A Note on the Morphology of Passive Nominals

Junji Hamamatsu

1. Introduction

Passive nominals refer to noun phrases such as (1), where the prenominal genitive DP is conceived as a complement of the noun:

(1) the patient's examination (by the doctor)

The putative objecthood of the prenominal DPs prompted some researchers, including, among others, Chomsky (1972; 1986) and Anderson (1977; 1979) to argue that movement is involved in their derivation. The example in (1a), for example, has the derivation such as that in (2):

(2) the patienti's examination t (by the doctor)

Thus, the objecthood of the patient, together with the similarity between (2) and its sentential counterpart in (3), can be expressed in a formal fashion by appealing to the movement operation:

(3) The patient was examined (by the doctor)

The idea that underlies their line of argument is succinctly described by Giorgi and Longobardi (1991: 2):

(4) a. It is possible to identify, within NPs, definite θ− (and non-θ−) positions at various levels of hierarchical attachment: whenever an element of the N frame appears in a position arguably different from the one where it should be projected at D−
structure, its displacement must, then, be governed by the general conditions holding on antecedent–trace relationships created by ‘Move a’...

b. The θ-structure of Ns (their θ-grid and the condition on θ-assignment) strictly parallels that of Vs, so that the differences appearing on the surface must be due to the intervention of other modules of grammar which determine some systematic variation.

Since the early days of generative grammar, the passive nominal has been one of the prominent manifestations of the purported parallelism between the noun phrase and the sentence. The present study is intended to offer an empirical support for positing movement in the passive nominal, confirming the similarity of the noun phrase with the sentence. Specifically, I would like to cast a new light on passive nominals from a morphological perspective. By examining the role that nominal suffixes play in the formation of passive nominals (cf. Roeper 1987; 1993), I shall show that the objecthood is real in some varieties of them and hence movement is necessary to capture it. I shall then move on to construct the adequate structure of passive nominals, with special attention paid to Case-checking and thematic properties of light nouns, which constitute nominal analogues of light verbs (Carstens 2000).

The organisation of this squib is as follows: Section 2 examines some arguments for and against the movement analysis of the passive nominal. In section 3 we shall look into the morphology of derived nouns. In section 4 the internal structure of the noun phrase and the passive nominal will be considered. Section 5 concludes the discussion.
2. The Pros and Cons of Movement Approach to the Passive Nominals

Although the passive nominal has been purported to represent the parallelism between the sentence and the noun phrase, some researchers rejected the movement analysis, claiming that the intuitive objecthood in fact does not come from syntactic movement. They include Williams (1982), Zubizaretta (1987) and Grimshaw (1990), among others.

Williams’ observation, it seems, is representative of the arguments against movement approach to the construction in question. He claimed that the apparent objecthood of the prenominal genitive DP comes from the broad range of meaning that possessives can represent. To illustrate, let us consider the example in (5):

(5) John’s car

In (5) the role of John is not confined to the owner of the car. The car may be one that John drives, one that John is fond of or one that John talked about. No wonder the interpretation of John as Theme in (6) originates from the freedom in meaning that possessives can express, rather than movement of the DP:

(6) John’s examination

Grimshaw argued against movement approach to passive nominals, in view of her original classification of nominals. Her proposal is based on a distinction between event nominals and result nominals. Event nominals denote a process or an event, whilst result nominals refer to the output of a process. They are exemplified by (7a) and (7b), respectively:
(7) a. The examination/exam was on the table
    b. The examination/*exam of the patient took a long time

In (7a) both examination and exam refer to a concrete object. In (7b), however, examination refers to an event and in this case the abbreviated form exam cannot be used. Thus, examination is ambiguous in that it allows both event and result interpretations, whilst exam is unambiguously a result nominal. What sets event nominals apart from result nominals, she suggests, is the presence/absence of argument structure. Specifically, only event nominals carry argument structure and this gives rise to a number of syntactic differences between the two types of nominals. The first one concerns the ability to take a complement. The contrast between (8a) and (8b) indicates that an event nominal obligatorily takes a complement, whereas a result nominal cannot take one:

(8) a. the doctor’s examination *(of the patient) took a long time
    b. *the exam of the student was on the table

Next, event nominals can co-occur with modifiers like frequent and constant, but result nominals cannot. This is exemplified by (9a) and (9b):

(9) a. the frequent examination of the patient
    b. *the frequent exam

Third, the two types of nominals differ in their ability to license aspectual modifiers such as for an hour and in an hour. Event nominals are compatible with the same aspectual modifiers that occur with their original verbs. Result nominals, by contrast, never co-occur with them. This is shown by the triplet in (10):
(10) a. the examination of the patient for an hour
    b. *the exam for an hour
    c. The doctor examined the patient for an hour

Lastly, event nominals do not allow pluralisation, but result nominals do, as exemplified by the contrast between (11a) and (11b):

(11) a. *an examination of the student
    b. an exam

Application of the above tests to passive nominals, Grimshaw argues, reveals that they are not event nominals. Observe the examples in (12):

(12) a. the politician’s frequent/constant nomination
    b. *the building’s construction in three weeks
    c. the politician’s nominations

Passive nominals are not compatible with modifiers that typically occur with event nominals (12a). Nor can they co-occur with aspectual modifiers that their original verbs can take (12b). They also resist pluralisation (12c). This seems to demonstrate unequivocally that passive nominals carry no argument structure. If this is true, putative Themes in passive nominals cannot be assumed to move from the object position. Instead, they should be base-generated.

Contrary to what the opponents to movement analysis, however, we have some evidence for positing movement in the passive nominal. Safir’s (1987) argument concern depictive predicates such as that in (13):

(13) the doctor’s treatment of Tom naked

In (13) either the doctor or Tom can be modified by the depictive predicate naked. Put differently, naked is linked to either the subject
or the object position. Observe now the grammaticality of (14):

(14) Tom’s treatment naked by the doctor

In (14) *naked* is predicated of *Tom* and the prenominal genitive DP. The crucial fact is that the prenominal genitive DP, unlike in (13), is interpreted as Theme. This can be explained by assuming that *Tom* was merged as a complement of *treatment* and then moved to the subject position. *Tom* is linked to the secondary predicate in its original position. Obviously, all this necessitates movement of *Tom* from the object to the subject position in (14)\(^\text{1}\).

On the other hand, Pesetsky (1990) claimed that the examples in (15a–c) derive from the underlying forms in (16a–c):

(15) a. Sue’s election as president
    b. John’s treatment as a serious candidate (by the committee)
    c. Sue’s serious consideration as a candidate (by the committee)

(16) a. the election of Sue as president
    b. the committee’s treatment of John as a serious candidate
    c. the committee’s serious consideration of Sue as a candidate

The occurrences in (16) all involve predication between the objects and the *as*-phrases. The predicative relation is kept intact in (15). This fact can be naturally captured by assuming that each of the objects in (16) has moved from the object to the prenominal position. Crucially, omission of the prenominal genitive DPs turn the examples in (15) ungrammatical, as shown in (17):

(17) a. *the election as president
    b. *the treatment as a serious candidate (by the committee)
    c. *the serious consideration as a candidate (by the committee)

This fact suggests that the prenominal genitive DPs are complements
of the nouns, rather than their modifiers or satellites.

3. The Morphology of Derived Nouns

Roeper (1987; 1993) argues that a nominal suffix plays an important role in the inheritance of a verb's argument structure by a noun. Following Williams (1981), he assumes that a nominal suffix determines the category of a derived word by attaching to a verb from the right. The internal structure of *examination*, for instance, would be drawn as (18):

\[
    \begin{array}{c}
    \text{N [Agent, Theme]} \\
    \end{array}
    \begin{array}{c}
    \text{V} \\
    \text{examination} \\
    \text{[Agent, Theme]} \\
    \end{array}
\]

The argument structure of the original verb percolates into N, which enables the noun to carry the argument structure.

Roeper's theory predicts that absence of a suffix hampers inheritance of argument structure. This is born out by the ungrammaticality of the examples in (19):

(19) a. *the dog's bite of the child
    b. *John's kick of the boy
    c. *John's buy of the cloth

However, this does not mean that any suffix can help V's argument structure get to N. In other words, a mere presence of a suffix is not enough for inheritance of argument structure of a verb. Roeper claims that suffixes are classified into the types of (20a) and (20b), according
to the inheritance of argument structure. He takes (21a) and (21b) to be examples of (20a) and (20b), respectively:

(20) a. Affixes that *inherit* the θ-roles on verbs

    b. Affixes that *block* the θ-roles on verbs

(21) a. the player of games

    b. *playful of games

The suffix involved in (21a) inherits V's argument structure, whilst that in (21b) does not. The division is attested in nominalisation in English as well. The suffixes in (22) allow inheritance of argument structure, whilst those in (23) do not:

(22) a. the doctor's examination of the patient

    b. the husband's payment of the debt

    c. Labour's proposal of the plan

    d. Darwin's discovery of the theory

    e. Henry's acceptance of the offer

(23) a. *the thief's stealth of the book

    b. *John's knowledge of the rumour [non-result reading]

    c. *John's gift of the book to Mary

Grimshaw (2004), shedding a new light on an observation made by Smith (1972), suggests that English contains two groups of subvocabularies: one is Germanic and the other is Romance. She claims that so far as derived nouns are concerned, only the latter carry argument structure. Specifically, derived nouns in English originate from Germanic and Romance verbs and a particular set of suffixes are used in their derivation. Let us call them Germanic suffixes and Romance suffixes, respectively'. Only Romance suffixes allow inheritance of verbs' argument structure, thus making nominalisation possible. By
contrast, Germanic suffixes do not allow inheritance, and therefore they no longer can engage in productive nominalisation in English.

All this means that only Romance suffixes can form event nouns. Germanic suffixes, by contrast, cannot combine with V and make an event nominal in the lexicon. Instead, they constitute a part of N from the beginning and the N has no internal structure in the lexicon. If looked at this way, the source for the demarcation between (22a–e) and (23a–c) is given a simple and straightforward explanation: the suffixes in (22) are of Romance origin, whereas those in (23) are Germanic. I propose that examination and stealth take the form in (24 a) and (24b), respectively:

(24) a. N<sub>R</sub> b. N

V N<sub>R</sub>

stealth

examine -ation

In (24a) the suffix is visible in the morphological structure of the noun. Given that the derived noun is headed by a suffix, the whole N in (24a) is marked as N<sub>R</sub>, which is visible to syntax as well.

Interestingly, the division in question is also observed in passivisation. Concretely, the nominals in (22) have their passive counterparts, whilst those in (23) do not. This is shown in (25) and (26), respectively:

(25) a. the patient’s examination by the doctor

b. the debt’s payment by the husband

c. the plan’s proposal by Labour

d. the theory’s discovery by Darwin
e. the offer’s acceptance by Henry

(26) a. *the book’s stealth by the thief
     b. *the rumour’s knowledge by John
     c. *the book’s gift to Mary by John

The contrast between (22) and (23) and that between (25) and (26) conspire to indicate that DP–internal movement depends on licensing of complements prior to their movement to the left edge of DP. In (13 a–e) the Theme DPs move to the DP–initial position only after they are licensed in N’s complement position. None of the instances in (26) is possible, because the Theme DPs cannot be licensed as the nouns’ complement in the first place.

I would like to note that this in turn offers a strong support to movement analysis of passive nominals and a counterargument against its opponents. Our line of argument has made it clear that the possibility of object interpretation of the genitive DPs in (13 a–e) comes from their licensing as N’s complements. Put differently, the ‘object’ interpretation of the genitive DPs is real and should be captured by the use of movement. On the other hand, the non-occurrence of (14a–c) would remain a mystery if movement were not involved and the putative objects were given interpretation independently of θ-role assignment by nouns.

We have observed that absence of a suffix blocks inheritance of argument structure from V to N. The examples in (19) are reproduced here as (27):

(27) a. *the dog’s bite of the child
     b. *John’s kick of the boy
     c. *John’s buy of the cloth
However, as Roeper (1987; 1993) points out, there are a number of apparent counterexamples to this, which are exemplified by (28a–c):

(28) a. John’s review of the book
    b. John’s return of the book
    c. John’s purchase of the car

He simply regards examples of this kind as exceptional. In fact, the contrast between (27a–c) and (28a–c) ceases to be a mystery if we pay attention to the fact that all the nouns in (27) have Germanic roots, whereas those in (28) are all of Romance origin. I take the morphological structure of the suffixes in (28a) and (27a) to be (29a) and (29b), respectively:

(29)  a. NR
      V  NR
      |   bite
    |  
   review  φR

I would argue that the nouns in (28) carry Romance suffixes that are phonetically null. This is schematised in (29a). By contrast, the nouns in (29b) have no suffix in their morphological structure, as indicated by (29b). So long as inheritance of argument structure depends on suffixes, nominalisation cannot be involved in (27a–c).

Interestingly, the contrast between the nominals in (27) and those in (28) is attested in passivisation as well. Observe the difference between (30a–c) and (31a–c):

(30) a. the book’s review by John
    b. the book’s return by John
    c. the car’s purchase by John
(31) a. *the child's bite by the dog
b. *the boy's kick by John
c. *the cloth's buy by John

The nouns in (30) all originate from Romance verbs, whereas those in (31) come from Germanic verbs. Each of the preposed Themes in (30) is licensed as the noun's complement and then undergoes movement. By contrast, none of the Theme DPs in (31) cannot be licensed as N's complements, thus blocking passivisation. Once again, the difference between (30) and (31) cannot be explained unless we posit a movement analysis of passive nominals.

In sum, nouns' argument-taking property derives from the inheritance of verbs' argument structure. This in turn has been ascribed to the difference between Romance and Germanic sub-vocabularies in the English lexicon. Specifically, only the former set of suffixes enables inheritance of argument structure, which constitutes the core of event nominals.

4. The Structure of the Derived Nominal

Following the suggestion of Hale and Keyser (1991, 1993), Chomsky (1995) proposed vP structure, which includes a projection of a light verb and an inner VP embedded within it. The initial structure of (32a), for example, would be illustrated in part as (32b):
(32) a. John introduced Sue to Mary
   b. vP
      DP v' 
      △ John v VP
      DP V' 
      △ Sue V PP
      introduced to Mary

The Theme DP Sue is generated in the specifier of the VP, and the Goal PP to Mary in V's complement position. The V head then moves and adjoins to v. The light verb v assigns an external θ-role to John in [Spec, vP], whereas V assigns two internal θ-roles within VP. The light verb also Case-checks the DP in [Spec, VP].

In view of the syntactic parallelism between sentences and nominals, it may well be reasonable to incorporate the assumption of the light verb and its projection into the domain of nominal syntax. Indeed, Carstens (2000) and Radford (2000) propose that a 'light noun' heads 'NP shell' structure and take a nominal suffix to constitute n. The example in (33a) thus would form the structure such as that in (33b):
Derivation of the nP proceeds in the same manner as that of the ?P: the Goal PP merges with N, whereas the Theme DP merges with N'. The noun *introduction* then moves from N to n, which assigns an external θ-role to its specifier. The placement of arguments in (33b) thus obeys thematic hierarchy in exactly the same way as in the verbal projection. In addition, the light noun is assumed to check the Case of the DP in [Spec, NP] in the same manner as the light verb.

Thus, the light noun constitutes the source for the parallelism between the sentence and the noun phrase. More concretely, it plays a crucial role in assignment of an external θ-role and checking of an objective Case. I would further argue that only event nominals carry n, which creates their close affinity with their original verbs. Specifically, the presence of n enables them to have both an external argument and an internal argument. The derivation of an event nominal like (34) therefore would look like (35):
The light noun assigns an external θ-role to the subject DP, which is Case-checked by 's in D. It then moves to [Spec, DP], attracted by an EPP feature in D. On the other hand, the object KP is given a θ-role by N. Importantly, it cannot be Case-checked within the NP, because there is no functional head for Case-licensing. The n Case-checks the object KP from outside of the NP and the KP is now licensed both θ-theoretically and Case-theoretically.

Crucially, the presence of a light noun forces both a subject and an object to occur with a noun. Consider the examples in (36), each of which contains an event noun:

(36) a. the teacher's examination of the student
    b. *the teacher's examination [event reading]
    c. the examination of the student

The instance in (36b) shows that omission of a complement results in
degradability. By contrast, deletion of a subject makes no difference, as indicated by (36c). However, there is some evidence for the presence of an external argument in (36c). For example, Roeper (1987) suggested that the acceptability of (37) points to the presence of an implicit argument, because a rationale clause needs a controller:

(37) the examination of the student in order to prove the point

We can therefore conclude that the existence of a light noun necessitates both a subject and an object. This accounts for one of the most important properties of an event noun.

We are now in a position to examine the structure of a passive nominal such as that exemplified by (38):

(38) the patient's examination (by the doctor)

The question is, whether it has a light noun or not and if it does, what its property is. We have observed that in an event nominal both an external and an internal argument are obligatory. In passive nominals, by contrast, external arguments seem to be suppressed. This is shown by the impossibility of control within the passive nominal such as (39), which is pointed out by Roeper (1987):

(39) *the patient's examination in order to prove the point

This is in contrast with what happens in (40), where the passive verb allows control to take place:

(40) The patient was examined in order to prove the point

The grammaticality of (40) indicates that an implicit argument must be present, which controls the rationale clause.

Moreover, by-phrases in passive sentences can represent varieties of θ-roles and is never confined to Agent. This is shown by the acceptability of (41a–c):
(41) a. The package was received by John
   b. The house is surrounded by the trees
   c. The intersection was approached by the cars
In (41a) John receives an Agent $\theta$-role. This might seem to be assigned by the preposition by. However, the $\theta$-role born by the DP in the by-phrase in (41) is never restricted to Agent. Rather, the post-verbal DP is interpreted in accordance with the $\theta$-role that each verb assigns to it. This suggests that by assigns no $\theta$-role in the passive sentence and that an external $\theta$-role is assigned by the passive verb, instead of by.

In contrast with the by-phrase that accompanies a verbal passive, by-phrases can refer only to Agent, when they occur within noun phrases. Consider the examples in (42):

(42) a. ?*the package's receipt by John (John = recipient)
   b. *the house's surrounding by the trees
   c. *the intersection's approach by the cars
The degradability of (42a–c) indicates that the nouns cannot assign their own external $\theta$-roles. Instead of the noun, by assigns a $\theta$-role to its complement DP as a preposition. This is confined to Agent and therefore none of the occurrences in (42) is thematically coherent.

All this points to the important difference between passive verbs and their nominal counterparts. The former can freely assign their external $\theta$-roles, whilst the latter can assign no external $\theta$-role except Agent. Johnson et. al (1989) claims that -en is a realisation of a verb's external argument, which controls the rationale clause in (40). Although it is not entirely clear how the observation would be expressed in minimalist theory, the point is that the external argument
of a passive verb is syntactically present. In Johnson et. al’s view, -en is a clitic which controls a by-phrase if there is one. I tentatively assume that -en is represented in a Voice head, which takes a defective ?P as a complement. The initial structure of the passive sentence *the patient was examined* would be drawn in part as (43):

(43) VoiceP
    Voice vP
    -en v VP
        V DP
        examine the patient

In (43) the light verb is defective, in the sense that it neither assigns an external θ-role to its specifier DP nor Case-checks the object DP.

By contrast, there is no syntactic external argument in the passive nominal. I assume that the *n* involved in a passive nominal is defective, in the sense that it cannot assign an external θ-role to its specifier, thus depriving N of the ability to take an external argument. Consider the derivation of (44a), whose underlying structure would be (44b), in which a defective *n* is involved:
Unlike their verbal congeners, passive nominals lack any syntactic external argument such as –*en*.

One might wonder what deters the generation of (45a), which eventually becomes (45b):

(45) a. [\[DP 's [\[aP PRO [\[nP [\[N examination] [\[DP the patient]]]]]]

b. [\[DP the patient [\[DP 's [\[aP PRO [\[nP [\[N examination] [\[DP the patient]]]]]]]]

Assume that the n involved in (45a) is non-defective and can therefore discharge its external θ-role. Nothing prevents the empty category PRO in [Spec, nP] from being assigned an external θ-role. The object DP is Case–checked by 's in D and then moves to [Spec, DP]. If the derivation were possible, PRO in [Spec, nP] would control the rationale clause, thus turning (39) grammatical, contrary to the fact. However, the movement in (45b) violates minimality of movement, because the object DP moves over PRO in [Spec, nP]. Thus, the derivation in (45b) is excluded and in consequence passive nominals cannot contain PRO.
5. Conclusion

It has been made clear in this squib that movement is involved in passive nominals in terms of morphology of nominal suffixes. It has been also shown that their syntactic structure contain a defective light noun, which lack the ability to check an objective Case and to assign an external θ-role.

Notes

Part of this study was financially supported by Senshu Research Grant (2005–2006: The Structure of the Noun Phrase) and Open Research Project, to which I am grateful.

1) It is fair to say that Safir is more concerned with denying movement in the passive nominal. He points out that omission of a by-phrase in examples like (14) triggers ungrammaticality, as (i) indicates:

   (i) *John’s treatment naked caused a riot

   If the contrast were real, movement should not be involved in passive nominals without by-phrases. However, Pesetsky (1990) claimed that he did not detect any difference as to the occurrence of a by-phrase. I have to leave the matter open.

2) This does not mean that etymology constitutes a part of English native speakers’ grammar.

3) This example, together with its contrast with (15c), was provided to me by Ad Neeleman (personal communication).

4) Quite a few researchers have argued that nominalisation takes place in syntax, rather than in the lexicon. See Fu, Roeper and Borer (2002) for VP within the noun phrase and Siloni (1997) for convincing argument against this assumption.

References


A Note on the Morphology of Passive Nominals


