have quite consistent evidence coming from stress pattern that supports the hypothesis of incorporation (see § 4.1), morphosyntactic evidence is in contrast more incoherent. In fact, within evidential forms incorporated nouns often retain overt morphological features as in (13), where the noun *hawe* 'the voice of' exhibits its possessive morphology differently from *hum* in (10). Alternatively, evidentials may be even separated from their incorporating verb by full syntactic constituents, though this is less common. This happens in (14) where the locative *ios* 'behind us' intervenes between *hum* 'sound' and its incorporating verb *as*.

13. *Nea   nispa   orarpare   **haw-e-as***.
    that   man   3SS/breathe   voice-POSS-stand.PC
    'That man seemed to breathe'. (Kayano 6-3,15)

14. *Aynu   ek   **hum**   i-os   **as***.
    person   3SS/come.PC   sound   4O-behind   stand.PC
    'It seemed a man came behind us'. (Kayano 24-3,2)

At this point, there is little to no evidence to argue that a perception noun such as *hum* 'sound' in (14) is incorporated, if we base our understanding of Ainu incorporation on previous studies. The main issue here is that indirect evidentials of SHA actually allow morphological complexity and syntactic freedom of the noun that constitutes them. Though we can simply see the former fact as a less common characteristic of SHA indirect evidentials, even so expected since possessives nouns can indeed be incorporated (cf. *kema* [leg-POSS] in (9)), syntactic freedom of the incorporated noun represents an outstanding behavior.

Even cases that seem to raise no such doubts about NI do not entirely comply with what has been said on this process in the Ainu literature.

15. *E-siknu   **haw-e**   ene   **haw**-as i   ka   an   kor…*
    2SS-be.safe   voice-POSS   like.this REP   NMLZ even   3SS/exist.PC   while
    'While the news is such that they even say that you have survived…' (Kayano 19-5,32)

In cases like (15) the perception noun is incorporated into the verb but is also echoed within the "possessor clause" by an external unbounded copy. The copy (here *hawe*) retains possessive morphology which does not appear on the incorporated noun (*haw*) within the evidential form – that is, what we call the external copy differs from its incorporated counterpart in terms of morphological complexity. On the other hand, as for their semantic specificity, the incorporated noun and its external counterpart are equal.

4.2.3 Indirect Evidentials and Relativization

As a third outstanding characteristic of IECs we have cases where their syntactic layout resembles the one of a RC. The peculiarity of this seeming case of relativization is that it concerns the perception noun within the evidential, which is found "reduplicated" after the latter covering a relative-head-like function for the clause where the evidential itself is found. The indirect evidential retains the perception noun, so that what we can call the relative head seems to be a displaced "copy" of the perception noun itself.

16.	Aynu	opitta	hotke	utari	oka	sekor
	person	all	3PS/lie.down	people	3PS/exist.PL	ADV
	haw-as	***haw-e***	*a-nu*		*kor an-an.*	
	REP	voice-POSS	4S-3SO/hear		PRG-4S	

'They said everybody was lying down [sick], I was hearing so'. (Tamura 1984, 32)

The morphosyntax of constructions like (16) presents a number of problems. Firstly, since we assume that SHA indirect evidentials constitute a case of NI, we would not expect a noun like *haw* 'voice' to be relativized. This prediction is sensible if we base our understanding of noun incorporation on syntactic approaches to this phenomenon like, for example, Baker (1988). Relativization of an incorporated noun would in fact violate lexical integrity. Secondly, the alleged relative head appears often to be morphologically more specified than its incorporated counterpart – note the possessive morpheme on *hawe*, which is not found on *haw* within the evidential form *hawas* in (16). Even admitting that indeed the incorporated noun undergoes relativization, we have no specific reason to expect it to bear a higher morphological specification for possession when used as the relative head.

5 Analysis

5.1 Possessive Constructions

As a start to the analysis, I discuss IECs as erstwhile possessive contructions. Precisely, I recognize them as inalienable possessive constructions, given the presence of the morpheme *-V(hV)* on the perception noun, and this latter noun as the possessee since it structurally hosts the possessive morpheme (see § 2.2). Such analysis coheres with Bugaeva's (2015) assumption for clauses headed by a possessive perception noun (see § 3.1). With the perception noun covering the role of possessee, the clause that contains the predicate under the scope of evidentiality fulfills the role of possessor. This clause has therefore a nominal status, which results from clausal nominalization (Yap et al., 2011), also discussed as "zero-nominalization" for SHA (Bugaeva 2011).

17. [**Hunak un ka a-i-y-ani wa paye-an**]$_{psr}$
    where to INT 4S-4O-0-carry and go.PL-4S
    [**hum**]$_{pss}$-i as.
    sound-POSS stand.PC
    'It seemed they went carrying me to somewhere'. (Tamura 1984, 4)

Evidence for the nominal status of the "possessor clause" comes from morphological referencing (or lack there of) found on the possessed noun, where no person agreement can be found and third person null-agreement is evidenced.[5] Although cross-referencing of the possessor with the subject of the verb within the possessor clause is imaginable, the subject-referencing reading appears to be merely semantically implicated by the meaning of the verbs that co-occur with the evidentials. Furthermore, the semantic confusion arises only with a third person subject on the possessor clause's predicate. Overt morphological cross-referencing would in fact be expected on the perception noun with other grammatical persons as subject of the predicate, but this is never accounted for.

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5 The inalienable possessor appears on possessed nouns in the shape of a personal agreement prefix (e.g. *ku-kisar-aha* [1S-ear-POSS] 'my ear'). Third person singular and plural possessors are marked via null-agreement (e.g. *sik-ihi* [3/eye-POSS] 'his/her/its/their eye'), hence the evidence for cross-referencing of the nominalized clause as the possessor in the construction in (17).

5.2 Pseudo-Noun Incorporation and Noun Incorporation Proper

5.2.1 Evidence for Pseudo-noun Incorporation

In light of the underlying possessive construction discussed in § 5.1, I argue that constructions like (18) represent a case of pseudo-noun incorporation (PNI) (Borik, Gehrke 2015).

18. *Nea   nispa   orarpare   **haw-e-as**.*
    that   man   3SS/breathe   voice-POSS-stand.PC
    'That man seemed to breathe'. (Kayano 6-3,15)

Broadly defined, PNI is a kind of incorporation where the noun retains a certain degree of syntactic freedom, although it is incorporated into a verb as signaled by its general morphological bareness. That is, unlike noun incorporation proper (§ 5.2.2), PNI does not involve morphological combination but rather syntactic adjacency. PNI can involve not only bare nouns but also larger constituents that should be treated as phrases (Borik, Gehrke 2015, 11); the phrasal status of the incorporee being possibly flagged by the presence of modifiers. Modifers of the pseudo-incorporated noun (PIN) are included in incorporation and therefore PNI does not result in modifier stranding (see § 5.2.2). However, PNI imposes limitations to the kind of modifiers allowed to undergo the process, which are essentially semantic.[6] In fact, only modifiers that semantically comply with both the PIN and the event described by the incorporating verb are allowed. Nonetheless, Borik and Gehrke (2015, 20) do discuss some restrictions of PIN's modifiers that appear to be unmistakably syntactic, like the impossibility of having a relative clause as a modifier. In SHA the sole nominalized possessor clause is allowed as a modifier of the perception noun, which is due exactly to the expression being originally a possessive construction. In this sense, the restriction is not semantic and these instance of Ainu PNI would therefore fit in with those rarer cases showcasing a syntactic restriction of modifiers.

PINs need not to be morphologically bare, but they systematically display less morphological specification than non-incorporated nouns. Since the possessive *-(Vh)V* is the only morphology found on *sir*, *hum* and *haw*, they too qualify as PINs with limited morphological specifications, that are not completely bare. As for syntactic freedom of the PIN, this shows in full constituents being allowed to intervene between this latter noun and the incorporating verb. As (19) illustrates, this possibility is also attested in SHA.

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6 PNI is usually pragmatically reserved for expressing well-established situations commonly associated with stereotypical activities (Borik, Gehrke 2015, 13).

19.   *[Aynu   ek   hum]   i-os   as.*
      person   3SS/come.PC   sound   4O-behind 3SS/stand
      'It seemed a man came behind us'. (Kayano 24-3,2)

In this example the locative expression *ios* 'behind us' intervenes between the pseudo-incorporated nominal *aynu ek hum* and the incorporating verb *as*, signalling that the former retains some syntactic independence from the latter.[7] Syntactic freedom is nonetheless limited, though less so than in NI, and, since syntax may also be diagnostic of PNI, the position of the PIN cannot be arbitrary. In SHA, clefting is not permitted. Neither the perception noun or its modifier (i.e. the possessor clause) can be displaced for pragmatic purposes. This is one more piece of evidence that noun and its modifier undergo incorporation as a whole complex nominal.

5.2.2   Evidence for Noun Incorporation Proper

Noun incorporation proper (NI) is another syntactic process involved in IECs. Example (20) illustrates the structural layout attested for instances that display characteristics of NI.

20.   *[**Ukuran   ka   yaanipo   isam**]   anki   sir-ki.*
      be.evening even   almost   3SS/not.be about   IND.VIS
      'Even in the evening it seemed he was almost about to die'. (Tamura 1984, 14)

In defining NI in this analysis, I start from Modena and Muro's (2009, 31) interpretation of this phenomenon as "any kind of morphosyntactic combining of nominal and verbal morphemes which are morphologically fully integrated as to form one single stem", where the involved morphemes are roots that cannot be morphologically analyzed further. As shown in (20), NI in IECs complies with this prototypical feature since both the nominal root (*sir*, *hum*, and *haw*) and the verbal root (*an*, *as*, and *(i)ki*) are not analyzable. Moreover, the incorporated nominal root is never found to be a complex root since it does not combine with any other root before undergoing incorporation, a possibility otherwise attested (Muro 2009, 108-17).

    One more characteristic of NI central for the analysis at hand concerns the modifiers of the IN. A behavior we notice in (20) is that it

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7   Fluctuations in the retention of possessive morphology are a peculiarity of PNI and NI featured in IECs. Parallel to the present case displaying a bare PIN, cases where the IN is expanded via possessive morphology prior to incorporation are also attested. Nonetheless, the syntax of these IECs still supports the presence of PNI and NI respectively – in the present case the syntactic constituent intervening before the incorporating verb is diagnostic of PNI. See Dal Corso (2018, 163-5) for more.

is possible to have syntactic constituents intervening between the incorporated perception noun and the "possessor clause". The intervening syntactic constituents are coordinating or subordinating conjunctions, time or space adverbs co-occurring with a conjunction, or adverbials that convey a semblative-approximative meaning like *anki* 'about' or *noyne* 'as if'. This is quite different from what we saw in constructions involving PNI in § 5.2.1, where no such syntactic insertion is acceptable since the PIN and its possessor-clause modifier undergo incorporation as one complex nominal. Having syntactic insentions in between the IN and the possessor signals that this latter has been left stranded in the process. Muro (2009, 108-25) discusses the possibility of having modifiers left out of the verbal constituent that results from NI, and these cases of NI are said to involve precisely modifier stranding. The kind and morphosyntactic complexity of strandable modifiers is language dependent – demostratives, adjectives and RCs being among the most common stranded categories. Possessors may also be stranded after NI. Muro (2009, 123-6) argues that this kind of stranding does not leave out a genitive modifier, but rather that incorporation of a possessee instantiates the reanalysis of the stranded possessor as an argument in its own right to which a new grammatical function is assigned. Evidence for the reanalysis may come from morphology, as erstwhile possessors can be marked for direct or indirect case. Since Muro (2009, 81) argues that grammatical and thematic functions are assigned through a process of thematic projection that do not depend on the inner semantics of the incorporating verb, there are different possible outcomes of NI in terms of syntactic valency. In fact, depending on the case, NI may or may not result in syntactic saturation of the verb.

I propose that the instances of NI in SHA follow this trend. I argue that the whole clause containing the scope predicate *isam* 'not be' in (20), shown in square brackets, is the subject of the verb *sirki*, resulting from incorporation. After NI takes place, the possessor clause remains stranded and could potentially be regarded as a genitival modifier of the incorporated sensorial noun. However, as Muro discusses, here too the possessor clause, as a nominalized constituent syntactically acceptable in the function of argument, can be re-analyzed as the S argument of *sirki*, and thus should not be considered a modifier of the sensorial noun *sir*. One more piece of evidence supporting the promotion to subject of the possessor clause comes from analogous cases of possessee incorporation. Kobayashi (2008) discusses such cases (see § 3.2) highlighting how the erstwhile possessor is re-analyzed as the subject after NI applies, as it is evident from morphology. What follows from this conclusion is that NI in this instance does not cause the syntactic saturation of the incorporating verb – a welcome outcome given the assumptions on NI discussed above.

5.3 The Interaction of Relativization and Incorporation

5.3.1 Classificatory Noun Incorporation

The analysis up to this point only partially answers the questions left at the end of § 4. Namely, it accounts for the morphological complexity and limited syntactic freedom displayed by some PINs. Moreover, it clarifies the role of the erstwhile possessor clause that is reanalyzed as the S argument of the verbal element resulting from NI.

In this subsection, I finally address the interaction of incorporation and relative clauses by returning on example (15) repeated here as (21).

21. *E-siknu*   **haw-e**   *ene*   **haw**-*as*   *[h]i*
    2SS-survive   voice-POSS   like.this voice-stand.PC   NMLZ
    ka   an   kor…
    even   3SS/exist.PC   while
    'While the news is such that they even say that you have survived…' (Kayano 19-5,32)

As noticed in § 4.2, the peculiarity of these constructions is that they feature an unbound nominal which is semantically identical to the incorporated sensorial noun. Morphologically, the unbound copy may be marked for possession, like *hawe* in (21), or be completely bare. Conversely, the incorporated perception noun in these instances never bears possessive morphology.

Syntactically, these constructions showcase the properties of classificatory noun incorporation (CNI). In CNI, the IN is supplemented by an unbound nominal that is external to the verbal constituent. Although the external copy is usually semantically more specific than the IN, the two nominal elements may seldom be identical (Mithun 1985, 863-72). The analogies between the kind of construction treated here and prototypical CNI, are clearly visible, since in (21) the copy of the IN (i.e. *hawe*) is syntactically unbound and external to the verbal constituent *hawas*. The one characteristic that makes (21) deviate from the CNI prototype is that the external nominal is semantically identical to the incorporated noun, thus including CNI of SHA among those less common cases that Mithun reports. On the contrary, the possibility for the unbound nominal to be morphologically more marked than the IN is not mentioned openly in the literature. On the syntactic and semantic side, instances where possessive morphology appears on the external nominal and those where it does not, seem to show no difference.

The occurrences of CNI among the tokens consulted for this study are extremely rare – in my reference corpora, this kind of construction is encountered only three times. Nevertheless, the presence of

CNI helps clarify the characteristics of another type of constructions involving indirect evidentials that I address in the following subsection.

5.3.2 The Emergence of an Internally-Headed RC

In an analogous way to (21), another group of IECs showcase the "reduplication" of the IN via a syntactically unbound nominal. The main difference with the constructions surveyed in § 5.3.1 is in the syntactic position of the IN copy, as it occurs after the incorporating verb.

22. | *Cisinaot* | *onnay-un* | *sesserke* | ***haw-e**-as* | ***haw-e*** |
|---|---|---|---|---|
| grave | interior-to | 3SS/cry | voice-POSS-stand.PC | voice-POSS |
| ene | an | hi… | | |
| like.this | 3SS/exist.PC | NMLZ | | |

'It seemed from inside the grave [someone] cried and indeed [that] voice was like so: …' (Kayano 6-3,3)

The possessed sensorial noun *hawe* in (22) follows *hawe as* in a syntactic layout that suggests that the IN *hawe* has been relativized. Such a deduction is based on the general tendency of Ainu to form RCs via the gap strategy, where the relativized noun heads the subordinate clause (see § 3.1), but it also essentially contrasts with the nature of gap strategy as a way to form RCs. In fact, with the gap strategy the relativized noun no longer occupies its original position in the clause. Therefore, stating that the second *hawe* (according to linear order) appearing in (22) is the same *hawe* incorporated in the verb *as* which has been relativized raises the question of why relativization in this case does not result in an empty syntactic position within the RC. Furthermore, the relativization of *hawe* violates lexical integrity, since a syntactic process like relativization should be blind to internal morphological structures.

We can respond to these objections by arguing that the construction in (22) represents an instance of internally-headed relative clause (IHRC), a kind of RC where the relative head noun (RH) still appears inside the subordinate relative clause. The emergence of an IHRC is possible when we consider the underlying, non-relativized structure of (22) as involving CNI (shown in (23)). In this scenario, the original position of the syntactically unbound copy of the IN that appears after *hawe as* is within the same clause as this latter form. This original structure is in all corresponding to the one of (21).

23. | *Cisinaot* | *onnay-un* | *sesserke* | ***haw-e*** | ***haw-e**-as*. |
|---|---|---|---|---|
| grave | interior-to | 3SS/cry | voice-POSS | voice-POSS-stand.PC |

This assumption solves the impasse addressed above, which is problematic for an analysis of (22) as a RC. This way, the relativization of *hawe* complies with all other instances of relativization reported for Ainu, as it too is obtained via the gap strategy. The original position of *hawe* is regularly left blank when this *hawe* is promoted to head of the RC. Moreover, the process of relativization does not violate lexical integrity, since it is not the IN itself the noun that is relativized but rather its unbound syntactic copy.

24. [*Cisinaot*   *onnay-un*   *sesserke*   **haw-e**-*as*   **haw-e**$_{RH}$]$_{RC}$
     grave   interior-to   3SS/cry   voice-POSS-stand.PC   voice-POSS
     [*ene*   *an*   *hi …*]$_{MC}$
     like.this   3SS/exist.PC NMLZ
     'It seemed from inside the grave [someone] cried and indeed [that] voice was like so: …' (Kayano 6-3,3)

As (24) better illustrates, the RC constitutes the constituents spanning *cisinaot* to *hawe*, while this latter element is the relative head (RH) in the construction.

Given this syntactic layout, my first remark is related to the categorial status of the RC. IHRCs are said to be nominalized clauses, whose categorial status may be signaled by overt nominal morphology but that do not function as argument of a verb (Culy 1990, 27-8). Alternatively, IHRCs may be zero-marked for nominalization – this is the stance Modena and Muro (2009) take in order to bypass the problem of providing evidence for the presence of null complementizers (Cole 1987) and to justify the use of the RC as a modifier of the MC. Internal-headedness as a process of nominalization then becomes a way to make a RC a modifier of a clause and not just a constituent of it. The IHRCs of SHA are among those IHRCs that are not marked as nominals via overt morphology, but that are instead zero-marked.

The syntactic behavior of the RH in the Ainu IHRC also appears to adhere to the tendencies observed by Basilico (1996) regarding the possible positioning of the relativized nominal within the RC, that can be fronted or moved outside of the VP. More concretely, the RH may not occupy a position consistent with the one it has in the non-relative construction. Since the RH *hawe* in (22) occurs after *hawe as*, I could argue that it has exited the VP, though still being within the RC, and it is thus in a VP-external position. However, to the best of my knowledge, there is no general agreement among scholars on how we define a VP in Ainu. In light of this theoretical gap, the claim that the RH *hawe* is found outside of the VP cannot be safely supported, and my assumption is merely based on the general tendency of Ainu of not having nominal constituents right-dislocated after the verb (Tamura 2000, 31). For the present purpose,

and to avoid unnecessary theoretical speculation, I simply say that the RH is right-dislocated in a post-verbal position, while it is still included in the RC. Whether this position also happens to be VP-external is not a main concern here. The relevant conclusion is that the RH position is not consistent with the role the nominal had in the non-relative construction.

As Basilico (1996) states by referencing Diesing's (1992) mapping hypothesis, RH displacement may be a requirement for binding. Since the syntactic analysis of IHRCs I provide here is not framed within a specific syntactic framework, I deviate from Basilico's explanation of RH movement by excluding discussion of Diesing theory. Nevertheless, I do assume that RH displacement in the Ainu case is needed in order for the RH to be bound by the variables projected by an operator. This way, RH displacement becomes a syntactic strategy to avoid semantico-pragmatic ambiguity. In the case at hand, the operator only projects one variable relevant for binding, namely third person grammatical number, and targets the one nominal that cross-references the argument of the verb in the main clause. Semantically a case of quantification (Basilico 1996, 509), the RC itself determines the scope for binding. In other words, the nominal whose features agree with the variable projected by the operator must be within the RC. If we consider the sentence in (22), the feature "third person" is found in more than one nominal: the nouns *cisinaot* 'grave', and *onnay* 'interior', and the perception noun *hawe*. In order to solve the ambiguity, the RH must move to the right edge of the RC and it is the resulting non-canonical syntax that signals which nominal undergoes relativization and functions as the third person argument of the main clause verb.

5.3.3   Possible Diachronic Change

To conclude this subsection on the interaction of NI and relativization, I consider one more type of construction, that sheds light on the possible evolution of the IHRCs discussed in § 5.3.2. In these instances, the possessor clause is followed by a subordinating conjunction and appears to have lost its nominal status, functioning now as a subordinate to the MC. The RC is now reduced to the sole evidential form and the right-dislocated RH.

25. *Pon-no*   *poka*   *hemesu-an*   *kor*   *[**hum**-as*
    be-little-ADV   at.least   climb-4S   while   sound-stand.PC
    ***hum**-i$_{RH}]_{RC}$*   *[ene*   *an*   *hi ...]$_{MC}$*
    sound-POSS   like.this   3SS/exist.PC   NMLZ

'When I climbed just a little, what (= the feeling that) I felt was like so …' (Tamura 1984, 54)

At this stage, the RH *humi* appears as a leftover of the process of relativization that involved its dislocation to the right of the RC from its original syntactic position within the nominalized possessor clause (§ 5.3.2), where it functioned as the unbound copy of *hum* involved, in its turn, in CNI (§ 5.3.1). This peculiar syntactic layout might be at the basis of the emergence of a very rare structure where the relative construction is completely lost and the clause containing the perception predicate is coordinated to the main clause via a conjunction. The former RH is nevertheless present, but it has the sole function of an anaphoric nominal that cross-references the IN.

26. *"Ahun-ke*   *yak*   *pirka*   *wa"*   *sekor*
    3SS/3SO/enter.PC-CAUS   if   3SS/be.good   FP   ADV
    haw*-as**   ***wa   ***haw-e***   *a-nu.*
    voice-stand.PC   and   voice-POSS   4S-3SO/hear
    '"You may let him come in" it was said and I heard [that] voice'. (Bugaeva 2004, 257)

It is otherwise possible that the external RH in constructions like (26) has been re-analyzed as a nominalizer, since sometimes we find *ru*, *sir*, *hum*, and *haw* in complementary distribution with nominalizers such as *hi*.

27. *E-hekote*   *kamuy*   *opitta*   *a-ko-caranke*   *wa*   *ene*
    2SO-3SP/turn   god   all   4S-APPL-3SP/complain   and   like.this
    sir*-ki**   ***hi   *e-nukar*   *kusu ne*   *na*   *hani.*
    appearance-do   NMLZ   2SS-3SO/see   INTN.FUT   FP   FP
    'You will see that they complain to the gods that protect you'. (Nakagawa 2013, 193)

Although it could be that all the different constructions taken into account here are representative of diachronic development of these constructions in SHA, there is no consistent evidence to advance any safe claim on this regard. As far as we see, the development appears to be synchronic.

6   Conclusions

In this paper I presented a morphosyntactic analysis of indirect evidential constructions (IECs) of SHA. After a discussion of their status as erstwhile possessive constructions (§ 5.1), I analyzed IECs as involving either NI or PNI in light of the discrepancies in morphological bareness and syntactic complexity of the evidental forms involved (§ 5.2). A small number of IECs otherwise showcase classificatory NI, which I argued to be the morphosyntactic process that allows the development of the IHRC construction that characterizes another small group of IECs (§ 5.3). CNI as a process namely provides the syntactic constituent that can be relativized without violating lexical integrity and via the gap strategy, thus bringing this case of relativization together with the others found in the language (§ 3.1). Pragmatically, these IECs can be seen as a case of lexical reinforcement (Aikhenvald 2004, 393) by which the speaker adds justification for her statement. Primarily, this study adds on previous studies on Ainu incorporation and relativization by suggesting new perspectives on these two processes.

As far as the data show, IECs displaying a IHRC construction are found synchronically to non-relativized IECs and the fewer ones featuring only CNI, and they also appear as an areal feature peculiar to Hokkaidō Ainu (Dal Corso 2018, 175). With regards to evidentiality in Ainu, this study addresses part of what seems an innovative process which, through the interaction of incorporation and relativization, resulted in a specific pragmatic use of indirect evidentiality. Moreover, the analysis above may be a contribution to our understanding of the development of noun-complement clauses in the language, and specifically it suggests that this development may have followed two separate directions – one bringing to the grammaticalization of syntactic structures involving incorporation of complex nominals into evidential strategies, the other bringing to the emergence of the GN-MCC, as proposed by Bugaeva (2015). It would be interesting to investigate whether internal headedness and CNI are accounted for also in other dialects of Ainu or within other semantic domains of SHA.

List of abbreviations

0	epenthetic vowel
1	first person
2	second person
3	third person
4	fourth person
ADV	adverbial

CAUS	causative
COP	copula
FP	final particle
IND.RSN	indirect evidential (reasoning source)
IND.VIS	indirect evidential (visual source)
INT	interrogative
INTN.FUT	intentional future
NMLZ	nominalizer
PC	paucal
PL	plural
POSS	possessive
PRF	perfective
PRG	progressive
PS	plural subject
REP	reportative
SO	singular object
SS	singular subject
TOP	topic

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