On the Derivation of Evidential Expressions in English
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1. Introduction

Languages have some linguistic means to express the source of information from which a given proposition is obtained.   In the field of linguistic typology, the linguistic category which marks the source of information is known as *evidentiality*. Evidential expressions "[cover] the way in which the information was acquired" (Aikhenvald (2004:3)):   they signal that the information in question was obtained via first-hand observation, inference, hearsay, and so on.   For concreteness, let us consider some evidential expressions in Japanese below:[1]

(1)   Ame-ga   fut-tei-ru   {-sooda / -rashii / φ}.
         rain-Nom   fall-Asp-Pres {$\text{Evid}_{\text{Hearsay}}$ / $\text{Evid}_{\text{Infer}}$ / Evid_{Dir}}
         'I heard that it's raining. / It's likely that it's raining. / It's raining.'

The example above shows that Japanese has a variety of grammatical elements encoding the source of information (cf. Aoki (1986)).   For example, *-sooda* means that the propositional content in question is acquired from a third party, and *-rashii* signals that the propositional content is obtained as a consequence of the speaker's inference.   In addition, the zero-evidential (indicated by φ) also contributes to the evidential interpretation.   It means that the propositional content is acquired by the speaker's direct perception of the situation; namely, this form indicates that the speaker directly perceives that it is raining outside.

English, unlike Japanese, is a language that does not normally encode evidentiality; the evidential interpretation of a sentence relies on the context.   Let us consider the following example, cited from Shizawa (2015:162):

(2)   a.   (*The speaker is looking out the window*.) Oh, it's raining.
       b.   It's raining (, because they are walking under their umbrellas).
       c.   A: What did John say?
             B: It's raining.

As seen in (1), Japanese has the zero evidential marker (φ), which expresses the speaker's direct perception, irrespective of the contextual information.   The situation, however, is different in English.   The examples in (2a-c) illustrate that

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[1] The following abbreviations are used in the glosses throughout this paper: Asp = aspect, Dir = Direct, Evid = evidential, Infer = inference, Nom = Nominative, Pres = present.

the evidential interpretation of the simple declarative sentence *It's raining* is not fixed to the speaker's direct perception. The declarative sentence in (2a) receives an evidential interpretation that the speaker directly perceives that it is raining outside. The same sentence is used to indicate that the propositional content is obtained as a result of the speaker's inference, as in (2b). Lastly, in (2c), speaker B is conveying to speaker A what John said, which suggests that declarative sentences also have a hearsay evidential interpretation. These examples show that the evidential interpretation of a sentence in English depends on the context.

The lack of grammatical evidential expressions in English, however, does not mean that English is unable to mark evidentiality. For example, English has an option to express evidentiality with recourse to the combinatory use of an embedding verb and its subject, as shown below:

(3) a. <u>I hear</u> you have a brother that goes to Lehigh.
     b. <u>She says</u> they met the professor later.

(Fox (2001:172))

The syntactic element *I hear* in (3a) serves as a hearsay evidential, and *she says* in (3b) indicates that *she* is the source of information. One important point here is that syntactic evidentials like the ones in (3a, b) cannot be seen as grammatical expressions listed in the lexicon because of their productivity. It is easy to generate a variant of, for example, (3a) by replacing the subject with another NP and/or changing the present tense form into the past tense. Thus, it will be concluded that syntactic evidentials are derived objects in English.

The question arising here is how sentences with evidential expressions are mapped onto the syntactic structure. This paper thus aims to propose an analysis of the derivation of syntactic structures with evidentials in English on the basis of the cartographic framework proposed by Rizzi (1997, 2004) and Cinque (1999), coupled with the parallel architecture model by Ackema and Neeleman (2004).

This paper is organized as follows. Section 2 introduces the cartographic framework, and Section 3 provides a cartographic analysis of evidential expressions, combined with the parallel architecture model. Section 4 provides four pieces of evidence for the proposal given in Section 3. Section 5 concludes this paper.

2.   The Cartographic Framework

We would like first to briefly introduce the framework on which we depend, namely the cartographic framework. Rizzi (1997, 2004) proposes the split CP hypothesis, according to which the CP domain is decomposed into several functional

projections dedicated to different discourse functions, as shown below:

(4) CP $\Rightarrow$ Force … Topic (Top) … Focus (Foc) … Finite (Fin) IP

The Force layer in (4) encodes the clause type of a given sentence as, for instance, declarative, and the Finite (Fin) layer encodes the finiteness of the sentence either as finite or non-finite. The Topic (Top) and Focus (Foc) layers are sandwiched between Force and Finite, and occur in order. For concreteness, let us consider the following contrast (Capitalized word denotes Focus):

(5) a. This book$_i$, to ROBIN$_j$ I gave t$_i$ t$_j$.   (Culicover (2013:251))
    b. * To ROBIN$_j$ this book$_i$, I gave t$_i$ t$_j$.   (Haegeman (2012:31))

Sentence (5a) shows that the topic element *the book* precedes the focus element *to Robin*, and the sentence is grammatical. The order of the two discourse elements is reversed in (5b), yielding an ungrammatical sentence. The contrast in (5a, b) suggests that there is a fixed order between Topic and Focus. The pattern is straightforwardly accounted for by assuming that Topic and Focus occur in the fixed order in accordance with the split CP hypothesis in (4).

In the cartographic (and minimalist) framework, it is argued that the C(onceptual)-I(ntentional) interface imposes a pragmatic requirement on the CP domain; broadly speaking, the use of the CP domain is due to the speaker's communicative intention (cf. Rizzi (1997)). If one has an intention to convey some topic information, the Top head is *activated*; otherwise, it is inert. For instance, when activated, the Top head is endowed with the uninterpretable feature, [u-Top-F] (cf. Shlonsky (2010)). If [u-Top-F] of the Top head is checked-off and deleted by merging a syntactic object bringing the interpretable feature [Top-F], the derivation converges; otherwise, the derivation crashes at LF. This kind of interface condition is referred to as *criterion* in the cartographic framework (cf. Rizzi (1997)).

3. Proposal: A Cartographic Approach to Evidential Expressions in English

This section proposes an analysis of syntactic evidentials in English on the basis of the cartographic framework introduced in the previous section. Recent work on the articulation of the CP/IP domain has argued that there is a functional projection dedicated to evidentiality at the top of the clausal structure (cf. Cinque (1999), Tenny (2006)). Following this approach, this paper assumes that there is a functional projection dedicated to evidentiality in the CP domain, as illustrated below:
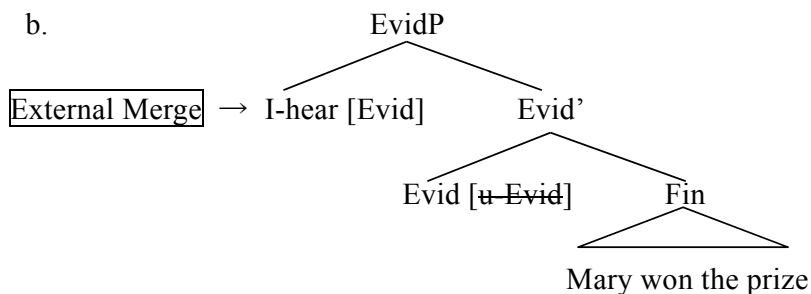
(6)   Force … Evid(ential) … Finite IP

The Evid head is activated when there is a C-I interface requirement; namely, the speaker's intention to mark the (type of) source of information.   The activated Evid head, then, has the uninterpretable feature [u-Evid-F] to be checked-off and deleted by merging a syntactic object with the interpretable feature [Evid-F] either to [Spec, Evid] or the Evid head (cf. Chomsky (1995)).[2]

As mentioned in section 1, English sentences are normally not sensitive to the source of information; they include no evidential expression.   This means that such sentences have CP structures with the inert Evid-head.   Evidential expressions like *I hear* are used to fulfill pragmatic purposes, such as to show the speaker's inability to assert the validity of the propositional content in question (cf. Aijmer (1980), Okada (1985), Ifantidou (1994), and Fox (2001)).   In this case, the Evid-head is activated, and is checked-off and deleted by merging to [Spec, Evid] these evidential expressions with the interpretable feature [Evid-F].   This derivational process can be illustrated as follows:

(7)   a.   I hear Mary won the prize.
      b.   EvidP

External Merge → I-hear [Evid]   Evid'

                              Evid [u̶ ̶E̶v̶i̶d̶]   Fin

   Mary won the prize

The syntactic element, *I hear*, in (7a) is merged into [Spec, Evid].   The syntactic object with [Evid] checks-off and deletes the u-Evid in the Evid head, and the derivation successfully converges, or ends up with a legitimate syntactic representation.

How, then, are the discontinuous syntactic elements like *I hear* reanalyzed as constituents to fulfill [Spec, Evid]?   To answer this question, following the parallel

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[2] The requirement stated here can be further refined.   One possibility is to unify it to theta-criterion: in this analysis, some evidential meaning is assigned to a propositional content as an adjunct theta-role (cf. Zubizarreta (1987)).   Alternatively, the requirement for deleting [u-Evid] can be stated as criterion in Rizzi's (1997, 2004) sense as stated in the previous section: in his term, criterion is a requirement to be satisfied by movement of a syntactic object to a designated position in the CP domain.   The present proposal here assumes that [u-Evid-F] is deleted by external merge, and thus, is basically in accord with Zubizarreta's (1987) idea.

architecture model by Ackema and Neeleman (2004), this paper proposes that English evidential expressions are derived independently of the structures other than them (e.g., *Mary won the prize* in *I hear Mary won the prize*).   Specifically, the evidential expressions are first derived as syntactic constituents; they are then assigned the interpretable feature [Evid-F], being renumerated as a kind of functional element.   The derivation described here is schematized below (*N* in (8b) is an abbreviation of numeration):

(8)   a.   I hear Mary won the prize.
      b.
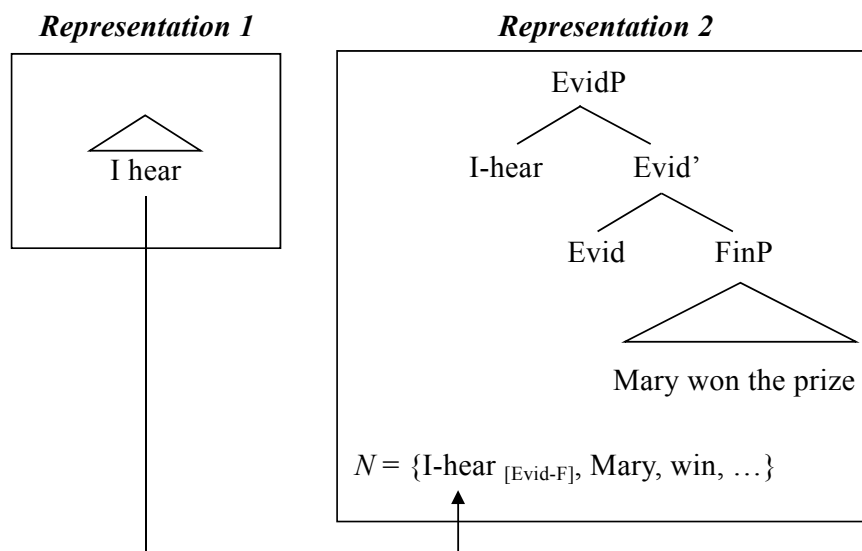
The next section provides evidence for the derivational process proposed in this section.

4.   Evidence for the Proposal

4.1.   *The Tense Form of Evidential Expressions*

The first evidence comes from the tense form of a syntactic evidential.   Let us consider the following example:

(9)   [I hear] Mary won the prize.   (Anderson (1986:276))

The bracketed evidential expression in (9) takes the present tense form, though it is clear that the speaker receives the information conveyed by the propositional content at some point in the past (Anderson (1986)).   This property is accounted for in the

following manner.   The evidential expression *I hear* is structured as an evidential expression independently of the structure *Mary won the prize*, as illustrated in (8b); it is not derived to describe the actual event the speaker experienced.   Hence, it is not required to reflect the actual time when the information in question was gained.

4.2.   Focal Accent

The second evidence is relevant to the difference in focal accent between embedding verbs and their evidential uses.   An embedding verb with accent cannot function as an evidential (Anderson (1986)):

(10) a.   [I heard] (that) Mary won the PRIZE.   [Evidential]
      b.   I HEARD that Mary won the prize.   [Embedding]
(Anderson (1986:276))

Expressions like *I heard* in (10a) are derived as evidential expressions with [Evid-F], serving to check-off [u-Evid] in the same way as grammatical evidentials in other languages such as Japanese.   So, English evidential expressions can be regarded as a kind of functional element, rather than lexical one (e.g., semi-lexical categories such as light verbs (cf. Emonds (2000))).   Thus, they do not receive accent because functional elements, in general, does not receive focal accent.

4.3.   Question Formation

The third evidence comes from the *it is that*-construction, which Ikarashi (2015) assumes is an inferential evidential.   Let us first consider the following example:

(11)   He was shot in his house.   <u>It is that he knew too much</u>.
(Declerck (1992:219))

The *it is that*-construction in (11) gives an explanation for the shooting of the person in question.   Notice that there can be several possible causes other than the one given in (11) (e.g., *he insulted the murderer*, *he stole the murderer's wallet*).   So the proposition in the *that*-clause can be interpreted to be chosen from these candidates as the most plausible explanation.   This process is called abduction, and the *it is that*-construction encodes abductive inference (Ikarashi (2015)).   Given that the construction is an abductive inferential evidential, let us consider the following example:

(12) "It's just, don't you think older guys expect a little more?" Eva prodded.
(C. Carter, *16 Isn't Always Sweet*)

The structure in the *that*-clause is derived independently of the evidential expression, *it is* (or *it's just*), which is merged with [Spec, Evid] after receiving [Evid-F]. This structure is, thus, not an embedded, but a matrix clause, enabling the Fin head to be endowed with the uninterpretable [+ V] feature in *yes-no* question (cf. Rizzi and Shlonsky (2007)). Consequently, as shown in the following configuration, the *it is that*-construction has a structure which allows the subject-auxiliary inversion to take place.

(13) [Force [Evid It's just [Fin don't [IP you <don't> think older guys expect a little more]]]]

4.4. Slifting

Lastly, s(entence)lifting lends support to the present proposal. Let us consider the following discourse patterns, observed by Hooper (1975:96):

(14) a. Who said anything about hiring a woman?
     b. The boss says we have to hire a woman.
     c. * We have to hire a woman, the boss says.
(15) a. Did he consider my application?
     b. No, he says we have to hire a woman.
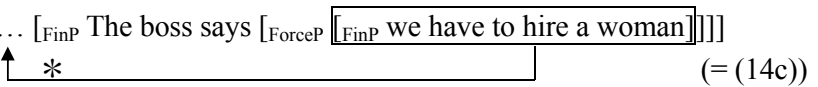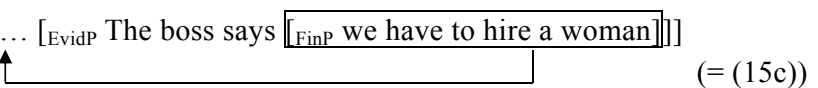   c. No, we have to hire a woman, he says.

The *wh*-question in (14a) is intended to require the hearer to provide the value of the *wh*-word. In (14b), an answer to the question in (14a), the focus is put on the information source (i.e., *the boss*). So the expression *the boss says*, according to Anderson (1986), is not an evidential. In this case, we cannot use as an answer a slifting structure like (14c). On the other hand, such a structure can be used as an answer to the question in (15a); in (15a), unlike in (14a), the questioner does not focus on who said the relevant propositional content, and thus, the expression *he says* in (15b) and (15c) is not a main point of utterance, but a specification added to the information *we have to hire a woman*; it specifies the source of information. In this sense, this expression can be considered an evidential.

The facts observed in (14) and (15) can be accounted for on the basis of the proposal given above. Since the expression *the boss says* in (14b) is not an evidential, it takes an embedding clause, as shown in (16a). On the other hand, the

expression *he says* in (15b) is an evidential.   Based on our proposal, it does not take an embedded clause, but is merged with [Spec, Evid] in the main clause, as illustrated in (16b).

(16) a. $[_{ForceP} \dots [_{FinP} [_{IP}$ The boss says $[_{ForceP} [_{FinP} [_{IP}$ we have to hire a woman]]]]]] $\hfill$ (= (14b))

b. $[_{ForceP} \dots [_{EvidP}$ The boss says $[_{FinP} [_{IP}$ we have to hire a woman]]]] $\hfill$ (= (15b))

Here, we would like to assume that slifting sentences are derived by the movement of the FinP into [Spec, ForceP].   As seen in the previous section, FinP determines the finiteness of a sentence, and therefore, serves as a syntactic object to which movement is applied.   This assumption provides the sentences in (14c) and (15c) with the structures in (17a) and (17b), respectively.

(17) a. $[_{ForceP} \dots [_{FinP}$ The boss says $[_{ForceP}$ $\boxed{[_{FinP} \text{ we have to hire a woman}]}$]]]

$\uparrow \qquad *$ $\hfill$ (= (14c))

b. $[_{ForceP} \dots [_{EvidP}$ The boss says $\boxed{[_{FinP} \text{ we have to hire a woman}]}$]]

$\uparrow$ $\hfill$ (= (15c))

The derivation in (17a) involves the movement of the FinP over the FinP in the main clause.   This pattern can be seen as an instance of relativized minimality violation in the sense of Rizzi (2004), which bans a syntactic configuration in which a syntactic object with a feature X cannot move to [Spec, X] over another syntactic object with the same feature X.   Hence, the derivation in (17a) is excluded due to the feature-based relativized minimality violation.   (17b), on the other hand, is a legitimate syntactic object because it does not cause a relativized minimality violation.   Hence, the slifting structure in (15c) is grammatical while that in (14c) is not.

5. Conclusion

This paper first observed that English, unlike Japanese, does not obligatorily encode the source of information, but a syntactic evidential element like *I hear* is used to meet the pragmatic requirement that the speaker has the intention to avoid responsibility for or authorize the propositional content a given sentence.   We proposed a mechanism to derive a syntactic evidential like *I hear* in English on the

basis of the cartographic framework proposed by Rizzi (1997, 2004) and Cinque (1999).   This proposal was supported by the four pieces of evidence.

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