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Clausal complementation as relativization, revisited

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In Nez Perce, some but not all notional complement clauses show the characteristic morphology of relativization. In contrast to some crosslinguistic data emphasizing nominalization as the source of commonalities between notional complement clauses and relative clauses, I show that relative-like notional complement clauses in Nez Perce are simply CPs with no nominal superstructure. It is the internal syntax of these clauses that is relative-like, involving \bar{A} movement from a high functional projection inside CP. I show that the language makes a distinction between two types of notional complement clauses, those that involve \bar{A} movement of this sort (“relative embeddings”) and those that do not (“simplex embeddings”). One conclusion is that not all clausal complementation is relativization, *pace* Kayne (2008, 2014), Arsenijević (2009). Another is that relative-like notional complement clauses show variation across languages at least as concerns nominal superstructure and the generation of factive inferences.

1 Introduction

The bracketed clauses in (1) have appeared to many a student of introductory syntax to instantiate the same type of syntactic structure.

- (1) a. She said [that they discovered the answer]
b. The answer [that they discovered]

Introductory classes typically marshal several types of facts (drawn from a long tradition in descriptive grammar) to dissuade the student from this view. Rather than grouping the clauses in (1) together, we must distinguish a finite complement clause (FCC), (1a), from a restrictive relative clause (RRC), (1b). Relevant English facts include:

- (2) a. RRCs but not FCCs contain gaps
b. RRCs but not FCCs may contain relative pronouns
c. RRCs are always optional, but FCCs are sometimes obligatory
d. RRCs combine only with nouns, but FCCs may combine with nouns, verbs, or adjectives
e. RRCs are islands, but FCCs are not

The student is thus led away from the hypothesis of a single structure for the clauses in (1) and toward a perspective on which complement clauses and relative clauses differ in both their internal and external syntax. Let us call this perspective the standard theory. According to the standard theory, internally, relative but not complement clauses contain an \bar{A} dependency. This accounts both for the presence of a gap (the tail of the \bar{A} chain) and for the relative pronoun (the head of the \bar{A} chain), (2a,b). Externally, relative clauses are adjuncts, whereas complement clauses are (as the name suggests) complements; this accounts for the difference in obligatoriness, (2c). Like adjectives, relative clauses are a type of adjunct restricted to nominal projections (a fact potentially to be explained in semantic terms), accounting for (2d). These points together make island effects (2e) unsurprising, even overdetermined: extraction from a relative clause is extraction from an adjunct *and* from a nominal *and* across an intervening \bar{A} dependency—three distinct factors all of which are known to give rise to island effects independently.

The impetus for this paper is a strand of literature which has nevertheless sought to vindicate the introductory student’s intuition of syntactic commonality between relative clauses and (at least some) notional complement clauses (Manzini and Savoia 2003, Nichols 2003, Aboh 2005, Kayne 2008, 2014, Arsenijević 2009, Haegeman and Ürögdi 2010, Krapova 2010, Caponigro and Polinsky 2011, Haegeman 2012, Manzini 2014, Hanink and Bochnak 2017, Poletto and Sanfelici 2018, Pietraszko 2019, Bondarenko 2022, among others; see de Cuba 2017 for an opposing view).¹ This work generally takes as its point of departure data from various languages showing morphosyntactic commonalities between the two varieties of clauses, often at the clause edge. Some such commonalities involve indications of DP structure, as for instance in the Washo examples in (3); Hanink and Bochnak (2017) argue that the morpheme *ge*, glossed ‘REL’, is in fact uniformly a D head that composes with CP complements. A further case where the similarity between notional complement clauses and relative clauses has been argued to reflect nominalization is discussed by Pietraszko (2019).

(3) Washo (Hanink and Bochnak 2017:(7),(9))

- a. [_{DP} Mé:hu géwe ʔ-í:gi-yi-š-**ge**] lé:-saʔ l-í:gi-yi.
 [boy coyote 3-see-IND-SR-REL] 1-also 1-see-IND
 ‘I also saw the coyote that the boy saw.’
- b. [_{DP} Ø-Háʔaš-i-š-**ge**] di-hámu-p’áy-i.
 [3-rain-IND-SR-REL] 1-feel-nonsense-IND
 ‘I forgot that it rained.’

Other commonalities involve evidence of \bar{A} movement. In Italian and other Romance languages, for instance, an element (*che*) appears at the edge of relative clauses and finite complement clauses that is implicated in (other) \bar{A} dependencies, such as *wh*-questions (4c,d).

(4) Italian (Manzini and Savoia 2003:87)

- a. quelli **che** chiamo sempre
 those that I.call always
 ‘the ones I always call’

¹ I refer to the latter class of clauses throughout as ‘notional’ complement clauses in view of a strand of work arguing that these clauses are in fact modifiers of a certain type; see discussion in Moulton (2015), Elliott (2017), Djärv (2019), Bondarenko (2022), Clem (2022). I will not address the issue of complement vs. modifier status here.

- b. Mi hanno detto **che** vieni domani.
to.me they.have said that you.come tomorrow
'They told you that you will come tomorrow.'
- c. No so **che** fare.
not I.know what to.do
'I don't know what to do.'
- d. **Che** camicia hanno portato?
what shirt they.have worn
'What shirt did they wear?'

Looking beyond the clause edge, Caponigro and Polinsky (2011) highlight commonalities in Adyghe in terms of \bar{A} -specific verb morphology: both the relative-like example in (5a) and the complement-like example in (5b) feature a marker of relativization of an oblique, the verbal 'wh-agreement' prefix $zə$:

- (5) Adyghe (Caponigro and Polinsky 2011:85, 106)
- a. [č'ale-m xatə-r \emptyset -zə-r-jə-pč'e-š'tə] š_wanə-r
[boy-ERG orchard-Abs 3SG.ABS-REL.OBL-APPL-3SG.ERG-weed-FUT] hoe-Abs
'the hoe that the boy will be weeding the orchard with'
- b. [Č'ale-r qə-zə-re-k_wež'ə-š'tə-r] ə-g_wərə?_weB.
[boy-Abs INV-REL.OBL-APPL-return-FUT-Abs] 3SG.ERG-understood
'S/he understood that the boy will arrive.'

Such facts suggest that relative clauses and notional complement clauses may in fact be more similar than the standard theory had concluded—in particular, it may be that both types of clauses involve a DP layer and contain an \bar{A} dependency. Researchers drawing this conclusion have differed in how thorough a rejection of the standard theory they endorse. At one end of the spectrum is Kayne (2008, 2014) and Arsenijević (2009), for whom relative and complement clause structures cross-linguistically are largely identical both in terms of external and internal syntax. Externally, they propose, both types of clauses involve complementation, not adjunction (a claim that builds on Kayne's (1994) analysis of relative clause syntax). Internally, clauses of both types involve an \bar{A} dependency between a clause-internal position and an element at the clause edge. Both types of clauses also involve a noun on the edge of the clause; this is the typical nominal head of a relative clause but often a covert noun in a notional complement clause. From this perspective, the differences listed in (2) between FCCs and RRCs in English must arise from properties of the particular position relativized, the inventory of relative pronouns, or the inventory of silent nouns. Concerning the presence of a clear gap in relative clauses but not notional complement clauses, for instance, Kayne and Arsenijević both appeal to the particular position of the \bar{A} chain tail in the latter—for Kayne, complement to a silent P, and for Arsenijević, the specifier of a Force projection in the high left periphery.

A different picture is suggested by Caponigro and Polinsky (2011) on the basis of a thorough study of Adyghe. On their view, the parallel between relative and notional complement clauses is extensive, but also language-particular: relative clauses and notional complement clauses in Adyghe all involve \bar{A} movement, and a nominal is always present at the clause edge (though it may be silent). Unlike Kayne and Arsenijević, however, Caponigro and Polinsky do not conclude

that relative clauses and notional complement clauses have the same structure across languages. Instead, they suggest that variation emerges as a function of different functional inventories in different languages: Adyghe has only a relative complementizer, meaning that all CP embedding must involve relativization, whereas other languages possess non-relative complementizers and therefore allow for non-relative complement clauses. This means the standard theory could well be right for English, even if it doesn't extend to Adyghe. The idea that some but not all notional complement clauses are similar to relative clauses is further explored by Krapova (2010), Haegeman and Ürögdi (2010), Haegeman (2012), and Hanink and Bochnak (2017).

In this paper I seek to develop this latter type of perspective by exploring the syntax of a class of notional complement clauses in Nez Perce which show a striking resemblance to relative clauses. The Nez Perce relative clause structure shown in (6a) and the notional complement clause type of interest, (6b), have in common the presence of the functional elements *yôx* and *ke* at their left edge. As the glossing of these examples reflects, *yôx* is a (nominative) relative pronoun, and *ke* is a complementizer linked to \bar{A} extraction (Deal 2016a). These data thus speak to the type of pattern seen above in Italian (insofar as they involve common morphosyntax at the edge of the clause) and, more generally, to the type of pattern seen in Adyghe (insofar as they involve morphology specific to \bar{A} dependencies).²

(6) Nez Perce (field notes)

- a. picpic [**yôx** **ke** *kine* __ *hi-pinmiix-sa-qa*]
 cat.NOM [RP.NOM C_{A'} here 3SUBJ-go.to.sleep-IMPERF-REC.PAST]
 ‘the cat that was sleeping here’ [20110623fd]
- b. Watiisx Meeli *hi-llooy-ca-qa* [**yôx** **ke** *kine*
 1.day.away Mary.NOM 3SUBJ-be.happy-IMPERF-REC.PAST [RP.NOM C_{A'} here
 picpic *hi-pnim-sa-qa*].
 cat.NOM 3SUBJ-sleep-IMPERF-REC.PAST]
 ‘Yesterday Mary was happy that the cat was sleeping here.’ [20190613bsfd]

There are several facets of the morphosyntax of Nez Perce that make this language an interesting one in which to study relative-like notional complement clauses, e.g. (6b). First, as both (6a,b) show, relative pronouns and complementizers co-occur in this language (i.e. there is no ban on “doubly-filled comp”). Previous work has taken different perspectives on whether elements like Italian *che*, which occurs both in “complementizer” function and in “relative pronoun” function,

² The following abbreviations are used in Nez Perce glosses: ACC accusative case, AGT agentive nominalization, APPL applicative, C complementizer, CISLOC cislocative (sometimes used as inflection for 2nd person subject on 1st person object; see Deal 2015b), ERG ergative case, GEN genitive case, GONNA ‘low future’ (see Deal 2010b), HAB habitual aspect, IMPERF imperfective aspect, INST instrumental case, LOC locative case, NEG negation, NOM nominative case, μ functional head present in possessor raising (Deal 2013), O.PL plural object agreement, P ‘P aspect’ (common to perfective-like and perfect-like TAM; see Deal 2010b), PL plural, PRES present tense, PROSP prospective aspect, REC.PAST recent past, REM.PAST remote past, RP relative pronoun, S.PL plural subject agreement, Y.N yes/no question particle, 1SG (etc.) 1st person singular (etc.), 3OBJ 3rd person object agreement, 3SUBJ 3rd person subject agreement, 3/3 3rd person subject and 3rd person object portmanteau.

(4), should be analyzed strictly as a complementizer (Cinque 1978, Manzini and Savoia 2003) or strictly as a relative pronoun (Kayne 2014, Poletto and Sanfelici 2018). The fact that Nez Perce possesses separate, overt items in these functions makes it relatively clearer what element plays what role in the syntax of this language.

Second, in interesting contrast to Adyghe and Italian, not all notional finite complement clauses have this relative-like character in Nez Perce. The difference is determined by the embedding predicate: some predicates (a subset of the factives) require their notional complement clauses to be “relative”, whereas others do not. The pair of examples below contrast *lilooy* ‘be happy’, whose notional complement is obligatorily relative-like in morphosyntax, with *cuukwe* ‘know’, whose notional complement freely lacks this marking:

- (7) 'Aayat hi-llooy-ca- \emptyset [*(yo \hat{x} ke) ma-may'ac
 woman.NOM 3SUBJ-be.happy-IMPERF-PRES [RP.NOM C_{A'} PL-child
 hi-pa-paay-n- \emptyset].
 3SUBJ-S.PL-arrive-P-PRES]
 ‘The woman is happy that the children arrived.’ [20150616fd]
- (8) Waaqo' *pro* hi-cuukwe-ce- \emptyset [hi-weeqi-se- \emptyset].
 now 3SG 3SUBJ-know-IMPERF-PRES [3SUBJ-rain-IMPERF-PRES]
 ‘Now she knows it’s raining.’ [20080616bs]

Nez Perce thus presents the opportunity internal to a single language to explore why it is that relative clauses and (some) notional complement clauses have morphosyntactic behaviors in common. This allows us to hold constant the inventory of relative pronouns and other functional material (e.g. null nouns, as Kayne and others posit) while asking: why do some notional complement clauses but not others appear relative-like? What is the syntax of “relative embedding”, i.e. notional complement clauses with relative morphosyntax? In addressing similar questions for Washo, Hanink and Bochnak (2017) conclude that the key factor is nominalization: shared morphosyntax between relative clauses and certain notional complement clauses in that language realizes D. The investigation of Nez Perce reaches a different conclusion: notional complement clauses are never DPs in this language. Rather, the distinctive behavior of relative-like notional complement clauses involves \bar{A} movement. The overall picture that takes shape is one where notional complement clauses vary, within and across languages, as to whether or not they include the familiar syntactic ingredients of relative clauses. I take this to support the general typological picture emerging from Caponigro and Polinsky (2011) and Hanink and Bochnak (2017). At the same time, we will see that Nez Perce relative-like notional complement clauses show systematic morphosyntactic differences from their counterparts in other languages, including Adyghe and Washo. This demonstrates that relative-like notional complement clauses are not a unitary phenomenon across languages, but rather represent a range of ways in which notional complement clauses may be built up with relative clause ingredients.

The paper is structured as follows. In section 2 I begin with some background about the Nez Perce language, with particular attention to relative clause syntax. I then present basic properties of Nez Perce relative embedding in section 3. Section 4 discusses the external syntax of relative embedding, arguing that these structures do not involve a DP or PP layer above the relative CP. Section 5 then turns to the internal syntax of these clauses, arguing that they involve \bar{A} movement from a position above the TP level. With this picture of the syntax of relative embedding in hand, section 6 turns to the language-internal contrast between relative and non-relative embeddings

in Nez Perce, arguing against the position that all notional complement clauses in this language possess an underlying relative structure. Section 7, which doubles as a conclusion, reviews the resulting picture for crosslinguistic variation as concerns relative-like notional complement clauses across languages.

2 Nez Perce background

Nez Perce is a Penutian language indigenous to the interior Columbia Plateau region; the traditional territory of Nez Perce speakers encompasses parts of the US states of Idaho, Washington, and Oregon (see Aoki 1994:viii). The language is currently severely endangered with only a small handful of elder native speakers remaining and active language revitalization projects underway. The data in this paper comes from work with two speakers, Florene Davis and the late Bessie Scott, conducted on the reservation of the Nez Perce Tribe of Idaho in Lapwai, ID, between 2006 and 2019.³

Nez Perce is a morphologically rich language with both head- and dependent-marking at the clausal level, quite free clausal word order, and very free *pro*-drop of all arguments.⁴ The case system is tripartite, distinguishing ERG and ACC in transitive clauses, e.g. (9a), versus NOM (unmarked) in intransitive clauses, e.g. (9b). There is no split ergativity based on clausal properties such as aspect, tense, or negation.

- (9) a. Angel-nim hi-naas-wapaayata-sa- \emptyset ma-may'as-na.
 Angel-ERG 3SUBJ-O.PL-help-IMPERF-PRES PL-child-ACC
 'Angel is helping the children.' [20150615bsfd]
- b. 'Aatway hi-tiy'a-sa-qa.
 old.woman.NOM 3SUBJ-laugh-IMPERF-REC.PAST
 'The old lady was laughing.' [20170531bsfd]

The verbal agreement system is nominative-accusative, with largely separable exponents of person and number agreement. Agreement is overt for plural and (notably) for third person (like in English). Person agreement for the subject and/or object occurs leftmost in the verb word, and tracks just one argument or a portmanteau of both depending on person and number values. The person marker is followed by plural agreement for the subject and/or the object, e.g. object plural marker *naas* in (9a). Complexities of the agreement system, including relatively idiosyncratic restrictions on combinations of particular affixes, are described in Deal 2015b. Verbal inflection for TAM, which influences the particular form of subject number agreement, is described in Rude 1985, Deal 2010b.⁵

³ Each example is annotated with metadata indicating the date of elicitation and the initials of the consultants present. Phonological details of the examples (esp. vowel length and glottalization) have been corrected based on information in Aoki (1994).

⁴ For ease of reading, I gloss *pro* arguments with the person/number information indicated by agreement and/or speakers' translations, and generally linearize covert arguments according to SVO order.

⁵ Glossing of the TAM system involves non-trivial questions of analysis, as discussed in Deal 2010b, given that not all tenses and aspects co-occur (among other complicating factors). Glossing decisions here generally follow that work; an exception is the glossing of *-o'qa* simply as 'modal'.

Ergative case, accusative case, and object agreement in transitive clauses are tightly linked, and there are two types of circumstances in which all three must be absent (Rude 1985, Deal 2010a,b). The first is when the subject binds the possessor of the object. In the examples below, note that both the subject and the object are nominative (when they are overt at all) and that there is no object agreement on the verb. Subject agreement proceeds as normal in such clauses.⁶

- (10) a. Weet 'isii₁ hi-'nix-peeleyk- \emptyset -e [*pro*₁ taaqmaat]?
 Y.N who.NOM 3SUBJ-put-get.lost-P-REM.PAST [3SG.GEN hat.NOM]
 'Did anyone₁ lose their₁ hat?' [20091208bs]
- b. *pro*₁ 'eetx 'ipeewi-s-iix- \emptyset ['ime-m₁ ciq'aamqal].
 2PL 2PL.CLITIC look.for-IMPERF-S.PL-PRES 2PL-GEN dog.NOM
 'You₁ are looking for your₁ dog.' [20120706bsfd]

The second circumstance is when the object is a weak indefinite, i.e. an indefinite description that takes narrow scope with respect to all clausal operators. This requirement of narrow scope is shown in (12). Note again that all arguments are in nominative case and that object agreement is absent.

- (11) Weet 'isii ha-ani- \emptyset -ya sam'x?
 Y.N who.NOM 3SUBJ-make-P-REM.PAST shirt.NOM
 'Did anyone make a shirt?' [20060724bs]
- (12) Weet'u *pro* cuukwe-ce- \emptyset [puute'ptit we'nipt]!
 NEG 1SG know-IMPERF-PRES 100.NOM song.NOM
 'I don't know 100 songs!' [20070124bs]
- a. ✓ The speaker has been ordered to sing 100 songs. She is objecting to this request.
 ($\neg > 100$)
- b. ✗ The speaker has been asked to memorize a large number of songs and wants to report
 that 100 songs are still unknown to her. ($100 > \neg$)

Both circumstances just described result in unmarked case on both the subject and the object—ergative and accusative are lost together.⁷ These facts are discussed at length and analyzed in an Agree-based case theory in Deal 2010a,b.

Nez Perce relative clauses are described and analyzed in Deal 2016a. As that work notes, most relative clauses in the language are externally headed; all such relatives are postnominal. They contain a case-marked relative pronoun *ko/yox*, drawn from the demonstrative inventory, the complementizer *ke*, and a gap inside CP. The same structure is used to relativize on all core argument positions, as well as on obliques. (There is no syntactic ergativity, and no pronominal resumption.)

⁶ There is no visible subject agreement marker in (10b) because the subject is not 3rd person. Outside of reflexives, local person agreement on the verb is consistently null in Nez Perce.

⁷ The one exception to this pattern concerns person-based split ergativity: local person subjects are always nominative, regardless of the presence of an object or its case. See Deal (2016b) for data and analysis.

- (13) a. *pro* 'e-'peewi-se- \emptyset cepeepy'u \hat{x} ti's-ne [_{CP} ko-nya ke 'aayato-nm
1SG 3OBJ-look.for-IMPERF-PRES pie-ACC [_{CP} RP-ACC C_{A'} woman-ERG
paa-ny- \emptyset -a ____].
3/3-make-P-REM.PAST ____]
'I'm looking for the pie that the woman made.' [20140826bsfd]
- b. *pro* 'e-'peewi-se- \emptyset 'aayato-na [_{CP} ko-nim ke ____
1SG 3OBJ-look.for-IMPERF-PRES woman-ACC [_{CP} RP-ERG C_{A'} ____
paa-ny- \emptyset -a ki-nye cepeepy'u \hat{x} ti's-ne].
3/3-make-P-REM.PAST this-ACC pie-ACC]
'I'm looking for the woman who made this pie.' [20140826bsfd]

I will first review the evidence that Nez Perce relative clauses involve \bar{A} movement, following Deal 2016a. I will then discuss the morphosyntax of the relative pronoun *ko/yo \hat{x}* and the complementizer *ke*, with particular attention to factors that can help us identify their categorial status as D (relative pronoun) vs C (complementizer).

Relative clauses in Nez Perce show familiar evidence of \bar{A} movement. First, relativization is unbounded; the relative pronoun may be found one or more finite clauses away from the gap.

- (14) 'iniit yo \hat{x} ke [Jack hi-neki-se- \emptyset ['iin
house.NOM RP.NOM C_{A'} [Jack.NOM 3SUBJ-think-IMPERF-PRES [1SG.NOM
hani- \emptyset -ya ____]]
make-P-REM.PAST ____]]
'the house that Jack thinks he built' [20110623bsfd]
- (15) *pro* hi-'nehpayk- \emptyset -a hipt [ko-nya ke-x *pro*
3SG 3SUBJ-bring-P-REM.PAST food.NOM [RP-ACC C_{A'}-1 1SG
'a-w-caa-qa *pro* [weet'u *pro* 'a-himkasayq-ca- \emptyset ____]].
3OBJ-tell-IMPERF-REC.PAST 3SG [NEG 1SG 3OBJ-find.tasty-IMPERF-PRES ____]]
'He brought food that I told him I don't like.' [20140826bsfd]

Second, the relative pronoun may not be separated from the gap by an adjunct or coordinate island:

- (16) * 'Isii hii-we-s haama **ko-nim** ke-m *pro* lilooy-no'qa [c'alawí
who.NOM 3SUBJ-be.PRES man.NOM RP-ERG C_{A'}-2 2SG be.happy-MODAL [if
____ paa-ni-yo'qa cepeepy'u \hat{x} ti's-ne]?
____ 3/3-make-MODAL pie-ACC]
Intended: 'Who is the man *x* such that you would be happy if *x* made pies?' [20140826bsfd]
- (17) * Mine hii-wes picpic **yo \hat{x}** ke ['eek'ex kaa ____] hii-wes
where 3SUBJ-be.PRES cat.NOM RP.NOM C_{A'} [magpie.NOM and ____] 3SUBJ-be.PRES
kasłcím?
same.size
Intended: 'Where is the cat *x* such that the magpie and *x* are the same size?' [20140826bsfd]

Third, relative clauses are themselves islands:

- (18) * 'Ituu₁ pro 'e-'peewi-se- \emptyset 'aayato-na [_{CP} yo \hat{x} ₂ ke 2
 what.NOM 2SG 3OBJ-look.for-IMPERF-PRES woman-ACC [_{CP} RP.NOM C_{A'} 2
 ha-ani-tato 1]?
 3SUBJ-make-HAB.PRES 1]
 Intended: 'What₁ are you looking for the woman who makes 1?' [20130702bsfd]

Language-internal evidence of an \bar{A} dependency comes from the fact that the same C element, *ke*, appears in relative clauses and in *wh*-questions (where it is optional). (This example shows ϕ -agreement on the complementizer, as do (15) and (16) above; this is discussed below.)

- (19) 'Isii-nm (**ke-m**) hi-wapaayata-yo' pro?
 who-ERG (C_{A'}-2) 3SUBJ-help-PROSP 2SG
 'Who is going to help you?' [20130626]

Notably, *ke* is not a general-purpose subordinator: it cannot occur in the complements of the verbs *hi* 'say/tell' or *neki* 'think', including in cases where these verbs are along the path of relativization, as in (20b).

- (20) a. Beth hi-neki-se- \emptyset [_{CP} (*ke) Jill-nim pee-siw'e-nu'
 Beth.NOM 3SUBJ-think-IMPERF-PRES [(*C_{A'}) Jill-ERG 3/3-not.recognize-PROSP
 Matt-ne].
 Matt-ACC]
 'Beth thinks Jill won't recognize Matt.' [20140826bsfd]
- b. Kii hii-wes 'iniit ke yo \hat{x} ₁ Jack
 This.NOM 3SUBJ-be.PRES house.NOM C_{A'} RP.NOM Jack.NOM
 hi-hi-ce- \emptyset [_{CP} (*ke-x) 'iin hani- \emptyset -ya 1].
 3SUBJ-say-IMPERF-PRES [(*C_{A'}-1) 1SG.NOM make-PERF-REM.PAST]
 'This is the house that Jack said he built.' [20140826bsfd]

Deal (2016a:438) suggests that *ke* is akin to \bar{A} morphology in Chamorro and Hausa in spelling out the features that drive the final step of \bar{A} movement (Chung 1998, Green and Reintges 2001; see general discussion of the morphology of \bar{A} extraction at clause edges in Georgi 2014).

Thus far I have taken for granted that *ko/yo \hat{x}* is a relative pronoun and *ke* a complementizer. Poletto and Sanfelici (2018) discuss a triad of behaviors standardly held to differentiate relative pronouns, which are D elements, from complementizers, i.e. C elements. First is case: relative pronouns inflect for case, but complementizers do not. Second is sensitivity to features of the head noun, e.g. animacy: pronouns are sensitive to these features, whereas complementizers are not. Third is compatibility with adpositions: complementizers cannot be combined with adpositions, whereas pronouns can. These factors converge in Nez Perce on a diagnosis of *ko/yo \hat{x}* as a relative pronoun and *ke* as a complementizer.

In terms of case, relative pronouns show the same core case-marking pattern found elsewhere in the language, distinguishing nominative, ergative, and accusative. The case of a relative pronoun generally matches the case expected for the RC-internal gap; thus the RP is accusative in object-relative (21a) but ergative in transitive subject-relative (21b), repeated from above. (Exceptions to this pattern involve case attraction and are discussed in section 4.)

- (21) a. *pro* 'e-'peewi-se- \emptyset cepeepy'u \hat{x} ti's-ne [_{CP} ko-nya ke 'aayato-nm
 1SG 3OBJ-look.for-IMPERF-PRES pie-ACC [_{CP} RP-ACC C_{A'} woman-ERG
 paa-ny- \emptyset -a _].
 3/3-make-P-REM.PAST _]
 'I'm looking for the pie that the woman made.' [20140826bsfd]
- b. *pro* 'e-'peewi-se- \emptyset 'aayato-na [_{CP} ko-nim ke _
 1SG 3OBJ-look.for-IMPERF-PRES woman-ACC [_{CP} RP-ERG C_{A'} _
 paa-ny- \emptyset -a ki-nye cepeepy'u \hat{x} ti's-ne].
 3/3-make-P-REM.PAST this-ACC pie-ACC]
 'I'm looking for the woman who made this pie.' [20140826bsfd]

In terms of features of the head noun, relative pronouns show concord with the head noun in number. A table of relative pronouns by case and number is shown in (22); examples of plural relative pronouns are shown in (23).⁸

(22) Case and number in relative pronouns

	SINGULAR	PLURAL	
NOM	yo \hat{x}	yo \hat{x} me	
ERG	konim	konmam	
ACC	konya	konmana / yo \hat{x} mene	[idiolectical variation]

- (23) a. Manaa we'nikt 'e-w-siix ha-'aayato-nm, [yo \hat{x} -me ke
 how name.NOM 3GEN-be.PRES.PL PL-woman-GEN [RP.NOM-PL C_{A'}
 hi-w-siix ti-ta'c we'np-e'weet]?
 3SUBJ-be.PRES.PL PL-good sing-AGT]
 'What are the names of the women, the ones who are good singers?' [20130703bsfd]
- b. Meeli-nm hi-'nahpayk-oo- \emptyset -ya *pro* lepit ciq'aamqal [yo \hat{x} -me ke-x
 Mary-ERG 3SUBJ-bring-APPL-P-REM.PAST 1SG two dog.NOM [RP.NOM-PL C_{A'}-1
 hi-pa-ka'np-o'qa *pro*].
 3SUBJ-S.PL-bite-MODAL 1SG]
 'Mary brought me two dogs that could bite me.' [20160615bsfd]

The complementizer does not show any parallel behavior, either regarding number or regarding case. The core form of the complementizer is always *ke*, regardless of whether the gap is nominative (6a), accusative (13a), or ergative (13b), and whether the head noun is singular or plural. Rather than sensitivity to these factors, which are associated with the D status of the relative pronoun, the complementizer *ke* shows ϕ -agreement with the subject and/or object of the embedded clause. This pattern is analyzed in the interaction/satisfaction theory of Agree in Deal 2015a: the ϕ -probe borne by C agrees with all ϕ -features, starting with those of the subject, until the feature [ADDR] is encountered. Person agreement is morphologically overt with first and second person but not with third. The examples in (24) involve relativization of the theme of a ditransitive, which

⁸ The RC in (23b) occurs within the theme of a ditransitive, which is always nominative in Nez Perce. Note that this example shows case attraction: the RC internal gap is ergative, but the relative pronoun is nominative, like the head noun.

leaves two other nominals available for agreement in the clause. As these examples show, complementizer agreement may target the subject (24a,d), the primary object (24b), or both (24c), depending on the distribution of person features in the clause.

- (24) a. *ciickan yoŋ ke-x pro 'ew-'nii-∅-ye pro*
 blanket.NOM RP.NOM C_{A'}-1 1SG 3OBJ-give-P-REM.PAST 3SG
 'the blanket that I gave to her' [20130627bsfd]
- b. *ciickan yoŋ ke-x Beth-nim hi-'nii-∅-ye pro*
 blanket.NOM RP.NOM C_{A'}-1 Beth-ERG 3SUBJ-give-P-REM.PAST 1SG
 'the blanket that Beth gave to me' [20130627bsfd]
- c. *ciickan yoŋ ke-m-ex pro 'inii-∅-ye pro ____*
 blanket.NOM RP.NOM C_{A'}-2-1 1SG give-P-REM.PAST 2SG ____
 'the blanket that I gave to you' [20130627bsfd]
- d. *ciickan yoŋ ke-m pro pii-'ni-∅-m-e pro ____*
 blanket.NOM RP.NOM C_{A'}-2 2SG RECIP-give-P-CIS-REM.PAST 1SG ____
 'the blanket that you gave to me' [20130627bsfd]

This behavior would be unusual if *ke* were a D head, as what matters for its pattern of agreement is solely ϕ -features of *other* arguments, rather than those native to the DP. Furthermore, as Deal (2015a) discusses, those arguments are considered by the Agree algorithm in a way that begins with the highest nominal in the embedded clause (the subject). This follows straightforwardly if the probe originates on the C head and probes into its c-command domain. It is less clear how to derive this pattern on a relative-pronoun analysis of *ke*.⁹

Turning now to adpositional relatives, adpositions are generally null in Nez Perce, with their presence detectable through particular cases they assign to their complement DPs, e.g. instrumental in (25). Note that the instrumental case shows case concord across the PP-internal DP.¹⁰

- (25) *pro he-'eey's-ce-∅ [PP ∅ kon-ki picpic-ki]*
 3SG 3SUBJ-be.joyful-IMPERF-PRES [P that-INST cat-INST]
 'She's joyful about that cat.' [20180627bsfd]

Adpositional relativization is possible and shows case assignment to the relative pronoun (and not the complementizer) that parallels what is seen on the D head of a PP complement generally. Thus the same form *konki* appears in (26) (as a relative pronoun) as in (25) (as a demonstrative).

⁹ Patterns of nominals apparently agreeing with each other are not unknown (see Troike 1981, Polinsky, Radkevich, and Chumakina 2017, Clem and Deal To appear), but these data show a pattern quite unlike what is found for Nez Perce *ke*. In Coahuilteco and Kolyma Yugahir, ϕ -features from the subject appear on the object; in Shawi and Archi, ϕ -features from the absolutive appear on the ergative. In these systems, whether a certain DP hosts ϕ -features from another argument is determined by the case and/or structural position of that DP. For *ke*, in contrast, the agreement pattern is not sensitive to what position is relativized. As Deal (2015a) shows, the Agree algorithm for *ke* starts with the subject and possibly (depending on the subject's features) then proceeds to consider lower arguments. The fact that the pattern of agreement found on *ke* is not sensitive to the case or structural position of what is relativized thus suggests that *ke* is not a relative pronoun.

¹⁰ Case concord for demonstratives and adjectives is generally optional in Nez Perce. See Deal (2016c).

(26) *soo*̂ [[\emptyset *kon-ki*] *ke-x pro siis* *hani-tato*]
 spoon.NOM [[P RP-INST] $C_{A'}$ -1 1SG soup.NOM make-HAB.PRES]
 ‘the spoon I make soup with’ [20130703bsfd]

This behavior is again as expected on the assumption that the relative pronoun is a D head in (26) just as in (25); the diagnosis of *ke* as a C head explains why its form does not vary with the introduction of the PP structure.

Having reviewed how these three diagnostics for relative pronouns vs. complementizers apply in Nez Perce, it should be noted that Poletto and Sanfelici (2018) cast doubt on whether these properties indeed diagnose categorial (D vs. C) status, reviewing evidence from various old Romance varieties. Although Modern Italian *che* is classifiable as a C head by these properties, they argue it should instead be treated as a featurally bleached relative pronoun, in line with its historical antecedents. A parallel move for Nez Perce would be to treat *ke* as a relative pronoun, rather than a C head. In addition to the challenge for this view in connection with agreement noted above, a further challenge is that *ko/yo*̂ and *ke* systematically co-occur: relative clauses in the language must now be taken to systematically contain not just one but *two* relative pronouns.¹¹ It is not clear why this would be in syntactic or semantic terms—how is “double” relativization compositionally interpreted? And why is “single” relativization ruled out? What is the connection between *ke* and other moving elements, such that neither *ke* nor *ko/yo*̂ can serve as a relative pronoun by itself? Note that this question of how it could be that *ke* would depend on (another) \bar{A} element is avoided on the complementizer analysis, where *ke* is a C head hosting a feature driving \bar{A} movement and *ko/yo*̂ is the sole relative pronoun, moving to Spec,CP. In view of these challenges, I will assume moving forward that *ko/yo*̂ is indeed a relative pronoun, i.e. a D element, whereas *ke* is a C head originating in the left periphery.

3 Basic properties of relative embedding

Turning now to notional complementation structures, Nez Perce has a number of attitude predicates that require their notional complement to be “relative”. These are primarily (though not exclusively) predicates whose English translations would be classified as emotive factives.¹² A sample of such predicates is given below.

(27) a. *lilooy* ‘be happy’
 ’Aayat hi-llooy-ca- \emptyset [*yo*̂ *ke ma-may’as-nim*
 woman.NOM 3SUBJ-be.happy-IMPERF-PRES [RP.NOM $C_{A'}$ PL-child-ERG
 poo-paayata-s-ix- \emptyset *qiiwn-e*].
 3/3-help-IMPERF-S.PL-PRES old.man-ACC]
 ‘The woman is happy that the children are helping the old man.’ [20150618bsfd]

¹¹This conclusion is embraced for other “doubly filled comp” examples by Kayne (2014:§18), though the issues flagged just below are left unresolved.

¹²In (27), English translations generally classified as emotive factives are ‘be happy’, ‘be sad’, ‘be surprised’, ‘be joyful’, and ‘be bothered/unhappy’. ‘Remember’ is a cognitive factive (or ‘doxastic factive’ according to Djärv 2019); ‘be worried’ is not factive in English at all. Evidence for factivity in Nez Perce is discussed at the end of this section.

- b. *'etqew* ‘be sad’
pro hi-’etqew-ce- \emptyset [yo \hat{x} ke-x ’iin
 3SG 3SUBJ-be.sad-IMPERF-PRES [RP.NOM C_{A'}-1 1SG.NOM
 wixne-tet’ee-se- \emptyset].
 leave-GONNA-IMPERF-PRES]
 ‘He’s sad that I’m going to leave.’ [20160524fd]
- c. *cicwaay* ‘be surprised’
pro cicwaay-ca- \emptyset [yo \hat{x} ke lal \hat{x} hii-wes yaw’ic].
 1SG be.surprised-IMPERF-PRES [RP.NOM C_{A'} coffee.NOM 3SUBJ-be.PRES cold]
 ‘I’m surprised that the coffee is cold.’ [20180611bsfd]
- d. *timiipni* ‘remember’
 ’Aayat hi-tmiipni-se- \emptyset [yo \hat{x} ke *pro*
 woman.NOM 3SUBJ-remember-IMPERF-PRES [RP.NOM C_{A'} 3PL
 hi-pa-paay-n-a].
 3SUBJ-S.PL-arrive-P-REM.PAST]
 ‘The woman remembers that they arrived.’ [20150616bsfd]
- e. *'eey's* ‘be joyful’, *q'eese'* ‘be bothered, unhappy’, *tim'neenek* ‘be worried’
pro he-'eey's-ce- \emptyset / hi-q'eese'-ce- \emptyset /
 3SG 3SUBJ-be.joyful-IMPERF-PRES / 3SUBJ-be.bothered-IMPERF-PRES /
 hi-tim'neenek-se- \emptyset [yo \hat{x} ke *pro* hi-pa-paay-n- \emptyset].
 3SUBJ-be.worried-IMPERF-PRES [RP.NOM C_{A'} 3PL 3SUBJ-S.PL-arrive-P-PRES]
 ‘She’s joyful / bothered / worried that they arrived.’ [20150616bsfd]

The distinctive behavior of these predicates is that their clausal complement must contain a relative pronoun (*yo \hat{x}*) and a relative complementizer (*ke*). Omission of these elements produces ungrammaticality:

- (28) a. ’Aayat hi-llooy-ca- \emptyset *(yo \hat{x} ke) ma-may’ac
 woman.NOM 3SUBJ-be.happy-IMPERF-PRES RP.NOM C_{A'} PL-child
 hi-pa-paay-n- \emptyset .
 3SUBJ-S.PL-arrive-P-PRES
 ‘The woman is happy that the children arrived.’ [20150616fd]
- b. *pro* cicwaay-ca- \emptyset *(yo \hat{x} ke) *pro* kuleewit-nix
 1SG be.surprised-IMPERF-PRES RP.NOM C_{A'} 3SG evening-EMPH
 hi-paay-no’.
 3SUBJ-arrive-PROSP
 ‘I’m surprised that he/she will arrive very late at night.’ [20190613bsfd]

As previewed above, I refer to this type of notional complement clause as a relative embedding, or RE (borrowing this term from Caponigro and Polinsky 2011). In this section I discuss the following basic properties of REs. First, the complement is indeed subordinated. Second, complementation possibilities remain constant across both verbal and adjectival uses of the root. Third, all such predicates are factive (even when their English translations are not).

Let us first consider the connection between the two clauses in these examples. Evidence that the bracketed clauses are indeed embedded (and not, say, high adjuncts) comes from Condition C.

Baseline example (29a) shows that a pronoun in the embedded clause may co-refer with the matrix subject. However, the opposite is not possible, as example (29b) shows. Example (29c) confirms that this judgment is not due to a general ban on cataphora in the language; thus the inability of the pronoun and the name to co-refer in (29b) suggests that the matrix subject c-commands the embedded clause.

- (29) a. Meeli hi-llooy-ca- \emptyset [yo \hat{x} ke *pro*
 Mary.NOM 3SUBJ-be.happy-IMPERF-PRES [RP.NOM C_{A'} 3SG
 hi-we'np_i-se- \emptyset].
 3SUBJ-sing-IMPERF-PRES]
 'Mary_i is happy she_{i/j} is singing.' [20170612bsfd]
- b. *pro* hi-llooy-ca- \emptyset [yo \hat{x} ke Meeli
 3SG 3SUBJ-be.happy-IMPERF-PRES [RP.NOM C_{A'} Mary.NOM
 hi-we'np_i-se- \emptyset].
 3SUBJ-sing-IMPERF-PRES]
 'S/he_{*i/j} is happy Mary_i is singing.'
 Consultant: "Someone else is happy that Meeli is singing." [20170612bsfd]
- c. Ke mawa *pro* 'ip-nim-'niit-pa hi-paay-no', kaa *pro*
 C_{A'} when 3SG 3SG-GEN-house-LOC 3SUBJ-arrive-PROSP, then 1SG
 'e-cewcew-nu' Mary-na.
 3OBJ-call-PROSP Mary-ACC
 'When she_i arrives home, I will call Mary_i.' [20170523bsfd]

Note that these data directly contrast with data provided by Clem (2022) to show that notional complement clauses in Amahuaca are in fact adjuncts originating high in the matrix clause.

Further reason to think the embedded clause occurs relatively low in Nez Perce RE constructions comes from deverbal relative embedding predicates. Note to begin with that while various relative-embedding verbs in Nez Perce are translation equivalents of English adjectives, these items are clearly verbal rather than adjectival in the examples we have seen thus far. As noted in section 2, Nez Perce verbs inflect for the person and number of their arguments as well as for TAM. None of this inflection is available to adjectives; rather, predicative adjectives must occur with a copular verb. In (30), I exemplify this behavior for an uncontroversial verb (*paay*, 'to arrive') and a simplex adjective (*himeeq*'is 'big').

- (30) a. Harold hi-paay-ca- \emptyset .
 Harold.NOM 3SUBJ-arrive-IMPERF-PRES
 'Harold is arriving.' [20070611bs]
- b. Yo \hat{x} saaslaqs hii-wes himeeq'is.
 DEM.NOM moose.NOM 3SUBJ-be.PRES big
 'That moose is big.' [20130702bsfd]

The examples in (31) show the same contrast for forms built from the root *lilooy* 'be happy'. The verbal version, (31a,b), shows ϕ -inflection (the prefix *hi-* for third person subject) and TAM-inflection (the suffix *-ca*, for imperfective aspect) flanking the root. The adjectival versions, (31c),

require a ϕ - and TAM-inflected copula, along with a deverbalizing morpheme on the root.¹³

- (31) a. Haacwal hi-llooy-ca- \emptyset .
 boy.NOM 3SUBJ-be.happy-IMPERF-PRES
 ‘The boy is happy.’ [20160526fd]
- b. *pro* lilooy-ca- \emptyset .
 1SG be.happy-IMPERF-PRES
 ‘I am happy.’ [20091208bs]
- c. *pro* lilooy-’c / lilooy-nin’ wees.
 1SG be.happy-ADJ / be.happy-PART be.PRES
 ‘I am happy.’ [20091208bs]

The relative complementation structure is preserved under adjectivalization, as (32) shows. (See (27c) for *cicwaay* ‘be surprised’ occurring as a verb.)

- (32) a. ’Aayat lilooy-’c hii-wes yo \hat{x} ke ma-may’ac
 woman.NOM be.happy-ADJ 3SUBJ-be.PRES RP.NOM C_{A'} PL-child
 hi-pa-paay-n- \emptyset .
 3SUBJ-S.PL-arrive-P-PRES
 ‘The woman is happy the children arrived.’ [20150616bsfd]
- b. Cicwaay-’s yo \hat{x} ke weet’u hi-weeqi-se!
 be.surprised-ADJ RP.NOM C_{A'} NEG 3SUBJ-rain-IMPERF-PRES
 ‘(It’s) surprising that it isn’t raining!’ [20170606bsfd]

This fact suggests that adjectivalization occurs above the level at which the root combines with its notional complement, which in turn suggests that the embedded clause occurs relatively low—in a standard complement position or similar—inside the matrix clause.¹⁴

We now add an important basic semantic property to the profile of relative embeddings that is taking shape: REs are factive. While this is perhaps unsurprising for predicates such as *lilooy* ‘be happy’, *cicwaay* ‘be surprised’, and *timiipni* ‘remember’, whose English translations are factive, it is true as well for predicates such as *tim’neenek* ‘worry’ as well. (A better English translation of *tim’neenek*, perhaps, would be ‘feel worried about the fact that’.) In making this assessment I draw on methodological work on projective content crosslinguistically by Tonhauser et al. (2013). Following the themes of that work, consultants were asked to imagine they had overheard certain snippets of conversation in Nez Perce; they were then asked whether they would draw particular inferences from the overheard sentences. An example is shown below for *lilooy* ‘be happy’. (The parenthesized English translation is for the ease of readers and was not provided to consultants as part of the task.)

¹³For this particular root this can be either -’c, which generally derives adjectives, or the participle-forming suffix -(n)in’. On the latter see Deal 2019a.

¹⁴To be clear, these data do not speak to the question of whether notional complements are indeed complements, or rather very low modifiers, as some recent work has proposed; see note 1. They simply suggest that they occur in close proximity to the root, such that the addition of derivational morphology does not alter their ability to compose.

(33) Linguist: “Suppose you overheard this:

Weet'u 'in-haama hi-llooy-ca-∅ [yô ke Fido
NEG 1SG-husband.NOM 3SUBJ-be.happy-IMPERF-PRES [RP.NOM CA' Fido.NOM
hi-ckiliitoq-∅-a].
3SUBJ-go.back-P-REM.PAST]

(My husband isn't happy that Fido went back.)

Would you think the husband was happy?”

Consultant: “No.”

Linguist: “Would you think the dog went back?”

Consultant: “Went back, uh-huh (yes). Wherever he came from.” [20170612bsfd]

In this example, the consultant was asked both about a matrix clause inference (concerning the husband) and about an embedded clause inference (concerning Fido, the dog). Crucially, the matrix clause is negated. As expected for a factive predicate embedded under negation, the attitudinal content of the predicate is negated (the husband is not happy), but the content of the embedded clause escapes negation (Fido *did* go back), i.e. it projects. The latter of these judgments is the crucial data point indicative of factivity. An example showing a similar inference to the complement under matrix negation is shown in (34), this time for *tim'neenek* ‘be worried (about the fact that)’.

(34) Linguist: “Suppose you overheard this:

Weet'u 'in-haama hi-tim'neenek-se-∅ [yô ke kimti
NEG 1SG-husband.NOM 3SUBJ-be.worried-IMPERF-PRES [RP.NOM CA' new
ciq'aamqal hi-wahoo-tato].
dog.NOM 3SUBJ-howl-HAB.PRES]

(My husband isn't worried that the new dog howls.)

Would you think that dog was a howler?”

Consultant: “The dog IS a howler, and the husband, it doesn't bother him. That's what it's referring to.” [20170612bsfd]

In a series of trials, sentences containing the relative embedding verbs *lilooy* ‘be happy’, *cicwaay* ‘be surprised’, *timiipni* ‘remember’, and *tim'neeneki* ‘be worried (about the fact that)’ were presented to consultants in this type of format. In nine cases, the predicate in question was presented in an entailment-cancelling environment, whether in the scope of negation (as in the examples above), in a question, or in the antecedent of a conditional. Across all of these trials, consultants endorsed the complement of the relative embedding verb. This indicates reliable projective behavior for the complements of these predicates. As expected, these inferences were also drawn when the predicate occurred in a simple upward entailing environment (without an entailment-cancelling operator). Also as expected, these inferences notably contrasted with control trials using the verb *neki* ‘think’ (which does not take a relative complement). When the matrix verb is *neki*, consultants do not make an inference to the embedded clause content:

- (35) Linguist: “Suppose you overheard this:
 Weet’u *pro* hi-neki-se- \emptyset [watiisx hi-weeqi-yu’].
 NEG 3SG 3SUBJ-think-IMPERF-PRES [1.day.away 3SUBJ-rain-PROSP]
 (S/he doesn’t think it’s going to rain tomorrow.)
 Would you think it was going to rain the next day?”
 Consultant: “No... I don’t think so.” [20170607bsfd]
- (36) Linguist: “Suppose you overheard this:
 Weet Angel hi-neki-se- \emptyset [hiteemenew’eet
 Y.N Angel.NOM 3SUBJ-think-IMPERF-PRES [student.NOM
 hi-pe-kuu- \emptyset -ye Siminikem-x]?
 3SUBJ-S.PL-go-P-REM.PAST Lewiston-to]
 (Does Angel think the students went to Lewiston?)
 What would you think about the kids?”
 Consultant: “They must have planned on going. I don’t know if they went or not, she’s asking if Angel **thinks** they went. Sounds like no one knows for sure.” [20170609bsfd]

Recent work on presupposition is careful to distinguish between content that is projective, i.e. able to escape entailment-cancelling operators, versus content that is familiar/given/discourse-old. (See Tonhauser et al. (2013) as well as the specific discussion of factivity in Djärv (2019).) Note that the methodology just discussed assesses only projection—thus in claiming that relative embedding verbs are factive, what I claim is that their complement clauses project.

4 External syntax: relative embeddings are CPs

Previous work on relative embeddings across languages has reached mixed conclusions concerning the presence of a DP layer outside the CP. On one hand, Aboh (2005) argues that relative embeddings in Gungbe are relative CPs lacking an outer DP. Similar conclusions are reached by Haegeman and Ürögdi (2010) for certain English notional complement clauses that they propose involve a (covert) relativization structure. On the other hand, Hanink and Bochnak (2017) argue for Washo that a nominal layer is in fact the sole commonality between factive notional complement clauses and relative clauses. In a similar vein, Caponigro and Polinsky (2011) analyze relative complements in Adyghe as DPs, containing both a noun head and a D layer: the relative CP modifies a noun which is usually silent, but which can be made overt. Given the factivity of relative complements in Nez Perce, applying such a perspective to this language would of course dovetail with the idea that factive complements in general involve nominal structure (Kiparsky and Kiparsky 1970, Kastner 2015, Hanink and Bochnak 2017, among many others). At an even broader scale, the idea that *all* apparent CP complementation structures involve relative embedding with a (sometimes null) nominal head is advanced by Kayne (2008, 2014) and Arsenijević (2009).

There are three primary reasons to favor a CP analysis of Nez Perce relative embeddings as opposed to a DP analysis. As we will see, each of these reasons involves a contrast between Nez Perce and certain other languages (notably Adyghe), demonstrating crosslinguistic variation. Consider first the behavior of relative embedding complements for case and agreement. For Adyghe, Caponigro and Polinsky (2011) demonstrate that relative embedding structures are treated like DP complements in these respects: the complement itself is marked for case as a DP object would be

is that relative embedding clauses in Nez Perce have a case/agreement profile markedly unlike that of DPs with these semantic properties.

Selection provides a second type of evidence against DP status. A long-standing factor motivating nominal analyses of factive complements in English and other languages is that verbs taking factive CPs (also) allow DP arguments, while non-factive verbs often do not:

- (40) a. I { resent / remember / know } the claim that John stole the jewels.
 b. *I { think / said / claimed } the { story / idea / N } that John stole the jewels.
 (Haegeman and Ürögdi 2010:133)

Similarly, Caponigro and Polinsky (2011) demonstrate for Adyghe that verbs allowing relative embedding complements also allow ordinary nominal complements. The logic is straightforward: if apparent CP complements / factive complements are always DPs, we expect to see them occurring only in positions where DPs are otherwise licensed. For Nez Perce, however, it is not the case that verbs allowing relative embedding complements consistently allow DP complements. Many verbs taking relative embeddings simply cannot take DPs. The sentences in (41) show that 'eey's 'be joyful', for instance, is unacceptable with a DP object regardless of whether or not the object triggers transitive case/agreement:

- (41) a. *Naaqc-nim qiiwn-e pe-'eey's-ce- \emptyset .
 one-ERG old.man-ACC 3/3-be.joyful-IMPERF-PRES
 Intended: 'Someone is joyful about the old man.' [20160601fd]
 b. **pro* he-'eey's-ce- \emptyset titwaatit.
 3SG 3SUBJ-be.joyful-IMPERF-PRES story.NOM
 Intended: 'S/he is joyful about a story.' [20180621bsfd]

Relative embeddings are also possible as apparent complements to the unanalyzable particle *qe'ciyeew'yew'* 'thank you', which disallows all nominal complements:

- (42) a. Qe'ciyeew'yew' [yo \hat{x} ke-m *pro* tamtaayn-im *pro*].
 thank.you [RP.NOM C_{A'}-2 2SG tell.news-CISLOC 1SG]
 'Thank you for informing me.' [20180619bsfd]
 b. *Qe'ciyeew'yew' hipt / tamtaayn.
 thank.you food.NOM / news.NOM
 Intended: 'Thank you for the food / news.' [20180619bsfd]

The fact that relative embeddings do not have the external distribution of nominals again suggests that they are not DPs.

Finally, a third point indicative of a lack of nominal structure in relative embeddings comes from the internal syntax of the relative complement. While some proposals for a nominal superstructure in relative-like complement clauses have called simply for a DP layer above CP (Krapova 2010, Hanink and Bochnak 2017, Pietraszko 2019), Caponigro and Polinsky (2011) show for Adyghe that an overt noun with a meaning such as 'news' or 'validity/verity/truth' can occur immediately after the CP, i.e. in the position where RC heads typically appear in the language:

(43) Adyghe (Caponigro and Polinsky 2011:106)

[*DP* [*CP* Č'ale-r qə-zə-re-k_wež'ə-š'tə] **qeba-r**] ə-g_wəɾə'wεβ.
 boy-ABS INV-REL.OBL-APPL-return-FUT news-ABS 3SG.ERG-understood
 'S/he understood that the boy will arrive.'

Nez Perce is again different. The noun *tamtaayn* 'news' cannot be added to the edge of a relative embedding; indeed, I have not found any noun that may be added in this position.

(44) *pro* hi-llooy-ca-∅ [(*tamtaayn) yoχ ke Angel
 3SG 3SUBJ-be.happy-IMPERF-PRES [(news.NOM) RP.NOM C_{A'} Angel.NOM
 hi-wehye-∅-m-∅].
 3SUBJ-arrive-P-CIS-PRES]
 Intended: 'S/he is happy about the news that Angel will arrive.' [20180619bsfd]

The overall conclusion is that relative embeddings lack both the internal and external syntax of DPs: they do not interact with case and agreement as DPs do, do not pattern with DPs for selection, and are not built on nominal projections as DPs are.

A variant of the DP analysis calling for special attention in light of these arguments is that of Krapova (2010). Krapova (2010) analyzes relative embeddings in Bulgarian as DPs contained inside a larger, sometimes covert, PP layer. The predicates that allow relative embeddings in Bulgarian are emotive factives, like many Nez Perce relative embedding predicates are. In support of the PP analysis, Krapova reports that Bulgarian emotive factive predicates allow relative embeddings iff they also select the preposition *za* 'for'. She proposes accordingly that Bulgarian relative embeddings are really *za*-PPs. Extending this analysis to Nez Perce potentially explains why relative embeddings do not have the selectional behavior or case/agreement behavior of DPs: there *is* a DP layer, but only encased within a larger PP.¹⁵ And this approach has some initial plausibility: predicates that allow relative embeddings also allow phrases marked with the instrumental suffix *-ki* (discussed above as a case marker assigned by a null P head). Structures featuring *ki*-PPs receive translations that are reminiscent of the meanings of sentences containing relative embeddings. The *ki*-PP, like the relative embedding, specifies what the attitude is about.

(45) *pro* he-'eey's-ce-∅ [*PP* ∅ kon-ki picpic-ki].
 3SG 3SUBJ-be.joyful-IMPERF-PRES [P that-INST cat-INST]
 'She's joyful about that cat.' [20180627bsfd]

(46) *pro* 'etqew-ce-∅ / tim'neenek-se-∅ [*PP* ∅ tamtaay-ki].
 1SG be.sad-IMPERF-PRES / be.worried-IMPERF-PRES [P news-INST]
 'I'm sad / worried about the news.' [20180619bsfd, 20180621bsfd]

There remain two important challenges for a PP approach. First is the recurring problem of selectional mismatch: the distribution of *ki*-PPs with 'about' readings is wider than the distribution of REs. REs are impossible with *hi* 'say/tell' and *neki* 'think', but *ki*-PPs with 'about' readings are possible:

¹⁵As to why no noun is possible, Krapova (2010) posits a direct DP shell above CP; see Hanink and Bochnak (2017), Pietraszko (2019) (and from a different direction, Hankamer and Mikkelsen 2021) for similar proposals.

- (47) *hi* ‘say/tell’
- a. *pro* ’a-w-caa-qa ’in-lawtiwaa-na [(*yô ke)
 1SG 3OBJ-say-IMPERF-REC.PAST 1SG-friend-ACC [(*RP.NOM C)
 hi-weeqi-yu’].
 3SUBJ-rain-PROSP]
 ‘I told my friend it is going to rain.’ [20180625bsfd]
- b. *pro* ’ew-∅-ce-ne ’in-lawtiwaa-na [∅ tamtaay-ki].
 1SG 3OBJ-say-IMPERF-REM.PAST 1SG-friend-ACC [P news-INST]
 ‘I told my friend about the news.’ [20180625bsfd]
- (48) *neki* ‘think’
- a. *pro* hi-neki-se-∅ [(*yô ke) hi-waaqi-sa-qa watiisx].
 3SG 3SUBJ-think-PRES [(RP.NOM C) 3SUBJ-rain-IMPERF-REC.PAST 1.day.away]
 ‘She thinks it was raining yesterday.’ [20180619bsfd]
- b. *pro* neki-se-∅ [∅ kimti tamtaay-ki]. Weet’u ta’c *pro* hii-wes.
 1SG think-IMPERF-PRES [P new news-INST] NEG good 3SG 3SUBJ-be.PRES
 ‘I’m thinking about the latest news. It’s not good.’ [20180628bsfd]

Ki-PPs with ‘about’ readings have the general behavior of adjuncts: they can appear with any predicate, modulo semantic incompatibility. REs, on the other hand, have the general behavior of arguments: they must be selected by a predicate, and some attitude roots but not others are able to select them.¹⁶

The second challenge comes from relative pronoun marking. In Bulgarian, according to Krapova, the *za* P can be silent when followed by an RE. However, it may also surface overtly with the relative complementizer *deto*, forming *zadeto*. In a *zadeto* RE, we see the PP structure overtly.

- (49) Bulgarian (Krapova 2010:1268)
- Sāžaljavam, [_{PP} za-_{CP} deto srešta-ta im se e provalila]].
 regret.1SG [for-[C.REL meeting.DEF their REFL is failed.PRT]]
 ‘I regret that their meeting has failed.’

Nez Perce grammar offers the opportunity for a similar signal of PP structure, though coming from a different morphosyntactic direction. As noted briefly in section 2, Nez Perce relative clauses permit case attraction: the relative pronoun may surface not in the case assigned internal to the RC, but rather in the case assigned to the DP containing the RC (Deal 2016a). In (50), the RC-internal case is nominative and the case assigned to the larger DP in the matrix is accusative. The RP appears in the baseline nominative case in (50a) and in the attracted accusative case in (50b).

- (50) a. *pro* ’e-suki-se-∅ ’aayato-na yô ke ____{NOM}
 1SG 3OBJ-recognize-IMPERF-PRES woman-ACC RP.NOM C_A
 hi-paay-n.
 3SUBJ-arrive-P-PRES
 ‘I recognize the woman who just came in.’ [20100727bsfd]

¹⁶Note that this type of issue has potential bearing on Bulgarian as well. Krapova claims not that *all* predicates that allow *za*-PPs take REs, but strictly that emotive factives that *za*-PPs take REs (pp 1266-7). The question is how to account for this double requirement.

- b. *pro* 'e-suki-se- \emptyset 'aayato-na **ko-nya** ke $_\text{NOM}$
 1SG 3OBJ-recognize-IMPERF-PRES woman-ACC RP-ACC $C_{A'}$
 hi-paay-n.
 3SUBJ-arrive-P-PRES
 'I recognize the woman who just came in.' [20100727bsfd, 20180628bsfd]

Relative pronouns can be case-attracted to the instrumental *ki*-case. Note that example (52) features a true, noun-modifying relative clause, rather than a relative embedding.

- (51) *pro* tiw'elixnik-se- \emptyset [PP \emptyset [DP soox̂-ki [RC yo \hat{x}_1 / **kon-ki**₁ ke-x *pro*
 1SG stir-IMPERF-PRES [P [spoon-INST [RP.NOM / RP-INST $C_{A'-1}$ 1SG
 hani- \emptyset -ya $_\text{1}$]]].
 make-P-REM.PAST]]]
 'I'm stirring with the spoon that I made.' [20180625bsfd]
- (52) *pro* lilooy-ca- \emptyset [PP \emptyset [DP tamtaay-ki [RC yo \hat{x}_1 / **kon-ki**₁ ke-x
 1SG be.happy-IMPERF-PRES [P [news-INST [RP.NOM / RP-INST $C_{A'}$ -1
 Angel-nim hi-'nii-se-ne *pro* $_\text{1}$]]].
 Angel-ERG 3SUBJ-give-IMPERF-REM.PAST 1SG]]]
 'I'm happy about the news that Angel gave me.' [20180625bsfd]

If relative embeddings similarly contain a P head, we expect a similar pattern: the relative pronoun should be able to occur in instrumental case here as well. But case attraction to the supposed hidden P is impossible in REs:

- (53) a. **pro* lilooy-ca- \emptyset [PP \emptyset [DP [RC kon-ki ke weet'u
 1SG be.happy-IMPERF-PRES [P [[RP-INST $C_{A'}$ NEG
 hi-weeqi-se- \emptyset]]].
 3SUBJ-rain-IMPERF-PRES]]
 Intended: 'I'm happy it's not raining.' [20180621bsfd]
- b. *pro* lilooy-ca- \emptyset [yo \hat{x} ke weet'u hi-weeqi-se- \emptyset].
 1SG be.happy-IMPERF-PRES [RP.NOM $C_{A'}$ NEG 3SUBJ-rain-IMPERF-PRES]
 'I'm happy it's not raining.' [20180621bsfd]
- (54) a. **pro* tim'neenek-se- \emptyset [PP \emptyset [DP [RC kon-ki ke-x *pro* picpic
 1SG be.worried-IMPERF-PRES [P [[RP-INST $C_{A'-1}$ 1SG cat.NOM
 k'oomay-ca- \emptyset]]].
 be.sick-IMPERF-PRES]]
 Intended: 'I feel worried about the fact that my cat is sick.' [20180621bsfd]
- b. *pro* tim'neenek-se- \emptyset [yo \hat{x} ke-x *pro* picpic
 1SG be.worried-IMPERF-PRES [RP.NOM $C_{A'-1}$ 1SG cat.NOM
 k'oomay-ca- \emptyset]]].
 be.sick-IMPERF-PRES]]
 'I feel worried about the fact that my cat is sick.' [20180621bsfd]

I conclude that, despite its initial attraction, maintaining a PP analysis leads to overgeneration both in terms of the distribution of REs (for selection) and in terms of their internal shape (morphological case).

A remaining analytical option is that REs are exactly what they look like: CPs. This provides a straightforward approach to the data that was problematic for the DP and PP approaches. CPs aren't expected to render the clause formally transitive (presumably because they lack ϕ -features), accounting for the case and agreement facts.¹⁷ The absence of nouns is expected; nouns are not freely generated on CP edges. CPs, DPs, and *ki*-PPs simply have different distributions; we might expect CPs to appear in positions in which these other phrases are not licensed, and vice versa. And finally, the fact that the relative pronoun must be nominative, and cannot be case-attracted, follows from the fact that CPs do not participate in the case system. Since CPs do not receive case, there is no "external" case assigned which the relative pronoun can be attracted to. These conclusions suggest that the view advanced by Kayne (2008, 2014) and Arsenijević (2009), according to which all apparent CP complementation structures involve (potentially hidden) nominal structure, is too strong. The overall picture is instead in line with the CP treatment of relative embeddings by Aboh (2005) and Haegeman and Ürögdi (2010).

5 Internal syntax: high relativization

Let us now consider the internal structure of the relative complement, in particular the question of why and how a relative pronoun and an \bar{A} complementizer appear on the edge of these clauses. The appearance of the complementizer *ke*, which is found otherwise only in cases of \bar{A} movement to Spec,CP, provides strong initial evidence that \bar{A} movement is present in these clauses as well. In this section I argue that REs do indeed involve \bar{A} movement of a relative operator to Spec,CP, and that the relative operator originates in a high functional projection in the relative clause.

Beyond the morphological similarities between relative clauses and REs, one major reason to posit movement of a relative operator in REs comes from island effects. REs have in common with relative clauses is that they are fully opaque for \bar{A} extraction, i.e. they are strong islands. Contrast the baseline declarative in (55a) with attempted extraction of the embedded object, (55b), and the embedded subject, (55c).

- (55) a. 'Aayat hi-llooy-ca- \emptyset [yo \hat{x} ke ma-may'as-nim
 woman.NOM 3SUBJ-be.happy-IMPERF-PRES [RP.NOM C_{A'} PL-child-ERG
 poo-paayata-s-ix- \emptyset qiwn-e].
 3/3-help-IMPERF-S.PL-PRES old.man-ACC]
 'The woman is happy that the children are helping the old man.' [20150618bsfd]
- b. * 'Isii-ne 'aayat hi-llooy-ca- \emptyset [yo \hat{x} ke
 who-ACC woman.NOM 3SUBJ-be.happy-IMPERF-PRES [RP.NOM C_{A'}
 ma-may'as-nim poo-paayata-s-ix- \emptyset __]?
 PL-child-ERG 3/3-help-IMPERF-S.PL-PRES]
 Intended: 'Who₁ is the woman happy that the children are helping __₁?' [20150618bsfd]

¹⁷Whether or not CPs bear ϕ -features is discussed as a point of crosslinguistic variation by Halpert (2019). The idea that CPs lack ϕ -features in Nez Perce is discussed in connection with hyperraising in Deal (2017).

- c. * 'Isii-me-m 'aayat hi-llooy-ca- \emptyset [yo \hat{x} ke _
 who-PL-ERG woman.NOM 3SUBJ-be.happy-IMPERF-PRES [RP.NOM C_{A'}
 poo-paayata-s-ix- \emptyset qiwn-e]?
 3/3-help-IMPERF-S.PL-PRES old.man-ACC]
 Intended: 'Who₁ is the woman happy that _1 are helping the old man?' [20150618bsfd]

Intransitive subjects also cannot be extracted from REs, as shown in (56).

- (56) * 'Isii Meeli hi-cciwaay-n-a [yo \hat{x} ke _
 who.NOM Mary.NOM 3SUBJ-be.surprised-P-REM.PAST [RP.NOM C_{A'}
 hi-we'npise- \emptyset]?
 3SUBJ-sing-IMPERF-PRES]
 Intended: 'Who₁ was Mary surprised _1 is singing?' [20170606bsfd]

This opacity is of special interest in light of two facts. First, as argued in the previous section, REs are CPs and lack a nominal superstructure. The island effect must therefore result from the structure of the CP itself, rather than from a ban of whatever sort on DP subextraction. Second, Nez Perce generally permits cross-clausal \bar{A} movement. Recall that the language distinguishes relative embedding predicates from non-relative embedding predicates (a distinction we return to in the next section). Complements of the latter type, which lack the distinctive *yo \hat{x} ke* of relative embedding, are \bar{A} transparent:¹⁸

- (57) a. 'Isii-ne Meeli hi-neki-se- \emptyset [*pro* pee-x-nu' _]?
 who-ACC Mary.NOM 3SUBJ-think-IMPERF-PRES [3SG 3/3-see-PROSP]
 'Who does Mary think she will see?' [20170605bsfd]
- b. 'Isii-nm 'im-lawtiwaa-nm hi-hi-n-e *pro* [_ 'ee
 who-ERG 2SG-friend-ERG 3SUBJ-tell-P-REM.PAST 2SG [2SG.CLITIC
 hi-'peewi-se- \emptyset]?
 3SUBJ-look.for-IMPERF-PRES]
 'Who did your friend tell you is looking for you?' [20120713bsfd]
- c. 'Isii-ne Meeli hi-cuukwe-ce- \emptyset , [*pro* 'e-ex-nu' _]?
 who-ACC Mary.NOM 3SUBJ-know-IMPERF-PRES [1SG 3OBJ-see-PROSP]
 'Who does Mary know she will see?' [20170605bsfd]

Such data confirm that it is some particular property of the CP in the RE structure that gives rise to the strong island effect. The obvious candidate for this property is the presence of a relativization dependency, given that relativization generally creates strong islands in Nez Perce (and crosslinguistically).

What is the origin site of the relative pronoun in an RE? This is a topic which (like DP vs. CP status) has seen diverging views in previous crosslinguistic work. On one hand, several strands of research have converged on a view of relative embeddings as involving movement of a relative operator originating relatively high in the functional structure of the clause. Caponigro and Polinsky

¹⁸In contrast to *neki* 'think' and *hi* 'say/tell', extraction from the complement of *cuukwe* 'know' was sometimes rejected by consultants—a fact which is perhaps unsurprising in view of the general slight degradation of extraction from the complements of 'know' in English (see e.g. Djärv 2019:38).

(2011) make this proposal for the visibly relative-like complement clauses in Adyghe discussed above; Arsenijević (2009) and Haegeman and Ürögdi (2010) reach the same conclusion for cases where the purported relativization structure is more covert. In contrast, Aboh (2005) notes for Gungbe that either a direct object or a verb copy may be fronted in relative-like embedding, arguing that these relatively low, lexical elements bear an event-related feature which triggers their relativization:

(58) Gungbe (Aboh 2005:274)

- a. [Àgásá₁ ló lé dǽ mí wlé ₁] vé ná Kòfí.
 crab DET NUM that.REL 1PL catch hurt for Kofi
 ‘The fact that we caught the crabs hurt Kofi.’
- b. [Wlé₁ dǽ mí wlé₁ àgásá ló lé] vé ná Kòfí.
 catch that.REL 1PL catch crab DET NUM hurt for Kofi
 ‘The fact that we caught the crabs hurt Kofi.’

I will now show that Nez Perce REs behave more like Adyghe than like Gungbe in this respect: what is relativized in this language is a *functional* element that originates *high* in the clausal structure, rather than a lexical element originating low.

Note to begin with that whatever is relativized in a Nez Perce RE is not obviously an argument. While the language of course permits arguments to be null inside REs (as it does in general), REs are also perfectly well formed with all of their arguments overt and in situ inside the CP (as well as the verb in a typical position). Examples (59) show this for intransitive and transitive clauses.

- (59) a. *pro* cicwaay-ca-∅ [yoχ ke lalχ hii-wes yaw’ic].
 1SG be.surprised-IMPERF-PRES [RP.NOM C_{A'} coffee.NOM 3SUBJ-be.PRES cold]
 ‘I’m surprised that the coffee is cold.’ [20180611bsfd]
- b. ’Aayat hi-llooy-ca-∅ [yoχ ke ma-may’as-nim
 woman.NOM 3SUBJ-be.happy-IMPERF-PRES [RP.NOM C_{A'} PL-child-ERG
 poo-paayata-s-ix-∅ qiiwn-e].
 3/3-help-IMPERF-S.PL-PRES old.man-ACC]
 ‘The woman is happy that the children are helping the old man.’ [20150618bsfd]

Seeing as all lexical elements remain inside CP, these data suggest that what is relativized is a functional element.

It is also notable that the case of the relative pronoun is always nominative in Nez Perce REs:

- (60) Angel hi-llooy-ca-qa { yoχ / *ko-nim / *ko-nya } ke
 Angel.NOM 3SUBJ-be.happy-IMPERF-REC.PAST { RP.NOM / *RP-ERG / *RP-ACC } C_{A'}
 Caan-im poo-paayata-sa-qa Meeli-ne.
 John-ERG 3/3-help-IMPERF-REC.PAST Mary-ACC
 ‘Angel was happy that John was helping Mary.’ [20170607bsfd]

This is in contrast to true relative clauses, where the relative pronoun surfaces in a variety of cases, depending (modulo case attraction) on its original position in the embedded clause. The data in (61) show that the relative pronoun is nominative when an intransitive subject is relativized, ergative when a transitive subject is relativized, and accusative when an object is relativized.

- (61) a. Mine hii-wes picpic [**yo** ke kine __
 where 3SUBJ-be.PRES cat.NOM [RP.NOM C_{A'} here
 hi-pinmix-sa-qa]?
 3SUBJ-sleep-IMPERF-REC.PAST]
 ‘Where is the cat that *t* was sleeping here?’ [20110623fd]
- b. Mine hii-wes picpic [**ko-nim** ke-x __ hi-ip-e’ni-s- \emptyset *pro*
 where 3SUBJ-be.PRES cat.NOM [RP-ERG C_{A'}-1 3SUBJ-eat- μ -P-PRES 1SG
 cuu’yem]?
 fish.NOM]
 ‘Where is the cat that *t* ate my fish?’ [20110627bsfd]
- c. Mine hii-wes sam’ \hat{x} [**ko-nya** ke-x *pro* ’a-sayqi-ca- \emptyset __]?
 where 3SUBJ-be.PRES shirt.NOM [RP-ACC C_{A'}-1 1SG 3OBJ-like-IMPERF-PRES]
 ‘Where is the shirt that I like?’ [20130622bs]

As noted in Deal 2016a, nominative is the default case used in Nez Perce for hanging topics, base-generated in the left periphery.

- (62) [_{DP} kii cepeepy’u \hat{x} tin’]₁, *pro* ’e-cuukwe-ce- \emptyset haama-na ke ko-nim
 [this.NOM pie.NOM] 1SG 3OBJ-know-IMPERF-PRES man-ACC C_{A'} RP-ERG
 paa-ny- \emptyset -a *pro*₁
 3/3-make-P-REM.PAST 3SG
 ‘This pie, I know the man who made it.’ [20140825bsfd]

A high origin site for relativization in REs predicts the nominative-only pattern of the RE relative pronoun: if the operator that is relativized in REs originates in the left periphery, it will never be within the syntactic domain in which other cases are assigned. Default case (nominative) is correctly predicted to be the only option available for its morphological encoding.

A final piece of evidence for high relativization in Nez Perce REs comes from the position of relative pronouns. As discussed in Deal 2016a, in ordinary relative clauses, Nez Perce relative pronouns freely alternate between two positions (without semantic consequences). One is a position to the left of C, between C and the NP head. I will call this the high position. The other is immediately to the right of C, apparently inside the relative clause. I will call this the low position.¹⁹

- (63) a. High RP:
 sam’ \hat{x} [_{CP} **ko-nya** ke-x *pro* ’a-sayqi-ca- \emptyset __]
 shirt.NOM [_{CP} RP-ACC C_{A'}-1 1SG 3OBJ-like-IMPERF-PRES]
 ‘the shirt that I like’ [20140825bsfd]
- b. Low RP:
 sam’ \hat{x} [_{CP} ke-x **ko-nya** *pro* ’a-sayqi-ca- \emptyset __]
 shirt.NOM [_{CP} C_{A'}-1 RP-ACC 1SG 3OBJ-like-IMPERF-PRES]
 ‘the shirt that I like’ [20140825bsfd]

¹⁹The careful reader will note that both structures have occurred in the RRC data presented thus far. An example with an RP in the low position can be found in (62).

Deal (2016a) shows that relative pronouns undergo \bar{A} movement regardless of which position they surface in; in both cases, RP movement is unbounded, island sensitive, and subject to \bar{A} intervention. She proposes that the two options arise due to cyclic movement of relative operators: the relative operator moves through an \bar{A} outer spec of TP on its way to Spec,CP, and it may be pronounced in either position.²⁰ Thus the difference between the two examples above concerns the pronunciation of copies in a movement chain. As to why movement of the RP transits through Spec,TP, Deal 2016a argues based on data from English and other languages that TP is a phase in relative clauses. It is notable, then, that in REs, the relative pronoun does not occur in the low position—only in the high one:

- (64) *pro* lilooy-ca- \emptyset { yo \hat{x} ke / *ke yo \hat{x} } *pro*
 1SG be.happy-IMPERF-PRES RP.NOM C_{A'} / C_{A'} RP.NOM 3PL
 hi-we'np-s-ix- \emptyset .
 3SUBJ-sing-IMPERF-S.PL-PRES
 'I amx happy that they are singing.' [20180619bsfd]

This follows if the origin site of the relative operator is not within the TP domain: the relative operator does not originate low enough to pass through the TP phase, and so cannot be pronounced in Spec,TP.

In sum, we have seen in this section that REs not only possess the CP-edge morphology of relative clauses, they also show the same island behavior. This confirms that the presence of similar morphology at the edge of REs and relative clauses is not due to a relatively trivial similarity such as shared CP status (as posited by de Cuba 2017). We have also seen that what is relativized is not an argument, but rather a functional element originating above the TP domain. This conclusion echoes previous work by Arsenijević (2009), Haegeman and Ürögdi (2010), and Caponigro and Polinsky (2011). The reader is referred to Caponigro and Polinsky (2011) for an explicit semantic analysis of this high relativization which may also be applicable to Nez Perce.

6 Relative vs. nonrelative embedding

Having now seen central aspects of the internal and external syntax of REs in Nez Perce, we return to the question of why some notional complement clauses but not others appear relative-like. Nez Perce presents us with the opportunity to ask the question internal to a single language, as some but not all notional complement clauses use the RE morphosyntactic strategy. The verbs *neki* 'think' and *hi* 'say/tell' strictly reject this strategy. The complements to these verbs have the morphosyntax of ordinary matrix clauses. I will call this *simplex embedding*.

- (65) a. *pro* hi-neki-se- \emptyset [(*yo \hat{x} ke) hi-waaqi-sa-qa
 3SG 3SUBJ-think-IMPERF-PRES [(RP.NOM C) 3SUBJ-rain-IMPERF-REC.PAST
 watiisx].
 1.day.away]
 'She thinks it was raining yesterday.' [20180619bsfd]

²⁰Support for a structural distinction between the two RP positions comes from the fact that while high RPs can be case attracted, low ones can't. See Deal 2016a.

- b. *pro* hi-i-caa-qa [(*yoŋ ke) watiisx
 3SG 3SUBJ-say-IMPERF-REC.PAST [(RP.NOM C) 1.day.away
 hi-weeqi-∅-ye].
 3SUBJ-rain-P-REM.PAST]
 ‘She said it rained yesterday.’ [20180619bsfd]

With the verb *cuukwe* ‘know’, the pattern is similar but with a slight nuance. Unlike relative embedding verbs such as *lilooy* ‘be happy’ and *timiipni* ‘remember’, *cuukwe* ‘know’ typically occurs without RE morphology; its complement looks like a matrix clause. Consultants did on rare occasions accept an RE with this verb, however, and on one documented occasion, produced such a structure, (66b).

- (66) a. Waaqo’ *pro* hi-cuukwe-ce-∅ [hi-weeqi-se-∅].
 now 3SG 3SUBJ-know-IMPERF-PRES [3SUBJ-rain-IMPERF-PRES]
 ‘Now she knows it’s raining.’ [20080616bs]
- b. % Weet’u *pro* hi-cuukwe-ce-∅ [yoŋ ke
 NEG 3SG 3SUBJ-know-IMPERF-PRES [RP.NOM C_A’
 hi-weeqi-sa-qa watiisx].
 3SUBJ-rain-IMPERF-REC.PAST 1.day.away]
 ‘She doesn’t know it was raining yesterday.’ [20180619bsfd]

It should be emphasized that structures like (66a), with simplex embedding, are extremely well documented, whereas the status of (66b) is more marginal. A conservative generalization would be that *neki* ‘think’, *hi* ‘say/tell’, and *cuukwe* ‘know’ are distinct from the RE verbs discussed so far in this paper in that they permit their notional complement clause to lack relative morphology.

We can set aside the idea that the simplex embedding examples above involve juxtaposition of clauses (or high adjunction), rather than subordination, thanks to the same type of Condition C data reviewed above for REs. In simplex clauses, like in REs, the matrix subject c-commands the embedded subject:

- (67) a. Meeli hi-cuukwe-ce-∅ [*pro* hi-wixne-nu’ Pasŋa-px].
 Mary.NOM 3SUBJ-know-IMPERF-PRES [3SG 3SUBJ-travel-PROSP Boise-to]
 ‘Mary_i knows she_{i/j} will go to Boise.’ [20170613bsfd]
- b. *pro* hi-cuukwe-ce-∅ [Meeli hi-wixne-nu’ Pasŋa-px].
 3SG 3SUBJ-know-IMPERF-PRES [Mary.NOM 3SUBJ-travel-PROSP Boise-to]
 ‘S/he_{*i/j} knows Mary_i will go to Boise.’
 Consultant: “It sounds like someone else knows.” [20170613bsfd]

The contrast between simplex embedding and REs also helps to clarify the relationship of RE morphosyntax to factivity. Using the same methodology applied to REs in section 3, we can confirm that *cuukwe* ‘know’ is factive, even when this verb does not take relative morphology in its complement. In (68), for instance, a ‘know’-report is embedded in a conditional antecedent, and consultants conclude that the complement clause is true.

(68) Linguist: “Suppose you overheard this:

C'alawi sepehiteemenew'eet hi-cuukwe-ce- \emptyset ['iin
 if teacher.NOM 3SUBJ-know-IMPERF-PRES [1SG.NOM
 k'oomay-ca- \emptyset], weet'u *pro* hi-cewcew-nuu-yu'-kum *pro*.
 be.sick-IMPERF-PRES] NEG 3SG 3SUBJ-call-APPL-PROSP-CIS 1SG
 (If the teacher knows that I am sick, she won't call me.)
 Would you think that person was ill?"

Consultant: “Well, I would think that person WAS ill. So he or she will not call her, if she knows.” [20170609bsfd]

Factivity cross-cuts the distinction between REs and simplex embedding. This suggests that the factive behavior of certain notional complements in Nez Perce cannot be uniformly attributed to some aspect of RE morphosyntax.

There are two primary perspectives to be contrasted on the difference between simplex embedding and REs. One is that the split between the two classes of clauses is merely at the surface level. This is the perspective of Kayne (2008, 2014) and Arsenijević (2009): all notional complement clauses are really relative clauses, underlyingly. The other is that the surface split is indicative of a deeper reality: notional complements with visible relative morphology have relative structures, whereas those without this morphology lack relative structures. Some but not all notional complements are relativization-based, then, as proposed by Haegeman and Ürögdi (2010), Caponigro and Polinsky (2011) and Haegeman (2012). I will present two types of arguments for this second type of perspective.

The first comes from a body of evidence showing that simplex complements need not contain an \bar{A} dependency. We saw above that these complements do not require (and in many cases, do not allow) relative pronoun *yoχ* plus \bar{A} complementizer *ke*. Furthermore, the complementizer *ke* does not occur by itself on the edges of these clauses, and when presented to consultants, is rejected. Consider first a simple structure such as (69), where no visible \bar{A} dependency is present:

(69) Beth hi-neki-se- \emptyset [_{CP} (*ke) Jill-nim pee-siw'e-nu'
 Beth.NOM 3SUBJ-think-IMPERF-PRES [(*C_{A'}) Jill-ERG 3/3-not.recognize-PROSP
 Matt-ne].
 Matt-ACC]
 ‘Beth thinks Jill won't recognize Matt.’ [20140826bsfd]

Ke is also rejected on the edges of simplex clauses when \bar{A} movement passes through these clause edges but does not terminate there, as shown in (70).

(70) a. Kii hii-wes 'iniit ke yoχ₁ Jack
 This.NOM 3SUBJ-be.PRES house.NOM C_{A'} RP.NOM Jack.NOM
 hi-hi-ce- \emptyset [_{CP} (*ke-x) 'iin hani- \emptyset -ya ₋₁].
 3SUBJ-say-IMPERF-PRES [(*C-1) 1SG.NOM make-PERF-REM.PAST]
 ‘This is the house that Jack said he built.’ [20140826bsfd]

- b. 'Ituu₁ pro neki-se- \emptyset [(*ke-m) taaqc pro hi-pe-kewyek-u'
 what.NOM 2SG think-IMPERF-PRES [(*C-2) soon 3PL 3SUBJ-S.PL-feed-PROSP
 pro ₁]?
 2SG]
 'What do you think they're going to feed you?' [20130626bsfd]

Data of this type are discussed by Deal (2016a) as evidence that *ke* occurs in the C head in whose specifier \bar{A} -movement terminates. If simplex complements contain an \bar{A} dependency parallel to that seen in REs, it is quite surprising that this complementizer cannot appear. The argument is similar to that made by de Cuba (2017) on the basis of Swedish and Basque, languages in which certain complementizers appear in cases of operator movement but are not found in notional complement clauses. All notional complement clauses in these languages behave like Nez Perce simplex embeddings.

Island data yield similar results, as touched on already in section 5. As we saw in that section, REs are strong islands, like relative clauses. Simplex embeddings, however, are not:

- (71) a. 'Isii-ne Meeli hi-neki-se- \emptyset [*pro* pee-x-nu']?
 who-ACC Mary.NOM 3SUBJ-think-IMPERF-PRES [3SG 3/3-see-PROSP]
 'Who does Mary think she will see?' [20170605bsfd]
- b. 'Isii-nm 'im-lawtiwaa-nm hi-hi-n-e *pro* ['ee
 who-ERG 2SG-friend-ERG 3SUBJ-tell-P-REM.PAST 2SG [2SG.CLITIC
 hi-'peewi-se- \emptyset]?
 3SUBJ-look.for-IMPERF-PRES]
 'Who did your friend tell you is looking for you?' [20120713bsfd]
- c. 'Isii-ne Meeli hi-cuukwe-ce- \emptyset , [*pro* 'e-ex-nu']?
 who-ACC Mary.NOM 3SUBJ-know-IMPERF-PRES [1SG 3OBJ-see-PROSP]
 'Who does Mary know she will see?' [20170605bsfd]

Indeed, we can show at least for *neki* 'think' and *hii* 'say/tell' that the (simplex) complement is not even a weak island, in the sense that adjunct extraction is freely available:

- (72) a. Mac-ipa liklii-pe₁ *pro* hi-hi-n-e [*pro* *kine*
 how.many-LOC hour-LOC 3SG 3SUBJ-say-P-REM.PAST [3SG here
 hi-paay-n-a 'iniit-pe ₁ meeywi]?
 3SUBJ-arrive-P-REM.PAST house-LOC morning]
 'What time (lit. 'at how many hours') did she say she came in here *t_{what time}* this
 morning?' [20110714bsfd]
- b. Mi-px₁ hi-neki-se- \emptyset Angel [hitemene'weet
 where-to 3SUBJ-think-IMPERF-PRES Angel.NOM [student.NOM
 hi-pe-kiy-o'qa ₁]?
 3SUBJ-S.PL-go-MODAL]
 'Where does Angel think the students should go *t_{where}*?' [20080611bs]

- c. 'Itu-wecet₁ yoχ pit'iin' hi-neki-se-∅ [1 *pro*
 what-reason DEM.NOM girl.NOM 3SUBJ-think-IMPERF-PRES 3SG(GEN)
 ciq'aamqal 'e-wuuy-n-e]?
 dog.NOM 3GEN-run.away-P-REM.PAST
 'Why does the girl think [*t_{why}* her dog ran away]?'
 (Possible answer: 'Maybe it was hungry.') [20070625bsfd]
- d. Mineke₁ pit'iin' hi-neki-se-∅ [*pro* ciq'aamqal
 which.way girl.NOM 3SUBJ-think-IMPERF-PRES 3SG(GEN) dog.NOM
 'uu-s 1]?
 3GEN-be.PRES]
 'Which way does the girl think her dog went?' [20070625bsfd]²¹

Haegeman and Ürögdi (2010) rely heavily on island data, in particular the presence of weak islands, in their argument that certain notional complements are covert REs. What the data in (72) show is that this type of argument cannot be made for all simplex complement clauses in Nez Perce. At least some of these show a total absence of island effects. This fact provides a syntactic counterpart to the morphological evidence seen above concerning the lack of *yoχ* and *ke* in simplex embeddings. Both in morphological terms and in syntactic ones, simplex embeddings show no sign of an \bar{A} dependency in Nez Perce. This strongly suggests that not all notional complement clauses are relativization-based in this language.

The second type of data I would like to bring forward is less specific to relativization, though still in support of the overall claim that REs and simplex embeddings are structurally distinct. This is that the two present two types of perspectival differences, discussed by Deal (2019b). The first concerns indexical shift (Deal 2014, 2020). Simplex complements to *hi* 'say/tell', *neki* 'think' and *cuukwe* 'know' allow shifted readings of local person pronouns (as well as locative indexicals). In (73), the embedded first person pronoun 'iin 'I' refers to the embedding attitude holder, Jack, rather than to the speaker. In (74), similarly, the null embedded first person pronoun subject refers to the embedding attitude holder, Mary. These are shifty readings. (\bar{A} -movement out of the clause with the shifty pronoun is useful here in ruling out a parse as a clausal quote under 'say' or 'know'.)

- (73) Kii hii-wes 'iniit ke yoχ₁ Jack hi-hi-ce-∅
 This.NOM 3SUBJ-be.PRES house.NOM C_{A'} RP.NOM Jack.NOM 3SUBJ-say-IMPERF-PRES
 ['iin hani-∅-ya 1].
 [1SG.NOM make-PERF-REM.PAST]
 'This is the house that Jack said he built.' [20140826bsfd]
- (74) 'Isii-ne Meeli hi-cuukwe-ce-∅, [*pro* 'e-ex-nu' 1]?
 who-ACC Mary.NOM 3SUBJ-know-IMPERF-PRES [1SG 3OBJ-see-PROSP]
 'Who does Mary know she will see?' [20170605bsfd]

As discussed in Deal (2020), shifty readings are possible for pronouns in Nez Perce regardless of their case and of whether they are overt or *pro*-dropped. What is notable for present purposes is that pronouns cannot receive shifty readings in REs. The only possibility here is a non-shifted reading:

²¹The word *mineke* in this example is not the form provided for 'in which direction' in Aoki (1994). The proper glossing of this word remains unclear.

(75) *pro* hi-llooy-n-a [yoχ ke-x *pro* 'iyaaχ-n-a *pro*
 3SG 3SUBJ-be.happy-P-REM.PAST [RP.NOM CA'-1 1SG find-P-REM.PAST 1SG.GEN
 siloo'ayn].
 glasses.NOM]

a. ✓ 'She was happy I found my glasses.'

b. ✗ 'She was happy she found her glasses.' [20160524fd]

The second perspectival phenomenon that distinguishes these two types of clauses concerns tense. Nez Perce distinguishes three tenses, an unmarked present tense and two marked past tenses, recent *qa* and remote *ne*. In simplex embedding, tense receives a relative reading—that is, a tense indicates the temporal relation between the events of the embedded clause and the 'internal now' of the attitude. In an intuitive sense, this means that the embedded tense matches the tense that would be used if the attitude holder themselves were to make an assertion. For a simultaneous reading of the embedded clause, embedded present tense must be used. This behavior of tense is perhaps familiar from languages such as Japanese, Hebrew, and Russian (Ogihara and Sharvit 2012, Sharvit 2018).

Consider example (76). Here we begin by establishing what Mary says at a certain point in the past (day 1). When reporting her speech the next day, the recent past tense is used for the matrix verb, since the speech itself is in the recent past. The embedded clause, however, is presented in the present tense, since the rain time overlaps the 'internal now' of Mary's speech report. Example (76b) shows that the simultaneous reading cannot be expressed with a tense that matches the matrix tense; embedded present tense is the only option.

(76) Context: On day 1, Mary says: "*pro* hi-weeqi-yuu-se-∅ *pro*."
 3SG 3SUBJ-rain-APPL-IMPERF-PRES 1SG
 (It's raining on me.)

On day 2, I say to you:

a. ✓ Meeli hi-i-caa-qa [*pro* hi-weeqi-yuu-se-∅
 Mary.NOM 3SUBJ-say-IMPERF-REC.PAST [3SG 3SUBJ-rain-APPL-IMPERF-PRES
pro].
 1SG]

(Mary said it was raining on her.)

b. ✗ Meeli hi-i-caa-qa [*pro*
 Mary.NOM 3SUBJ-say-IMPERF-REC.PAST [3SG
 hi-weeqi-yuu-sa-qa *pro*].
 3SUBJ-rain-APPL-IMPERF-REC.PST 1SG]

[20170607bsfd]

Tense in REs is different. Consider the near-minimal pair in (77). Example (77a) is a simplex embedding, as above, and embedded present tense is used for a simultaneous reading. Example (77b), however, is an RE. Here present tense *cannot* be used, and the simultaneous reading is expressed with tenses that match that of the matrix clause.

- (77) a. *pro* hi-weeqi-se-ne met'u Meeli weet'u
 3SG 3SUBJ-rain-IMPERF-REM.PAST but Mary NEG
 hi-cuukwe-ce-ne [*pro* hi-weeqi-se-∅].
 3SUBJ-know-IMPERF-REM.PAST [3SG 3SUBJ-rain-IMPERF-PRES]
 'It was raining but Mary didn't know that it was raining.' [20170612bsfd]
- b. *pro* hi-weeqi-se-ne met'u Meeli weet'u
 3SG 3SUBJ-rain-IMPERF-REM.PAST but Mary.NOM NEG
 hi-cciwaay-n-a [yoχ ke *pro* ✓
 3SUBJ-be.surprised-P-REM.PAST [RP.NOM C_{A'} 3SG
 hi-weeqi-se-ne / ✗ hi-weeqi-se-∅].
 3SUBJ-rain-IMPERF-REM.PAST / 3SUBJ-rain-IMPERF-PRES]
 'It was raining but Mary wasn't surprised that it was raining.' [20170612bsfd]

Deal (2019b) argues that the simultaneous reading of embedded tense in REs reflects a *de re* reading of tense (Abusch 1997, Sharvit 2018, i.a.), rather than the application of a sequence-of-tense rule.

Why should it be that simplex embedding and REs diverge in terms of indexical shift and relative readings of tense? What does this tell us in particular about the syntax of these clauses? Deal (2019b) takes a largely semantic perspective, arguing (based in part on data from an additional type of indexical shift not reviewed here) that the overall generalization is that simplex embeddings but not REs allow dedicated *de se* phenomena. This informs an analysis of the difference between the two clause types in terms of the kinds of semantic objects they provide to the matrix predicate: simplex embeddings provide centered propositions (sets of centered worlds), whereas REs provide uncentered propositions (sets of worlds). This semantic analysis of REs is compatible with a Caponigro and Polinsky (2011)-style analysis of the compositional semantics of REs, but requires that something crucially different be said about the semantic composition of simplex embedding. Given that semantic rules take syntactic structures as their input and are determinate—that is, when presented with the same input, they invariably compute the same output—the presence of a different semantic output for REs and for simplex embedding suggests that the two do not have the same syntactic structure.²² This confirms the impression from the morphology of the clause edge and from island effects and their absence, as reviewed above: REs have a distinct syntactic profile in Nez Perce, in a way that strongly suggests that not all complementation structures in the language involve relative clauses.

²²Alternative accounts of the perspectival differences point to the same conclusion, as far as I can see. In view of the idea that indexical shift arises from operators that merge at the left periphery of the clause (Anand and Nevins 2004, Anand 2006, Shklovsky and Sudo 2014, Deal 2020), one might for instance seek to connect the absence of indexical shift in REs with the idea that certain factive clauses have an impoverished left periphery (Haegeman 2006, de Cuba 2007) and/or that relative clauses do (Caponigro and Polinsky 2011). It remains true on this type of view that REs and simplex embeddings are syntactically different.

7 Conclusions and prospects for crosslinguistic variation

The picture of relative embeddings in Nez Perce that has taken shape in this paper is one where RE clauses have a limited distribution (i.e., not all notional complement clauses are REs) and a mix of relative-like and non-relative-like syntax. The central property of REs that is similar to relative clauses is the presence of an \bar{A} dependency. A core difference is that relative clauses occur inside nominal projections, whereas REs lack nominal superstructure. As noted in the introduction, Hanink and Bochnak (2017) have argued that in Washo, the apparent similarity between relative clauses and certain complement clauses is simply due to nominalization; the morphology shared across the two lexicalizes D. The Nez Perce RE data support the opposite type of conclusion: the similarity between relative clauses and complement clauses in this language is indicative of \bar{A} movement, but not a DP layer. This contrast makes it clear that relative clauses and notional complement clauses may appear morphosyntactically similar for multiple different reasons and thus that a proper understanding of the behavior of REs across languages will require detailed engagement with crosslinguistic data. The data that is available at this point clarifies several dimensions of variation in connection with relative-like notional complement clauses within and across languages.

One important dimension of variation was touched on already in section 4. In that section, I argued that Nez Perce REs are CPs: they do not behave like DPs in distributional terms or for case/agreement. This is in direct contrast with their counterparts in Adyghe, which behave like DPs distributionally and in terms of case/agreement (Caponigro and Polinsky 2011). Nez Perce REs also do not behave like PPs in terms of distribution or case. This is in contrast to their counterparts in Bulgarian (Krapova 2010). The contrasts among these three languages show that languages may place varying amounts of functional superstructure on top of the core CP that constitutes an RE. Nez Perce represents a sort of ‘minimal’ RE with no additional structure above CP. Adyghe adds N and D projections. Bulgarian adds D and P projections. While these three languages have in common the presence of an \bar{A} dependency internal to the CP, the same range of options is attested for CPs that do not contain an \bar{A} dependency. In Nez Perce simplex embeddings (and in English), a CP lacking an internal \bar{A} dependency may occur as the complement of a verb, where N and D are absent; in English, such a CP may occur as the complement of a noun inside a DP (or perhaps in the type of DP shell with an N co-argument envisioned by Hankamer and Mikkelsen 2021). CP under D under P (absent any \bar{A} dependency) occurs in Ndebele, where CPs are systematically wrapped in a DP layer (Pietraszko 2019):

(78) Ndebele (Pietraszko 2019:75)

Si-khuluma [PP nga [DP u-kuthi abantu babambane]].
1PL.SUBJ-talk about AUG-15.COMP people be.united
‘We are talking about the fact that people are united.’

This overall range of variation is summarized in (79).

(79) Internal and external syntax of notional complement clauses

	\bar{A} dependency in CP (RE)	No \bar{A} dependency in CP
V CP	Nez Perce REs	Nez Perce simplex embedding English simplex V-complementation
V D N CP	Adyghe REs	English N-complementation
V P D CP	Bulgarian REs	Ndebele embedding

The typological picture makes clear that CPs built with relativization of a high functional position, as in Nez Perce, Adyghe, and Bulgarian, behave crosslinguistically like other CPs in the range of larger structures in which they can occur. This, I suggest, is largely what syntactic theories predict: the internal syntax of a CP does not predict its external syntax.

Another dimension of variation concerns factivity. We have seen that in Nez Perce, all REs are factive, but not all factives are REs. A similar situation holds in Bulgarian, according to Krapova (2010). Factivity thus cross-cuts the distinction between notional complements that do and don't have the morphosyntax of \bar{A} extraction. Such data show that RE syntax is not necessary to ensure factivity (and thus cast doubt on the idea that factivity and related semantic notions, e.g. CP "referentiality", can be used to diagnose RE syntax, *pace* Haegeman and Ürögdi 2010). Caponigro and Polinsky (2011) report that in Adyghe, all notional complementation uses the RE strategy, regardless of factivity (p. 115). This shows that RE syntax by itself is not sufficient to ensure factivity. The overall picture is one where factivity and RE syntax vary independently to at least some extent:

(80) RE structure vs. factivity

	\bar{A} dependency in CP (RE)	No \bar{A} dependency in CP
Factive	Nez Perce REs	Nez Perce, English 'know'
Not factive	Adyghe REs	Nez Perce, English 'think'

The same dissociation holds for factivity and nominalization: Nez Perce REs are factive but not nominal, where Turkish allows nominalized complements that are not factive, e.g. with verbs like *düşün-* 'think' (Özyıldız 2017).

(81) Nominalization vs. factivity

	Nominalization of CP	No nominalization of CP
Factive	Washo 'forget'	Nez Perce REs, e.g. 'be happy'
Not factive	Turkish 'think'	Washo, Nez Perce 'think'

The (imperfect) correlation between these factors could have its source in a diachronic pathway, as Krapova (2010:1266) suggests. Alternatively, it could be that some specific property of REs as instantiated in Bulgarian and Nez Perce is connected to the generation of a factive inference, though future research would be required to ascertain exactly what this is.

A final potential source of variation in REs concerns the precise origin site of the relative operator. The conclusion reached in section 5 was that this operator must originate in a functional position above the TP in Nez Perce. This largely converges with the view from previous work, in particular Caponigro and Polinsky's (2011) treatment of Adyghe. It contrasts, however, with the idea from Aboh (2005) that what is relativized in Gungbe REs bears an event related feature found

lower in the clause on lexical material. We saw above that Gungbe REs allow for fronting of the object and doubling of the embedded verb (possibilities that are ruled out in Nez Perce REs):

(82) Gungbe (Aboh 2005:274)

- a. [Àgásá₁ ló lé dǽ mí wlé __₁] vé ná Kòfí.
 crab DET NUM that.REL 1PL catch hurt for Kofi
 ‘The fact that we caught the crabs hurt Kofi.’
- b. [Wlé₁ dǽ mí wlé₁ àgásá ló lé] vé ná Kòfí.
 catch that.REL 1PL catch crab DET NUM hurt for Kofi
 ‘The fact that we caught the crabs hurt Kofi.’

One tricky consequence of positing relativization from a high, functional projection is that the direct evidence of that relativization might be null. That is, without the relative C head and visible relative pronoun of Nez Perce, or the distinctive \bar{A} verb morphology of Adyghe, one might entirely miss the presence of an \bar{A} dependency in the relevant contexts in these languages. An intriguing possibility raised by these considerations is that Gungbe may not actually be so different from Nez Perce and Adyghe as it initially seems. It could be, for instance, that a high functional projection is the source of relativization in (82), but that this relativization occurs in a structure wherein a *different* head in the left periphery drives overt movement of the object or verb. This might be a focus-related head, given the intuitions about ‘emphasis’ in these examples that Aboh reports. Certainly, further research is required to assess the plausibility of this analysis.

This possible analysis brings us back to the contrast between English notional complement clause and relative clause structures with which the paper began. English is a language in which C lacks a visibly relative form, and in which relative pronouns can be null. Could it be, then, that notional complement clauses in this language do contain an \bar{A} dependency? Our exploration of Nez Perce suggests two main responses to this type of suggestion. The first is simply that the relatively programmatic views which would force this type of analysis (Arsenijević 2009, Kayne 2008, 2014) cannot be maintained. Given that not *all* notional complement clauses are relative clauses, the attraction of a relative clause analysis of data like (1a) is diminished. The second response centrally features island effects: if English notional complement clauses are relative clauses, they should show RC-like island effects (as REs do in Nez Perce). But this is not so; English notional complement clauses instead behave like Nez Perce simplex complements in lacking even weak island behavior. This provides English-internal confirmation of a non-relative structure in at least some notional complement clauses.

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