NOMINALIZATION IN THE JAPANESE PREDICATE DOUBLING CONSTRUCTION

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This paper examines the status of koto and no in the Predicate Doubling Construction in Japanese and shows that they have lost their syntactic status as nominals. This is an example of a nominal element losing its syntactic features through grammaticalization, though still retaining features necessary for morphophonological purposes. It is claimed that the construction is derived via movement of vP or TP and copy spell-out, which in turn suggests that koto and no are inserted for a morphophonological reason.*

Keywords: predicate doubling, grammaticalization, formal nouns

1. Introduction

Much research has been conducted on the nature of formal nouns in Japanese such as koto and no, and it has been observed that their behavior differs considerably depending on the environment they occur in.

(1) a. Sono ooki-no-o kudasai. (modified nominal) the big-NO-Acc give.Imp.Polite ‘Please give me the big one.’
b. Kimi-ga tukut-ta-no-o misete. (headless relative) you-Nom make-Past-NO-Acc show.Imp ‘Show me what you’ve made.’
c. Hanako-wa sakana-o yai-ta-no-o Hanako-Top fish-Acc broil-Past-NO-Acc tabe-ta. (head-internal relative) eat-Past

* The analysis presented in this paper presupposes a partial movement analysis of the Predicate Doubling Construction proposed by Ishihara (2010), which is outlined in Section 3 with some revisions. I am thankful to Noriko Imanishi, Akira Watanabe and anonymous reviewers for valuable comments and suggestions, and to Alison Tokita for stylistic improvements. All remaining errors are my own.

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‘Hanako ate the fish which was broiled.’

d. Boku-wa Taro-ga hon-o kat-ta-koto/no-o
   I-Top Taro-Nom book-Acc buy-Past-KOTO/NO-Acc
   sit-te-iru.
   know-Ger-be
   ‘I know that Taro bought a book.’ (complement clause)

e. Taro-ga hon-o kat-ta-no-wa
   Taro-Nom book-Acc buy-Past-NO-Top
   sono-mise-de-da. (cleft)
   the-shop-at-Cop
   ‘It is at that shop that Taro bought the book.’

f. Taro-ga hon-o kat-ta-no-da. (no-da construction)
   Taro-Nom book-Acc buy-Past-NO-Cop
   ‘Taro did indeed buy the book.’

Formal nouns differ from lexical nouns in not having much semantic content, but how they should be analyzed syntactically is still under debate.

In this paper we will look into another construction involving a formal noun: the Predicate Doubling Construction (henceforth PDC). The PDC is a construction in which a predicative element is repeated as in (2).\(^1\),\(^2\)

(2) Taro-wa ringo-o mui-ta koto/no/ni-wa mui-ta (ga
   Taro-Top apple-Acc peel-Past KOTO/NO/NI-Top peel-Past (but
   tabe-nakat-ta).
   eat-Neg-Past)
   ‘As for Taro’s peeling the apple, he did peel it (but he didn’t eat it).’

In this construction it is usually the case that koto/no/ni immediately precedes a Topic marker, wa, and koto and no nominalize a Topic phrase.\(^3\)

The fact that nominalization is involved in this construction is not peculiar to Japanese. In Yorùbá (Manfredi (1993)), Bùli (Hiraiwa (2005)), Korean (Nishiyama and Cho (1998)) and Russian (Aboh and Dyakonova (2009)), the first verb is nominalized (along with its arguments) as well.

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\(^1\) This construction is used mostly in colloquial Japanese, and there is considerable variability across speakers regarding acceptability of the example sentences. For instance, some speakers do not tolerate the use of no in the construction, whereas others find the use of no most acceptable and do not tolerate the use of ni following a predicate in the past tense. For this reason we will not deal with the differences between no and koto in this paper.

\(^2\) As Vicente (2007) discusses, the PDC emphasizes the truth of the proposition, and it has an adversative implicature (‘but’ effect).

\(^3\) We will consider ni in section 4.
Hiraiwa relates nominalization in the PDC to the existence of clausal determiners in a language. Though clausal determiners are not available in Japanese, nominalized clauses are readily available, and thus the use of nominalization in the PDC is quite natural in the language.

However, stating that *koto* and *no* in the PDC are nominalizers is just the beginning of our understanding. The term ‘nominalizer’ indicates their syntactic function of taking a non-nominal category and turning it into a nominal, but it does not tell us which syntactic category they belong to. The aim of this paper is to clarify their syntactic property.

In this paper we assume along with Chomsky (1995) that at some point in the syntactic derivation to LF, Spell-Out sends the structure already formed to Morphology and PF. In addition, we crucially rely on the copy theory of movement in considering the derivation of the PDC.

The paper is organized as follows. In section 2 we will show that *koto* and *no* in the PDC do not behave as nouns. Section 3 demonstrates that the PDC is derived via movement and copy spell-out. It will be claimed that *koto* and *no* cannot be complementizers or determiners under this analysis. In section 4 we will suggest that they are inserted in morphophonology to satisfy a requirement of the preceding adnominal verb. Section 5 concludes the paper.

2. *Koto* and *No* in the PDC Are Not Nouns

Let us start our investigation by determining whether *koto* and *no* in the PDC behave like nouns or not.

First, *koto* and *no* in the PDC differ from nouns in not allowing case-marking. The occurrence of *wa* is vital in the construction.

(3) *[Taroo-ga ringo-o tabe-ta koto/no]-ga/o/ni tabe-ta.
Taro-Nom apple-Acc eat-Past KOTO/NO-Nom/Acc/Dat eat-Past
‘As for Taro’s eating the apple, he did eat it.’

Second, they cannot be replaced with other nouns like *zizitu* ‘fact’ or *zitai* ‘situation.’

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4 But see Simpson and Wu (2001) and Simpson (2003) for an analysis of the nominalizer *no* as a clausal determiner.
In addition, if *koto* and *no* are nouns, nominalized clauses as a whole should be DPs/NPs, but they resist pronominalization. (5) cannot be interpreted as, for instance, *Taro*-*wa* ringo-*o* tabe-*ta* koto/no-*wa* tabe-*ta*.

(5)  
Taro-*wa* sore-*wa* tabe-*ta*.  
Taro-*Top* it-*Top* eat-*Past*  
‘Taro ate it.’

These data are consistent with the hypothesis that *koto* and *no* in the PDC are not nouns. However, as pointed out by an anonymous reviewer, they are also explained if the PDC involves fixed expressions of the form, V KOTO/NO-WA V, no part of which can be replaced with something else.

Now let us consider examples in which the fixed sequences are kept intact so that the syntactic status of *koto* and *no* in the PDC can be determined unambiguously.

(6)  
(6a) Kono hito-*ga* tanin-*o* kizutuke-zu-*ni-*wa iki-*rare-*nai this men-Nom others-Acc hurt-Neg-NI-*Top* live-can-*Neg* koto-*wa* Taroo-nitotte kutuu dat-*ta*. fact-*Top* Taro-*for* pain Cop-*Past*  
‘The fact that human beings cannot live without hurting others disturbed Taro.’

b. *Kono* dareka-*ga* ringo-*o* tabe-*ta* koto/no-*wa* this someone-Nom apple-Acc eat-*Past* KOTO/NO-*Top* tabe-*ta*. eat-*Past*  
‘Someone did eat an apple.’

(6a) shows that *kono* ‘this’ can modify the noun, *koto* ‘fact,’ even if a sentential modifier intervenes between them.\(^5\) If *koto* and *no* in the PDC are nouns, *kono* should be able to modify them as well. However, it cannot do so, as indicated by (6b).\(^6\) Notice that the sequence V KOTO/NO-WA V is not interfered with in (6b), so its ungrammaticality can be regarded as evi-

\(^5\) This interpretation is facilitated if the sentence is read with a pause following *kono.*

\(^6\) The intended interpretation of (6b) is the one in which *kono* modifies *koto* or *no,* and not the one where *kono* modifies *dareka.* If *koto* ‘fact’ is added at the end of (6b), the sentence becomes grammatical, which again supports the syntactic difference between *koto* and *no* in the PDC and *koto* as a noun.
idence that *koto* and *no* are not nouns in the PDC.

Finally, let us note that nominative genitive conversion is not possible in the PDC (7b, c).

(7) a. Akatyan-ga/no neru heya-wa sizuka-daroo.
    baby-Nom/Gen sleep room-Top quiet-probably
    ‘The room where the baby sleeps is probably quiet.’

b. Akatyan-ga/*no neru koto/no-wa neru (ga suguni
    baby-Nom/Gen sleep KOTO/NO-Top sleep but soon
    me-o samasu).
    eye-Acc wake.up
    ‘The baby does sleep (but he wakes up in a little while).’

c. Taroo-ga/*no sizuka-na koto/no-wa sizuka-da.
    Taro-Nom/Gen quiet-adn KOTO/NO-Top quiet-Cop
    ‘As for quietness, Taro IS quiet.’

If nominative genitive conversion is licensed by nominals as claimed by Miyagawa (1993) and Ochi (2001), its inapplicability in the PDC again indicates the non-nominal status of *koto* and *no*.7, 8

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7 A nominalized clause in the PDC is not an argument of a sentence-final predicate, but that does not invalidate our claim. It is sometimes maintained that nominative genitive conversion does not occur in adjunct clauses (i), but what seems to be at work here is the non-nominal status of *toki*. When it is followed by a postposition as in (ii), a genitive subject is allowed even in an adjunct clause.

(i) Taroo-ga/*no denwa-si-ta toki, kaigi-wa sudeni owat-te
    Taro-Nom/Gen telephone-do-Past when meeting-Top already end-Ger
    have-Past
    ‘When Taro telephoned, the meeting had already ended.’
    (Lit.) ‘(At) the time Taro telephoned, the meeting had already ended.’
    (Fujita (1988: 74))

(ii) Sukai-turii-wa watasi-ga/no it-ta toki-ni-wa koozityuu
    Sky-Tree-Top I-Nom/Gen go-Past time-at-Top under.construction
desi-ta.
    be.Polite-Past
    ‘The Sky Tree was under construction when I went there.’

8 Hiraiwa (2002) also observes that grammaticalized structures do not tolerate nominative genitive conversion easily.

(i) John-wa gozentyuu-wa hi-no tetteita no ga/?wo/*ni
    John-Top morning-Top sun-Gen shine-Past-Adn C Nom/Acc/Dat
    gogo-ni natte ame-ga huridasite-kara deteitta.
    afternoon-Dat become rain-Nom fall-begin-after go-out-Past
    ‘It was sunny in the morning and/but John went out after it began to rain in
    the afternoon.’
    (Hiraiwa (2002: 557))
For reasons of space, the syntactic behavior of *koto/no* in the other environments in (1) cannot be illustrated here, but it is summarized in (8).

(8)

<table>
<thead>
<tr>
<th></th>
<th>occurrence with a case marker</th>
<th>substitution by other N</th>
<th>pronominalization of a constituent containing it</th>
<th>modification by <em>kono/sono</em></th>
<th>nominative genitive conversion</th>
</tr>
</thead>
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<td>cleft</td>
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<td>*</td>
<td>OK</td>
<td>*</td>
<td>OK/??9</td>
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<tr>
<td><em>no-da</em></td>
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<tr>
<td>PDC</td>
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</tbody>
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It seems that *no* (and *koto*) in the *no-da* construction and the PDC have developed further away from nouns than *no* (and *koto*) in other environments, and this accords with the observation made by Yap, Grunow-Hårsta and Wrona (2011) that grammaticalization of nominalizers in Asian languages proceeds from referential to non-referential functions. It is not surprising that *koto* and *no* in the PDC should have entirely lost their nominal status due to grammaticalization.

Interestingly, however, *koto* and *no* have retained an ability to license the preceding element in adnominal form.

(9) Taroo-ga sizuka-na/*sizuka-da koto/no-wa sizuka-da.
    Taro-Nom quiet-Adn/quiet-Concl KOTO/NO-Top quiet-Cop
    ‘As for quietness, Taro IS quiet.’

Adjectival nouns have an adnominal form morphologically distinct from a conclusive form. Notice that the adnominal form, *sizuka-na*, must be used before *koto* or *no* in the PDC, as shown in (9). As far as the form of the preceding predicate is concerned, *koto* and *no* thus function as nouns.

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One way of making sense of this mixed behavior of koto and no is to consider that while categorial features necessary for syntactic operations have been lost, the minimal features responsible for licensing conjugation are retained, which could be a low-level morphophonological operation.\textsuperscript{10} In order to implement this idea, we would like to suggest that koto and no are inserted postsyntactically to satisfy a morphophonological requirement of the preceding predicate. Before pursuing this possibility, in the next section, let us consider an alternative possibility, namely, that koto and no have been reanalyzed as belonging to a category other than nouns, though somehow retaining a nominal property to license the preceding adnominal form.

3. *Koto* and *No* in the PDC Are Not Complementizers or Determiners

Grammaticalization often leads to creation of functional categories out of lexical categories, as demonstrated by Roberts and Roussou (2003), and it has been claimed that no and koto in some environments are complementizers (e.g. Kuno (1973), Kuroda (1976–77), Murasugi (1991), Hoshi (1995), Horie (1997), Kizu (2005), Kinsui (2008) among others) or (clausal) determiners (e.g. Simpson and Wu (2001), Simpson (2003)). However, this cannot be the case with koto and no in the PDC, if Ishihara’s (2010) analysis of the construction, based on Nishiyama and Cho (1998), is correct. In this section we will outline her analysis, showing that the occurrence of non-identical verb forms in the PDC can be easily explained by it.

3.1. Movement Analysis of the PDC

3.1.1. The Structure of the PDC

Before discussing an analysis, we need to determine the constituent structure of the PDC. Two structures that immediately come to mind are the following:

\textsuperscript{10} But see Hiraiwa (2002) among others for syntactic treatment of conjugations.
In (10a) the argument DPs are members of the first verb, whereas in (10b) they are the members of the second verb. The former is consistent with an analysis in which TP/vP is topicalized. On the other hand, the latter is expected under an analysis where the verb is reduplicated, perhaps by moving V or VP with phonologically null argument DPs to some inner Top(P) position. Ishihara (2010) claims that the structure of the PDC is not (10b) but (10a).

Firstly, VP consisting of the first verb and its object can be preposed, leaving behind a subject and the second verb.

(11) Ringo-o tabe-ta koto/no/ni-wa Taroo-wa tabe-ta (ga apple-Acc eat-Past KOTO/NO/NI-Top Taro-Top eat-Past but oisi-i to-wa omowa-nakat-ta) delicious-Nonpast C-Top think-Neg-Past

‘As for Taro’s eating an apple, he did eat one (but did not find it delicious).’

(Ishihara (2010: 49))

This is expected if the structure is as in (10a) rather than (10b), since the first verb and its object form a constituent in the former but not in the latter.

In addition, there are speakers who permit the repetition of internal arguments in the PDC.


‘As for Taro’s reading the book, he did read it.’

(Ishihara (2010: 49))
This is readily accountable for under (10a), if a principle governing the pronunciation of the copy in the base position is subject to idiolectal variation. On the other hand, it is difficult to accommodate (12) under (10b).

Therefore (10a) is a more plausible structure for the PDC than (10b), which can be captured if the construction is derived by TP/vP movement.11, 12

3.1.2. Forms of Predicates Allowed in the PDC

Nishiyama and Cho (1998) propose to derive the PDC by TP movement,

11 The PDC can be interpreted with V (ia), VP (ib), or TP (ic) as a contrastive topic.

(i) Taro-Top apple-Acc buy-Past KOTO/NO-Top buy-Past but 'As for Taro’s buying an apple, he did buy one, but …'
a. … eat-Neg-Past 'he didn’t eat it.'
b. … sake-Acc drink-Ger sleep-Ger have-Past 'he drank sake and fell asleep.'
c. … poisoned-apple-case-Gen suspect-as arrest-Pass-Past-NO-Top Hanako Cop-Past 'the one that was arrested as a suspect in the case of the poisoned apple was Hanako.'

The interpretation of the PDC does not necessarily reflect its constituent structure, but the fact that TP as a whole can be interpreted as a contrastive topic is readily compatible with (10a). We may be able to say that a preposed constituent or its subpart can be interpreted as a topic.

12 An anonymous reviewer suggested that the unavailability of nominative genitive conversion in the PDC (7b, c) follows naturally if the structure is as in (10b), because the subject DP would be an argument of the second verb, which does not modify any nominal elements. (S)he observes that (i) is much better than (7b) with a genitive subject.

(i) baby-Gen sleep KOTO/NO-Top sleep room 'A room in which a baby does sleep'

Though I concur with the reviewer’s judgment, I do not think the contrast between (i) and (7b) necessarily indicates that *akatyan-no* is an argument of the second verb. For example, we may be able to regard *akatyan-no* in (i) as a genitive DP modifying *heya* just as in *akatyan-no* *heya*, providing an antecedent for a phonologically-null subject of the first verb in the PDC. Since the structure in (10a) is empirically motivated by (11) and (12), I take the failure of nominative genitive conversion in the PDC (7b, c) as an indication of the non-nominal status of *koto/no*. 
assuming Chomsky’s (1995) copy theory of movement.\(^{13}\)

\[(\text{FocP}) \left[ [\text{TPi} \quad \text{John-ga konpyuuttaa-o kat-ta]-koto-wa}] \right] \quad t_i \]

\[
\begin{array}{ll}
\text{John-Nom} & \text{computer-Acc} \\
\text{buy-Past-KOTO-Foc} & \downarrow \\
\text{kat-ta} &
\end{array}
\]

‘As for buying a computer, John did buy one.’

According to their analysis, TP is moved to Spec of FocP, and its trace is spelled out as \textit{kat-ta}, which consists of -\textit{ta}, a spell-out of T, and \textit{kaw}, the verb functioning as a spell-out of the VP.\(^{14}\) They suggest that the trace of TP has to be spelled out either because Japanese has a (null) mood marker above TP like Korean, which must be supported, or because a predicate is necessary for the purpose of predication.

An interesting property of this construction noted by Nishiyama and Cho (1998) is that a predicate that precedes \textit{koto/no/ni} (P\(_1\)) and a sentence-final predicate (P\(_2\)) need not match in tense form.

\[\text{TP1} \quad \text{Taro-wa ringo-o tabe-ru/tabeta koto/no/ni-wa} \]

\[\text{TP2} \quad \text{Taro-Top apple-Acc eat-Nonpast/eat-Past KOTO/NO/NI-Top} \]

\[\text{eat-Past} \]

‘As for Taro’s eating the apple, he did eat it.’

There is no difference in meaning, whether P\(_1\) occurs in the non-past form \textit{tabe-ru}, or in the past form \textit{tabe-ta}. When P\(_2\) is in the past tense, the PDC is interpreted as a description of a past event, regardless of the form of P\(_1\).

Ishihara (2010) examines what kind of predicate forms can precede and follow the Topic marker \textit{wa} in the PDC, and reports that for a group of speakers, P\(_1\) and P\(_2\) can differ not only in tense, but also in the use of causatives (15c).\(^{15}\)


\(^{14}\) They treat \textit{wa} as a Focus marker, heading FocP, but in this paper we will treat it as a Topic marker, which may bear a contrastive meaning, when an adversative ‘but’ clause is added.

\(^{15}\) There are many speakers who do not accept (15c) or (16b), as reported by Potts et al. (2009). Probably these speakers treat both -(r)u and -\textit{ta} as Tense morphemes, unlike the speakers considered in the text. Some of these speakers accept sentences with tense mismatches like (15b), making use of default tense. See section 4 for more discussion on idiolectal variation.
(15) a. Hanako-wa Taro-ni kusuri-o nom-ase-ta
    Hanako-Top Taro-Dat medicine-Acc take-Cause-Past
    koto/no/ni-wa nom-ase-ta (ga byoo-in-e ture-te
    KOTO/NO/NI-Top take-Cause-Past but hospital-to take-Ger
    iki-wa si-nakat-ta).
    go-Foc do-Neg-Past
    ‘As for making T aro take medicine, Hanako did make him
do it (but she didn’t take him to the hospital).’
b. Hanako-wa Taro-ni kusuri-o nom-ase-ru koto/no/ni-wa
    take-Cause-RU
    nom-ase-ta  (ga …).
take-Cause-Past
c. %Hanako-wa Taro-ni kusuri-o nom-u koto/no/ni-wa
    take-U
    nom-ase-ta  (ga …).
take-Cause-Past
d. *Hanako-wa Taro-ni kusuri-o nom-ase-ta koto/no/ni-wa
    take-Cause-Past
    nom-ase-ru  (ga …).
take-Cause-Nonpast
e. *Hanako-wa Taro-ni kusuri-o nom-ase-ta koto/no/ni-wa
    take-Cause-Past
    non-da  (ga …).
take-Past
f. *Hanako-wa Taro-ni kusuri-o non-da koto/no/ni-wa
    take-Past
    nom-ase-ta  (ga …).
take-Cause-Past  (adapted from Ishihara (2010: 44))

P₁ and P₂ need not be identical in form, though the verbal root has to be
the same. P₁ can be in -(r)u form (15b). It can leave out the causative
morpheme if it ends in -(r)u as in (15c), but this omission is not allowed if
it ends in the past tense -ta as in (15f).¹⁶ P₁ cannot be specified more than
P₂ in terms of tense or causation (15d, e).

The same pattern holds with other restructuring predicates. Examples
with a desiderative restructuring predicate tai are given below.

¹⁶ In (15f), the past tense morpheme -ta is realized as -da due to the onbin sound change.
(16) a. Watasi-wa hon-o yomi-ta-i koto/no/ni-wa
    I-Top book-Acc read-want-I KOTO/NO/NI-Top
    yomi-ta-i (ga ...).
    read-want-Nonpast but
    ‘As for reading a book, I want to read one (but ...).’

b. %Watasi-wa hon-o yom-u koto/no/ni-wa yomi-ta-i
    read-U read-want-Nonpast
    (ga ...).

c. *Watasi-wa hon-o yomi-ta-i koto/no/ni-wa yom-u
    read-want-I read-Nonpast
    (ga ...).  (Ishihara (2010: 45))

In the dialect considered here, it is possible to leave tai out from P1 when it ends in -(r)u as in (16b), and P2 has to be the same as, or more specified than, P1 (16c).

These data are summarized as (17).

(17) a. P1 can be the same as, or in a less specified form than P2, but not vice versa.
    b. The root of P1 must be followed by subsequent morphemes in the same order as in P2 without skipping any morphemes, except when P1 ends with -(r)u.

3.1.3. Movement of TP or a Subpart of TP in Deriving the PDC

The doubling pattern of non-identical predicate forms given in (17a) is not peculiar to the PDC in Japanese. We find similar restrictions on non-identical WH-pronoun doubling in Dutch dialects. Barbiers et al. (2008) observe that the order of the pronouns involved is fixed.

(18) a. Wat denk je wie ik gezien heb? (Overijssel)
    what think you who I seen have
    ‘Who do you think I have seen?’ (Barbiers et al. (2008: 77))

b. *Wie denk je wat ik gezien heb? (Barbiers et al. (2008: 78))

Based on this, they argue that a higher chain link cannot be more specified than a lower chain link in a movement chain and propose to analyze pronouns as spell-outs of different layers of a nominal projection.

(19) \[ \begin{array}{c}
\text{DP =die} \\
\text{D PhiP =wie} \\
\text{Phi QP =wat}
\end{array} \]  (Barbiers et al. (2008: 79))

According to their proposal, non-identical doubling results as a consequence
of partial copying of a lower chain link and spelling out of both chain links.

Likewise, let us suppose that in the PDC in Japanese, TP or its subpart is moved to a sentence-initial position, and both the head and the tail of the movement chain are spelled out. When TP is moved, it results in the PDC with P₁ and P₂ in an identical form. When a subpart of TP is moved, P₁ results in a less specified form than P₂, as described in (17a), because P₂ contains all the information available in TP whereas P₁ does not. The first part of (17b) follows straightforwardly from this movement analysis as well. Since only constituents can move, the order of morphemes in the lower chain link is preserved in the higher chain link, and there is no way of deriving P₁ in which some morphemes in between are left out.

A problematic case for this analysis is the latter half of (17b), a proviso for the generalization, which seems to resist the movement analysis of a partial structure. In (15c), a causative morpheme is skipped in P₁. This ceases to be a problem, if we regard -(r)u, which occurs with verbs, and i, which occurs with adjectives, preceding koto and no not as Ts but as markers of adnominal verb/adjective form, in contrast to -ta preceding koto and no, which is T in adnominal form. Then we will be able to derive (15c) via movement of vP, a partial structure of TP, and maintain the generalization about the combination pattern of morphemes without exception.

For the sake of concreteness, let us see how (2) and (15c) are derived respectively under this analysis.

(20)

In (20), P₁ and P₂ are in the same past form. Here, driven by a Topic
feature, TP moves to Spec of TopP. An affixal Topic marker, wa, attaches to whatever occurs in Spec of TopP.\textsuperscript{17} Taro in the preposed TP undergoes further Topic movement to Spec of a higher TopP, where it is realized as Taro-wa. Grohmann (2003) argues that movement cannot be too local; it has to take place from one prolific domain to another. However, according to his Condition on Domain Exclusivity, movement within the same prolific domain is permitted, if a copy is spelled out differently from a moved object. Since the movement of TP to Spec of TopP takes place within the same prolific domain, the copy left behind needs to be spelled out, but in a distinct form from the moved TP. -Ta must be spelled out, because it is a head of TP, and (v and) V have to be pronounced as well to support this affixal T. Arguments within TP must remain silent to satisfy the Condition on Domain Exclusivity as well as economy conditions.\textsuperscript{18}

(21) represents the derivation of (15c), where P skips ase and ends in -(r)u.

\begin{center}
(21)
\end{center}

\textsuperscript{17} We will deal with koto and no in section 4.

\textsuperscript{18} Some speakers who allow repetition of internal arguments seem to have a weaker requirement on economy (cf. (12)), but no speaker allows repetition of an external argument.
The vP, complement of a causative ase, [Taro-ni kusuri-o nom v] moves to Spec of TopP, and Hanako, moves to Spec of another TopP. Note that -(r)u, being an adnominal marker, does not reside in T. At the base position -ase-ta is left behind. -Ase being affixal, a copy of the lexical verb, nom, is pronounced together with -ase-ta to support the stranded affix. Other elements such as Hanako, Taro and kusuri in the base position are not phonetically realized due to economy.

The partial movement analysis can successfully explain why only a certain combination of morphemes is allowed in P₁. Without movement, it would not be clear how the combination of morphemes in P₁ is accounted for. It would also be unclear why the same predicate has to appear twice in the construction.

(22) *Taro-wa ringo-o tabe-ru koto/no/ni-wa kuw-u.

Taro-Top apple-Acc eat₁-RU KOTO/NO/NI-Top eat₂-Nonpast

(22) indicates that taberu and kuwu cannot appear as P₁ and P₂ in the same PDC, though they have roughly the same meaning. Those who attempt to account for the PDC without making recourse to movement need to justify why sentences like (22) are unacceptable.¹⁹

The fact that the PDC shows unbounded dependency and sensitivity to island constraints lends further support to the movement analysis.

(23) Ame-ga hut-ta koto/no/ni-wa boku-wa t hut-ta-to
rain-Nom fall-Past KOTO/NO/NI-Top I-Top fall-Past-C

think
‘I think it did rain.’

¹⁹ Aoyagi (2006: footnote 1) claims that the same predicate need not appear twice in the PDC (i), but I assume this represents a different construction.

(i) Chelswu-wa sake-o non-da koto-wa biiru-o 1,2-hai yat-ta
Chelswu-Top liquor-Acc drink-Past KOTO-Top beer-Acc 1 or 2-glass do-Past
but
‘As far as drinking goes, Chelswu had a glass of beer or two (but …).’

²⁰ Nishiyama and Cho (1998: 466) give a different judgment.

(i) *[John-ga konpyuutaa-o kat-ta], koto-wa [boku-wa [i, kat-ta-to]
John-Nom computer-Acc buy-Past KOTO-Foc I-Top buy-Past-C

think
‘As for John’s buying a computer, I think he bought one.’
(24) a. \*Ame-ga hur-u koto/no/ni-wa boku-wa t hur-u
   rain-Nom fall-U KOTO/NO/NI-Top I-Top fall-U
   toti-o kat-ta.
   land.Acc buy-Past
   ‘I bought land where it did rain.’

b. *Ame-ga hur-u koto/no/ni-wa boku-wa t huri,
   rain-Nom fall-U KOTO/NO/NI-Top I-Top fall
   kaze-mo hui-ta-to omou.
   wind-also blow-Past-C think
   ‘I think it really rained and the wind also blew.’

(adapted from Ishihara (2010: 61))

As in (23) TP in the embedded clause can move to Spec of a matrix TopP,
but this movement is subject to the Complex NP Constraint (24a) and the
Coordinate Structure Constraint (24b).

We have shown that the PDC is derived by movement of (a subpart of)
TP and copy spell-out. This analysis demonstrates that a copy left behind
by movement has an internal structure, and offers empirical support for the
copy theory of movement.

3.2. Koto and No under the Partial Movement Analysis of the PDC

Nishiyama and Cho (1998) suggest that koto in the PDC is a nominal-
izer, which nominalizes TP so that wa can attach to it. They consider the
possibility of analyzing it as C, but claim that such an analysis cannot be
extended to Korean ki, which behaves like koto in the PDC in many ways.

If the analysis sketched in the previous subsection is on the right track,
it will provide grounds for dismissing koto and no as complementizers
or clausal determiners. Under this analysis, in order to account for mis-
matches in form of the predicates preceding and following a Topic marker,
movement of vP is posited. The phrase that undergoes movement cannot
be CP or DP, because CP and DP do not occur as a complement of T, sase
or tai. One might argue that koto or no is added after vP movement takes
place and projects CP or DP, but that would amount to introducing a new
type of C or D that takes vP as its complement. Hence, to the extent that
the analysis involving movement of a subpart of TP is tenable, koto and no
cannot be C or D.

4. The Status of Koto, No and ⌀ in the PDC

If koto and no in the PDC cannot be N, C, or D, what are they? We
would like to suggest that they are not present in the syntactic structure, but are inserted postsyntactically just to satisfy a morphophonological requirement of a preceding predicate in adnominal form.\(^{21}\) We assume that they have retained enough morphological features to do so. We call this late insertion of \textit{koto} and \textit{no koto}-support and \textit{no-support} respectively.\(^{22}\)

Now let us speculate how the PDC got grammaticalized. In the beginning, \textit{koto} and \textit{no} acted as nouns in the PDC. As grammaticalization proceeded, \textit{koto} and \textit{no} lost their syntactic status as nouns, but the adnominal form of the preceding predicate still remains, which triggers \textit{koto-support} or \textit{no-support}.

Interestingly, \textit{koto-support} or \textit{no-support} is optional for some speakers.\(^{23}\)

\[(25) \% \text{Taro-wa ringo-o mui-ta-wa mui-ta (ga \ldots).} \]
\text{Taro-Top apple-Acc peel-Past-Top peel-Past but}

‘As for Taro’s peeling the apple, he did peel it (but \ldots).’

These speakers moved further and started reanalyzing \textit{P}_1 as a conclusive form. Unlike adjectival nominals and copulas, adnominal forms of verbs and adjectives are nondistinct from conclusive forms in modern Japanese, so it is not surprising that the adnominal property was lost in the process of grammaticalization. If so, there is no need for \textit{koto-support} or \textit{no-support} in (25).

\[(26) \text{Pred } koto/no \rightarrow \text{Pred } koto/no \rightarrow \text{Pred} \]
[adnominal] [nominal] [adnominal] [conclusive]

If this hypothesis is on the right track, it makes the following prediction: Those speakers who accept (25) should not accept \textit{P}_1 and \textit{P}_2 in non-identical forms, because they treat \textit{P}_1 as a conclusive form, consisting of V-v-(\ldots)-T, which requires TP movement. This prediction seems to be borne out.

\[(27) \* \text{Taro-wa ringo-o muku-wa mui-ta (ga \ldots).} \]
\text{Taro-Top apple-Acc peel-Top peel-Past but}

‘As for Taro’s peeling the apple, he did peel it (but \ldots).’

\(^{21}\) This approach fits naturally within the framework of Distributed Morphology put forth by Halle and Marantz (1993), which posits late insertion of phonological materials, though it can be incorporated in other frameworks as well.

\(^{22}\) \textit{Koto-support} and \textit{no-support} are similar to \textit{do-support} because both types of operations are triggered for a morphophonological reason, but there seems to be a difference between them. As an anonymous reviewer pointed out, while \textit{do} is inserted in T, \textit{koto} and \textit{no} do not have a syntactic N position to fill in.

\(^{23}\) I am grateful to Sakumi Inokuma, Fumikazu Niinuma and Chizuru Nakao for pointing this out to me.
The late insertion of *koto* and *no* may look like a novel invention. Once we realize that they lack syntactic properties as well as semantic properties, however, it is not clear what forces their presence in the syntactic structure, given the principle of economy of representation. Late insertion is a reasonable way of dealing with them.

We can apply the same analysis to case markers. It is known that DPs followed by postpositions and those followed by case markers behave differently.

(28) a. Gakusei-ga 3-nin hon-o kat-ta.
   students-Nom 3-CL book-Acc buy-Past
   ‘Three students bought the book.’ (Miyagawa (1989: 27))
   b. *Hito-ga tiisai mura-kara 2-tu ki-ta.
   people-Nom small villages-from 2-CL come-Past
   ‘People came from two small villages.’
   (Miyagawa (1989: 31))

Miyagawa (1989) claims that the contrast between (28a, b) follows if a numeral quantifier and DP must c-command each other, and if postpositions project PPs in contrast to case markers, which he claims cliticize directly onto DPs. Case features, which play a crucial role in syntactic computation, reside in D/N, so case markers are not active in syntax. Since they have no inherent meaning either, they are plausible candidates for late insertion. We can extend this analysis to the Topic marker *wa* in the PDC as well, which is a spell-out of a Topic feature in Top. Furthermore it may be possible to handle many instances of agreement morphology along the same lines.24

So far we have not considered the PDC with *ni*.

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24 An anonymous reviewer suggested pleonastic negation as a candidate for late insertion, which is semantically superfluous (i).
   (i) I can’t get no satisfaction.
   (title of a song by The Rolling Stones, cited by Horn (2010: 120))
   However, Horn (2010: 125) observes that pleonastic negatives have a grammatical effect.
   (ii) I miss *(not) seeing you around anymore.
   The pleonastic *not* does not contribute negative meaning in the complement of *miss*, but it acts as a licenser of the NPI in (ii), since the verb is only weakly negative and cannot license *anymore* by itself. This indicates that at least some cases of pleonastic negation cannot be treated in the same manner as *koto* and *no* in the PDC, though more needs to be investigated on this issue.
NOMINALIZATION IN THE JAPANESE PREDICATE DOUBLING CONSTRUCTION

(29) Taroo-wa ringo-o mui-ta ni-wa mui-ta (ga
Taro-Top apple-Acc peel-Past NI-Top peel-Past but
tabe-nakat-ta).
eat-Neg-Past
‘As for Taro’s peeling the apple, he did peel it (but he didn’t eat it).’

We assume *ni* is a case-marker, attached to a phonologically-null nominalizer ∅, which was common in classical Japanese and is still in use today, as observed by Shida (1976) and Horie (1997) among others.25

(30) a. Ima-no hito-no moto-ni hiruma-ni
present-Gen person-Gen place-to daytime-in
irikitaru-∅-o mi-te …
enter.come-NML-Acc see-Ger
‘Having seen (the man) come into his new wife’s residence during the daytime, …’


b. Makeru-∅-ga kati-da.
lose-NML-Nom victory-Cop
‘To lose is to win.’

In the PDC, ∅ nominalizes a preposed topic vP/TP into a noun phrase, which requires case marking. Since ∅ has a syntactic function, it is present in syntax, unlike *koto* or *no*.

To sum up, we have seen that the PDC has undergone grammaticalization to a stage in which *koto* and *no* not only have bleached out their semantic content but also have lost their syntactic features, and have proposed that they are inserted postsyntactically to support the adnominal form of the preceding predicates.

5. Conclusion

In this paper we have examined the PDC in Japanese. The construction may look idiosyncratic and uninteresting at first sight, but its properties are shared by similar doubling constructions in other languages: a lower chain link, which is not usually pronounced, is partially pronounced. We have seen that a partial movement analysis proposed for Dutch pronominal doubling can be adapted for cases involving non-identical predicate

25 I am thankful to Saeko Urushibara for helping me clarify this point.
forms. Doubling of a tensed predicate, on the other hand, has been shown to follow from TP movement. In both cases principles governing copy spell-out, coupled with a ban on stranded affixes, play a crucial role in determining the pronunciation of a copy left behind by the movement. The analysis thus offers empirical support for Chomsky’s (1995) copy theory of movement.

As for the status of koto and no in the PDC, we have noted their dual behavior. On the one hand, they do not behave as nouns syntactically. On the other hand, they occur immediately after adnominal predicates just like other nouns. We have proposed that these nominal-like elements have lost their syntactic and semantic features through grammaticalization, while still retaining their morphophonological features. By separating syntactic and semantic features from morphophonological features, we have been able to account for their puzzling behavior: they do not exist in syntax, but are inserted postsyntactically just to satisfy a morphophonological requirement of the preceding predicates.

There are several issues that have not been addressed in this paper. First, we have not considered no and koto in the PDC in the context of the historical development of no and koto. How different functions of no and koto emerged and developed in the history of Japanese, and what roles the loss of distinct adnominal inflection of predicates played in it are still under debate (e.g. Shida (1976), Nishi (2006), Yoshimura (2010)). We need to investigate how no in the PDC is related to post-predicate pronominal no and/or complementizer no, and whether koto and no can be treated in the same way from a historical perspective.

Second, it is necessary to examine how much variation is allowed in the PDC cross-linguistically as well as language-internally and to consider why nominalization takes place in the construction in various languages.

Third, we have suggested that late insertion may be a possible way of dealing with elements that are devoid of both semantic and syntactic properties. It remains to be seen whether or not this kind of analysis is capable of handling other types of grammaticalized elements.

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