Sequence of tenses in English*

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1.   Sequence of tenses(SOT) is the phenomenon whereby the tense of the complement is made to match that of its main clause. When the higher verb is in the simple past tense, the tense of the lower verb shifts to maintain the temporal relationship between itself and the main verb(i.e. backshift). SOT is illustrated in the following sentences:

(1) a. Megumi said, 'I am happy.'
    b. Megumi said that she was happy.

(2) a. Miho said, 'I will marry you.'
    b. Miho said that she would marry you.

(3) a. Emiko said, 'I loved you.'
    b. Emiko said that she had loved you.

Various attempts have so far been made to make explicit SOT phenomena in English : e.g.. Ross(1967). Costa(1972). Riddle(1976). Smith(1978,1981),Comrie(1985, 1986). and many others. Costa(1972) suggests that SOT be considered a copying rule. showing that SOT is by no means automatic. Riddle(1976) also claims that SOT is not a rule and that various semantic and pragmatic factors determine tense choice in a complement on the same basis that it is selected in main clauses. Comrie(1986. p.293) argues that "the distribution of tense in indirect speech in English is determined by a rule of sequence of tenses".

    In the present article. I will first review these three theories and point out that their analyses go wrong in several respects; I will then propose an alternative theory that is more adequate than the previous ones. What I will claim here is that SOT is not a rule. I will suggest that in addition to semantic and pragmatic factors discussed in Riddle(1976). discourse factors play an important role in tense selection in a complement.[1]

2.   Costa(1972) claims that past and present relevance determine the choice

between the past and present tenses in an SOT environment,[2] and that "factivity" is probably crucial in distinguishing the types of relevance. She argues that the verbs relevant to SOT phenomena can be divided into two groups which she calls A-verbs and B-verbs: A-verbs allow optional SOT, but B-verbs impose obligatory SOT.

> A-verbs: factive, entailment, and reporting verbs
>
>   forget, mention, regret, realize, discover, show, notice, say, report.   → SOT is optional
>
> B-verbs: Non-factive and semi-factive verbs
>
>   know, be aware, think, believe, wish, hope, allege.
>   → SOT is obligatory

Although her account appears to be on the right track, it should be criticized for at least two reasons:

> (i) There is no independent motivation to distinguish between A- and B-verbs. This distinction can be made only for accounting for SOT phenomena in English.[3]
>
> (ii) What is worse, this distinction can not account for some SOT examples , as mentioned in Riddle(1976) and Hirose(1986).

She claims that semifactives such as know and be aware and non-factives such as claim and maintain impose obligatory sequence of tenses. However, given the appropriate context, both (a) and (b) in the following examples are acceptable, contrary to her claim:

> (4) a. The ancients thought that the sun moved round the earth: they didn't know that it is the earth that moves round the sun.
>
>   b. She was not aware that those woolen clothes always shrink in the wash.   (Hirose, 1986, p.182)

(5) a.   Harry claimed that the sun <u>was</u> the center of the universe.

    b.   Harry claimed that the sun <u>is</u> the center of the universe.

(Riddle, 1976, p.2)

(6) a.   (Context: a Salem judge records in his diary the day's progress in a current witchcraft trial.)

Goody Brown denied the allegation that she <u>is</u> guilty of witchcraft.

    b.   (Context: a narrative account of a witchcraft trial)

Goody Brown denied the allegation that she <u>was</u> guilty of witchcraft.

(ibid., p.48)

As the above examples show, almost any tense can occur under almost any verb, if given the right context: for example, in (5), either present tense <u>is</u> or past tense <u>was</u> is acceptable in the complement of a non-factive verb <u>claim</u>.

3.   Comrie(1986) attempts to show why it is that the verb in the complement is past tense in English in a sentence like (7). According to him, there are at least two reasons: "the first is because it has past time reference, and the second is because it follows a main clause verb in the past tense"(p.265). And he concludes that tense selection is determined by the rule of sequence of tenses in (8), rather than by any of the alternative suggestions.[4]

(7) John said that he <u>was</u> sick.

(8) Sequence of tenses rule

If the tense of the verb of reporting is non-past, then the tense of the original utterance is retained: if the tense of the verb of reporting is past, then the tense of the original utterance is backshifted into the past, except that if the content of the indirect speech has continuing applicability the backshifting is optional. (Comrie, 1986, pp.284-285)

(9) a. Yesterday. Inigo said. 'I will arrive the day after tomorrow.'

b. Yesterday. Inigo said that he <u>would</u> arrive tomorrow.

c. Yesterday, Inigo said that he <u>will</u> arrive tomorrow.

Traditionally. sentence (9a) above is said to have two correspondents in indirect speech: (9b) and (9c). Both (9b) and (9c) are predicted to be grammatical by the SOT rule in (8). in accordance with Comrie's expectation.

Comrie maintains that (8) also makes correct predictions about the following examples. In (10). backshifting is obligatory. because the temporal adverb <u>yesterday</u> excludes the possibility of continuing applicability:

(10) a. The day before yesterday. Joan said. 'I will arrive tomorrow.'

b. The day before yesterday. Joan said that she <u>would</u> arrive yesterday.

c. *The day before yesterday. Joan said that she <u>will</u> arrive yesterday.

In (11). on the other hand. backshifting is not always observed. because a statement which has "universal temporal validity necessarily has continuing applicability at the present moment"(1986. p.285).

(11) a. Many medieval scholars said, 'the earth is flat.'

b. Many medieval scholars said that the earth <u>was</u> flat.

c. Many medieval svholars said that the earth <u>is</u> flat.

His sequence of tenses rule (8)in fact makes correct predictions for all the examples in his paper. However. consider the following examples:

(12) a. John has really been in a sentimental mood lately. Yesterday he was looking through his old year book. talking about how different everyone turned out from the class predictions. Then all of a sudden he got this dreamy look in his eyes and told me that his highschool sweetheart <u>had</u> big blue eyes.

b. ??John has really been in a sentimental mood lately. Yesterday
he was looking through his old year book. talking about how
different everyone turned out from the class predictions.
Then all of a sudden he got this dreamy look in his eyes
and told me that his highschool sweetheart <u>has</u> big blue eyes.

(Riddle. 1976. p.14)

(13) a. You are wrong. Mary. John said that his old highschool
sweetheart <u>has</u> green eyes, not blue.

b. You are wrong. Mary. John said that his old highschool
sweetheart <u>had</u> green eyes, not blue.

c. ???You are wrong. Mary. John said that his old highschool
sweetheart <u>has</u> green eyes, not blue, and besides, I re-
member it myself. even though she hasn't been around in
years. (ibid.. p.15)

Comrie's analysis predicts both (12b) and (13c) to be acceptable. But in fact.
they sound odd. Though we can assume the description of having big blue eyes or
green eyes to be still valid. it is odd to use the present tense in the descrip-
tion of that person, on the pragmatic grounds that the color and size of one's
eyes do not normally change beyond a certain age.

From the above argument. we can say that the optionality of backshifting
does not solely depend on the notion "continuing applicability". In this
respect. Comrie's analysis is not adequate to account for SOT phenomena.

4. According to Riddle(1976). the occurrence of the present tense in an SOT
environment conveys the following three implications: Speaker belief in the
truth of the complement. Subject involvement, and unresolved state of affairs.[5]

4.1. Speaker belief in the truth of the complement

As many scholars observed. the occurrence of the present tense in an SOT
environment often indicates "speaker belief in the truth of the complement".
This is shown in the contrast between (14a) and (14b):

(14) a. Bob told me that he <u>was</u> the son of an English lord.

b. Isn't it exciting! Bob finally revealed to the public that

he <u>is</u> the son of an English lord.

Riddle(1976. p.10) observes that the (a) sentence "represents objective reports
of situations which occurred in the past, with no particular attitude toward the
proposition of the complement, but the (b) sentence conveys the idea that the
speaker believes in the truth of that proposition".

4.2. Subject involvement

She argues that in appropriate contexts, the use of the present tense in
an SOT environment indicates that the referent of the subject of the main verb
has "some current involvement in the situation described in the complement"
(p.11):

(15) a. Jane said that her ex-husband <u>has</u> beautiful teeth.

b. Jane said that her ex-husband <u>had</u> beautiful teeth.

According to her. (15a) suggests that Jane still has some sort of contact with
her <u>ex-husband</u>. but (15b) conveys no such implication. And she accounts for the
oddness of sentence (16b) in terms of the notion "subject involvement":

(16) a. Dante regretted that Italy <u>was</u> shaped like a boot.

b. ?Dante regretted that Italy <u>is</u> shaped like a boot.

She claims that since Dante is long dead. it is pragmatically odd to use a
present tense in an SOT environment which implies "current involvement on his
part(i.e., subject involvement) in a particular situation". On the same
grounds. she judges the sentence (17b) to be odd:

(17) a. Jane declared that her husband <u>was</u> an inveterate gambler

and that that's why she divorced him.

b. ??Jane declared that her husband <u>is</u> an inveterate gambler

and that that's why she divorced him.

In (17), the present tense is unacceptable, because "the definite description
her husband describes a relationship which does not exist at the time of speech
act"(p.13).

4.3. Unresolved state of affairs

Riddle(1976, p.29) points out that the present tense can be used in an
SOT environment to indicate that "the situation being described is unresolved".
By "unresolved" she means that "the situation described by the sentence holds at
the speech time but that further development or change in status is expectable":

> (18) a. It was alleged in the newspapers recently that the mayor
> is the head of a big swindling racket. This is really going
> to shake up the union elections if it doesn't get settled
> soon.
>
> b. ??It was alleged in the newspapers recently that the mayor
> is the head of a big swindling racket, but then they found
> the evidence that she was framed.

According to Riddle(p.29-30), the sentence (18b) is odd because "the use of the
present tense in an SOT environment is incompatible with the description of a
situation whose outcome is indicated contextually": the context of (18a) indi-
cates the charges have neither been proven nor withdrawn, nor has the scandal
blown over. Therefore, the allegation is part of an unresolved state of af-
fairs. The context of (18b) shows that the mayor has been unjustly accused and
threfore the allegation is part of resolved situation. This is why the present
tense is unacceptable in (18b). In other words, the speaker of (18b) makes an
incoherent statement: the conventional implication, which is supposed to be non-
cancellable,[6] of the first half sentencein (18b) is cancelled by the second half
sentence.

4.4. Based on the above discussion, she concluded as follows: "the crucial
factor in determining the choice between the present and past tenses in an SOT
environment is the speaker's purpose in uttering the sentence; the choice of
tense depends on whether or not the speaker wants to convey certain implications
mentioned above associated with the use of the tenses in question"(p.8).

Up to now, I have reviewed three analyses. No doubt, Riddle(1976) is the most adequate. Yet, her analysis has at least one problem. Note the contrast in acceptability between (19b) and (16b):

(19) a. The Egyptians knew that the earth <u>was</u> round.[7]

 b. The Egyptians knew that the earth <u>is</u> round.

(16) a. Dante regretted that Italy <u>was</u> shaped like a boot.

 b. ?Dante regretted that Italy <u>is</u> shaped like a boot.

Both sentences in (19) are fairly good. But (16b) is judged by Riddle to be odd, as shown earlier. If Riddle's analysis is adequate enough, (19b) should be judged to be odd. Because the ancient Egyptians are long dead it should be pragmatically strange to use a present tense which implies "subject involvement" in a particular situation. However, in fact, (19b) is good and (16b) is slightly odd, contrary to Riddle's expectation. How, then, should we get over this problem?

5. I claim in this section that discourse factors are also crucial in tense selection in an SOT environment.[8] First, based on Quirk et al.(1986), I will show that discourse factors play an important role in tence choice in main clauses. This is shown in the following examples:

(20) She told me all about the operation on her hip.

 a. It seemed to have been a success.

 b. It seems to have been a success. (Quirk et al., 1986, p.1454)

Quirk et al. observe about (20) as follows: "the past(<u>seemed</u>) ties the second part to the first, as if both parts derive their authority from the woman concerned: It seemed to her.... While, in [20b], the present(<u>seems</u>) disjoins the second part:It seems to me..."(p.1454). Based on their observation, I assume that tense choice in examples like(20) is determined by "current (discourse) topic" (what is semantically dominant in the discourse context, or what the speaker is telling something primarily about now). For example, if the speaker focuses attention on her(her opinion), past tense (<u>seemed</u>) is predicted

to be preferred in (20). And this prediction is accepted by informants. Now I will reconsider the sentences in (16) and (19) in terms of the notion "current topic":

(16) a. Dante regretted that Italy <u>was</u> shaped like a boot.

It is worth while to note here Riddle's observation about (16a): "[16a] would be used to tell something primarily about Dante. No special attention is focused upon the fact about Italy's shape"(p.53). This observation is rephrased in terms of my analysis as follows: what is semantically dominant in this discourse is the main clause proposition. <u>Dante</u> <u>regretted</u> <u>X</u>.; That is. the main clause proposition is the main assertion conveyed by the speaker of (16a). In other words. this sentence is about dante. This is why the tense in an SOT environment is to match that of the main verb. whose subject is Dante who is being talked about in this discourse.

Furthermore the following examples will surely prove that discourse topic determines tense selection in a complement :

(21) Dante was born in 1265. He(Dante) regretted that Italy $\begin{Bmatrix} \text{was} \\ \text{??is} \end{Bmatrix}$

shaped like a boot.

(22) Italy has a funny shape. Dante regretted that it $\begin{Bmatrix} \text{(?) is} \\ \text{?? was} \end{Bmatrix}$

shaped like a boot.

As the linguistic context shows explicitly.[9] (21) would be used to tell something primarily about Dante. In this case. the present tense is unacceptable in accordance with our expectation. On the other hand. in (22) where much attention is focused upon the fact about Italy's shape (i.e.. the complement proposition. <u>it</u> <u>is</u> <u>shaped</u> <u>like</u> <u>a</u> <u>boot</u>. is semantically dominant in this discourse. or it is the main assertion conveyed by the speaker of (22)). as the linguistic context shows. the present tense in an SOT environment is acceptable. though less acceptable than the past tense in (21).

The validity of my analysis is shown by further examples:

(23) a. His father was worried that Bob's school <u>was</u> so close to
         an earthquake fault.

     b. His father was worried that Bob's school <u>is</u> so close to an
         earthquake fault.   (Riddle, 1976, p.52)

(24) a. Aunt Helen, we learned in school last week that water <u>is</u>
         a combination of hydrogen and oxygen.
     b. (?)Aunt Helen, we learned in school last week that water <u>was</u>
            a combination of hydrogen and oxygen.   (ibid, p.54)

Riddle(p.52) says, "the appropriate discourse situation for the utterance of
[23a] would be where the speaker's intention is to tell something about Bob's
father". In other words, (23a) is about of Bob's father. So the tense in a
complement matches that of the main verb <u>was</u> whose subject is Bob's father. And
she says that (24a) is "a vehicle for making an assertion about water", while
(24b) would be "the report of a fact about the child's education"(p.54). For
example, (24a) would be a response to the question: What is water made up of?
On the other hand, (24b) would be a response to the question: What did you learn
in school?[10] In short, (24a) is saying about water; the complement in (24a)
depends on its matrix sentence syntactically, but semantically it is independ-
ent of its main sentence. That is, the complement proposition is the main as-
sertion by the speaker of (24a). This is why the tense in an SOT environment
does not match that of the higher verb in (24a). On the other hand, the comple-
ment in (24b) is dependent on its matrix both syntactically and semantically.
That is, the main clause proposition is the main assertion by the speaker of
(24b); the tense in a complement agrees with that of the main verb.

6.   Up to now, I have shown that discourse factors play an important role in
tense selection in an SOT environment. Still I have one problem to solve: Why
is (19b) less acceptable than (16b)?

(16) b. ?Dante regretted that Italy <u>is</u> shaped like a boot.
(19) b. The Egyptians knew that the earth <u>is</u> round.

This contrast in acceptability seems to be attributed to the verb :[11] the assertive/non-assertive distinction has much to do with the contrast between (16b) and (19b):[12] this distinction is related to the connection between the matrix and its complement.[13]

    (25)   Did Dante regret that ...?

    (26)   Did the Egyptians know that ...?

Under Hooper's(1975) analysis, the assertive verb like <u>know</u> in (26) has a parenthetical and a nonparenthetical reading. On the latter reading, the only question asked in (26) is : Did the Egyptians know <u>x</u> ? That is, the questioner is actually interested in whether or not they <u>knew</u> something: only the main clause can be assertion focus, or questioned. On the second reading, the main verb is used parenthetically. The questioner is actually interested in their knowledge. On this reading, the complement proposition is being questioned. On the other hand, the nonassertive verb like <u>regret</u> in (25) has only a nonparenthetical reading; only the main clause can be assertion focus, or questioned. To put it briefly, the complement of "nonassertive" verbs like <u>regret</u> cannot be assertion focus, but that of "assertive" verbs can be assertion focus. And this fact makes (16b) sound odd: A nonassertive verb takes a presupposed complement. In short, the matrix and its complement are closely connected with each other syntactically and semantically. This is why the tense in a complement follows that of the main verb. On the other hand, either past or present tense is acceptable in (19), because the complement of assertive verbs is not always presupposed, or the matrix and its complement are not tightly connected with each other semantically.

    To summarize, it is easy to use present tense in the complement of an assertive verb, which can be a question focus, or assertion focus, given an appropriate linguistic context. But it is less natural to use present tense in the complement of a nonassertive verb which cannot generally be a question focus, or assertion focus.

7.   In this paper, I have reviewed the three previous analyses. Among them, Riddle(1976) is the most adequate. But her analysis cannot account for some SOT phenomena. So, I have proposed an alternative analysis in terms of the notion

"current topic": Discourse factors are also crucial in determining tense choice in an SOT environment as well as in main clauses in addition to pragmatic and semantic factors mentioned by Riddle. Given an appropriate linguistic or non-linguistic context. SOT is optional under almost any verb. But, as mentioned in the previous section. nonassertive verbs tend to impose obligatory sequence of tenses.

NOTES

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[1] I will consider only those cases where the main verb is in the simple past tense and the embedded verb is either in the simple present or the simple past tense.

[2] The term " SOT environment" is originated in Riddle(1976. p.2): "An SOT environment may be defined as a situation where a verb either follows or is embedded below another verb in the simple past tense".

[3] This point was suggested to me by Minoru Nakau.

[4] He considers four possibilities governing the use of tenses in indirect speech in English: fixed reference. absolute deixis. relative deixis and sequence of tenses. See Comrie(1986. pp.277-283) for details.

[5] Riddle claims that speaker belief in the truth of the complement is a conversational implicature of present tense. but the notions of subject involvement and unresolved state of affairs are conventional implicatures.

[6] According to Sadock(1978). conversational implicatures are cancellable but conventional implicatures are not cancellable.

[7] In this context. the Egyptians mean the ancient Egyptians.

[8] This point was pointed out to me by Yukio Hirose.

[9] In my view. context is divided into two types: linguistic context associated with "Discourse" and non-linguistic context associated with "Pragmatics".

[10] Yukio Hirose has suggested this point to me.

[11] Minoru Nakau has called my attention to this point.

¹² Oka has suggested to me that the contrast between (16b) and (19b) be attributed to the true factive <u>regret</u> / semifactive <u>know</u> distinction, not the assertive / nonassertive distinction. I will examine this point in my M.A. thesis.

¹³ According to Hooper(1975), assertive predicates allow their complement to be preposed, but nonassertive predicates does not.

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