Structural reduction of parenthetical *I mean* at an intermediate stage of grammaticalization

Siyu LI and Hiromune ODA

The University of Tokyo

li-siyu515@g.ecc.u-tokyo.ac.jp, hiromuneoda@g.ecc.u-tokyo.ac.jp

Abstract As a discourse marker, the parenthetical *I mean* plays some pragmatic roles in speech, which has been considered to correlate with its impoverished morpho-syntax. In this study, we propose that its internal structure is made simpler than that of the non-parenthetical version via External Pair-Merge (Epstein et al. 2016), in a similar fashion to grammaticalization of indefinite and definite articles proposed by Wang (2019) and Oda (2022), respectively. We thus propose that this structure reduction leads to loss of lexical status and acquisition of grammatical and/or communicative functions. External Pair-Merge is then argued to take place at an intermediate stage of grammaticalization of *I mean*, which is located between being a specifier and being a head in the process of grammaticalization proposed by van Gelderen (2011). Based on grammaticalization of *I mean* as well as indefinite and definite articles, this study argues for generality of application of EPM in the process of grammaticalization.

Keywords: English, syntax-pragmatics interface, grammaticalization, parenthetical expression, External Pair-Merge

1. Introduction

Urmson (1952) first considers the verbs such as *know*, *believe*, and *deduce* as a group and dubs this group of verbs as parenthetical verbs. According to Urmson, 'parenthetical' in the current context is defined as follows. "In some contexts, it will be virtually indifferent, on all but stylistic grounds, whether the verb occurs at the beginning, middle, or end of the indicative sentence with which it is conjoined; this will not always be so, but when it is the verb will be said to be used purely parenthetically" (Urmson 1952: 481). "[The verbs] themselves have not any descriptive sense but rather function as signals guiding the hearer to a proper appreciation of the statement in its context, social, logical, or evidential" (Urmson 1952: 495).

In this work, we examine the parenthetical *I mean* in Modern English, which has received a fair amount of attention in the pragmatic literature, from a formal syntactic perspective. It has been pointed out that the use of *I mean* as a parenthetical expression is becoming particularly common and have many pragmatic functions in speech; i.e., *I mean* has been undergoing grammaticalization into a parenthetical expression. In particular, Brinton (2007) argues that the meanings and functions of the parenthetical *I mean* are becoming (more) subjective and intersubjective in that it signals the speaker's modification of his or her expressions or intentions. Not only the difference in pragmatic functions, in comparison with that of its non-parenthetical counterpart, impoverished morpho-syntax can also be observed in the parenthetical *I mean*, which will be discussed in Section 2. As Brinton (2007) points out, all this can be taken as indicating that the structure of the parenthetical *I mean* is smaller than that of the nonparenthetical use. Interestingly, she suggests that the acquisition of the parenthetical use correlates with the rise of the impoverished morpho-syntax, although she does not discuss its exact formal mechanism.

Against this background, we propose a formal syntactic implementation of the relevant grammaticalization of the parenthetical *I mean*. Specifically, in Section 3, we propose that the internal structure of the parenthetical *I mean* is made simpler than that of the non-parenthetical version via External Pair-Merge (Epstein et al. 2016), in a similar fashion to grammaticalization of indefinite and definite articles proposed by Wang (2019) and Oda (2022), respectively. Building on this, we propose a formal account of general grammaticalization processes

in Section 4, in which reduction of the syntactic structure via External Pair-Merge can generally lead to loss of lexical status and acquisition of grammatical and/or pragmatic functions. Thus, based on grammaticalization of *I mean* as well as indefinite and definite articles, this study argues for generality of application of EPM in the process of grammaticalization.

2. Parenthetical use of *I mean*

According to Schiffrin (1987) and Brinton (2007), there are two primary meanings of the verb *mean*. One of them is "to have as an intention", as (1) shows.

(1) *I didn't **mean** to hurt you.*

However, according to Brinton (2007), parenthetical uses in this sense are rare in Modern English. Thus, we can assume that this meaning is bleached in the parenthetical *I mean*. The other major meaning of *mean* is "to signify", as (2) shows.

(2) *The red light **means** there is a fault.*

In Modern English, the parenthetical uses in this sense are more varied in pragmatic function than that in the earlier periods, such as explicitness like (3), exemplification like (4), reformulation like (5), cause like (6), etc., which are (more or less) related to but not exactly the same as the original meaning "to signify".

(3) *"It could be embarrassing, you see. Politically, **I mean**."* (1991 Pearce, *The Mamm Zapt and the Girl in the Nile* 62; Freiburg-LOB Corpus of British English).

(4) *Miranda was a star; I was space dust. **I mean**, when she made cheerleader our sophomore year, I got elected treasurer of the Latin Club* (1992 Lanning, "I was a prom date renegade", *Teen* 16; Freiburg-Brown Corpus of American English).

(5) *... but I can't remember when anyone spoke so many words to me in such a short time. **I mean** gave me so much attention* (1992 Stanley, "The stranger's surprise", *Saturday Evening Post* 56; Freiburg-Brown Corpus of American English).

(6) *"Don't you think it's time you put that thing away. **I mean**, look at it, it's antique; you could hurt yourself with it"* (1991 Royce, *The Proving Ground* 31; Freiburg-LOB Corpus of British English).

Besides, there are some other newborn functions, such as hesitation as (7), manifestation of speaker's attitude such as compromise, like (8), and politeness marking such as a softener of complaint, like (9).

(7) *"...uh and also they're not **I mean** as I understand it you – you don't have a way optimize the features for the final word error"* (2004 *Workshop* W04, The ICSI Meeting Recorder Dialog Act).

(8) *"**I mean** I know she is a strong as a horse and I know she could have every shot under the sun and she'd be fine I just don't think it's a proper thing to do ... in only two-month olds."* (2012 *BMC Public Health* 12: 205)

(9) *"You have to kind of be like, 'okay, next, next, next.' And it is just, it is like a huge lack of – **I mean** for me that is a lack of quality. That really, really bothers me…"*(2020 *J Behav Health Serv Res.* 47(1))

To summarize so far, the original meaning "to intend" of *mean* is bleached in the parenthetical *I mean* while "to signify" partly remains. Besides, there are some newborn functions appeared. Interestingly, Brinton (2007) points out that the parenthetical uses of *I mean* were not common until the modern period, which indicates that

this expression is currently undergoing grammaticalization. The facts above are in line with Hopper and Traugott's (2003) argument, which points out that the change in meaning that accompanies grammaticalization is a process in which a gradual loss of expressiveness occurs; in other words, one meaning is gradually lost and another is gradually created, which Hopper and Traugott (2003) call a cline.

What is remarkable regarding the parenthetical *I mean* in the current context is its impoverished morpho-syntax in comparison with that of its non-parenthetical counterpart: e.g., the lack of the nominal and clausal complement, the constraint on person, number, and tense (i.e., first person singular and present tense only), freedom to insert in a sentence, and having no influence on the syntactic structure of the whole sentence. Brinton (2007) suggests that the parenthetical *I mean* has (partly) lost its complex internal structure in this process, which she considers to correlate with acquisition of the communicative functions, although she does not elaborate its exact formal mechanism.

Furthermore, depending on the location in a sentence, the acceptability of *I mean* varies across speakers.[1] Specifically, there are some speakers who find the sentence-final *I mean* as in (10) unacceptable. It may be the case that *I mean* can only be used as a typical discourse marker for those speakers. For speakers who find it acceptable, *I mean* seems to be used purely parenthetically in Urmson's (1952) sense (as well as in a wider range of grammatical functions), since *I mean* here can occur at the beginning, middle, or end of the sentence without affecting the syntax and the truth value of the sentence.

(10) %*John is a talented scientist,* **I mean***.*
(11)   *John is,* **I mean***, a talented scientist.*

Moreover, as for the parenthetical expression in the past tense, i.e. *I meant*, when it is in the sentence-final position, as (12) shows, some speakers find it acceptable just like *I mean* in (10). However, when the past tense *I meant* is located sentence-medially as in (13), it is simply rejected by all native speakers, unlike the present tense *I mean* in (11). We suggest that the contrast between the sentence-medial *I mean* and *I meant* is attributable to the difference in the structure of these two; the former lacks tense, hence lacks TP, unlike *I meant*, which obviously has tense and hence TP. This is further supported by the fact that no occurrence of a modal is allowed with the expression in question, as shown in (14). Given the standard assumption in the syntactic literature that T is the locus of tense and modal (in English), we can conclude that TP is lacking in the parenthetical *I mean*. This in turn means that there should be some change in the internal structure of the parenthetical *I mean* under discussion in the process of grammaticalization, which leads to its morpho-syntactic properties.

(12) %*John is a talented scientist,* **I meant***.*
(13)   **John is, **I meant***, a talented scientist.*
(14)   **John is, **I will mean***, a talented scientist.*

3.   Structural reduction

The question that needs to be addressed is exactly how the morpho-syntax of the parenthetical *I mean* is impoverished. Recall from the previous section that it can be considered to be a "bare" verbal expression that lacks TP. It also seems that it does not project VP, since it does not take a nominal or clausal complement unlike its non-parenthetical version, and parenthetical expressions that can be (relatively) freely inserted in a sentence tend to be a single word, such as the interjection *well*. Brinton (2007) in fact suggests that it has lost its complex internal structure in the course of grammaticalization, as mentioned above. To formally implement

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[1] We are grateful to Hiroaki Saito for pointing this out.

all this, we propose, based on Epstein et al. (2016), that *I* is base-generated as adjoined (i.e., Externally Pair-Merged) to *mean*, forming the <D, V> amalgam without projecting VP or TP, as schematized in (15).

(15)   **<D,V>**
        /\
     D   **V**
     I   *mean*
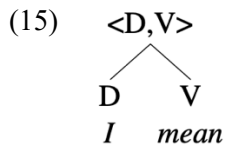
I mean as the <D, V> amalgam is essentially a complex head which is a minimal-maximal projection (i.e., a head and a phrase at the same time; see Chomsky 1994), so it does not take a complement unlike the non-parenthetical *I mean* and can be inserted (relatively) freely in a sentence similarly to, e.g., the interjection *well*, which is also a minimal-maximal projection. The restriction on person, number, and tense also follows from the absence of T(P), which is responsible for those properties of the verb.

    It is worth adding here that this is essentially parallel with Oda's (2022) proposal regarding the options of merger of definite articles in Italian. Oda (2022) notes that if we consider Italian definite articles from a morpho-syntactic perspective, we observe that Italian definite articles are actually morphologically similar with 3rd person accusative pronominal clitics. Laenzlinger (1993) in fact proposes that 3rd person accusative clitics and definite articles in Italian are the same elements, which he analyzes as D^0. Although Laenzlinger assumes that the definite articles always project DP in the nominal domain, Oda (2022) points out that in the current syntactic theory nothing precludes the possibility that they can adjoin to N as clitics in the nominal domain, given the standard assumption that clitics in general undergo head-adjunction to a head in the verbal domain. Oda thus proposes, based on Epstein et al. (2016), that the definite articles in Italian can be base-generated adjoined to N, without projecting DP, and the <D, N> amalgam is created. This option of merger of the definite article in Italian is schematized in (16), where the higher <D, N> node is a non-minimal maximal projection that corresponds to traditional NP (see Oda 2022 for empirical arguments for this structure).

(16)   **<D,N>**
          /\
   <D,N> **Root**
     /\
   D **N**
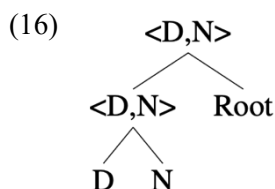
    Turning back to *I mean*, note that the pronunciation of *I* in the parenthetical *I mean* is reduced, which can be taken as indicating that *I* in this case is a clitic just like the definite articles in Italian. Thus, the current proposal that *I* and *mean* form via External Pair-Merge a single complex head that does not project up is theoretically and empirically well-motivated, on a par with External Pair-Merge of definite articles to a nominal head in Italian.

4. A more fine-grained picture of grammaticalization processes

As mentioned before, this kind of structure reduction, namely External-Pair Merge, takes place in the course of grammaticalization of *I mean* into a parenthetical expression. Interestingly in this context, van Gelderen (2004, 2011) proposes a cycle of grammaticalization from a formal syntactic perspective, in which grammaticalization of an element proceeds in the following way:

(17) Adjunct > Spec > Head > Affix

The core intuition behind this grammaticalization procedure is that an element that is located at the edge of a phrase becomes a head, i.e., there is an Edge-to-Head bias in syntactic change (see Dadan 2019 for a deduction of this Edge-to-Head grammaticalization bias under Chomsky's 2013 labeling theory). Note that under van Gelderen's grammaticalization cycle, it is not immediately clear how a specifier element becomes a head. In particular, it is not clear how the "gradual" nature of syntactic change (or cline in the sense of Hopper and Traugott 2003) can be captured by this "instantaneous" view of change from Spec to Head; if Spec can directly become Head as indicated in (17), why does it take so much time in general? Addressing this issue, our proposal, which generalizes the application of External Pair-Merge at an intermediate stage of grammaticalization, adds one more step in this process, as in (18).

(18) Adjunct > Spec> Complex Head created by External Pair-Merge > Independent Head > Affix

Under this revised model of grammaticalization cycle, Spec does not immediately become Head. Rather, it first becomes a head that is "dependent" on another head in a complex head, and then later becomes an "independent" head that can project its own functional projection. Interestingly, van Gelderen in fact notes the following grammaticalization cycles of pronominal elements:

(19) a. demonstrative > third person pronoun > clitic > agreement > zero
    b. noun/oblique/emphatic > first/second person pronoun > clitic > agreement > zero

Although van Gelderen considers clitics in (19) to correspond to the Head stage in (17), they can be considered to correspond to the Complex Head stage in (18) under the current proposal, which is rather natural given the standard assumption that clitics adjoin to another head (via movement or base-generation). Thus, we conclude that the more fine-grained model of grammaticalization proposed here as in (18) is a more appropriate formulation of syntactic change.

    We would like to add here that the current proposal that there is a Complex Head stage in the process of grammaticalization is essentially similar to Wang's (2019) and Oda's (2022) proposals regarding grammaticalization of indefinite and definite articles, respectively. Wang (2019) points out that the numeral *yi* 'one' in Mandarin is different from other numeral phrases in a number of respects. For instance, numeral phrases in Mandarin are non-specific indefinite expressions and they generally do not appear in the subject position (e.g. Li & Thompson 1981), as (20a) shows. However, the numeral *yi* 'one' is an exception. As Tsai (1996) points out, there is no problem with *yi* 'one' appearing in subject, as (20b) shows.

(20) a. ??san-ge   xuesheng chi-le   dangao.
        three-CL student   eat-ASP cake
        'Three students ate the cake.'   (Huang et al. 2009)
   b. yi-ge   xuesheng chi-le   dangao.
        one-CL   student   eat-ASP cake
        'A student ate the cake.'   (Wang 2019)

In addition, *yi* can occur in a nominal phrase without a classifier, while other numerals require a classifier, as shown in (21) (Huang 1981, Lü and Li 1999).

(21) a. yi   nanhai   b. san-*(ge) nanhai
       one boy   three-CL boy
       'a boy'   three boys

Building on these, Wang (2019) suggests that *yi* 'one' is ambiguous between a numeral and an indefinite article (see Wang 2019 for more arguments). In addition, Wang (2019) suggests that *yi* 'one' is at an intermediate stage of grammaticalization into an indefinite article, and when used as an indefinite article it is head-adjoined to a head in the nominal domain, rather than projecting its own functional projection. Notice now that under the current proposal, such *yi* 'one' can be placed at the Complex Head stage of grammaticalization between the numeral at the edge of a nominal phrase and the indefinite article as an independent head, i.e., it is head-adjoined to CL(assifier) via base-generation, creating the <Num, CL>.

Turning to definite articles, Oda (2022) suggests, extending Wang's (2019) proposal mentioned above, that at an intermediate stage of grammaticalization into definite articles, the non-proximal demonstrative in Italian, which is originally at the edge of a nominal phrase, undergo head-adjunction to a nominal head via base-generation, rather than projecting DP, whereby the <D(em), N> amalgam is created.

Moreover, we suggest that the "Complex Head" stage of grammaticalization, where *I mean* is located, is motivated by Oda's (2022) Structural Economy principle, which requires a learner to postulate as few projections as possible in language acquisition; External Pair-Merge of *I* and *mean* reduces the number of projections, which conforms to this principle. This is indeed supported by observations in language acquisition. Guasti et al. (2008) observe that the definite articles in Italian are acquired earlier than that in English, which Oda (2022) attributes to the syntactic difference of the definite articles in the two languages; the Italian definite articles, but not the English definite article, can be Externally Pair-Merged to another nominal head without projecting DP, hence only the former can observe Structural Economy. Interestingly, Thompson and Mulac (1991) observe that parenthetical expressions are acquired earlier than their non-parenthetical counterpart, which can be interpreted such that parenthetical expressions are structurally smaller than their non-parenthetical counterpart, conforming to Structural Economy. Thus, in both cases, elements that need not project a non-minimal projection are acquired earlier than those that project it.

Thus, in this study, we propose that there is a general pattern in the grammaticalization process with respect to syntax, i.e., there is a stage of head-adjunction of an element to another head via base-generation without its own functional projection projected. Furthermore, the Edge-Head structure (non-minimal projection) is reduced to the Head-Head (i.e. Complex Head) structure (minimal projection). We suggest that this structural change from non-minimal to minimal projection can generally be a trigger for the relevant elements to lose the lexical semantics ("to intend" or "to signify" of *mean*, the strong numerical meaning for *yi* 'one', and the deixis of the demonstrative) and to acquire the grammatical functions. An element located at the edge of a phrase is a phrasal element, which has a rich internal structure, hence can have "rich semantics" (e.g., deixis, strong numeral interpretation, the first pronoun interpretation), whereas an element that is part of a complex head lacks such a rich internal structure, hence rich semantics, (eventually) resulting in the loss of the lexical semantics and acquisition of grammatical/pragmatic functions that are dependent on (extra-)linguistic contexts.

5. Conclusion

In conclusion, this study has focused on the impoverished morpho-syntax of the parenthetical *I mean*, and proposed that this is due to structure reduction via External Pair-Merge. External Pair-Merge has then been argued to take place at an intermediate stage of grammaticalization of *I mean*, which is located between being a specifier and being a head in the cycle of reanalysis that van Gelderen (2011) proposed. Based on grammaticalization of *I mean* as well as indefinite and definite articles, this study argues for generality of application of External Pair-Merge in the process of grammaticalization, providing a more fine-grained view of grammaticalization cycles. The one more step of grammaticalization added by this study could be a clue to capture the "cline" of grammaticalization in the sense Hopper & Traugott (2003) from a formal syntactic perspective. Our study thus sheds a new light on grammaticalization at the interface of syntax and pragmatics.

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