An externally headed relative clause analysis of reason clauses*

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July 2022

Abstract. The paper argues that *the reason why* type of sentences are best described as involving an externally headed relative clause (RC) that underlyingly pre-modifies an ontological noun denoting 'reason'. While in English the noun moves overtly to its surface position in front of the relative clause, on the basis of word order and case marking facts we argue that in a (rigid) head-final language like Japanese, the 'reason' noun stays in situ in its RC-external position. We also use selection facts to submit that in contrast to *the reason why* variant, bare *why* clauses resist a similar RC analysis with a silent noun 'reason' and are instead best analyzed as bare question clauses.

1. Introduction

The aim of this paper is to explain the differences between the sizes of the (closely) synonymous subordinate reason clauses in the following triplet:[1]

* We are deeply indebted to Guglielmo Cinque for providing comments on the first draft and to two anonymous reviewers for their questions, comments, and suggestions. For questions and comments we are also thankful to Takashi Masuoka, Jacek Witkoś, and the participants of the Nanosyntax Online Lab, the 50th Poznań Linguistic Meeting, and Syn&Sin reading group at A. Mickiewicz University, where parts of this work were presented. We also thank our language consultants, especially Robert France and Ron Kim, for providing their acceptability judgments of some of the English sentences used as examples in this paper. Suffice it to say, we are solely responsible for all the errors.

[1] In the present paper, we focus on the variants in (1) and leave out the sentences like in (ia,b).

(i) a. the reason for which John left
b. the reason for John to leave

At least on the face of it, (ia) looks similar to the Polish structure in (ii), an instance of case mismatch, which we proposed an anlysis for in Endo and Wiland (2021) and intend to turn it into a separate written work where (ia) and (ii) are compared.

(ii) {powód / powod-em / powodzi-e } z któr-ego Jan wyjechał
reason.NOM=ACC/ reason-INS/ reason-LOC from which-GEN John left.3SG
'the reason for which John left'

(1) a. I know the reason why they left.
b. I know the reason they left.
c. I know why they left.

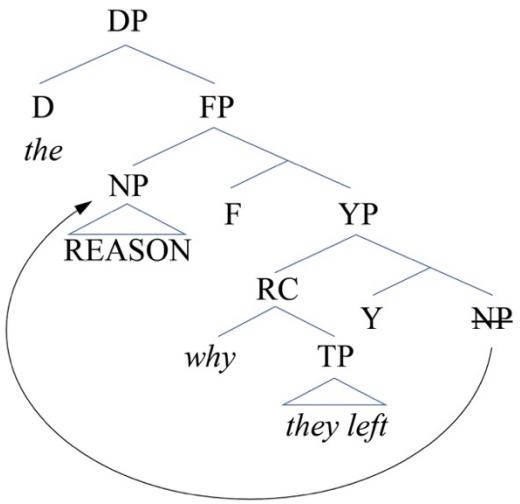
The point of departure for the analysis is the observation that the noun *reason* that precedes the *why*-clause in a sentence like in (2) can be more or less felicitously replaced only by psychological nouns whose meaning is closely related to reason, not by other.

(2) I know the **reason** (motive / rationale / purpose / *suggestion / *source / *proof) **why** they left.

With this respect *the reason* and *why* look similar to other clauses with an ontological noun and a wh-pronoun like *the place where...*, *the time when..., the person who...*, *the thing which...,* and *the way how...*, where *place* can only be replaced by a noun that denotes a location (e.g. *house*), *time* by a specific time unit (e.g. *year*, *moment*), *person* by a human referent (e.g. *teacher*), *thing* by a non-human referent (e.g. *book*) and *way* by *manner* (e.g. in *the way/manner how he talked*...). In this paper we focus only on the syntactic status of *reason*, the *why*-clause, and the pronominal *why*, whith the proposal at large serving merely as an outline for the analysis of the other similar-looking wh-adverbial clauses, as long as their own idiosyncracies can be controlled for.

We argue that the *why*-clause in (1a) is a relative clause (RC) that underlyingly pre-modifies an NP headed by an overt ontological noun denoting REASON, as in (3). In English, the noun REASON is lexically realized as *reason* or its closely related nouns like *motive, rationale, purpose*.

(3)



We submit that in a head-initial language like English, the NP headed by REASON moves overtly to a higher position in the extended NP structure, the spec of FP, but below the determiner, the head of DP.[2] However, in a (rigid) head-final language like Japanese, the REASON NP stays in situ, as seen in (4), where it is lexically realized as *sono riyuu-o*.[3]

(4) [$_{DP}$ [$_{RC}$ John-ga naze naiteiru no ka][$_{NP}$ **sono riyuu-o**]] (siritai)
John-NOM why crying FIN Q that reason-ACC want.to.know
'(I want to know) the reason why John is crying.'

We also argue that while both reason clauses in (1a) and (1b) contain a RC structure and differ only with respect to the presence of the pronominal *why* in the RC, the indirect question in (1c) stands out in that it does not contain a RC. While it is perhaps tempting to assume a silent REASON in (1c) so that the triplet in (1) could be described as uniformly based on a

[2] For the purposes of the proposal, we use YP and FP in (3) merely as placeholders for more accurate labels, whose function is to provide a merge position for the raised external head and the RC in the extended nominal projection. In this sense, (3) does not differ from the representation of Cinque's (2020) extended nominal projection with a RC.

[3] We are grateful to Takashi Masuoka (p.c.) for discussing this construction with us. It might be argued that (4) does not contain a RC but instead consists of two independent sentences, as suggested in (i).

(i) [$_{CP}$ John-ga naze naiteiru no ka]. [$_{CP}$ [$_{NP}$ **Sono riyuu-o**] (siritai)].
John-NOM why crying FIN Q that reason-ACC want.to.know
'I wonder why John is crying. I want to know the reason.'

However, that (4) does indeed involve a RC while (i) consists of two sentences can be demonstrated by identifying the subject of the main sentence, as shown in (ii) and (iii).

(ii) [**Watasi-wa** [$_{DP}$ [$_{RC}$ John-ga naze naiteiru no ka][$_{NP}$ **sono riyuu-o**]] (siritai)]
I-TOP John-NOM why crying FIN Q that reason-ACC want.to.know
'I want to know the reason why John is crying.'

(iii) [$_{CP}$ John-ga naze naiteiru no ka]. [$_{CP}$ **Watasi-wa** [$_{NP}$ **sono riyuu-o**]] (siritai)
John-NOM why crying FIN Q I-TOP that reason-ACC want.to.know
'I wonder why John is crying. I want to know the reason.'

In (ii), which corresponds to (4), the entire DP that contains the RC is the direct object of the main clause predicate *siritai* 'want to know'. Given that Japanese is an SOV language, the object follows the subject *watasi-wa* 'I-Top'. The same SOV order is seen in the second sentence in (iii), which is a variant of (i), only that the object *sono riyuu* 'that reason' in (iii) is not modified with the RC.

RC-structure, we provide evidence from Japanese and Polish against an RC analysis of (1c) and in favor of a "traditional" clausal complement analysis. Under such view the 'reason' reading of (1c) is provided by *why* itself, which we propose to lexicalize a ReasonP as part of its pronominal structure — a proposal in agreement with recent work on syntactic representation of ontological categories in wh-pronouns (Vangsnes 2013, Baunaz and Lander 2018b, Wiland 2019).

It is important to point out that the structure of reason clauses proposed in (3) shares an essential feature of Cinque's (2020) representation of "matching" RCs. Namely, in Cinque's theory, the "matching" properties of RCs are derived by the raising of an external head (i.e. the one that corresponds to our REASON NP in (3)). While our analysis of *why*-relatives is close to the general format for RCs in Cinque (2020), it differs from Cinque's own proposal to represent arguably similar adverbial clauses such as *the place where...*, *the time when..., the person who...*, *the thing which...,* or *the way how...* as constituents that comprise silent functional nouns TIME, PERSON, THING, and WAY (cf. Kayne 2004, 2007; Radford 2019). For instance, Cinque's (2020) representation of the phrase *the restaurant where we met* looks as in (5), where both *restaurant* and *where* are specifiers of the silent noun PLACE.

(5) the [**restaurant** PLACE][$_{RC}$ [**where** PLACE] we met]

The proposal in (3), instead, includes only one instance of an ontological noun, which is spelled out as *reason* (or its near synonym) and does not rely on silent nouns. We discuss the details of and a difference in empirical predictions both proposals make for the triplet in (1).

The paper is organized as follows. In section 2 we discuss Cinque's uniform double-headed format for RCs. In section 3, we motivate a single-headed RC structure in (3) vis-a-vis Cinque's analysis to account for the difference between (1a) and (1b). In section 4 we focus on Japanese and argue that word order and case marking facts provide overt evidence in favor of (3). In section 5 we point out that selection facts suggest an indirect question — but not a headless RC analysis — of (1c). Section 6 is a conclusion.

2. Relative clauses in Cinque (2020)

2.1. A uniform format for relative clauses

Comparative and analytical work on relative clauses has been present in generative grammar since the late 1960's and has led to a number of empirical generalizations and competing

analyses, which is reflected by a body of overviews of the topic (for typological overviews see e.g. Downing 1978; Lehman 1984; Givón 1984: §5; Andrews 1985, 2007; De Vries 2005; Cristofaro & Giacalone-Ramat 2007; Dryer 2013; Comrie & Kuteva 2013a, 2013b; for theretical overviews see e.g. Alexiadou et al. 2000, Grosu 2002, Bianchi 2002, De Vries 2002, Salzmann 2017). The resulting picture of this research is that languages have one or more relativization strategies that produce the following major **syntactic types** of RCs: externally headed post-nominal (6a), externally headed pre-nominal (6b), internally headed (6c), double-headed (6d), headless (or "free")(6e), correlative (6f), and adjoined (6g).[4]

(6) a. Externally headed post-nominal, English
the [**book** [$_{RC}$ {that/which} we read]]
b. Externally headed pre-nominal, Japanese (Shimoyama 1999: 147)
Yoko-wa [[$_{RC}$Taro-ga sara-no ue-ni oita] **keeki**]-o tabeta.

[4] There are other types of relatives than the ones listed in (6), including infinitival (i), or pseudo-relatives of the type found in Romance and Greek, as shown for Italian in (ii-a) and for Greek in (ii-b).

(i) a. John has found a [**book** [to read]]
b. Ho trovato un [**libro** [da recensire]]
have.1SG found a book to review
'I have found a book to review.' (Italian, Cinque 2020: 194)

(ii) a. Ho visto [**Gianni** [che correva]]
have.1SG seen Gianni COMP run.PST.IPFV
'I saw Gianni running.' (Italian, Moulton & Grillo 2015: 1)
b. I Maria evlepe ton [**Jani** [pu etrexe]]
the Mary watch.PST.IPFV the John.ACC COMP run.PST.IPFV
'Mary was watching John running.' (Greek, Grillo & Spathas 2014)

Reduced and infinitival relatives are structural variants of either externally or internally headed RC, which lack higher clausal layers, as it is often manifested by the absence of relative pronouns, tense and overt subjects (cf. Williams 1975: 249; Burzio 1986: 150-152, 193-198; Douglas 2016: 81; Harwood 2018: §5; Hazout 2001; Radford 2019: §1.4). The Romance/Greek-type pseudo-relatives like in (iii) differ from genuine RCs in a number of ways, including the fact that they modify only subjects and their 'head' can be passivized or cliticized (cf. e.g. Kayne 1975: 126-129; Radford 1975, 1977: §3.3; Declerk 1981; Guasti 1988, 1992; Moulton & Grillo 2015; Graffi 2017). Cinque's unified RC analysis covers these types of relatives in one way or another, too (see Cinque 2020: §3.2-3.5 for details), though the way the differences between them and other types of RCs listed in (6) are derived is orthogonal to the purposes of this paper.

Yoko-TOP Taro-NOM plate-GEN on-LOC put cake-ACC ate

'Yoko ate the cake that Taro put on a plate.'

c. Internally headed, Japanese (Shimoyama 1999: 147)

Yoko-wa [[$_{RC}$ Taro-ga sara-no ue-ni **keeki-o** oita]-no]-o tabeta.

Yoko-TOP Taro-NOM plate-GEN on-LOC cake-ACC put-NM-ACC ate

'Yoko ate the cake that Taro put on a plate.'

d. Double-headed, Kombai (de Vries 1993: 78)

[[$_{RC}$ **doü** adiyano-no] **doü**] deyalukhe

sago give.3PL.NONFUT-CONN sago finished.ADJ

'The sago that they gave is finished.'

e. Headless/free, English

[$_{RC}$ **what** they said] was true.

f. Correlative, Hindi (Dayal 1996: 196)

[$_{RC}$ **jo laRkii** khaRii hai] **vo (laRkii)** lambii hai

which girl standing is that girl tall is

'The girl who is standing is tall.'

g. Adjoined, Japanese (Shimoyama 1999: 174)

Taro-wa [$_{RC}$ daidokoro-no mado-kara **Lucky-ga** haitte kita tokoro]-o

Taro-TOP kitchen-GEN window-from Lucky-NOM came in TOKORO-ACC

tukamaeta.

caught

'Taro caught Lucky as she came in from the kitchen window.'

This syntactic typology is complemented by four basic **semantic types**, which comprise restrictive, non-restrictive, amount, and kind-defining relatives.[5] A restrictive RC, like the one in (7a), narrows down the set of referents denoted by the head noun, as opposed to a non-

[5] There are finer distinctions among these four main semantic classes, especially within restrictives (e.g. Cabredo-Hofherr 2014), non-restrictives (Cinque 2008) and amount relatives, which Grosu & Landman (1998) take to belong to a more general type of maximalizing RCs, with further distinctions within them made in McNally (2008) and Grosu & Landman (2017). Likewise, as pointed out in Cinque (2020: §3.2), the Italian kind-defining restrictives are very close to what McCawley (1981, 1998) calls pseudo-relatives and also similar to Prince's (1990, 1997) kind clauses, albeit with certain language-specific differences among them.

restrictive RC like in (7b), which adds information about the head noun whose reference is already established.

(7) a. The **bus** [that leaves at noon] is waiting on lane 5.
b. The **bus**, [which leaves at noon], is waiting on lane 5.

In turn, an amount RC like the one in (8a), makes the head noun *champagne* receive a maximalizing (or "all of") reading (Carlson 1977, Grosu & Landman 1998), as opposed to the restrictive RC in (8b), which does not.

(8) a. It will take us the rest of our lives to drink the **champagne** [that they spilled last night].
b. Did you drink the **champagne** [that was served last night]?

Finally, kind-defining relatives, discussed in Benincà (2012) and Benincà & Cinque (2014), mark the semantic class which the head noun belongs to rather than — like ordinary restrictives — narrow down its reference, as for instance in the Italian example (9a)(from Cinque 2020: 185) and the colloquial English example (9b)(from Radford 2019: 87).[6]

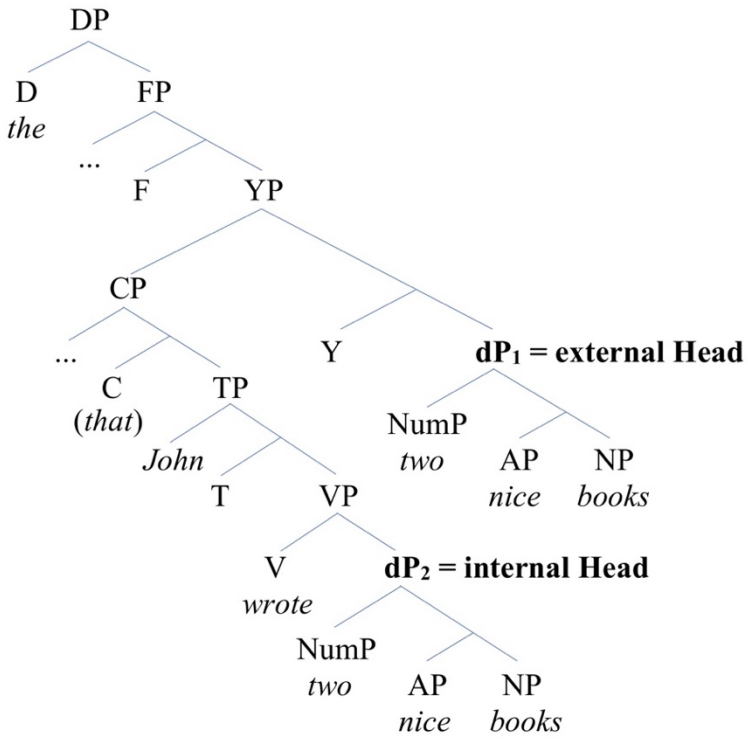
(9) a. Gianni è **uno** [che non **gli** si può dire di no]
Gianni is one COMP NEG he.DAT 3SG.REFL can.PRS.3SG say.INF about not
'Gianni is someone that you can't say no to him.'
b. He's one of those **players** [where **he**'s been really unlucky].

Working with a wide range of languages, Cinque (2020) provides an elegant way to derive all the syntactic and semantic types of RCs from a single double-headed structure shown in (10), which includes two identical heads.

[6] Kind-defining relatives differ in certain syntactic properties both from restrictive and non-restrictive RCs, including the fact that in some languages they also have a distinct relative pronoun that introduces them, e.g. the Macedonian *kakov* 'qualis' in (i) from Browne (1970: 269)(as cited in Cinque 2020 :184).

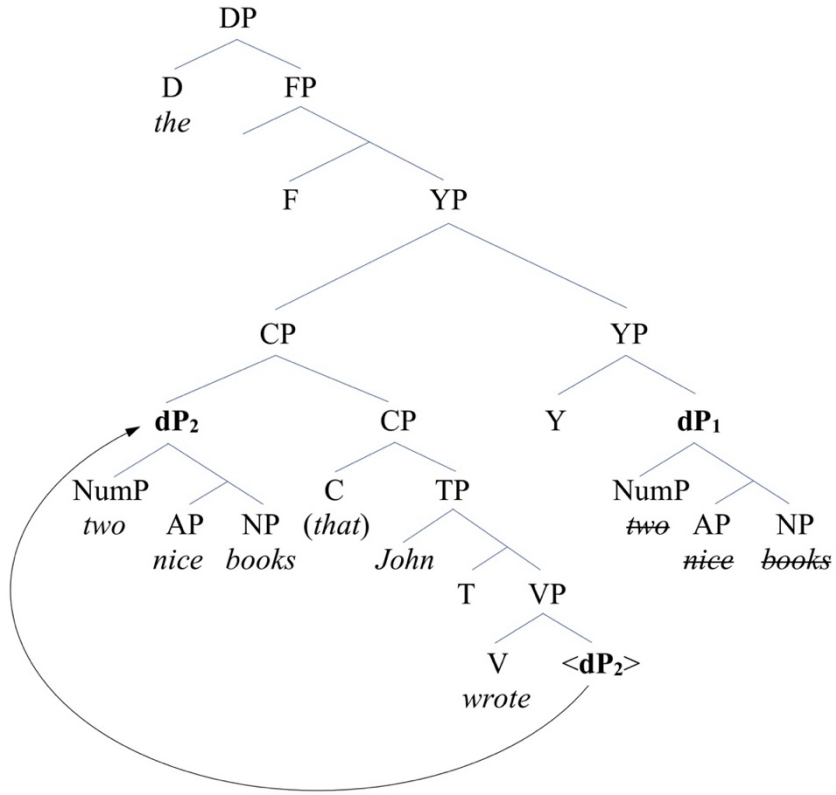
(i) Todor e čovek **kakov** retko k'e vidiš.
Theodore is man qualis (wh-such) rarely will see.2SG
'Theodore is a man such as you'll rarely see.'

(10)



According to the double-headed analysis, what is known as the "raising" formation of RCs involves the overt movement of the internal head (dP_2) to Spec-CP, as in (11).

(11)



The merger of the internal head in Spec-CP licences the deletion of the RC-external head (dP_1) under Kayne's (1994) definition of c-command, which distinguishes between categories and segments, i.e. two directly connected nodes that have the same label. Thus, dP_2 re-merged as a Spec of the CP c-commands dP_1, which deletes under identity.[7] Cinque identifies structures that instantiate (11) in a wide range of languages by the fact that they are compatible with an invariant relativizer (e.g. English *that*) and incompatible with wh-pronouns (*which, who*), unless the second are syncretic with the invariant relativizer, and argues how it explains the typical "raising" properties of the RCs. These include obligatory reconstruction, the interpretation of the head inside the RC, maximalizing amount reading (as in (8a)), sensitivity to strong and weak islands, case-marking of the internal head licensed RC-internally, and resistance to stacking and extraposition.[8]

In turn, the "matching" analysis of relative clauses is argued to follow from the raising of the external head dP_1 to a position above the RC, Spec-FP in (12).[9]

[7] In agreement with the LCA/antisymmetry and its notion of segments, the non-projecting left branches ("specifiers") in the diagrams of RCs in (10) and later in the paper should be understood as adjuncts, i.e. the type of structures as in (i), not as sisters to X' in the X-bar theoretic sense in (ii).

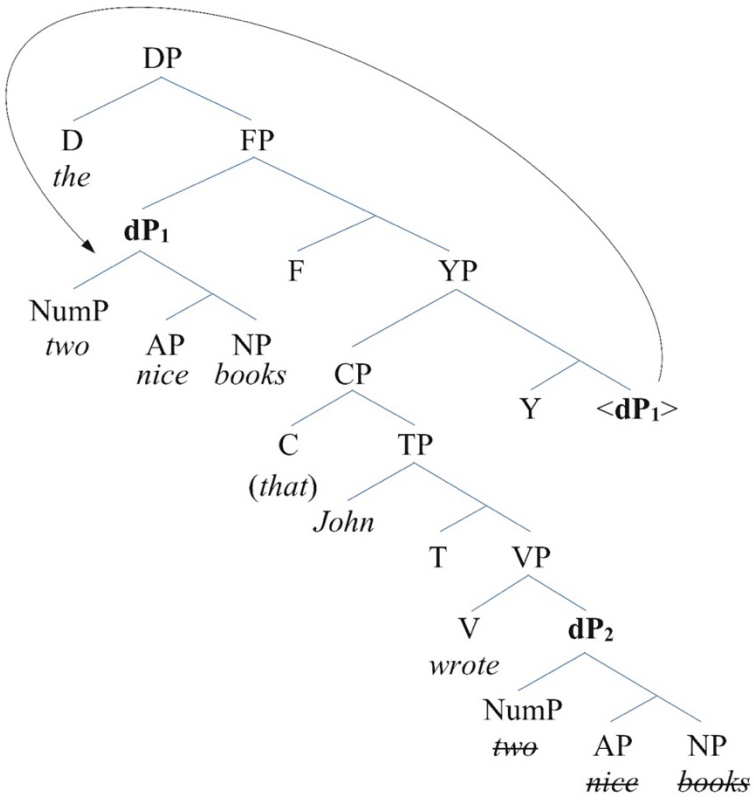
(i) $[_{XP}$ WP $[_{XP}$ X ZP]

(ii) $[_{XP}$ WP $[_{X'}$ X ZP]

[8] Earlier analyses of the derivation of RCs by head raising include Brame (1968), Schachter (1973), Vergnaud (1974), Åfarli (1994), Kayne (1994) and later works inspired by Kayne's analysis, including Bianchi (1999), Bhatt (2002), de Vries (2002), and Donati & Cecchetto (2011), among others.

[9] The traditional matching analysis proposed in Lees (1960, 1961), Chomsky (1965), and further developed in Munn (1994), Sauerland (1998, 2003), Citko (2001), and Salzmann (2006) postulates an RC-internal noun that is deleted under (close) identity with an external head noun, which is base generated above the RC. This is opposite to Cinque's analysis where the RC is universally base generated pre-nominally, above the external head noun.

(12)



The remerger of dP_1 as Spec-FP licenses the deletion of the RC-internal head dP_2 under identity. Cinque argues that the raising of the external head to a position above the RC explains the "matching" properties, which include the lack of reconstruction (the head noun is interpreted outside the RC), individual reading, and case marking of the head noun licensed RC-externally.[10]

Cinque's canonical argument for a double-headed structure follows from the fact that in both "raising" and "matching" derivations we often observe lexical material in the base positions of the internal or the external head together with a raised head noun. Such a scenario is expected to occur when the internal and external heads are not exact matches, which eliminates the possibility to delete one of them under identity. This is, for instance, what we see in the Japanese sentences in (13) or in overtly double-headed structures like in a Papuan

[10] As Cinque (2020: fn21, §2.1.3-2.1.4) notes, the island effects may still be observed in a "matching" derivation in languages where the RC-internal head dP_2 moves to Spec-CP (i.e. within the RC) before it gets deleted.

Trans-New Guinea OV language Kombai in (6d) above and (14), reported in Cinque (2020: 82, 90).[11]

(13) a. [[RC Watakusi-ga **sono hito**-no namae-o wasurete-simatta] **okyaku-san**]
I-NOM that person-GEN name-ACC have-forgotten guest
'a guest whose name I have forgotten' (Kuno 1973: 237)

b. [[[RC Taro-ga **aru gaku-o** kaseideru] **sono gaku**]-no hanbun-o]
Taro-NOM certain amount-ACC earns that amount-GEN half-ACC
'half of the amount (of money) that Taro earns' (Inada 2009: 94f)

c. Junya-wa [[RC Ayaka-ga **ringo-o** mui-ta] **sono ringo-o**] tabe-ta
Junya-TOP Ayaka-NOM apple-ACC peel-PST that apple-ACC eat-PST
'Junya ate the apples that Ayaka peeled.' (Erlewine & Gould 2016: 2)

(14) a. [[RC **kho** khumolei-n-o] **mogo**]
man die.3SG.NF-TR-CONN person
'the man who died' (de Vries 1993: 78)

b. [[RC **ai** fali-khano] **ro**] nagu-n-ay-a
pig carry-go.3PL.NF thing our-TR-pig-PRED
'The pig they took away is ours' (de Vries 1993: 78)

There are also a number of languages where overtly double-headed relatives that involve identical heads reported in Cinque (2020: 93ff), as for instance Yagaria, another Papuan OV language with pre-nominal RCs, shown in (15); Wenzhounese (Wu Chinese), a VO language with a pre-nominal RC, in (16); or Abun, a VO language with a post-nominal RC, in (17).

(15) a. [[RC hemeti dete' **ge** hu-d-u-ma'] **ge**]
today morning word say-PST-1SG-PIV word
'the word I spoke this morning' (Renck 1975: 173)

b. [[RC hemeti **yo'** gi-ta su ho-d-u-pa'] **yo**]-se'
today house build-1PL finish-PST-1PL-PIV house-BEN
'for the house which we finished building today' (Renck 1975: 174)

[11] Teramura (1992) refers to gapless relative clauses as involving *soto no kankei* 'outer relation' as in (13) and gapped relative clauses as involving an *uchi no kankei* 'inner relation'. The test for inner relation is whether or not the head NP can occupy a position in the matrix clause corresponding to the relative clause.

(16) [[RC māma qīn **xiǎopéngyou** de] **xiǎopéngyou**]
grandma kiss child REL child
'the child that the grandmother kisses' (Hu, Gavarró & Guasti 2016: 9)

(17) An ndo-bot [**su-git** dik yo [RC to men ye bok ne git **su-git** ne]]
3SG ask-about food one DET.1SG REL 1PL people several ANAPH eat food DET
'He asked about some (kind of) food which all of us would eat.' (Berry & Berry 1999: 162)

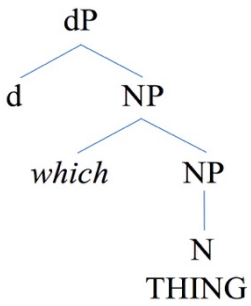
2.2. Silent nouns in a class of restrictive RCs

Cinque (2020) extends the double-headed analysis to a class of restrictive RCs introduced by *which* and *who* like in (18a,b), which just like *that*-relatives, narrow down the set of referents denoted by the head noun.

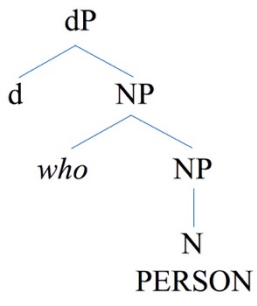
(18) a. The book **which** {is here/John wrote}.
b. The boy **who** {came/who I saw} yesterday.

In particular, Cinque (2020: 48–51) contrasts the restrictive *which* and *who* used in (18a,b) with the ones that occur in non-restrictive (7b), kind-defining (9b), and interrogative clauses, taking these first to be pronouns that are obligatorily placed in the specifiers of silent functional nouns THING and PERSON. Those are parts of the indefinite dP, as shown in (19a,b).

(19) a.



b.



Such a treatment of the restrictive *which* and *who* follows from their occurence with, respectively, non-human and human antecedents, e.g. **the book who is here*, **the boy which came yesterday* (Jackendoff 1977: 174, Aoun & Li 2003: 121, Lassiter 2011)(with exceptions

in certain varieties of spoken English reported in Radford 2019: fn.27, where *which* can cooccur with a human antecedent).[12]

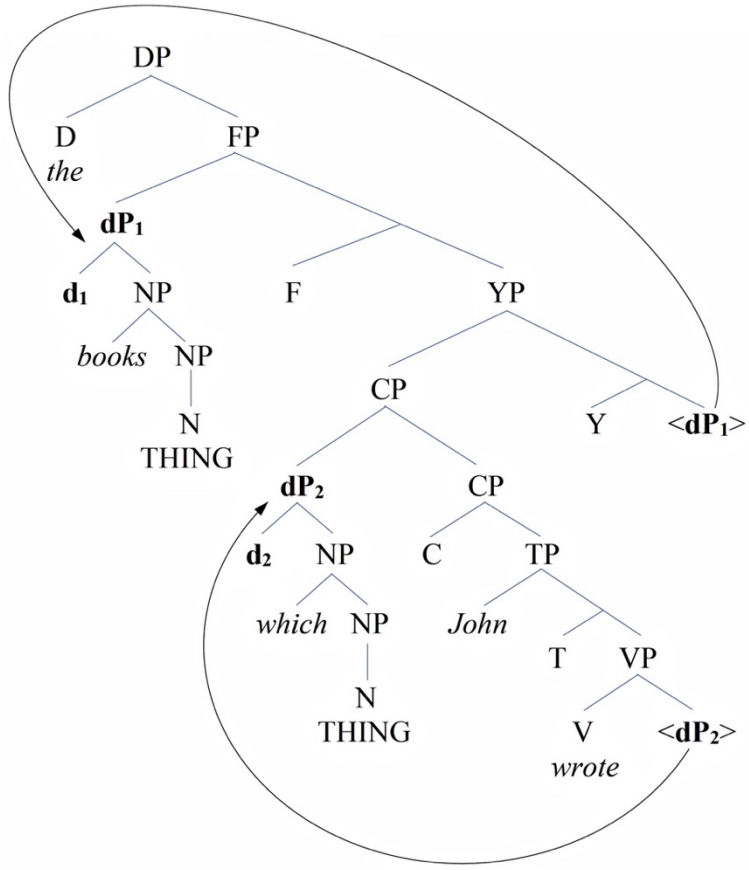
Following Kayne (2005, 2007), Cinque extends the representation in (12) to restrictive uses of *where*, *when*, and *how,* whereby a phrase like *the restaurant where we met* includes a pronominal *where* in the specifier of a silent noun PLACE. In such an analysis, the head noun that is the antecedent of [*which* [THING]], [*who* [PERSON]], [*where* [PLACE]], [*when* [TIME]], or [*how* [MANNER]] is itself a specifier of a silent noun, e.g. [*book* [THING]], [*boy* [PERSON]], [*restaurant* [PLACE]], [*hour* [TIME]], [*way* [MANNER]].[13] Thus, the derivation of *the book which John wrote* is an instance of the "matching" in (12), which involves the raising of the external head [*book* [THING]], along the raising of the internal head dP_2 [*which* [THING]], as shown in (20).

[12] A potential argument in favor of the pronominal rather than a determiner status of a restrictive *which*, which motivates its placement in the specifier of a silent noun, cited in Cinque (2020: 51) comes from the observation that it cannot be followed by an overt copy of the head noun, as illustrated with the examples from Sportiche (2017: §1.2.2):

(i) a. *This is the only film which film they liked.
b. *No pictures which pictures John sold.

[13] Cinque's proposal opens up a possibility for an alternative representation of the antecedent of a restrictive wh-pronoun, the one in which it is merged as a specifier of an indefinite dP rather than the silent noun, i.e. [$_{dP}$ *book* [$_{dP}$ d [$_{NP}$ THING]]] or [$_{dP}$ *restaurant* [$_{dP}$ d [$_{NP}$ PLACE]]]. Nonetheless, in our extension of external head raising analysis to *the reason why* clauses, we will instead explore a representation seen in (3), which does not include a silent noun and hence constitutes an alternative to both possibilities.

(20)



Cinque (2020: 100–101) takes the silent functional nouns to be also present in the headless (or "free") RCs, as in (21)(the capitals indicate here non-pronunciation).

(21) a. (This is) [$_{DP}$ THE [$_{CP}$ [what THING]$_i$ [C [we bought t_i]]] (THAT) THING]
b. (I know) [$_{DP}$ THE [$_{CP}$ [who PERSON]$_i$ [C [t_i ate my desert]]] (THAT) PERSON]
c. (It is) [$_{DP}$ THE [$_{CP}$ [how MANNER]$_i$ [C [it's done t_i]]] (THAT) MANNER]
d. (This is) [$_{DP}$ THE [$_{CP}$ [where PLACE]$_i$ [C [I was born AT t_i]]] THERE PLACE]
e. (He was born) [$_{DP}$ THE [$_{CP}$ [when TIME]$_i$ [C [I was born AT t_i]]] THEN TIME]

This claim is informed by the existence of languages whose RCs equivalent to the English "headless" type in (21) include overt functional nouns denoting 'thing', 'person', 'place', 'time', etc. The overt functional nouns are found in languages with post-nominal as well as with pre-nominal RCs, as shown on the example of a Gbe language Gengbe in (22) and a Tibeto-Burman language Ronghong Qiang in (22), where the "free" relative is a double-headed stucture.

(22) [**Ame**-ke gbe [$_{RC}$ dzi be ye la ple gbɔ]] yi-na asi ya me
person-REL ever desire that 3SG FUT buy goat go-CNT market that in
'Whoever wants to buy goats comes to this market.' (Huttar et al. 2013: 118)

(23) [[$_{RC}$ **mi** qɑ nə-xeˡ-m] **mi**-le:] kə-ji
person 1SG DIR-scold-NOM person-DEF:CL go-CSM
'He who scolded me has gone.' (Huang 2008: 762)

Just like in the case of other syntactic types of RCs, Cinque (2020: §2.5.2) proposes that the cross-linguistic variation in the kind (internal vs. external) and amount (one or both) of head nouns that get pronunced is subject to parametrization and depends on other aspects of grammar than narrow syntax. This conjecture extends also to the definite article, which is silent in the free relatives in (21) but is attested in certain varieties of English, as in the following examples from Nakamura (2009):[14]

(24) a. In this country, cheating has mainly involved tampering with the time clocks that register **the when** the birds are released and **the when** they return. (The Guardian, Mar 29, 1997)
b. A pocket money allowance of pounds 14.10 is set for all **the who** receive state help towards their nursing home fees. (The Observer, Apr 27, 1997)

3. Extending the double-headed analysis to reason clauses

If we extend Cinque' (2020) approach to *why* and *reason*, we expect them to form specifiers of a silent functional noun REASON, as in (25), and the derivation of a noun phrase such as *the reason why John left* to look like in (26), an analogical counterpart of (20).

[14] Let us observe that the examples in (24a,b) need not necessarily include an overt instance of the silent THE seen in the representations of free relatives in (21) but, instead, they may instantiate restrictive RCs with silent (or elided) head nouns. In that case, (24a,b) should be rather analyzed like (i) and (ii), respectively.

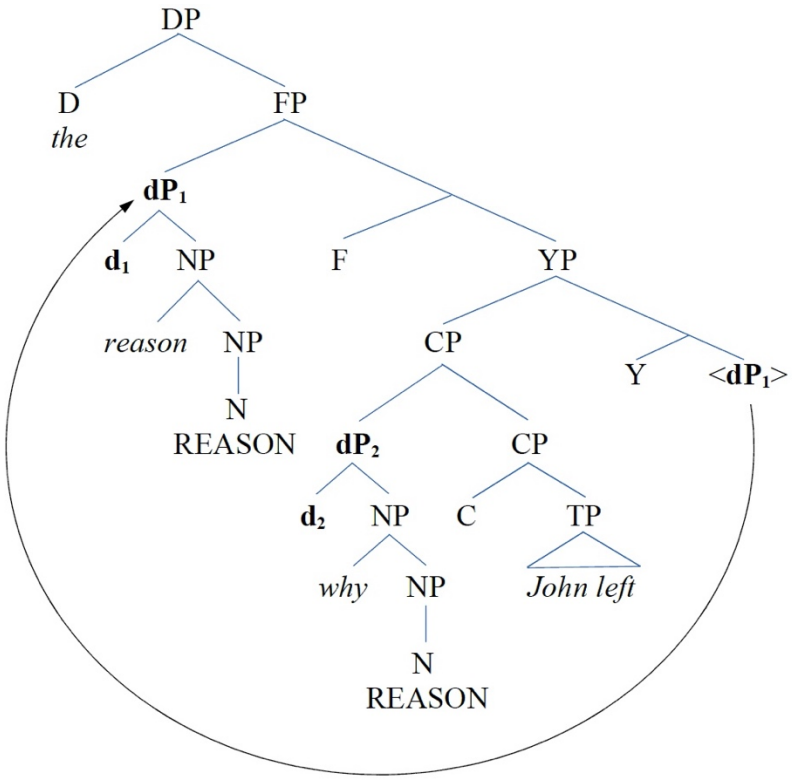
(i) … **the** [TIME$_i$ [$_{RC}$ [**when** TIME] birds are released] t$_i$] and
the [TIME$_i$ [$_{RC}$ [**when** TIME] they return] t$_i$].

(ii) … for all **the** [PEOPLE$_i$ [**who** PEOPLE] receive state help] t$_i$] …

(25) a. [$_{dP}$ d [$_{NP}$ *why* [$_{NP}$ REASON]]]

b. [$_{dP}$ d [$_{NP}$ *reason* [$_{NP}$ REASON]]]

(26)



With an extension of Cinque's double-headed structure to reason clauses, we expect the contrast between the English (1a) and (1b) to result from the presence of either overt or silent *why* in the specifier of the silent REASON NP (in the RC-internal head dP_2). However, such an account comes with a proviso that (1b) has a RC with a silent complex constituent [WHY REASON], as in (27).

(27) **Representation of (1b) as a double-headed structure and a silent WHY**

I know [$_{DP}$ the [$_{dP1}$ reason REASON][$_{CP}$ [$_{dP2}$ WHY REASON] [C [they left]]] ...]

While, admittedly, there is no specific constraint that permits silent nouns but bans multi-word silent NPs that we are aware of, (1b) can be alternatively represented simply as a structure without *why* altogether. That is, under such an alternative, (1b) differs from (1a) in that it involves a single-headed structure with an overtly realized REASON and a pre-nominal RC without dP_2, as in (28).

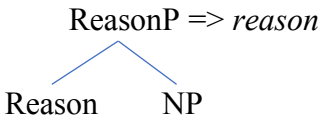
(28) **Representation of (1b) as a single-headed structure**

I know [$_{DP}$ the [$_{NP}$ reason][[$_{CP}$ they left]] ...]

The only 'reason' ingredient in (28) is the overt noun *reason* that lexicalizes the functional REASON itself. The representation of (1b) as a single-headed structure follows the logic of the proposal in (3), where the 'reason' semantics is provided by an overt rather than a silent ingredient.

This, however, leads us to the question how to represent the overt *why* in (1a) without postulating it to be a specifier of a silent REASON. The natural answer is to represent *why* as overtly realizing the functional REASON as part of its pronominal structure. Under such an approach the English noun *reason* (as well as its near synonyms like *motive, rationale, purpose*) will lexicalize a constituent like in (29), with ReasonP applying to the nominal base (see Endo 2015, 2018 for ReasonP).[15]

(29) **Ontological REASON**



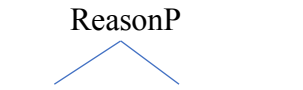
A single lexical item like *reason* lexicalizing a complex constituent is possible under phrasal spellout, a situation where lexical insertion targets phrasal rather than terminal nodes in a view of grammar with a post-syntactic lexicon (for phrasal spellout see e.g. Neeleman and Szendrői 2007, Starke 2009, Pantcheva 2011, Baunaz and Lander 2018a, Wiland 2019, Caha 2020, among many others). In the case of *why*, the ReasonP will apply to the pronominal WhP base, as in (30).[16] In fact, such a representation allows us to analyze *why* as

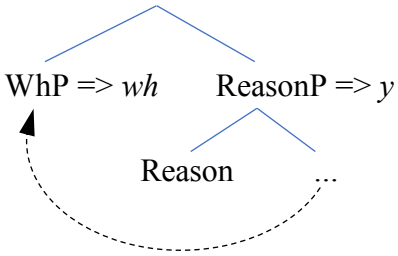
[15] Note that the degree of internal compexity of the nominal base in (29), the NP, is orthogonal to the idea that *reason* lexicalizes a nominal constituent with a grammatically represented reason-ingredient. Depending on the approach, the nominal base can be decomposed into a separate root and a category-defining node 'little n' on top or into categories that contribute specific nominal denotations like mass, countability, number, etc. (see e.g. Borer 2005).

[16] Again, the details of internal composition of the WhP in (30a) are irrelevant here (though see e.g. Baunaz and Lander 2018c and Wiland 2018, 2019 on wh-pronouns where WhP is part of a functional sequence with a classifier-like nominal base).

morphologically complex, where the WhP layer spells out as *wh-* (as in (30a)) and — following the evacuation movement of the WhP — the remnant ReasonP spells out as *-y*, (as shown in (30b)).

(30) ***Why***

a. 

b. 

Such a bi-morphemic representation of *wh-y* fits the pattern visible in *wh-ich, wh-ere* and *wh-en*, where the suffixes lexicalize, respectively, ontological THING, PLACE, and TIME. In contrast to these, the portmanteau forms *who* and *how* possibly spell out the WhP together with the ontological PERSON or MANNER, in the way that mimics the spellout of ReasonP jointly with the NP in (29) (for the representation of wh-pronouns and ontological nouns see also Baunaz and Lander (2018c) and Wiland (2019: §5)). All in all, such an approach to *why* allows us to represent (1a) as an exact instance of (3) and (1b) as its variant without *why* inside the RC.

Before we turn our attention to the variant in (1c), let us turn to Japanese, which provides overt evidence for the RC external placement of the ontological REASON and, more specifically, for the derivation of reason clauses proposed in (3).

4. Japanese

While Japanese has both internally and externally headed RCs, only the second can be headed by nouns denoting reason. The overt position of REASON in Japanese, thus, corresponds to its base position in (3).

4.1. Internally and externally headed relative clauses

Japanese has both internally and externally headed RCs. The internally headed type is shown in (31) below, where the noun *keeki* 'cake' is part of the RC.[17]

[17] The RC in (31) is followed by the morpheme *-no*, usually analyzed as a nominalizer (NM), which is in turn followed by the accusative marker *-o*. The example in (i) below shows that the accusative is licensed

(31) Yoko-wa [$_{DP}$ [$_{RC}$ Taro-ga sara-no ue-ni **keeki-o** oita]-no]-o tabeta.
Yoko-TOP Taro-NOM plate-GEN on-LOC cake-ACC put-NM-ACC ate
'Yoko ate a piece of cake that/which Taro put on a plate.'

In the externally headed type seen in (6b)(repeated below as (32)), the head noun follows a RC with a corresponding gap (marked as Ø). Unlike in English, no overt wh-pronoun can be used instead.

(32) Yoko-wa [$_{DP}$ [$_{RC}$ Taro-ga sara-no ue-ni { Ø/***nani**-o } oita] **keeki**]-o tabeta.
Yoko-TOP Taro-NOM plate-GEN on-LOC what-ACC put cake-ACC ate
'Yoko ate a piece of cake which Taro put on a plate.' (Shimoyama 1999: 147)

The external head of a RC can be a noun denoting reason such as e.g. *riyuu* in (33). Just like in (32), the corresponding wh-pronoun *naze* 'why' cannot appear in the RC either.

(33) Yoko-wa [$_{DP}$ [$_{RC}$ Taro-ga (***naze**) sara-no ue-ni keeki-o oita]
Yoko- TOP Taro-NOM why plate-GEN on-LOC cake-ACC put
[(sono) **riyuu**]-o] siritai.
DEM reason-ACC want.to.know
'Yoko wants to know the reason why Taro put a cake on a plate.'

In view of the fact that externally-headed RCs as in (32) or (33) do not occur with a wh-pronoun, let us focus on an externally-headed non-restrictive RC in (34), a type of RC that has not been paid attention to in the previous literature on Japanese.

RC-externally by the matrix action predicate *tabe* 'eat', while the RC-internal object *keeki* has its nominative case realized as *-ga,* licensed by the stative predicate *oitearu* 'put'. (See Sugioka 1984 on case marking in Japanese).

(i) Yoko-wa [$_{DP}$ [$_{RC}$ sara-no ue-ni **keeki-ga** oitearu]-no]-o tabeta.
Yoko-TOP plate-GEN on-LOC cake-NOM is.put-NM-ACC ate
'Yoko ate a piece of cake that/which is put on a plate.'

(34) [$_{DP}$ [$_{RC}$ John-ga **naze** naiteiru no ka][$_{NP}$ **sono riyuu-o**]] siritai.
John-NOM why crying FIN Q that reason-ACC want.to.know
'I want to know the reason why John is crying.'

(34) includes an appositive RC, where in contrast to (33), *naze* 'why' must co-occur with the associated RC-external head *sono riyuu* 'that reason'. The difference between (33) and (34) lies in the size of RC. Namely, the RC in (33) has a small TP structure without the CP region,[18] while the RC in (34) has a large internal structure with a CP region. What indicates the size difference between the RCs in (33) and (34) is the presence of the Q particle *ka*. In Japanese, wh-elements such as *naze* 'why' are licensed by the particle *ka*, which is projected in the CP region. Since the RC in (33) is of a TP-size, it cannot come with the particle *ka* that can license *naze*. In contrast, that the appositive RC in (34) is of a CP-size is indicated by the presence of the particle *ka,* which licenses *naze*.

Another important point about the non-restrictive RC in (34) is that it has similar features to the Italian *il quale* type of a non-restrictive RC, as seen in the following examples from Cinque (2008: 102):

(35) a. L'unico che potrebbe è tuo padre, **il quale** potrà, credi, perdonarci per quello che abbiamo fatto?
'The only one who could is your father, by whom will we ever be forgiven,you think, for what we have done?'

b. *? L'unico che potrebbe è tuo padre, **che** potrà, credi, perdonarci per quello che abbiamo fatto?
'The only one who could is your father, who (lit. that) will ever forgive us, you think, for what we have done?'

Cinque (2008) compares the Italian *il quale* RC (in (35a)) with the *che* RC (in (35b)) and notes that only the first is illocutionary-independent in that it can be interrogative even if the main sentence is declarative. In a similar way, the Japanese non-restrictive RC in (34) is illocutionary-independent of the main clause as the RC is interrogative (with the Q particle *ka*) while the main clause is declarative.[19]

[18] See Murasugi (1991a,b) on this point.

[19] Kamio (1977) observes that the demonstrative *sono* cannot occur before a non-restrictive RC in

4.2. Distribution of 'why' and REASON

Japanese has a few wh-expressions denoting reason: *naze* 'why', which has a somewhat literal flavor, colloquial *nande* 'why', and *nani-o* 'why', which lexically comprises *nani* 'what' and accusative case marker *-o* and is similar in use to the English *how come* or *what…for* in that it expresses surprise or disapproval in what is sometimes called a surprise-disapproval question (SDQ)(see Endo 2015, 2016, 2020 for SDQ). As shown in (36), all of them can occur without a reason noun and its RC, i.e. a construction that corresponds to the English sentence in (1c).

(36) Watasi-wa karera-ga { **naze** / **nande** / **nani-o** / *Ø} sonnnani naiteiru no ka
I-TOP they-NOM why why why so.much crying FIN Q
wakaranai.
do.not.know
'I don't know why they are crying.'

Different forms of 'why' in the RC can be also correlated with a noun denoting reason, as in (37), which corresponds to the English (1a).

(37) [$_{DP}$ [$_{RC}$ John-ga { **naze** / **nande** / **nani-o** / *Ø} naiteiru no ka][$_{NP}$ **sono riyuu-o**]]
John-NOM why$_1$ why$_2$ why$_3$ crying FIN Q that reason-ACC
siritai.
want.to.know
'I want to know the reason why John is crying.'

Japanese. (34) becomes ungrammatical if *sono*, which immediately precedes the noun *riyuu* 'reason', is placed before the RC, as shown below in (i).

(i) ***Sono** [$_{DP}$ [$_{RC}$ John-ga naze naiteiru no ka][$_{NP}$ **riyuu-o**]] (siritai)
that John-NOM why crying FIN Q reason-ACC I.want.to.know
'(I want to know) the reason why John is crying.

While this fact further suggests that (34) involves a non-restrictive RC, it also means that RCs in Japanese are base-generated above the demonstrative, as in the nominal sequence in (ii) below. At face value, this contrasts with English, where a RC is base-generated below the demonstrative (see e.g. (10)/(11) or (20)), which instantiates a different nominal sequence than the one in Japanese, namely the one in (iii).

(ii) RC > Dem > N

(iii) Dem > RC > N

According to our proposal, the NP headed by ontological REASON is RC-external and while it raises in English as in (38), it stays in-situ in Japanese, as in (39).

(38) (I want to know) [$_{DP}$ the [**reason** [[$_{RC}$ **why** John is crying] __]]]

(39) [[$_{RC}$ John-ga **naze** naiteiru no ka] [**sono riyuu**-o]] (siritai)
John-NOM why is.crying FIN Q DEM reason-ACC I.want.to.know
'I want to know the reason why John is crying.'

While REASON does not raise in Japanese to a pre-RC, *naze* 'why' can either follow (as in (38)), or precede the subject. In both situations, however, it is clear that *naze* 'why' remains inside the RC.

4.2.1. Subject > 'why' order inside the RC

The fact that both the subject and *naze* 'why' order are part of the RC comes from the placement of the adverb *syooziki* 'honestly', which according to Cinque's (1999) hierarchy of adverbs is merged in a high position in the clause. In the main clause, as in (40), the placement of the *syooziki* 'honestly' is more felicitious before rather than after the subject.

(40) **Syooziki** John-**wa** (??syooziki) saikin hen da.
honestly John-TOP honestly recently strange COP
'Honestly, John has been strange recently.'

The same word order preference holds in a RC, as shown in (41).

(41) [[$_{RC}$ **Syooziki** John-**ga** (??syooziki) **naze** saikin hen na no ka]
honestly John-NOM honestly why recently strange COP FIN Q
[**sono riyuu**]-o siritai].
DEM reason-ACC want.to.know
'I want to know why honestly John has been strange recently.'

Here, the preference of the *syooziki* > subject order is kept.

A similar word order restriction has been also observed in the literature with the subject and a high adverbial *gozonzinoyooni* 'as you know'. On the basis of the facts from Italian discussed in Cardinaletti (2004), Fujimaki (2011) shows that a non-referential subject precedes rather than follow the high adverb *gozonzinoyooni* 'as you know'. Although the judgments concerning the placement of adverbial elements are subtle due to various factors revolving around information structure (cf. Rizzi 2004), we find that when a wh-element like *naze* 'why' is focus-fronted to a pre-subject position in the main clause, it must precede rather than follow a high adverb like *gozonzinoyooni* 'as you know', as shown in (42).

(42) (??gozonzinoyooni) **naze** (??gozonzinoyooni) John-wa **gozonzinoyooni**
as.you.know why as.you.know John-TOP as.you.know
naiteiru no ka?
crying FIN Q
'Why is John, as you know, crying?'

The same word order preference is holds in a non-restrictive RC with a RC-initial *naze* and a (RC-external) reason noun, as shown in (43).

(43) [[RC **naze** John-**ga** (??naze) (**gozonzinoyooni**) naiteru no ka] [**sono riyuu**]-o
why John-NOM why as.you.know crying FIN Q DEM reason-ACC
siritai]
I.want.to.know
'I want to know why John, as you know, is crying?'

4.2.2. RC-external case marking of REASON

Let us now consider case marking in Japanese RCs, which provides an argument in favor of RC-external REASON, as proposed in (3). (44) and (45) illustrate different main verbs assigning different cases to the head noun denoting reason. In (44), the accusative marker *-o* placed after *riyuu* is licensed by the matrix transitive predicate *siritai* 'want.to.know', while in (45), the predicate *wakara.nai* 'do.not.know' licenses the nominative *-ga*.

(44) [[[$_{RC}$ Watasi-wa karera-ga naiteiru] **riyuu-o**] siritai].
I-TOP they-NOM crying reason-ACC want.to.know
'I want to know the reason why they are crying.'

(45) [[[$_{RC}$ Watasi-wa karera-ga naiteiru] **riyuu-ga**] wakara.nai].
I-TOP they- NOM crying reason-NOM do.not.know
'I don't know the reason why they are crying.'

In fact, the case of the external REASON can be optionally (and with, admittedly, marginal acceptability) doubled on the RC itself. This is shown in (46)-(47), where the non-restrictive RC is suffixed with the same accusative *-o* and nominative *-ga* as seen on the RC-external noun that realizes the ontological REASON.[20]

(46) ?[[$_{RC}$ John-ga {naze / nani-o} naiteiru no ka]**-o** **sono** {**riyuu/wake**}**-o**]
John- NOM why why is.crying FIN Q ACC DEM reason-ACC
siritai.
want.to.know
'I want to know the reason why John is crying.

(47) ?[[$_{RC}$ John-ga {naze / nani-o} naiteiru no ka]**-ga** **sono riyuu-ga**] wakara.nai.
John- NOM why why is.crying FIN Q NOM DEM reason-NOM do.not.know
'I don't know the reason why John is crying.'

While this kind of case doubling with ontological nouns other than REASON has not drawn much attention in the literature, it seems to us that we can obseve more general patterns here. First, (48) shows that case doubling on the non-restrictive RC is also attested with the RC-external nouns denoting PLACE or TIME and with other wh-pronouns pronouns (*dokode* 'where', *itu* 'when').

(48) [[$_{RC}$ John-ga { **dokode / itu** } naiteita no ka]**-o** [**sono** {**basyo / zikan**}]**-o**
John-NOM where when was.crying FIN Q ACC DEM place time ACC
siritai].
want.to.know
'I want to know {the place where / the time when} John was crying.'

[20] It seems to us that the case doubling examples sound felicitous when the case particle is stressed.

Second, as shown in (49) with lexical nouns denoting the ontological THING, case doubling is well-formed with an interrogative complementizer like *dooka* 'whether', in which case the wh-pronoun (*dokode* 'where', *itu* 'when') can be optionally skipped.

(49) [[$_{RC}$ John-ga (dokode/itu) naiteita no ka **dooka**]-**o**
John-NOM where when was.crying FIN Q whether]-ACC
{**zizitu**/**hontoonotokoro**}-**o** siritai]
fact real.thing-ACC want.to.know
'I want to know (whether) the place/time John is crying.'

Third, as is well known, a quantifier like *dake* 'only' and also — to a lesser extent — *sae* 'even', can be placed between the NP and the case particle, as shown in (50)(see Miyagawa (1989) on this point).[21] The '*dake* – case' sequence can also be doubled on the RC, as in (51).

(50) Gakusei-**dake-ga** ringo-hutatu-**dake-o** tabeta.
student-only-NOM apple-two-only-ACC ate
'Only students ate only two apples.'

(51) [[$_{RC}$ John-ga nani-o naiteita no ka]-**dake-o** [**sono** {**wake**/**riyuu**}]-**dake-o**
John-NOM what-ACC was.crying FIN Q only-ACC DEM reason only-ACC
siritai.
want.to.know
'I want to know only the reason why John is crying.'

To sum up, the word order and case marking facts indicate that the *why*-clause in Japanese sentences like in (37) or (39) is a RC that pre-modifies an external head noun denoting REASON.

5. Relative clause vs indirect question

While we have argued in section 3 that the reason clauses in (1a) and (1b) are best described as externally headed RC, the one in (1c) resists such an analysis. The proposal about the RC format of reason clauses in (3) does not extend to the variant in (1c) as it does not contain the overt noun reason noun. More precisely, while the Kayne/Cinque's approach with silent

[21] The '*dake* – case' squence sounds felicitous when it receives an (emphatic) focus intonation.

functional nouns in principle opens up a possibility to analyze (1c) as a "headless" RC along the lines in (21), our proposal in (3) does not. However, selection and island facts suggest that, rather than a noun with a RC, (1c) contains an indirect question, i.e. a clause embedded under the main verb.

The relevant contrast between (1a,b) and (1c) is seen with question-embedding verbs like *wonder* or *ask*, which can select a *why*-clause but not an (overt) DP with a reason noun, as in (52a,b):

(52) a. I {wonder/asked} why they left.
b. *I {wonder/asked} the reason why they left.
c. I {wonder/asked} about the reason why they left.

A similar selection contrast is also found in Japanese or in Polish. In Japanese, for instance, the verb *husiginiomou* 'wonder' selects an indirect question clause that asks for a reason as in (53a), but it cannot select an externally headed RC that expresses a reason, whether it is restrictive or non-restrictive, as shown in (53b,c).

(53) a. Watasi-wa [Mary-ga naze naiteiru no ka] husiginiomotta.
I-TOP Mary- NOM why is.crying FIN Q wondered
'I wondered why Mary is crying'
b. ??Watasi-wa [Mary-ga naiteiru] riyuu-ga/o husiginiomotta.
I-TOP Mary- NOM is.crying reason-NOM/ACC wondered
'I wondered the reason Mary is crying.'
c. ??Watasi-wa [Mary-ga naze naiteiru ka] sono riyuu-ga/o
I-TOP Mary-NOM why is.crying Q DEM reason-NOM/ACC
husiginiomotta.[22]
wondered
'I wondered the reason why Mary is crying'

[22] The grammaticality of (53b,c) can be improved by replacing the case particles *ga* and *o* suffixed to the RC with the postposition *nituite* 'about'. This situation is similar to the fact that the verb *wonder* in English selects the preposition *about* but not a noun phrase.

In Polish there are two different verbs meaning 'know': *znać* and *wiedzieć*. The relevant difference between them is that *znać* selects for a NP, *wiedzieć* for a question clause. Thus, only the first one takes a reason noun that can be modified by the RC, as shown in (54), while the other can only select for a question clause, as in (55).

(54) Znam [$_{RC}$ *(powód) [$_{CP}$ dlaczego wyszli] ...].
know.1SG reason why left.3PL
'I know the reason why they left.'

(55) Wiem (*powód) [$_{CP}$ dlaczego wyszli].
know.1SG reason why left.3PL
'I know why they left.'

That the structural contrast between (1a,b) and (1c) is not reducible to overt vs. silent REASON is also manifested in the way both types of sentences react to extractions. As pointed out to us by G. Cinque (p.c.), if (1a,b) includes a RC but (1c) an indirect question clause, then (1a,c) should be a strong island while (1c), a weak island. This prediction appears to be borne out with the following contrasts:[23]

(56) a. * John, with whom I know the reason why they don't speak any longer
b. John, with whom I know why they don't speak any longer

(57) a. * John, who I know the reason why they fired
b. John, who I know why they fired

Under the proposed analysis, the (a) sentences involve an extraction out of a complex DP while the (b) sentences, the extraction out of an interrogative CP, as shown in, respectively

[23] This comes with a proviso that the presence or lack of the asterisk in the English pairs of examples in (56)–(58) serves here merely as an indicator of acceptability contrast rather than categorical marking of ill-formedness or grammaticality and relies on the limited native speaker's judgments that we have managed to obtain. Admittedly, the speakers that we have consulted reported only a very moderate difference between (a) and (b) examples, which we hope to better understand in a forthcoming study. Nevertheless, it must be pointed out that island effects obtained with extractions from different types of islands have been fairly often reported not to be equally strong (e.g. Comorovsky 1989, Pesetsky 2000, Sabel 2002, Hofmeister and Sag 2010; for the acceptability of extractions from English relative clauses see Sprouse et al. 2016, Vincent 2021, and Christensen and Nyvad 2020).

(58a) and (58b):

(58) a. *John with whom I know [$_{DP}$ the reason [$_{CP}$ why they don't speak __ any longer]]
b. John with whom I know [$_{CP}$ why they don't speak __ any longer]

A similar contrast is attested in Polish:

(59) a. *Jan, z którym znam powód dlaczego nie rozmawiają
Jan.NOM with who.INS know.1SG reason.ACC why NEG speak.3PL
b. Jan, z którym wiem dlaczego nie rozmawiają
Jan.NOM with who.INS know.1SG why NEG speak.3PL
'John, with whom I know why they don't speak'

(60) a. *Jan, którego znam powód dlaczego zwolnili
Jan.NOM who.ACC know.1SG reason.ACC why fired.3PL
b. Jan, którego wiem dlaczego zwolnili
Jan.NOM who.ACC know.1SG why fired.3PL
'John, who I know why they fired'

Given the complement selection contrast between *znać* and *wiedzieć* in (54)-(55), we correctly predict only the (a) sentences to induce the relative clause island effect, with the (b) sentences to involve a licit extraction out of an interrogative CP, as outlined in the following:

(61) a. *Jan którego znam [$_{DP}$ powód [$_{CP}$ dlaczego (*pro*) zwolnili __]]
Jan whom know.1SG reason.ACC why fired.3PL
b. Jan którego wiem [$_{CP}$ dlaczego (*pro*) zwolnili __]]
Jan whom know.1SG why fired.3PL

6. Conclusion

We have argued that two out of three variants of the reason sentences in (1) involve a relative clause that underlyingly pre-modifies an NP headed by *reason*, which next raises to its surface pre-RC position. The evidence for the underlying position of a noun denoting reason comes from Japanese, a head-final language, where it stays in situ in its base, RC-external position. On the basis of the contrast in constituent selection between verbs that merge with

D/NPs and clauses, we have argued that the third variant of the reason clause, the one in (1c), resists the analysis with a silent head noun and is best described as involving an indirect question clause.

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