

A NOTE ON *NO*-PARTICLE IN HEAD-INTERNAL RELATIVES*

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Summary

In this note I reexamine a long-standing problem on the categorical identity of *no* particle in head-internal (internally headed) relative clauses (HIRCs) in Japanese. First, I will review two dominant views proposed in the literature, pointing out that there has been a conflict caused between a nominalizer (NML) / noun view and a complementizer (C) view on the status of *no* particle. Meanwhile, I will attempt to support the C view from viewpoints of minimalism, especially the Labeling Theory of Chomsky (2013, 2015), from a chronological study of Nishiyama (2009), and from a dialectic fact that has not been presented in the literature.

1. Basic Facts

This section introduces some basic facts of Japanese HIRCs and *no* particles at issue seen in HIRCs and similar nominal constructions in Japanese. First, (1) is a typical example of Japanese HIRCs where *no* particle is bolded while an internal relative head is italicized.

- (1) [*ringo-ga* sara-no ue-ni at-ta **no**]-o dareka-ga
 apple-NOM plate-GEN on-LOC be-PAST *no*-ACC someone-NOM
 tabete-shimatta.
 ate-PERF
 ‘Someone ate (an) apple(s) that was/were on the plate’

The bracketed part of (1) is comprised of a HIRC. We can find an internal relative head *ringo(-ga)* ‘apple(-NOM)’ which is usually considered as a counterpart of an external relative head of head-external (externally headed) relative clauses (HERCs). The most natural interpretation of (1) is commonly thought to be derived by regarding the internal head as an

* This paper is an output of Takahashi (in preparation). I have much benefited from Takaaki Yoshida while we discussed in my office. I thank Takaaki and wish his big success at the new place. My thanks also go to Tammy Niina and Kayo Takemoto for their helpful comments about Miyazaki dialects. Of course, I’m solely responsible to all the errors remaining in this paper.

internal argument of the matrix predicate *tabete-shimatta (ate-PERF)*.¹ HIRCs are headed by a *no* particle occupying the rightmost position of their domain. However, it seems that deciding its syntactic category is still open to question.

For the comprehensive understanding of usages of *no* particle, Tonoike's (1990) work would be much helpful. See (2) where all possible instances with *no* particle other than HIRC are listed.

- (2) a. Yamada no setsu/hon/ie/kazoku (possessive)
 b. onna no sensei (predicative NP / appositive)
 c. Taro-ga Hanako-o shootaishita no-ga matigaidatta (subordinate conjunction)
 c'. Taro-wa Hanako-ga kaketeiku no-o mita. (subordinate conjunction)
 d. Taro-ga Hanako-o shootaishita noda. (noda-construction)
 e. Hanako-o shootaishita no-wa Taroo-da. (cleft)
 e. Taro-ga shootaishita no-wa Hanako-da. (cleft)
 f. kono akai no-o kudasai. (pronoun)
 f'. sekkaku kattekita no-o kaeshi-ni itta. (pronoun)
- (Tonoike (1990: 74), slightly modified)

Although Tonoike (1990) does not address HIRCs, (1) is capable of being added to (2). (2) predicts that the goal of our investigation would be squeezed into two possibilities. The relevant *no* particle in HIRCs would be equivalent to the one of (2a-f'), otherwise it would be a totally unique usage attested in none of (2a-f'). However, it is kind of fortunate that we would be safe to rule out the latter possibility because many findings from leading research on HIRCs apparently converge on without exceeding the ordinary usages of *no* particles.

¹ See Takahashi (in preparation) for a skeptical view on a traditional concept of internal relative head. The gist of the discussion there is roughly described as follows: the genuine HIRC argument added into an argument slot of a matrix predicate should be a NP *predicated* by an embedded CP rather than a simple NP. This can be exemplified in the case of (1) by saying the real internal argument of the matrix predicate of (1) is not an entity with the property of an apple but an entity corresponding to the entity of an apple further predicated by the event that either *x* (a variable for restrictive reading) or *it* (a pronoun for non-restrictive reading), either of which refers to an apple here, was on the plate. The reason why I avoid using the expression '(non-)restricted' instead of the italicized expression 'predicated' above is that Japanese HIRCs can be restrictive and non-restrictive in the sense of the classificatory criterion based on English (cf. Kuno (1973), Inoue (1976), Fukui (1986) for leading similar views for HERCs). Thus, following Chomsky (1977), predicate embedded CP contains a variable for restrictive reading or a bound pronoun for non-restrictive reading, either of which is thought to be co-indexed with the predicated NP.

Concretely to say, one dominant position attested in Kuroda (1999, 2004), Hoshi (1995), Hasegawa (2002), and Mihara and Hiraiwa (2006) among others, is that the relevant item should be categorized as nominalizer (NML) that projects a HIRC as NP by the merger with an adjacent syntactic object (SO). In addition, there is also a study of Narita (2007) that treats the item as a formal noun (*keishiki meishi*) NP. The other major approach adopted in Watanabe (2004), Tonoike (2008, 2018), and Takahashi (2012, 2016) is that it is C. Prior to the investigation of derivational details, let us review major claims in the literature on this item.

2. *no* as nominalizer/noun

First, we examine the NML / noun approach. NML is a kind of suffix that renders its adjacent constituent into a noun. This sounds the most reasonable when we consider HIRCs' strict sensitivities for their Case concordance and theta assignment.^{2,3} One might argue that

² Case Concordance Phenomenon: (Cf. Tsubomoto (1990))

The form of a Case particle following a HIRC exhibits strict concordance with the Case value assigned by a matrix Case assigner. See (i):

- (i) a. [kouhai-ga PIC-ni tuite ronbun-o kaita no]-**ga** EL-ni keisai-sareta.
 junior-NOM PIC-DAT on paper-ACC wrote *no*-**NOM** EL-DAT publish-PAST
- b. Suzuki-ga [kouhai-ga PIC-ni tuite ronbun-o kaita no]-**o** toosaku-
Suzuki-NOM junior-NOM PIC-DAT about paper-ACC wrote *no*-**ACC** plagiarize-
 shita.
 PAST
- c. Suzuki-ha [kouhai-ga PIC-ni tuite ronbun-o kaita no]-**ni** hihan-
Suzuki-NOM junior-NOM PIC-DAT about paper-ACC wrote *no*-DAT criticize
 shita.
 PAST
- d. [kouhai-ga PIC-ni tuite ronbun-o kaita no]-**no** shohyoo-ga todoita.
 junior-NOM PIC-DAT about paper-ACC wrote *no*-GEN review-NOM arrived

³ Theta Assignment Condition: (Cf. Kuroda (1999))

The internal relative head must be assigned a theta role from a matrix theta assigner. See (i) where in (ia) we can find a relation of inalienable possession between two bolded items while we cannot in (ib).

- (i) a. **gakuseitati-ga** saka-o oritekita no-no **hidarite-kara** totuzen
students-NOM slope-ACC went_down *no*-GEN **left_hand-from** suddenly

we could derive the same benefit even if it was assumed to be a determiner (pronoun), one of the major usages of *no* head. However, this possibility has been thoroughly refuted in the literature, for example, Kuroda (1992) and Mihara and Hiraiwa (2006), and the references therein. The evidence therein is diverse, so let me here cite some persuasive pieces among them. First, it has been pointed out that the relevant *no* head cannot be substituted by a full NP, shown in (3). Given the fact that HIRCs are always an argument and followed by a Case particle, they should be nominal but if the relevant *no* cannot be replaced with a full NP, assuming it a functional item, namely NML, might be a viable option.

- (3) Boku-wa[makkana ringo-ga sara-no ue-ni atta] no/ *ringo-o
 I-TOP red apple-NOM plate-GEN on-LOC was *no/* apple-ACC
 totte-tabeta.
 took-ate
 Lit. 'I ate a red apple that was on the plate.'

The second reason is apparently capable of eliminating a possibility that the *no* is a pronoun, just as those of (2f-f'). It is often pointed out that HIRCs are insensitive to external modification by demonstratives and attributive adjectives. See (4) and notice that the bolded modifiers are oriented to modify not each linearly adjacent item but each internal relative head. Contrary to the fact, if the *no* head were D, it would be projected up to DP with vacant slots in its Spec with which these external modifiers could be filled. However, that is not the case.

- (4) a. * [**sono**] [sara-no ue-ni makkana ringo-ga aru no]-o totte-tabeta.
 the plate-GEN on-LOC red apple-NOM is *no*-ACC took-ate
 Lit. '(I) ate the red apple that was on the plate.'
- b. * [**makkana**] [sara-no ue-ni ringo-ga aru no]-o tottetabeta.
 red plate-GEN on-LOC apple-NOM is *no*-ACC took-ate

baiku-ga tobidashite-kita.
 motorcycle-NOM ran_out-came

'A motorcycle suddenly ran out from the left of students who went down the slope.'

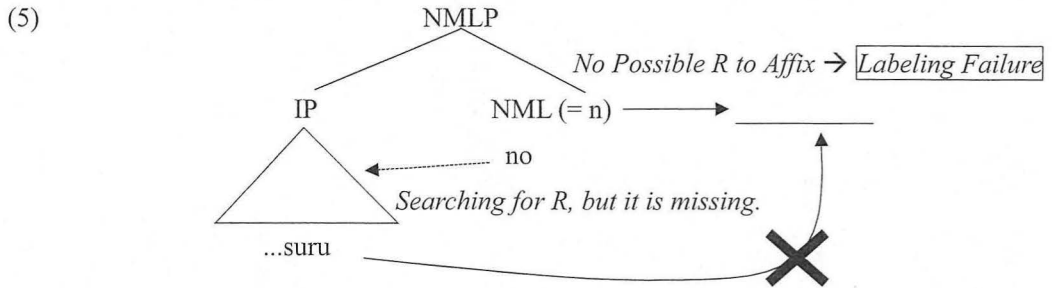
- b. * **gakuseitai-ga** saka-o oritekita no-no **boushi-ga** kaze-de
 students-NOM slope-ACC went_down *no*-GEN hat-NOM wind-by
 toba-sareta.
 blow-PAST
 'The hats of students who went down the slope was blown by the wind.'

Lit. '(I) ate a red apple that was on the plate.'

According to Mihara and Hiraiwa (2006), this fact encourages us to abandon a possibility that the relevant *no* is D, instead suggesting us to regard it as NML because they claim that NML *no* heads do not accommodate such modification in general, so (4a-b) can be treated as a natural consequence brought by its categorial nature as NML.

3. Reconsidering *no* as NML approach

This section is for the reconsideration of the NML approach to *no* particle in HIRCs. First, it is worth reconsidering the concept of NML in general under the recent labeling framework developed in Chomsky (2013, 2015). NML, as the name shows, nominalizes a syntactic object (SO) newly created by the merger with its adjacent SO, giving a status of NP to it in the structure. What I said as “a status of NP to it (= SO)” here is virtually equivalent to say ‘labeling a SO as NP’ in the recent theoretical framework, given that the label of SO is a readable input to both interfaces. In the framework, light functional categories like n^* and v^* , often called categorizer (K) (e.g., Oishi (2015)), take the responsibility of feeding a grammatical category by means of the affixation to a so-called root element (R) listed in lexicon in an categorically-abstract form. If we maintain this insight, the putative NML *no* head should be naturally treated as a nominal K, namely n or n^* in that NML nominalizes a SO by its merger with a target SO, possibly in the manner of External Merge (EM). However, the things are not so simple. It is assumed in general that during the derivation, K undergoes Pair-Merge (PM) for the purpose of affixation to R, creating an ordered pair such as $\langle K, R \rangle$. For example, in the case of indefinite nominals, it is widely assumed that it is $\langle n, N \rangle$. In order for this system to work out properly, the NML *no*, which corresponds to K in my argument, does not directly undergo EM with its target SO, rather, it is also expected to be affixed to some R element under its search domain in the structure. However, a problem arises that any candidate R cannot be located in the adjacent IP. See (5).



This is an irregular situation where a whole nominal SO is given a unique label distinct from ordinary noun phrases, and it is destined to be sent to Interfaces without receiving further adjustment. To avoid this problem, we simply allow the putative NML head to have an authority to undergo EM with the IP for nominalization. However, this stipulation is obviously a deviation from the derivational theory of projection, so I'm not sure whether such stipulation is worth being adopted.⁴

In addition, it seems to me that the NML approach lacks any independent supports for as to why it should be, for, the above logic that *no* in HIRCs is not D (pronoun) thus NML sounds powerful. On the other hand, I am somewhat skeptical about Mihara and Hiraiwa's (2006) empirical evidence that *no*-headed adnominal clauses do not generally accommodate external modification because the ill-formedness could not be ameliorated even if the NML *no* head was replaced by a full NP such as *koto* 'thing' and *zizitsu* 'fact' respectively, as shown below. See (6).

- (6) a. * [sono] [watashi-no gakusei-ga sakuban taiho-sareta no]-o
 the I-GEN student-NOM last_night arrested no-ACC
 kiite taihen odorita.
 heard very astonished
 Lit. 'I was very astonished to hear that my student was arrested last night.'
- b. * [sono] [watashi-no gakusei-ga sakuban taiho-sareta koto]-o
 the I-GEN student-NOM last_night arrested thing-ACC
 kiite taihen odorita.
 heard very astonished
 Lit. 'I was very astonished to hear the thing that my student was arrested last

⁴ The stipulation that I present in the body would receive a support from a trivial fact that *no* head cannot be used alone and it has to be together with some attributive item. In this sense, *no* head would require a complement, then it would be predicted to undergo EM rather than PM. I leave this problem for future research.

night.’

- c. * [sono] [watashi-no gakusei-ga sakuban taiho-sareta zizitsu]-o
 the I-GEN student-NOM last_night arrested fact-ACC
 kiite taihen odorita.
 heard very astonished
 Lit. ‘I was very astonished to hear the fact that my student was arrested last night.’

The infelicity of (6) suggests us that the ill-formedness problem at issue is not something unique to HIRCs, rather should be reduced to the general property of *no* particles in Japanese.

To recapitulate so far, the NML approach to *no* particle lacks compelling evidence for why it should be so. Rather, it seems that it is undermined by the impossibility of extra external modification as well as the compatibility with the Labeling Theory. Before leaving this section, let us consider Narita’s (2007) proposal that claims that the putative item is a kind of formal noun, often referred to as *keishiki meishi* in Japanese linguistics, that lacks any substantial semantic contents. The vital point of his claim is that the *no* head is active for Case-assignment but inactive for theta-assignment. Under his system, in order to follow the Full Interpretation, an internal head NP must raise to an external head position to be theta-assigned at LF by means of scrambling.⁵ Leaving aside the theoretical validity of adopting LF movement, however, several empirical facts tempt us to be somewhat skeptical about this approach. First, the following instances are generally said to have a putative formal noun as well. (7a) is so-called a change-state relative clause (Cf. Tonosaki (1996)) and (7b) is a typical example of headless relatives. In these examples, *no*-headed adnominal expressions are obviously the internal argument of each predicate, thus the underscored formal nouns should be theta-assigned. Thus, some explanation is required for the exception for why *no* head must be inactive for theta-assignment only in the case of HIRCs. Otherwise, it would lose a piece of motivation to raise the internal head NP at LF.

- (7) a. [ika-o abutta no]-o tsumande, sake-o nonda.
 squid-ACC grilled *no*-ACC taste liquor-ACC drunk
 Lit. ‘I drunk liquor while tasting what squid was grilled.’
 b. [ima ushiro-ni kakushita no]-o dashite.
 now behind-DAT hid *no*-ACC show
 Lit. ‘Show what you hid behind now.’

⁵ To be more accurate, Narita (2007) assumes this movement to take place without leaving morphophonetic effects before Spell-Out (Pre-Spell-Out-Movement).

In addition, this NP movement strategy faces a problem as to labeling along the lines of Chomsky's (2013, 2015) Labeling Theory, although I recognize it is an obvious hindsight when considering the timing of the publication of the work. Under his proposal, *no* head takes IP as its complement, thus naturally giving a $\{no, IP\}$, to which an internal head NP moves at LF. It is then predicted to generate a $\{NP, noP\}$ structure, which is a configuration of $\{XP, YP\}$ and it is a troubling input for Minimal Search because it cannot unambiguously choose which to be labeled as it is. So, some extra device needs to be installed, for example, to hypothesize that another IM later takes place to generate an antisymmetry in the set, or we need to hypothesize that the moved NP share a unique feature salient to Minimal Search.

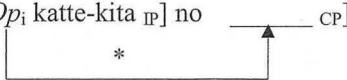
Summarizing this section, it seems a reasonable approach at first sight to treat *no* particle of HIRC as either NML or N(P) for the sake of nominalizing a whole clause. However, it was pointed out that this approach apparently receives no independent empirical evidence for why it should be. In addition, from a theoretical perspective, labeling problems intervene in the identification of *no* as NML or N(P). Thus, in what follows, I pursue instead the other dominant approach, namely the *no*-as-complementizer approach.

4. *no* as complementizer

The other major argument for the categorical status of the *no* particle in HIRCs is that it is a complementizer C (e.g., Watanabe (1992, 2004), Tsubomoto (1991), Tonoike (2008, 2018), Takahashi (2012, 2016) among others). The C approach is watertight in the regard that *no* in HIRCs follows a finite clause, manifesting where the embedded clause begins. Meanwhile, this receives further solidification when we consider the historical process of the installment of the relevant *no* particle in Japanese language. Furthermore, a dialect fact becomes another support for regarding *no* in HIRCs as C.

First, as indicated in Tonoike (1990), comparison of the morphology of HIRC with HERC in Japanese gives us a positive suggestion for why it should be C head. As shown in (8a), HERCs in Japanese lack a *no* head in its clause-rightmost position. Tonoike argues that this is explainable if the *no* head occupies the C head position because it blocks the movement of a relative operator to the C domain. This turns out to be a piece of evidence for the *no* as C approach.⁶

⁶ Note that Tonoike changed his position for relativization in his seminal work (2008, 2018) where a null operator movement is completely abandoned. However, he still assumes *no* to be C in HIRCs.

- (8) a. * Yamada-ga katte-kita no hon
 (Cf. Yamada-ga katte-kita hon (*acceptable HERC*))
 b. [[Yamada-ga Op_i katte-kita $_{IP}$] no $_{CP}$]


Now, let us give defense to this approach from a chronological view. Although I stand on the assumption that *no*'s usage of NML and C is clearly independent from each other, there is a traditional study of Okutsu (1974) in Japanese linguistics that says that the NML function of *no* head is entailed by its categorial nature as C.⁷ However, this is actually a plausible reasoning backed up from the origin of *no* particle. Nishina and Yoshimura (2004) argue that insertion of *no* can be traced to the loss of attributive-form's ability to form a nominal expression as a result of its integration with end-forms. Nishiyama (2009) argues that an attributive-form *ru* once occupied a D position of relative clause construction where a DP projection generates above a finite TP (= IP) clause. Eventually, the D head becomes phonetically null when the integration took place.

(9) Relative Clause (EHRC)

[[[V T $_{TP}$] [ru $_{D}$] $_{TP}$] $_{DP}$] > [[[V T $_{TP}$] [\emptyset $_{D}$] $_{TP}$] $_{DP}$]

(Nishiyama (2009: 76), slightly modified)

Although the present discussion concerns a *no* head, Japanese EHRCs do not have this item and Nishiyama says nothing about cases of HIRC. Instead, he deals with *noda*-constructions, claiming that they underwent the three-stages chronological shifts in (10): (i) an attributive-form *ru* first occupied a D position; (ii) then, the attributive-form raised to a C position; (iii) eventually, the attributive-form was replaced by *no* head.

- (10) a. [[[[V T $_{TP}$] [ru $_{D}$] $_{TP}$] $_{DP}$] (= (i))
 b. [[[[[V T $_{TP}$] [\emptyset $_{D}$] $_{TP}$] $_{DP}$] ru $_{CP}$] (= (ii))
 c. [[[[[V T $_{TP}$] [\emptyset $_{D}$] $_{TP}$] $_{DP}$] no $_{CP}$] (= (iii))

As for *noda*-constructions, Nishiyama cites Iwasaki (2000) that indicates that in Heian period, an attributive-form began to be put on the end of a sentence without a concord

⁷ See also Tonoike (1990) for an interesting proposal that all the categorial properties of *no* particle care are explainable solely from its C nature.

(*kakarimusubi*) particle, and this usage has three functions: i) background information; ii) exclamation; and iii) weak conjectures. And, it is generally assumed that these functions are encoded in CP layers in syntax, as finely categorized in the seminal studies of Rizzi (1997, among others). Thus, Nishiyama claims that attributive *ru* first got reanalyzed as C, then it was replaced by *no* head after the integration. Suppose that the same story would go to the case of HIRCs, namely they underwent the same processes in (10). I owe this supposition to a trivial fact that HIRCs obviously denote background information of what Iwasaki claims. On the other hand, it is also able to tolerate questions of why the *no* particle encodes nominal nature and why it is sensitive to Case concordance and theta assignment. This is because the *no* head carries over the lexical information that attributive-forms used to be encoded with. I admit that this reasoning might sound somewhat fence-sitting to Nishiyama's insight without my own investigation as to whether it can be applied to the case of HIRCs, however if adopted, it would be also able to nullify the problems that we saw in the previous section. As to the labeling problem caused by regarding it as NML, the label visible to Minimal Search is predicted to be C as standardly assumed the Labeling Theory of Chomsky (2013, 2015). Thus, all it has to do is affixing to T by Pair-Merge, which is safely predicted without being barred. Moreover, the insensitivity of extra-modification by modifiers like demonstratives somehow is offered an excuse that the Spec position of C head is not generally open to such modifiers because it is standardly assumed to host an operator.

Before closing this section, let me introduce another piece of evidence that comes from dialects observed widely in Miyazaki, a part of Kyushu area in Japan.^{8,9} First of all, I need to show the basic data necessary for the following argument. The *no* particles in Miyazaki dialects are used almost in the same manner as Kanto dialects: i) attributive particle; ii) pronoun; and iii) complementizer. On the other hand, it is interestingly to note that the use of *to* particles in the dialect is somewhat unique. First, *to* particles are used as C attested in an interrogative sentences and clefts. See (11):

- (11) a. kyoo-wa nani-o tabetato? (*interrogative sentence*)
 today-TOP what-ACC ate *to*

⁸ The major dialectic forms used in Miyazaki can be divided into two: i) Hyuga dialect; and ii) Satsugu dialect. The former spreads over the large area of Miyazaki, on the other hand, the latter can be observed in the south part adjacent to Kagoshima area. I owe a lot to my informants. Especially I thank Tammy Niina (a speaker of Hyuga dialect) and Kayo Takemoto (a speaker of Satsugu dialect) for their helpful comments.

⁹ See Yoshimura (2001) for a study from Yatusiro dialect, which is a kind of dialect used in Kumamoro area, a part of Kyushu.

(Cf. *kyoo-wa nani-o tabeta no?*)

‘What did you eat today?’

b. *asoko-de hashittyoru to-ga watashi-no tomodati yo.*
 there-LOC running *to*-NOM I-GEN friend be

(Cf. *asoko-de hashitteru no-ga watashi-no tomodati yo.*)

Lit. ‘It is my friend who is running there.’

As shown in (12), some speakers of Miyazaki dialects allow *to* to be used as a pronoun.¹⁰

(12) *ano akai to totte.*

that red *to* take

Lit. ‘Take that red one.’

(Cf. *ano akai no, totte.*)

However, it seems that this pronominal usage is not fully accepted by some speakers. Instead, they prefer *no* to *to* to make a pronominal expression like (12). Concerning HIRCs, it is much interesting to note that some speakers find it more or less ameliorated if HIRCs are headed by *to* rather than *no*.

(13) *asoko-de otokonoko-ga hashittyoru to-ga watashi-no tomodati yo.*

there-LOC boy-NOM running *to*-NOM I-GEN friend be

Lit. ‘The boy who is running over there is my friend.’

Extrapolating these facts, we might be able to say that the two particles in Miyazaki dialect have a tendency that the *no* particle is preferable in pronominal situations while the *to* particle is positively adopted in the situations where C appears, such as interrogative and cleft. If so, HIRCs are immediately followed by neither NML nor N, but C if (13) is supported enough.

5. Concluding Remarks

In this paper, we reviewed the long-standing issue as to what the categorial status of *no* particle of HIRCs should be, namely NML / N or C. Of course, some readers might think that this long-standing issue would be nullified if pursuing a view of Bare Phrase Structure in the sense of Chomsky (1993). The SO consisting of *no* and IP projection would be labeled

¹⁰ I thank Kayo Takemoto, a speaker of Satsugu dialect, for notifying me this fact.

as *no*P because of its {X, YP} configuration. This might be a workable solution to settle the dispute between NML / N versus C: namely, *no*P is nothing but a projection that reflects the hybrid lexical property of *no* particle, thus it behaves unambiguously. However, I'm not sure whether we can really make such position, advocating that the C system of Japanese is flexible among other natural languages so that the eclectic characteristics should be accommodated without receiving further elaboration. At least, however, the arguments that I made in this paper become supports for a view that the *no*-as-C approach to HIRCs has advantages over the NML / N approach because the former would receive a chronological explanation if the proposal of Nishiyama (2009) on the origin of *no* particle could be extended to HIRCs. On the other hands, from a theoretical view, the approach can also avoid facing potential labeling problems caused by assuming *no* to be NML. Moreover, the facts attested in Miyazaki dialects solidifies my position.

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