

Free relatives in Gitksan*

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1. Introduction

Gitksan has headed relatives (1), free relatives (FRs) (2), *-ever* FRs (3).

- (1) Ixsta=hl [suusiit=hl agwi=hl gub-i=s John]
tasty=CN [potato=CN what=CN eat-TR=PN John]
'The potato which John ate was tasty.' (Davis and Brown 2011:65(59))
- (2) Ga'a-'y=hl [gu=hl jab-i-t]
see-1SG.II=CN [what=CN make-TR=3SG.II]
'I saw what s/he made.' (Davis 2011:6(17))
- (3) Anook=s John=hl [ligi agu=hl jab-i=s Mary]
like=PN John=CN [DWID what=CN make-TR=PN Mary]
'John likes whatever Mary makes.'

This paper focuses on regular FRs like (2) and presents the first semantic investigation of Gitksan FRs. Special attention is brought to the fact that Gitksan FRs receive both definite and indefinite interpretations freely, which is contrary to the limited distribution of existential FRs observed cross-linguistically (Caponigro 2003) but nevertheless consistent with the behaviours of bare nominals in the language (Bicevskis et al. 2017, Davis 2018). I propose a semantic account in which set-denoting FRs are type-shifted to derive a definite or indefinite reading as required by the context, extending what has been proposed for definite FRs in the literature (Caponigro 2003, 2004). I then argue against potential alternative syntactic analyses of indefinite FRs on semantic grounds.

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2. Background on Gitksan

Gitksan is a Tsimshianic language from present-day northern B.C., Canada with approximately 520 fluent speakers (Dunlop et al. 2018). It comprises the Interior Tsimshianic branch along with a closely related language, Nisga'a. The word order is VSO (Rigsby 1986).

2.1. *Wh*-words

There are three basic *wh*-words in Gitksan (4) (Rigsby 1986, Davis and Brown 2011, Bicevskis et al. 2017).

- (4) a. *naa* 'who, someone' (Davis and Brown 2011:48)
 b. *(a)gwi*, *(a)gu* 'what, something'
 c. *(hi)nda* 'where, which, somewhere, somehow'

One consultant also uses *hinda* (4c) as a nominal *wh*-word unspecified for humanness.

Wh-words in Gitksan are argued to be syntactically nouns (Tarpent 1987 on Nisga'a; Davis and Brown 2011 on Gitksan). One piece of evidence presented in Davis and Brown 2011 is that *wh*-words can be a predicate (5a), along with common nouns (5b), while proper nouns (5c) and pronouns (5d) can't.

- (5) a. **Naa**=t Tyler b. **Si'moogit**=t Cathy
 who=PN Tyler **Chief**=PN Cathy
 'Who is Tyler?' 'Cathy is a chief.'
 c. ***Cathy**=hl si'moogit d. ***Nit**=hl si'moogit
 Cathy=CN chief **3SG.III**=CN chief

Another piece of evidence is that a *wh*-word accompanied by a domain widening particle *ligi* (Davis 2011) can be coordinated with common nouns (6).²

- (6) Nee=dii gaa-'y=hl [as-us] gan [ligi=t naa]
 NEG=FOC see-1SG.II=CN [PL-dog] PCNJ [DWID=PN who]
 'I didn't see dogs or anybody.'

Consistent with the nominal analysis, *wh*-words are compatible with an indefinite reading, as seen in (3); in fact, Tarpent (1987) argues they are "nouns with indefinite meaning and

² However, it seems that a *wh*-word *naa* 'who' alone cannot be coordinated with a common noun, either by itself (ia) or under *ligi* (ib), which is unexpected if *wh*-words are like common nouns. Further investigation of coordination and the particle *ligi* are needed before one can evaluate what the data in (6) and (i) mean for the claim that *wh*-words are nouns.

- (i) a. *Nee=dii gaa-'y=hl [as-us] gan=t [naa]
 Intended: 'I didn't see dogs or people.'
 b. *Nee=dii gaa-'y=hl [ligi=hl [[as-us] gan=t [naa]]]
 Intended: 'I didn't see any dogs or people.'

specialized properties” (319), and Bicevskis et al. (2017) refer to them as “indeterminate pronouns” (362).

2.2. Definiteness

Gitksan lacks an overt marker of definiteness. Nouns are preceded by enclitic connectives: a ‘determinate’ connective, which alternates between $=t \sim =s$, marks proper nouns (7a-b) and a *wh*-word *naa* ‘who’ (7c). A ‘non-determinate’ connective $=hl$ marks other *wh*-words and common nouns (8) (Bicevskis et al. 2017).

- (7) a. $\text{Limix}=\mathbf{t}$ Vince gyaxxw
 $\text{sing}=\text{PN}$ Vince last.night
 ‘Vince sang last night.’
- b. $\text{Nee}=\mathbf{dii}$ $\text{limix}=\mathbf{s}$ Vince gyaxxw
 $\text{NEG}=\text{FOC}$ $\text{sing}=\text{PN}$ Vince last.night
 ‘Vince didn’t sing last night.’ (Bicevskis et al. 2017:293)
- c. $\text{Gya}'\text{a-}'\mathbf{y}=\mathbf{hl}$ $\text{gwalk}'\mathbf{a}$ lip $\text{ligi}=\mathbf{t}$ naa
 $\text{see-1SG.II}=\text{CN}$ all SELF $\text{DWID}=\text{PN}$ who
 ‘I saw everyone.’ (Bicevskis et al. 2017:358)
- (8) $\text{Bax}=\mathbf{hl}$ hanak
 $\text{run}=\text{CN}$ woman
 ‘**The / A** woman ran.’ (Davis 2018:483)

Although these connectives are assumed to be in a determiner position (Bicevskis et al. 2017), a common noun connective $=hl$ is semantically vacuous and insensitive to definiteness (Davis 2018). Note that in (8), a noun *hanak* ‘woman,’ preceded by a connective $=hl$, is compatible with both definite and indefinite readings.

2.3. Extraction morphology

Another relevant characteristic of the Gitksan grammar is its extraction morphology, which is shared by both headed and free relatives as well as *wh*-questions and focus marking (Davis and Brown 2011). Choice of an extraction morpheme depends on the argument position of the target. Extraction of a transitive object does not involve a dedicated extraction morpheme, except for the transitive marker on the verb (1-3). In contrast, agent (i.e., transitive agent) extraction is marked by a complementizer-like element *an* and a third person enclitic $=t$ (9). Subject (i.e., intransitive subject) extraction is marked by the *-it* suffix on the predicate (10) (Davis 2011).

- (9) $\text{Ga}'\text{a-}'\mathbf{y}=\mathbf{hl}$ gat [$\mathbf{an}=\mathbf{t}$ $\text{gup}=\mathbf{hl}$ suusiit]
 $\text{see-1SG.II}=\text{CN}$ man [$\mathbf{AX}=\mathbf{3.I}$ $\text{eat}=\text{CN}$ potato]
 ‘I saw the man that ate the potato.’ (Davis and Brown 2011:52)

- (10) Wilaa-y-in=hl gat=hl [lim-**it**]=aa
 know-TR-2SG.II=CN man=CN [sing-**SX**]=Q
 ‘Do you know the man who sang?’ (Davis and Brown 2011:52)

Overt agent and subject extraction markers serve as useful diagnostics for ensuring that a given construction is indeed derived through extraction, although as argued by Forbes (2012), with respect to intransitive predicates, the presence of a subject extraction marker itself does not distinguish a full relative clause of the CP category from an adjectival modifier (11), which she analyzes as being smaller than a ‘true’ relative clause (see Section 6.1 below).

- (11) Sga’wa-’y=hl [aam-**it**] gat
 meet-1SG.II=CN [good-**SX**] man
 ‘I met a good man.’ (Forbes 2012:50)

3. Background on FRs

3.1 Definite FRs

Cross-linguistically, DP-like FRs freely receive a definite, maximal reading regardless of the choice of the matrix predicate. In (12), the FR, *who you choose* can be paraphrased with a definite expression, *the person you choose*.

- (12) I’ll marry [who you choose].
 ‘I’ll marry [the person you choose].’ (Caponigro 2003:11)

3.2 Existential FRs

FRs with an existential reading are generally unattested in Germanic (13) (though see Caponigro 2003, 2004 for exceptions).

- (13) *I have [who(m) to talk to] when I am sad.
 ≠ ‘I have a person to talk to when I am sad.’ (Caponigro 2003:87)

However, outside of Germanic, existential FRs are commonly observed, including in the languages of the Americas (Caponigro et al. 2013 on Nieves and Melchor Ocampo Mixtec, Kotek and Erlewine 2016 on Chuj, and Torrence and Duncan 2016 on Kaqchikel). Semantically, they behave like (narrow-scope) indefinite DPs (Grosu 2004) or bare nominals (Caponigro 2020).

Cross-linguistically, distributions of existential FRs are more restricted than definite FRs. In particular, they can only occur in the internal argument position of existential predicates (Caponigro 2003, Grosu 2004, Šimík 2017). According to Grosu’s (2004) implicational hierarchy of matrix predicates that allow existential FRs (14), predicates that assert the existence of its argument, such as *exist* (15) and *have*, are the most liberal cross-linguistically.

- (14) a) assertion of existence > b) *find, seek* > c) *buy, wangle, build, send*

- (15) Iyò [ndáčí kusũ ra jwá]
 exist.CON [where sleep.CON CL.3SG.M Juan]
 ‘Juan has a place to sleep.’ (Melchor Ocampo Mixtec, Caponigro et al. 2013:84)

As shown in Section 4 below, indefinite FRs in Gitksan do not seem to be restricted in this way. They do not depend on an existential matrix predicate for an indefinite reading.

3.3 Cross-linguistic restrictions

There are some cross-linguistic restrictions on the *wh*-element introducing a FR. First, *why* cannot introduce a FR of any kind (16) (Caponigro 2003, Torrence and Duncan 2016).

- (16) *I did it [why you did it].
 intended: ‘I did it for the (same) reason (why) you did it.’ (Caponigro 2003:43)

Second, while *wh*-phrases of the form [*what/which* + NP] can occur in *-ever* FRs (17a), they cannot introduce a definite FR (18b) (Caponigro 2003).

- (17) a. I will read [whatever/whichever (good) book you just read].
 b. *I will read [what/which (good) book you just read]. (Caponigro 2003:114)

The data below show that Gitksan allows both of these constructions.

4. Gitksan data

As hinted above, Gitksan FRs deviate from the cross-linguistic generalizations in two ways. First, while existential FRs are known to be restricted to an internal argument position of a limited set of existential predicates cross-linguistically, in Gitksan, a FR can freely receive an indefinite reading. Second, regular FRs introduced by *why* and a *wh*-phrase [*what/which* NP] are both attested in Gitksan. This section highlights these two data points while presenting comprehensive data on Gitksan FRs with definite and indefinite readings.

4.1 Wider availability of indefinite readings

In line with the cross-linguistic generalization, a FR occurring with an existential matrix predicate receives an existential reading in Gitksan. Example (18) shows a *naa* ‘who’ FR under an existential predicate ‘*wa* ‘to find.’ Example (19) shows an *agu* ‘what’ FR in an existential construction, which is most commonly constructed with a light verb *wil* ‘be/do’ (Hunt 1993, Bicevskis et al. 2017).

- (18) ’**Wa**-yi=s John=hl [naa dim algyax-it go’o=hl
 find-TR=PN John=CN [who PROSP speak-SX LOC=CN
 li’ligid-it]
 feast-SX]
 ‘John found someone who will speak at the party.’

- (19) **Wil** [agu dim litsxxw-'y]
LVB [what PROSP read-1SG.II]
 'I have something to read.' (Lit: 'There is what I will read.')

However, indefinite FRs in Gitksan are not limited to the internal argument position of an existential predicate. The wider availability of an indefinite reading of a FR can be most clearly seen in context minimal pairs in which the same FR receives either a definite or indefinite reading depending on the context (20-22).

- (20) a. Indefinite context: *Alex is thinking about getting married to a man but hasn't met anyone in particular.*
 b. Definite context: *Alex's suiters are lined up. She tested which man is the strongest. Pointing to the strongest man, she says:*
- Dim naksw-'y [naa=hl daxgyad-it]
 PROSP marry-1SG.II [who=CN strong-SX]
 'I will marry **a/the** man who is strong.'

- (21) a. Indefinite context: *Heading to the library with his mom, little John says:*
 b. Definite context: *At the library, it turns out that there is only one book that he hasn't read.*
- Hasak-'y dim litsxxw-'y=hl [agu=hl nee=dii
 want-1SG.II PROSP read-1SG.II=CN [what=CN NEG=FOC
 wilaax-'y]
 know-1SG.II]
 'I want to read **a/the** thing that I don't know.'

- (22) a. Indefinite context: *John is thinking of adopting a dog. He says before visiting a dog shelter:*
 b. Definite context: *At a dog shelter, John found one dog that runs very fast, and he wants it.*
- Hasak-'y dim si-hlguuhl-xw=hl [hinda=hl haɣolax-it]
 want-1SG.II PROSP CAUS1-child -PASS=CN [WH.SPT=CN fast-SX]
 'I want **a/the** one that is fast.'

4.2 Less restriction on *wh*-elements introducing a FR

Gitksan allows FRs introduced by a *wh*-phrase [*what/which* NP] (23-25), which are in general cross-linguistically unattested (Caponigro 2003). They too receive an indefinite reading freely.

- (23) Dim naksw-'y [naa=hl gat=hl daxgyad-it]
 PROSP marry-1SG.II [who=CN man=CN strong-SX]
 'I will marry **a/the** man who is strong.'

- (24) Hasak-’y dim litsxw-’y=hl [agu=hl adaawk=hl
 want-1SG.II PROSP read-1SG.II=CN [what=CN story=CN
 nee=dii wilaax-’y]
 NEG=FOC know-1SG.II]
 ‘I want to read **a/the** story that I don’t know.’
- (25) Hasak-’y dim si-hlguuhl-xw=hl [hinda=hl us=hl haḵolax-it]
 want-1SG.II PROSP CAUS1-PASS=CN [WH.SPT=CN dog=CN fast-SX]
 ‘I want to adopt **a/the** dog that is fast.’

In addition, Gitksan allows a *why* FR, which can behave like a DP (26a) or a PP (26b). *Why* FRs are formed with a *wh*-word *agu* ‘what’ followed by a complementizer-like element *gan*³ and a light verb *wil* ‘be/do’. In (27a), the FR is fronted for focus, which confirms that the constituent is a DP and therefore a FR rather than an embedded question.

- (26) Context: *Mary sneaked out to go to a party yesterday and broke her curfew. Her mother is mad because Mary went to a party, and not because she broke the curfew.*
- a. [Agu gan wil=hl gina hetxw=s Mary]_i **an=t**
 [what REAS LVB=CN late stand=PN Mary]_i AX=3.I
 si-a’laḵ=s *t_i* noḵ-t
 CAUS1-angry=PN *t_i* mother-3SG.II
 ‘It is the reason why Mary came home late that made her mother angry.’
- b. A’laḵ=hl negwaad=is Mary [(agu) gan wil=hl
 angry=CN father=PN Mary [(what) REA LVB=CN
 a’laḵ=hl noḵ=s Mary]
 angry=CN mother=PN Mary]
 ‘Mary’s father is mad for the same reason why her mother is mad.’

In summary, this section presented data on definite and indefinite FRs in Gitksan. For FRs introduced by other *wh*-elements, see Appendix.

5. Analysis

5.1 Denotation of FRs

My analysis builds on Caponigro’s work (2003, 2004); both definite and indefinite FRs are bare CPs, and their semantic type is $\langle e, t \rangle$. For example, in (27a), a *wh*-word *agu* ‘what’ moves to SpecC, leaving a trace of type *e* and triggering lambda abstraction (27b). While *wh*-words are restrictors of type $\langle et, et \rangle$ in Caponigro’s analysis (2003, 2004), in Gitksan, it is independently established that *wh*-words are nouns and therefore of type $\langle e, t \rangle$ (27c). I assume that the denotations of C’ (27b) and the *wh*-word (27c) are combined through predicate modification (27d).

³*Gan* has been described as complementizer (Rigsby 1986) and a subordinator (Tarpent 1987). For the current purpose, it suffices to note that it is not a noun (Clarissa Forbes, p.c.) and that therefore the given construction is a FR, not a headed relative in the form of ‘what reason.’

- (27) a. [agu dim lits_{xxw}-’y]
 [what PROSP read-1SG.II]
 Lit: ‘what I will read’
- b. $\llbracket 1 \text{ dim lits}_{xxw}\text{-’y } e_1 \text{ ‘I will read } __\text{’} \rrbracket^{g,c} = \lambda x. \text{ Speaker-will-read}(x)$
- c. $\llbracket \text{agu ‘what’} \rrbracket^{g,c} = \lambda y. \text{ Inanimate}(y)$
- d. $\llbracket \text{agu dim lits}_{xxw}\text{-’y ‘what I will read’} \rrbracket^{g,c} = \lambda z. \text{ Inanimate}(z) \ \& \ \text{Speaker-will-read}(z)$

5.2 Existential predicates

A limited set of unambiguously existential predicates, including a light verb *wil* (19 repeated as 28a), are of type $\langle et, t \rangle$ (28b), as in Caponigro’s analysis of existential FRs. The existential predicate takes the denotation of the FR as its argument (28c).

- (28) a. **Wil** [agu dim lits_{xxw}-’y]
 LVB [what PROSP read-1SG.II]
 ‘I have something to read.’
- b. $\llbracket \text{wil ‘there be’} \rrbracket^{g,c} = \lambda P_{\langle e, t \rangle}. \exists x[P(x)]$
- c. $\llbracket \text{Wil agu dim lits}_{xxw}\text{-’y} \rrbracket^{g,c} = \exists x[\text{Inanimate}(x) \ \& \ \text{Speaker-will-read}(x)]$

5.3 Definiteness is determined by the context

5.3.1 Non-existential predicates take arguments of type e

In Caponigro’s (2003, 2004) analysis, definiteness is determined by the semantic type of the matrix predicate: $\langle et, t \rangle$ for existential FRs and $\langle e, t \rangle$ for definite FRs. However, recall that in Gitksan, most predicates except for a limited number of existential predicates are compatible with both definite and indefinite interpretations of FRs. Whatever determines the definiteness of FRs must be also responsible for the definiteness of common nouns. In this system, it is implausible that the semantic type of the matrix predicate is responsible for definiteness of its argument, since that would generate $2 \times 2 = 4$ lexical entries for a transitive verb and fail to account for context minimal pairs like (22) (repeated here as 29).

- (29) a. Indefinite context: *Alex is thinking about getting married to a man but hasn’t met anyone in particular.*
- b. Definite context: *Alex’s suiters are lined up. She tested which man is the strongest. Pointing to the strongest man, she says:*
- | | | | |
|-------|--------------|---------|-------------|
| Dim | naksw-’y | [naa=hl | daxgyad-it] |
| PROSP | marry-1SG.II | [who=CN | strong-SX] |
- ‘I will marry **a/the** man who is strong.’

Instead, I propose that all predicates except for the lexically existential ones take an argument(s) of type e (30), and the definiteness of the argument is determined by how the context resolves a type mismatch with the denotation of a FR, which is of type $\langle e, t \rangle$.

- (30) $\llbracket \text{naksw 'marry'} \rrbracket^{g,c} = \lambda x. \lambda y. y \text{ marries } x$

5.3.2 Deriving definite and indefinite interpretations

If the context requires a definite interpretation of a FR (29b), the denotation of the FR (31a) is converted to type e by an iota (31b), allowing the predicate to take the result as an argument (31c).⁴

- (31) a. $\llbracket \text{naa=hl 1 daxgyad-it } e_1 \text{ 'who is strong'} \rrbracket^{g,c} = \lambda x. \text{Animate}(x) \ \& \ \text{Strong}(x)$
 b. $\iota x[\text{Animate}(x) \ \& \ \text{Strong}(x)]$
 c. $\llbracket \text{Dim naksw-'y naa=hl daxgyad-it} \rrbracket^{g,c} = \text{Marry}(\iota x[\text{Animate}(x) \ \& \ \text{Strong}(x)])(\text{speaker})$

In contrast, when the context requires an indefinite interpretation of a FR (29a), for concreteness, I assume that a choice function f (32b) of type $\langle et, e \rangle$ (Reinhart 1997) is inserted.⁵

- (32) a. $\llbracket \text{naa=hl 1 daxgyad-it } e_1 \text{ 'who is strong'} \rrbracket^{g,c} = \lambda x. \text{Animate}(x) \ \& \ \text{Strong}(x)$
 b. $\forall P_{\langle e, t \rangle} [P \neq \emptyset \rightarrow \exists y[y=f(P) \ \& \ P(y)]]$ (adapted from Reinhart 1997:372)
 c. $\llbracket \text{Dim naksw-'y naa=hl daxgyad-it} \rrbracket^{g,c} = \text{Marry}(f[\lambda x. \text{Animate}(x) \ \& \ \text{Strong}(x)])(\text{speaker})$

6. Against alternative accounts of indefinite FRs

6.1 Not a *wh*-word modified by a postnominal adjective

This section presents evidence against two possible alternative accounts of indefinite FRs in Gitksan in order to demonstrate that an indefinite FR under a non-existential matrix predicate is indeed a FR. First, one might suspect that a FR with an indefinite reading is actually a *wh*-pronoun modified by a postnominal adjective (Caponigro, p.c.), especially with respect to examples in which an intransitive predicate inside the FR corresponds to an adjective in English ((20) and (22), repeated below as (33) and (34), respectively). For example, the structure in (34) might be more appropriately analyzed as ‘someone strong’ rather than a full FR.

- (33) Dim naksw-'y [naa=hl daxgyad-it]
 PROSP marry-1SG.II [who=CN strong-SX]
 ‘I will marry **a/the** man who is strong.’

⁴The denotations in (31c) as well as (32c) ignore temporal and event semantics. Using Jóhannsdóttir and Matthewson’s (2007) denotation of a future marker *dim*, a full denotation of (31c) is given in (ii).

(ii) $\llbracket \text{Dim naksw-'y naa=hl daxgyad-it} \rrbracket^{g,c} = \exists t[t_c < t \ \& \ \exists e[\text{Marry}(\iota z[z \in D \ \& \ \text{Strong}(z)])(\text{speaker})(e) \ \& \ \text{time}(e) \subseteq t]]$

⁵The data should be compatible with other analyses of indefinites, including those using a choice function of type $\langle et, \langle et, t \rangle \rangle$ (Winter 1997), a free variable (Heim 1982), and type-shifting (Partee 1987).

- (34) Hasak-'y dim si-hlguuhl-xw=hl [hinda=hl ha_xolax-it]
 want-1SG.II PROSP CAUS1-child -PASS=CN [WH.SPT=CN fast-SX]
 'I want **a/the** one that is fast.'

However, there is evidence that the constructions in (33) and (34) are indeed full FRs. Forbes (2012), in arguing for the existence of the category of adjectives within intransitive predicates, shows that adjectives like *t'suusts'xw* 'black' (36a) cannot appear in a postnominal position (36b, d) or with a *wh*-word (36c-d).

- (35) a. Gi'nam-'y=hl sip a=hl [t'uuts'xw-it=hl os]
 give-1SG.II=CN bone OBL=CN [black-SX=CN dog]
 'I gave a bone to the black dog.'
- b. *Gi'nam-'y=hl sip a=hl [os t'uuts'xw-it]
 give-1SG.II=CN bone OBL=CN [dog black-SX]
- c. *Gi'nam-'y=hl sip a=hl [naa=hl t'uuts'xw-it=hl os]
 give-1SG.II=CN bone OBL=CN [who=CN black-SX=CN dog]
- d. *Gi'nam-'y=hl sip a=hl [os naa=hl t'uuts'xw-it]
 give-1SG.II=CN bone OBL=CN [dog who=CN black-SX]
 (Forbes 2012:64)

Therefore, since the clauses in (33-34) are post-nominal and introduced by an overt *wh*-word, they must be full FRs.⁶

6.2 Not a headed relative

One could also imagine an analysis in which what seems to be indefinite FRs are actually headed relatives with the *wh*-word as a CP-external, nominal head and that that is why they freely receive an indefinite reading (Caponigro, p.c.). This alternative also turns out to be implausible because the indefinite readings do not depend on the existence of a *wh*-word.

Gitksan allows 'super-free' relatives in Caponigro's (2020) terms, which look like FRs except that they lack a *wh*-word. Super-free relatives (36-37) have both definite and indefinite readings, just like regular FRs.

- (36) a. Indefinite context: *John is thinking of adopting a dog. He says before visiting a dog shelter:*
- b. Definite context: *At a dog shelter, only one dog liked him, and other dogs ran away.*
- Dim si-hlguuhl-xw=hl [an=t anook-'y]
 PROSP CAUS1-child -PASS=CN [AX=3.I like-1SG.II]
 'I will adopt the/a one that likes me.'

⁶One caveat is that most intransitive stative predicates in Gitksan do appear only pre-nominally and are therefore adjectives (Forbes 2012), and *strong* and *fast* would be stative in English. Further investigations of lexical aspects in Gitksan are needed.

- (37) a. Indefinite context: *Heading to the library with his mom, little John says:*
 Hasak-’y dim litsxxw-’y=hl [ha’win=dii naḵ’nit]
 want-1SG.II PROSP read-1SG.II=CN [not.yet=FOC hear]
 ‘I want to read a story that I have not heard.’
- b. Definite context: *At the library, it turns out that there is only one book that he hasn’t read. He points to that one book and says:*
 Hasak-’y dim litsxxw-’y=hl tus [ha’win=dii
 want-1SG.II PROSP read-1SG.II=CN DEM.DIST [not.yet=FOC
 naḵ’nit]
 hear]
 ‘I want to read that story that I have not heard.’

It cannot be that a *wh*-word is merely phonologically null in (36-37). There are two data points showing that when a *wh*-word is phonologically absent, it is syntactically and semantically absent. First, super-free relatives (38a) do not have restrictions for humanness, unlike FRs introduced by *naa* ‘who’ (38b) and *agu* ‘what’ (38c).

- (38) a. Context: *You’re a detective looking at a broken window. You’re trying to find who or what did it. Maybe someone broke it, and maybe it was a rock.*
 Gi-gi’y-’y=hl [an=t k’was-in=hl ha’niigoyp’ax]
 DUR-look.for-1SG.II=CN [AX=3.I break-CAUS2=CN window]
 ‘I’m looking for the **person/thing** that broke the window.’
- b. Context: *You saw a person break a window and run away.*
 Gi-gi’y-’y=t [naa an=t k’was-in=hl ha’niigoyp’ax]
 DUR-look.for-1SG.II=PN [who AX=3.I break-CAUS2=CN window]
 ‘I’m looking for the **person** who broke the window.’
Elicitor: Can you use it if you saw a rock thrown into the window but no one around? VG: no.
- c. Context: *You saw a rock-like object thrown into a window and breaking it, but you can’t find the object.*
 Gi-gi’y-’y=hl [agu=hl an=t k’was-in=hl
 DUR-look.for-1SG.II=CN [what=CN AX=3.I break-CAUS2=CN
 ha’niigoyp’ax]
 window]
 ‘I’m looking for the **thing** that broke the window.’
Elicitor: Can you use it if you saw a person break a window? VG: no.

This suggests that when a *wh*-word is phonologically absent, its semantic component is also absent, although one could argue that there is a covert *wh*-word unspecified for humanness or a covert *hinda*, whose overt version is used as a nominal *wh*-word unrestricted for humanness by at least one speaker.

The second, more reliable evidence is found in *-ever* FRs, which are constructed with a domain widening particle *ligi* (Davis 2011). Although a *wh*-word is otherwise optional in a sense that Gitksan allows both FRs and super-free relatives, it is required when *ligi* is

present (39). Since existing analyses of the semantics of *-ever* FRs rely on the semantic properties of a *wh*-word (e.g., Hirsch 2016), the obligatoriness of a *wh*-word in (39) suggests that when a *wh*-word is phonologically absent, it is also semantically absent.

- (39) Context: *You're trying to come up with a good name for your new dog. You're writing down all the names you can think of.*

Yukw=na t'am-i=hl **ligi** *(**agu**)=hl wilaax-'y
 IPFV=1SG.I write-TR=CN **DWID** *(**what**)=CN know-1SG.II
 'I'm writing down anything I know.'

Putting the pieces together, an indefinite reading is also available in super-free relatives, which are like FRs except that they lack a *wh*-word, and in these constructions, a *wh*-word is not merely covert but absent. Therefore, an indefinite reading is freely available without a *wh*-word, and an indefinite FR cannot be analyzed as a headed relative with a *wh*-word as a CP-external head.

7. Conclusion

This paper highlighted two properties of Gitksan FRs that seem to be typologically rare. First, indefinite readings of Gitksan FRs are freely available as required by the context and not restricted to the internal argument position of an existential predicate. Second, Gitksan allows FRs introduced by *why* and [*what/which* NP]. The former is particularly significant for the cross-linguistic typology and a formal analysis of FRs. The wider availability of an indefinite reading suggests that Gitksan is a language in which FRs behave like common nouns in terms of definiteness (Caponigro p.c.).

If this analysis is on the right track, this raises further typological questions. Is there another language like Gitksan, and more importantly, what do languages with freely available indefinite readings of FRs have in common: common nouns with no definiteness distinction, indeterminate *wh*-pronouns, or both, or something else? The answer is not clear from Gitksan alone. While the availability of indefinite FRs is compatible with the indeterminate behaviour of *wh*-words outside of FRs, recall that *wh*-words are not required in regular FRs, as Gitksan allows super-free relatives. In accounting for the lack of definiteness distinction in regular FRs, this paper extended Caponigro's (2003, 2004) type-shifting account of definite FRs to both definite and indefinite readings of Gitksan FRs.

Language-internally, topics for future investigations include the semantics of the particle *ligi*, which appears in *-ever* FRs, and its interaction with FRs, *wh*-words, and common nouns; and syntactic relations between FRs, super-free relatives, and headed relatives. At the same time, this paper calls for further cross-linguistic investigation of FRs, especially in search of languages like Gitksan, in which FRs freely receive both definite and indefinite interpretations depending on the context rather than the matrix predicate.

Appendix

A. *How many and how much* FRs

How many (40) and *how much* (41) FRs are introduced by one of the three basic *wh*-words followed by an amount word, which would be *gabi* for count nouns and *gasgoo* for mass nouns, respectively. *Nda* in (40) is short for a *wh*-word *hinda*.

- (40) Di-bagw-i'y=hl [nda=hl gabi=hl git=hl 'wa-'y]
 COM-come-1SG.II=PN [WH.SPT=CN CNT.AMT=CN man=CN find-1SG.II]
 'I brought as many people as I could find/whoever I found.'
- (41) Wil=hl [{agu/hinda}=hl gasgoo=hl yipx sgi dim
 LVB=CN [{what/WH.SPT}=CN MS.AMT=CN soup CIRC.NECESS FUT
 di-bagw-i'y]
 COM-come-1SG.II]
 'There is some soup I need to carry.'

The semantics of these FRs, including whether they can receive an indefinite reading without an existential predicate, is yet to be investigated.

B. *Where/when* FRs

My consultant uses a *wh*-word (*hi*)*nda* followed by a complementizer *win* for both *where* and *when* FRs (42-43).

- (42) Nee=dii [nda win=t da'akhlxw=s Mary dim
 NEG=FOC [WH.SPT COMP=3.I CIRC.POSS=PN Mary PROSP
 litsxxw=hl ha'niilitxxw]
 read=CN book]
 Lit: 'There isn't a place/time where Mary can read her book.'
- (43) Context: *Mary's neighbourhood is so noisy, and she can't find a place to read.*
 Hasak=s Mary dim ts'okw-t go'o=hl [nda
 want=PN Mary PROSP live-3SG.II LOC=CN [WH.SPT
 win=t da'akhlxw dim litsxxw=hl ha'niilitxxw]
 COMP=3.I CIRC.POSS PROSP read=CN book]
 'Mary wants to live where she can read her book.'

C. *How* FRs

How FRs are constructed with a *wh*-word *hinda* followed by a manner complementizer *wila* (44-45), where the former is optional.

- (44) Context: *During elicitation*
 Wil=hl lixs [hinda wila he-'y 'nit]
 LVB=CN different [WH.SPT MANR say-1SG.II 3SG.III]
 'There is a different way to say that.'
- (45) Hogax=s Blake wila miiluxw=hl gimxdi-t
 resemble=PN Blake MANR dance=CN sibling-3SG.II
 'Blake copies how her sister dances.'

Note that in (44), a FR is modified by a preceding adjective *lixs* 'different.' This may be another piece of evidence for a FR having a denotation of type <e, t> and behaving like a common noun.

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