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ON THE ALTERNATION OF *'S* AND *OF* IN TEMPORAL GENITIVES *

1 INTRODUCTION

The aim of this paper is to characterize the alternation of temporal genitives in English from the point of view of information structure (Halliday 1985/1994). In particular, expressions like *today's paper* and *the heat of summer* are considered. Most previous studies have discussed such an alternation in the light of animacy of possessors. According to these arguments, inflected NPs refer to animate possessors as in (1a). On the other hand, when possessors are inanimate, *of*-genitives are used, as in (1b):

(1) a. Mary's book, Jim's computer, the dog's bone, the cat's basket
b. the roof of the house, the foot of the mountain, the cost of the car

However, inflectional forms are used irrespective of animacy in temporal genitives. This is indicated by (2a). Moreover, *of*-genitives also occur in temporal genitives as (2b) shows:

(2) a. this year's festival, the decade's event, winter's day
b. a stay of three days, the work of a moment, this time of year

(2a) and (2b) demonstrate that factors other than animacy are at work in the alternation of *'s* and *of* in temporal genitives. By taking these factors into consideration, we have to clarify what factors cause the alternation of *'s* and *of* in temporal genitives. In this paper, it will be suggested that the information structure of genitive expressions triggers the use of *'s* and *of* in temporal genitives.

This paper is organized as follows: In section 2, we will examine previous studies

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which discuss the alternation in genitives in the light of animacy. We will also consider other analyses which maintain that the topicality of possessors determines the genitive form. In addition, we will point out their problems. In section 3, we will consider the outline of the information structure (Halliday 1985/1994), which is the theoretical premise of this paper. Moreover, we will review Anschutz (1997), which shows that the information structure in genitive expressions causes the alternation of inflected forms and *of*-genitives. In section 4.1, we will analyze the use of *'s* in temporal genitives. In section 4.2, we will study the use of *of* in temporal genitives. Based on the claims in section 4, we will assert that the information structure is a major factor causing the alternation of *'s* and *of* in temporal genitives.

2 PREVIOUS STUDIES

2.1 Studies of Genitives Based on Animacy

Quirk et al. (1972: 192-203, 1985: 314-331), Hawkins (1981), and Declerck (1991: 252-258) have observed that the animacy of possessors contributes to the occurrence of inflection and *of*-genitive in genitives. According to these arguments, *of*-genitives tend to be used when possessors are inanimate as in (3a). When possessors are human beings or animals, inflected forms tend to be used as in (3b, c):

(3) a. *the bookshelf's books/the books of the bookshelf (Quirk et al. 1972: 194)
b. Mary's cat/ ?the cat of Mary (Hawkins 1981: 257)
c. the cat's basket/? the basket of the cat (ibid.)

Hawkins (1981: 260) has explained the occurrence of *'s* and *of* by devising the animacy hierarchy shown in Figure 1:

[HUMAN>[HUMAN ATTRIBUTE]]>[NON-HUMAN ANIMATE]>
[NON-HUMAN INANIMATE]

<Figure 1> Hawkins' animacy hierarchy

According to this, animate NPs are ranked higher in the hierarchy. These NPs are usually inflected when they denote possessors in genitives. On the other hand, inanimate NPs are ranked lower in the hierarchy. These NPs usually occur in *of*-genitives when they refer to possessors in genitives.

Next, let us consider some examples of temporal genitives. Quirk et al. (1972, 1985) have pointed out that both inflected forms like (4a) and *of*-genitives like (4b) are possible in temporal genitives:

(4) a. the decade's events, this year's sales (Quirk et al. 1985: 324)
b. an absence of ten days (ibid.: 322)

In contrast to Quirk et al. (1972, 1985), Declerck (1991: 253) claims that only inflected forms are available in temporal genitives. Therefore, the use of the *of*-genitive is impossible in these genitives.

Concerning the use of *'s* and *of* in temporal genitives, these claims have several problems. First, these analyses cannot explain why inflectional forms are used in temporal genitives. Although temporal NPs do not refer to animate entities, they are inflected in temporal genitives.

Second, there are counterexamples to Declerck's analysis as (5a, b) show:

(5) a. the average heat of summer (BNC)
b. the dusk of a winter's day (HTI)

According to Declerck's argument, these genitives are predicted to be unacceptable, but in fact these forms can be found in current usage. Thus, (5a, b) are used. His study does not make it clear why (5a, b) are used. Therefore, we have to assume that other factors than animacy determine the form of temporal genitives. In addition, we have to clarify why two types of temporal genitives are actually used.

2.2 Topicality and the Genitive Forms

Deane (1987, 1992: 202-204) has observed that a topic tends to precede a focus in genitive expressions. Based on the hierarchy shown in Figure 2, Deane has maintained that some NPs are more likely to be topical than other NPs. In this hierarchy, some NPs are prone to be topical regardless of context. Therefore, this hierarchy may be regarded as a natural topic hierarchy, as Deane (1992: 202-204) says.[1]

> 1st person pronoun>2nd person pronoun>3rd person pronoun>3rd person demonstrative>Proper name>Kin-term>Human and animate NP>Concrete object>Container>Location>Perceivable>Abstract

<Figure 2> Silverstein Hierarchy (Deane 1987: 67)

According to Figure 2, pronouns are most likely to be topical. Human beings and animals are more likely to be topical than other entities such as concrete objects and containers. Locations and perceivable stimuli are less topical than concrete objects and containers. Abstract NPs are the least topical.

[1] This hierarchy is originally devised by Silverstein (1981: 240, 1986: 350) to explain the case assignment in split ergative languages. Some NPs ranked above other NPs are assigned the accusative case in these languages. Some NPs ranked below other NPs are assigned the ergative case in these languages.

On the basis of this hierarchy, Dean has demonstrated that those NPs ranked higher in the hierarchy are inflected in genitives. Namely, inflected forms are used when more topical NPs refer to possessors as in (6a). In contrast to (6a), those NPs ranked lower in the hierarchy are not inflected in genitives. When these NPs refer to possessors, *of*-genitives are used, as in (6b):

(6) a. my foot, the man's foot, the dog's foot, ?the house's roof, *his honor's nature (Deane 1987: 68)
b. *the foot of me, *the foot of the man, ?the foot of the dog, the roof of the house, the nature of his honor (ibid.)

Therefore, it follows that topicality of possessors determines the genitive form.

When we apply this hierarchy to the analysis of temporal genitives, we will wrongly predict their appropriateness. As time is abstract, temporal NPs are ranked lowest in the hierarchy. That is, they are looked upon as the least topical. The application of this hierarchy will wrongly predict that inflected forms are inappropriate in temporal genitives. However, inflected forms are also used in these genitives, and they are far from being odd. Accordingly, we have to assume that the alternation of *'s* and *of* is induced by other factors in temporal genitives.

Besides Deane (1987, 1992), Taylor (1994) has also studied genitives from the point of view of topicality. Taylor claims that a context enhances the possessor's topicality, and that a context allows the use of genitives. [2] Out of context, some genitive expressions like *music's pursuit* and *the conviction's expressions* are ungrammatical. However, they are acceptable when they occur in certain contexts:

(7) a. Men with the greatest insight into music use one life in *its pursuit* and lack another in which to command words in a way that effectively communicate their musical judgement (Taylor 1994: 223)
b. This conviction of the superhuman...found *its visible expression* in offerings, sacrifices to the spirits or deities. (ibid.)

In (7a), music is a discourse topic, and the antecedent of *its* is *music*. In (7b), the conviction of the superhuman is a discourse topic, and the antecedent of *its* is *this conviction*. Therefore, genitive expressions like *its pursuit* and *its visible expression* are appropriate in (7).

Since Taylor considers that topicality of possessor NPs licenses the use of genitives, he is relying on other factors than animacy in discussing their use. However, this study also has a problem. In (8), the possessor is not a topic, but an inflected NP indicates a possessor:

(8) Then she hurried along the road to Onabasha and found a bookstore.

[2] Taylor maintains that the content of the preceding discourse will render certain concepts more accessible than others (ibid.). That is why topicality pertains to discourse structure, and some concepts become a discourse topic. This kind of topic is context dependent. As for discourse topic, see Chafe (1987). Moreover, Taylor also assumes that certain concepts are more readily available to function as topics than others, regardless of context (Taylor 1994: 220). Thus, some NPs have inherent topicality.

> There she asked the prices of the list of books that she needed, and learned that six dollars would not quite supply them. She anxiously inquired for second-hand books, but was told that the only way to secure them was from *the last year's Freshmen.*
>
> (HTI, henceforth, italics are mine.)

(8) is an excerpt from a discourse whose topic is the books she needs at school. Last year is not a topic in (8), but the NP *last year* is inflected. As (8) shows, other factors than topicality may determine the genitive form. To account for this, we have to see what yields the use of such a genitive. Therefore, we will consider another factor triggering the use of *'s* and *of* in temporal genitives. Especially, we will suggest that the form of temporal genitives depends on the information structure of these genitives. Furthermore, we will demonstrate that an information-structure-based account works well in discussing the alternation of *'s* and *of* in temporal genitives.

3 THEORETICAL PREMISE: INFORMATION STRUCTURE

3.1 The Information Structure in Clauses

According to Halliday (1985/1994: 295-302), the information structure in clauses is explained in the following way. A clause usually contains given information and new information. Moreover, a clause contains only new information in some cases (Halliday 1985/1994: 296-297). Given information is usually placed at the beginning of a sentence, and it is followed by new information. Given information is recoverable to a hearer, for it has been mentioned in the previous discourse, or it is evident from context. In addition, a speaker wants to present something as given for rhetorical purposes. As for new information, it is not recoverable to a hearer. New information is not stated in the previous discourse. Furthermore, it is unexpected and worthy of attention. In other words, important information is considered to be new.

The following sentence clearly indicates what information structure is like:

(9) <u>You</u> were to blame.

(Halliday 1994: 301, henceforth, the underline is mine.)

In this example, *you* conveys given information and the rest transmits new information. As the hearer is present, the hearer is looked upon as given. However, the hearer is unaware that he or she is to blame. Having heard (9), the hearer recognizes his or her blameworthiness. Therefore, the hearer's blameworthiness may be described as new information. In the next section, we will review Anschutz (1997), and see how the information structure is related to the genitive form.

3.2 The Information-structure-based Analysis of Genitives

As for an information-structure-based analysis of genitives, Anschutz (1997) has carried out one. Anschutz has claimed that the information structure of genitives is similar to that of clauses:

> Whenever a speaker's choice of possessive construction is not predetermined, either by a lack of choice of construction or by factors such as the need to avoid ambiguity, the construction is chosen with regard to the information status of the possessor and possession. (Anschutz 1997: 26)

Due to this feature of genitives, *of*-genitives and inflected forms are used in genitives, and the alternation of these two types of genitives occurs. [3]

We can see such a characteristic of genitives in (10a, b):

(10) a. One was Dr. McGilvray, of Siam, a venerable old man, who was uh a very fine gentleman. And I mention this because he was *the father of Mrs. Needler*. (ibid.: 5)

b. A: And she wanted to have Cousin Judy and Sam sit at a card table over there away from the dining area with the children.
B: Who's Sam?
A: *Judy's boyfriend.* (ibid.)

As Mrs. Needler has not been previously mentioned, information on her is unavailable. That is why *Mrs. Needler* transmits new information. Concerning her father, he has been mentioned four times in the underlined parts, and the information on him is recoverable. Therefore, *the father* communicates given information. Accordingly, an *of*-genitive is used in (10a). In (10b), Judy has been previously mentioned, and the noun *Judy* conveys given information. However, there is no previous mention of her boyfriend, and the noun *boyfriend* transmits new information. Consequently, an inflected form occurs in (10b).

If we rely on an information-structure-based account, we can appropriately explain the use of *'s* and *of* in (11) too:

(11) a. Tom: Whose cat is this?
Mary: It's *the cat of Mary.*

b. Tom: What are you saying about the roof?
Mary: *The roof's cost.*

c. We will climb the mountain, but let's have a rest at *the mountain's foot.* (David Espey (p.c.))

In (11a), the information on the possessor of the cat is conveyed as new information.

[3] We should note however that Anschutz (1997 Section 6) takes other factors into consideration. He has pointed out that grammatical rules, meaning, and stylistic effects also contribute to the interchange of *'s* and *of* in genitives. Furthermore, he also admits the role of animacy in the alternation of two types of genitives.

The use of the *of*-genitive is consistent with the information structure, but the use of this genitive is inappropriate in the light of animacy. In (11b), the cost is transmitted as new information, and the use of an inflected form is compatible with the information structure. If we assume that animacy of possessors determines the genitive form, the use of *'s* is not acceptable. Similarly, the mountain is looked upon as new information in (11c). Therefore, the use of an inflected form is in conformity to the information structure. If we suppose that animacy is the key factor in the alternation of genitives, *the mountain's foot* is also predicted to be wrong. As (11a-c) show, the alternation of two forms yields a natural information structure for genitives. Consequently, the information structure in these genitives is similar to that of clauses.

Anschutz (1997) has counted the number of inflectional forms and *of*-genitives in 500 genitive expressions. Moreover, he has also enumerated the cases in which given information precedes new information. On the basis of a quantitative analysis, he claims that the information structure of genitives tends to be similar to that of clauses. However, this study is not intended to account for the occurrence of *'s* and *of* in temporal genitives. This is merely an overview of various genitives such as genitives of ownership, genitives of origin and so on (ibid.: 8-10). Accordingly, it is unclear if Anschutz's proposal succeeds in explaining the form of temporal genitives. Therefore, we will analyze temporal genitives by paying attention to their information structure. We will deal with various examples of inflectional genitives and *of*-genitives. Based on this, we will reveal that the information structure of temporal genitives is similar to that of clauses, and demonstrate that the alternation of *'s* and *of* affects the information structure. On the basis of these claims, we will see the appropriateness of an information-structure-based analysis of temporal genitives.

4 THE ANALYSIS OF TEMPORAL GENITIVES

4.1 The Occurrence of 's *in Temporal Genitives*

In this subsection, we will examine the information structure of inflectional temporal genitives in comparison with their *of*-genitive counterparts.

First, we will look at an example of temporal genitive in which an anaphoric NP precedes another NP. As Halliday and Hasan (1976: 72-73) and Halliday (1985/1994: 298) argue, anaphoric NPs originally convey given information. Accordingly, an anaphoric NP is inflected and conveys given information as in (12):

(12) a. Peter: How was the meeting this Thursday?
Tom: It was interesting. I have *the day's handouts,* so you can borrow them. (Paul Harvey (p.c.))

b. #Peter: How was the meeting this Thursday?
Tom: It was interesting. I have *the handouts of the day,* so you can borrow them.

In (12), Peter did not attend the meeting. That is why he asked Peter how the meeting was. In response to the question, he said that it was interesting. Moreover, he was willing to lend him the handouts distributed at the meeting. (12a) and (12b) differ in their appropriateness. This difference can be explained in the light of the information structure in temporal genitives. In (12a), the anaphoric NP *the day* refers to the underlined part, i.e. *this Thursday*. Thus, Peter can understand what *the day* refers to in relation to the discourse, and we recognize that this NP communicates given information. In contrast to this information, Peter cannot recover the information concerning the handouts. Such information is conveyed by *handouts*, and it is regarded as new. In (12a), given information is precedent to new information, and the information structure of the temporal genitive is the same as that of clauses. Therefore, the genitive in (12a) is appropriate. However, in (12b), the order of given and new information is reversed, and the information structure of the temporal genitive is different from that of clauses. Consequently, unnatural information structure will be yielded in this example. That is why the use of an *of*-genitive is less appropriate in (12b).

Next, let us consider an example of a temporal genitive in which a deictic temporal NP occurs. As Halliday (1985/1994: 298) argues, a deictic NP conveys given information inherently. Therefore, a deictic temporal NP is inflected, and it conveys given information. Consider (8), which is restated here as (13):

(13) a. Then she hurried along the road to Onabasha and found a bookstore. There she asked the prices of the list of books that she needed, and learned that six dollars would not quite supply them. She anxiously inquired for second-hand books, but was told that the only way to secure them was from *the last year's Freshmen.* (=(8))

b. #Then she hurried along the road to Onabasha and found a bookstore. There she asked the prices of the list of books that she needed, and learned that six dollars would not quite supply them. She anxiously inquired for second-hand books, but was told that the only way to secure them was from *the Freshmen of last year.*

In (13a), a girl is looking for second-hand books at a bookstore. She has learned that they are unavailable and that she should ask last year's freshmen. Accordingly, the NP *the Freshmen* conveys new information. On the other hand, *last year* is a deictic temporal NP, and we can understand what it refers to in relation to context. Therefore, this temporal NP conveys given information. In contrast to (13a), the NP *the Freshmen* precedes the temporal NP *last year* in (13b), and given information follows new information. The inappropriateness of this genitive expression is also explained by looking at its information structure. As the information structure is different from that of clauses, (13b) sounds odd. Moreover, it is worthy to note who sells second-hand books for someone who needs them. In this respect, the information on the seller of books is looked upon as new too. As a consequence, only the use of *'s* is possible in (13). As an inflected form is used, the information structure of this temporal genitive will be the same as that of clauses.

Besides deictic temporal NPs, some durational NPs are also used in temporal

genitives as (14) shows: [4]

(14) a. Tom: Why is John absent from his work?
Mary: He is in New York for *a week's trip.* (David Espey (p.c.))
b. #Tom: Why is John absent from his work?
Mary: He is in New York for *a trip of a week.*

In this pair, only the use of an inflected form is permitted in Mary's answer. In her answer, the reason for John's absence is requested as an answer to Tom's question. John's trip should be emphasized in Mary's answer. Thus she wants to convey John's trip as new information. That is why the use of the inflected form is preferable in (14). In (14a), the inflectional genitive retains the natural information structure, for given information precedes new information. If an *of*-genitive is used, John's trip precedes the information on its duration, and the use of *of* yields an inappropriate answer as in (14b). In (14b), the use of an *of*-genitive highlights the duration of John's trip, and Mary's answer is beside the point. Therefore, only (14a) sounds natural in this discourse.

Furthermore, an indefinite temporal NP is inflected in (15a), and the NP is placed before another NP:

(15) a. Some little time before the date of this service in the cathedral the pretty, liquid-eyed, light-footed young woman Sue Bridehead had *an afternoon's holiday,* and leaving the ecclesiastical establishment in which she not only assisted but lodged, took a walk into the country with a book in her hand. (HTI)
b. #Some little time before the date of this service in the cathedral the pretty, liquid-eyed, light-footed young woman Sue Bridehead had *a holiday of an afternoon,* and leaving the ecclesiastical establishment in which she not only assisted but lodged, took a walk into the country with a book in her hand.

This is an excerpt from a novel. In the previous part of the story, it is stated that Sue went to church in the afternoon. Some little time before this service, however, she took a walk in the afternoon. The passage in (15) is about this strolling. In (15a), the use of the inflected form is appropriate. In (15), what she did is important, and the author wants the reader to focus on her activity. Accordingly, the author wants to convey the information on this as new information. However, this information is also considered to be new in another respect. According to the previous section, she attended a service at a church one day, but she went for a walk another day. These two activities are contrastive. The author transmits her sauntering as new information in order to contrast her walk with her attendance at church. As for the information on

[4] Woisetschlaeger (1983) assumes that genitive expressions like *an old man's book* can only be paraphrased into *the book of an old man.* According to his argument, genitives have only a definite reading when indefinite NPs refer to possessors in inflectional genitives. However, we do not accept this claim in our discussion. Instead, we assume that both definite and indefinite readings are available when indefinite inflected NPs denote possessors in genitives.

time, such information is less important, and it is communicated as given information. For these reasons, the author uses an inflected form in (15a). Such a genitive form yields natural information structure, and the use of an inflected form sounds natural in (15a). In (15b), on the other hand, the information on her deed precedes the information on time. It follows that new information is placed before given information. The use of an *of*-genitive is awkward for that reason. As (15a) and (15b) also show, the appropriateness of temporal genitive expressions depends on how new information and given information are presented in these expressions.

Moreover, (16a) can be naturally paraphrased into an inflectional genitive as in (16b), while it cannot be paraphrased naturally into (16c). This fact is also explained by paying attention to the information structure of the italicized parts:

(16) a. We've had *two days of pretty good debate.* (HTI)
b. We've had *two days' pretty good debate.*
c. #We've had *a pretty good debate of two days.*

(16a) is an excerpt from a record of a meeting. In the meeting, those present have been debating for two days whether they should nominate Clarence Thomas as an Associate Justice. One of the participants is recollecting how they have debated the matter. In (16a), a temporal NP precedes another NP, and the NP *two days of pretty good debate* is used. In (16), we can understand the duration of the debate by reading the previous parts. According to the previous section, the debate started the previous day. That is why given information is conveyed by *two days.* However, the record says nothing about the quality of the debate in the previous section. For that reason, we cannot recover the information concerning this. In this respect, such information is looked upon as new. As for (16a), new information follows given information, and the information flows smoothly. This flow of information makes it possible to use the NP *two days of pretty good debate.* If (16a) is paraphrased into (16b), given information is precedent to new information, and the use of an inflectional form yields a natural information structure. Accordingly, the use of an inflected form is appropriate. However, (16a) cannot be paraphrased into (16c), for the order of these pieces of information is reversed. The use of an *of*-genitive cannot retain natural information structure in (16c). Therefore, the information structure affects the use of a temporal genitive in (16), too.

In this section, we have seen several examples of temporal genitives in which inflected forms are used, and compared these genitives with their *of*-genitive counterparts. As these examples indicate, the use of *'s* makes the information structure feel natural. That is, the information structure of temporal genitives becomes the same as that of clauses. In the next section, we will consider the instances of *of*-genitives occurring in temporal genitives, and reveal that their information structure also motivates the use of *of*-genitives in temporal genitives.

4.2 The Occurrence of of *in Temporal Genitives*

In this section, we will compare the use of *of*-genitives with their inflectional counterparts, and see what information structure these *of*-genitives have. To begin with, we will discuss the use of an *of*-genitive in (17). In (17), a temporal NP follows an anaphoric NP. In (17), Peter is asking a question about the Olympic Games, and Jim is answering his question:

(17) a. Peter: When do these events occur?
Jim: They are *the events of the evening section.* (Paul Harvey (p.c.))
b. #Peter: When do these events occur?
Jim: They are *the evening section's events.*

In these examples, *the events* anaphorically refers to some events Peter is talking about. That is, *the events* refers to the underlined part in Peter's utterance. Therefore, Peter can understand what these events are in relation to the discourse, and can recover the information communicated by this NP. Such information is regarded as given in this respect. However, Peter does not know when these events will occur. As the NP *the evening section* conveys unknown information, Peter cannot recover it. Therefore, this information is new. In (17a), given information is followed by new information, and the use of the *of*-genitive is adequate. In (17b), however, new information is placed before given information, and the use of an inflected form is not permitted. Since the information structure is natural in (17a), only the use of the *of*-genitive is possible in this pair.

Next, let us consider (18a, b). In (18a), a deictic NP precedes a temporal NP conveying new information:

(18) a. As soon as they had reached the little port, D'Arnot had cabled his government of his safety, and requested *a three-month's leave*, which had been granted. He had also cabled his bankers for funds, and *the enforced wait of a month,* under which both chafed, was due to their inability to charter a vessel for their return to Tarzan's jungle after the treasure. (HTI)
b. As soon as they had reached the little port, D'Arnot had cabled his government of his safety, and requested *a three-month's leave*, which had been granted. He had also cabled his bankers for funds, and *a month's enforced wait,* under which both chafed, was due to their inability to charter a vessel for the return to Tarzan's jungle after the treasure.

In (18), a man who has cabled his government is traveling in search of treasure. He has enough money for his journey, but he is obliged to stay at a town because a boat is unavailable.

If an *of*-genitive is used as in (18a), we can understand that he has to wait for a boat in relation to the discourse. Accordingly, we recognize that *the enforced wait* refers to waiting for a boat, and we are able to regard this NP as deictic. Thus, given

information is transmitted by this NP. However, it is unexpected that he has to wait for a boat for a month. Moreover, he has learned that the wait extends for a month by contacting the government. Therefore, the information on the duration is not recoverable. It follows that *a month* conveys new information. As given information precedes new information in the *of*-genitive, the use of the *of*-genitive is licensed in (18a). That is why this genitive expression yields a natural information structure in (18a).

In contrast to (18a), waiting for a boat itself is remarkable in (18b), and the duration of his stay is not looked upon as amazing. In addition, the month-long wait has not been mentioned previously. The waiting is regarded as new information in these respects, and the duration is regarded as given. The consideration of the information structure clarifies why an inflected form occurs in (18b). Since new information follows given information in this genitive, the use of an inflected form is allowed in (18b). Moreover, as (18a, b) indicate, a speaker or a writer is deciding what to convey as given and what to convey as new.

We can tell what influences the use of *the enforced wait of a month* and its inflectional counterpart. Moreover, we can also explain the use of *a three-month's leave* in (18). The man has been informed of the duration of his leave, and we can also obtain the information on the duration by reading the previous parts. Therefore, the duration is given in (18). The temporal NP *three-month* transmits this information. In (18), the author wants to make it clear what he is requesting. For that reason, his leave is conveyed as new information. Accordingly, an inflected form like *a three-month's leave* is used. This form makes the information structure feel natural in this temporal genitive expression.

There are other uses of temporal genitives. In (19), information concerning time is described as new information, and an anaphoric NP occurs before a temporal NP. In (19), the NP *a work* is indefinite, but it denotes the work of art which Tom has mentioned:

(19) a. Tom: What work of art is this?
Mary: It's *a work of the early period.* (Paul Harvey (p.c.))
b. #Tom: What work of art is this?
Mary: It's *the early period's work.*

In this dialogue, Tom is asking a question about a work of art at a museum, and Mary is indirectly answering his question. The NP *work* refers to a work which Mary and Tom are looking at. They can recognize what this NP refers to in relation to the discourse. In addition, this NP is used anaphorically in Mary's answer, for it also refers to a work of art mentioned in Tom's utterance. Specifically, this NP refers to the underlined parts in Tom's utterance. Accordingly, Tom is able to recover the information this NP conveys. It follows that this NP transmits given information. However, it is originally unknown to him what kind of work he is looking at. Since Mary has told him what he is looking at, he has figured out what kind of work this is. Strictly speaking, the NP *the early period* has told him what he is looking at in her utterance. That is why this NP is communicating new information in her utterance. As given information is followed by new information in (19a), the use of the

of-genitive is appropriate. On the other hand, new information is precedent to given information in (19b). Therefore, the use of an inflected form sounds stilted here. As (19a, b) show, the information structure of a temporal genitive also affects the appropriateness of two types of temporal genitives in this example.

Finally, we will consider an example of a genitive in which an *of*-genitive refers to duration in (20):

(20) a. And it is further stated that a balloon was constructed so sound and impervious that after *the lapse of two months* it was still capable, without being replenished, of raising into the air two men, with necessary ballast equipment. (Project Gutenberg)

b. #And it is further stated that a balloon was constructed so sound and impervious that after *two months' lapse* it was still capable, without being replenished, of raising into the air two men, with necessary ballast equipment.

c. #And it is further stated that a balloon was constructed so sound and impervious that after *two months of lapse* it was still capable, without being replenished, of raising into the air two men, with necessary ballast equipment.

(20) is an excerpt from an article on aerial navigation. The article states that the balloon was so sturdy that it could carry two people and ballast equipment. It could carry them even if two months passed. Here, the duration of the lapse is important, and the author wants the reader to focus on such information. That is why this information is considered to be new. On the other hand, the information on the lapse itself is not so important, and such information is not worthy of attention. This information is regarded as given in this respect. In (20a), the use of the *of*-genitive sounds natural, for the information on the duration follows the information on the lapse itself. In other words, given information is placed before new information in this example. This flow of information yields the natural information structure. Compared with (20a), the use of an inflectional form is inappropriate in (20b), for the information about the period of lapse is precedent to the information on lapse. That is to say, the order of given information and new information is reversed. Consequently, the information structure is unnatural in this inflectional genitive, and the use of this genitive expression is stilted in (20b). Similarly, (20c) is also unnatural. In (20c) too, the information on the duration precedes the information on lapse. It follows that (20b) and (20c) retain the same information structure. As such information structure is unnatural, the use of *two months of* is also unnatural in (20c). As (20) shows, an *of*-genitive is sometimes used to indicate duration. Such a use of an *of*-genitive is also subject to the information structure of temporal genitives.

In this section, we have seen some examples of temporal genitives in which *of*-genitives are used. We have compared these expressions with their inflectional counterparts. As a consequence, it is brought to light that the use of *of*-genitives makes the information structure feel natural. Since their information structure is natural, temporal genitives and clauses share the same information structure.

5 CONCLUSION

Temporal NPs do not refer to animate entities, but both *'s* and *of* occur in these genitives. Therefore, the use of temporal genitives is inexplicable in animacy-based frameworks. Moreover, focusing on topicality wrongly predicts that the use of inflected forms is unlikely in temporal genitives. Although temporal NPs are originally least topical, they are inflected in genitives. Even if time is not a topic of a discourse, temporal NPs are inflected in genitives. Accordingly, we have attempted to demonstrate another factor triggering the use of *'s* and *of* in temporal genitives. We have suggested that the information structure of temporal genitives affects the occurrence of two types of temporal genitives. In the proposal, we have revealed that given information precedes new information in *of*-genitives, and that temporal NPs convey new information in these genitives. In addition, we have also shown that given information is also precedent to new information in inflectional genitives, and that temporal NPs convey given information in these genitives. Since the alternation of these two types of genitives occurs, temporal genitives retain their natural information structure. As a consequence, my claim works better in accounting for the alternation of *'s* and *of* in temporal genitives.

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