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1. Introduction

The expressions like (1B) and (2B) have been scarcely examined seriously as an important testing ground for grammatical theories.

(1) A: Who watered the plants?
    B: Me.

(Merchant 2004)

(2) A: Harriet has been flirting again.
    B:  a. Yeah, with Ozzie.
        b. *Yeah, Ozzie.

(Culicover and Jackendoff 2005)

These expressions are not sentences in form, but they bear sentential interpretations. Here I call such expressions “Sentence Fragments” (SFs).\(^1\) Behind the poverty of investigations into SFs lies the tacit assumption among most grammarians that SFs pose no issues worth consideration. I argue, however, that quite the opposite is true. SFs show unique grammatical

\(^1\) In the literature, various terms are given to these expressions, e.g. Fragment Answers, Short Answers, NP Utterances, Nonsententials and Bare Argument Ellipsis. There is no standard term for them. I adopt “Sentence Fragments” just for convenience and do not expect this term to have any theoretical implication here.
behaviors never seen in sentences, which provide significant problems for the theory of case, binding conditions and other core issues of the linguistic theories.

The purpose of this article is to investigate how a theory of case can explain the case phenomena observed in SFs. I will argue that the standard theory of case (e.g. Chomsky 1981, 1986, 1995 and others) is inappropriate to adequately account for some important aspects of the case phenomena. I claim, instead, that the architecture of the Faculty of the Language proposed by Jackendoff can be a basis of a plausible analysis of the phenomena.

The structure of this article is as follows. Section 2 summarizes properties of SFs and briefly examines how SFs are generated. Section 3 overviews case phenomena in SFs of English, German and French. In section 4, it is argued that the phenomena cannot be explained on an assumption that an SF is derived from a full sentence as a result of ellipsis, which has been the assumption most favored by syntacticians. Section 5 is an attempt to demonstrate that the standard case theory fails in resolution of the phenomena, regardless of what process of generation SFs follow. In Section 6, I argue that Indirect Licensing proposed by Culicover and Jackendoff (2005) is a promising way of analyzing the case phenomena and attempt to modify the original proposal. Section 7 is the conclusion.

2. Properties of Sentence Fragments

2.1. What is Sentence Fragment?
An SF is a linguistic expression with a sentential interpretation which lacks the form of a full sentence. For example, “Pizza.” as an answer to a question “What did you eat for lunch?” has the same meaning as “I ate Pizza for lunch.”, though the descriptive content is not fully expressed in explicit form.

As a first approximation, SF can be defined as (3) (See also the endnotes).

(3) An SF is an expression with a sentential interpretation which consists of a (minor) part of a sentence.

Though (3) may be too informal to be a definition, I provisionally set (3) as the definition of SFs. I will propose a more specified definition a little later.
At first glance, SFs appear to be peripheral elliptical expressions. However, a close scrutiny reveals that the unique grammatical properties that SFs show shed light on hidden aspects of the syntax-semantics interface that we tend to overlook in examining sentences. What should be especially noticed about the grammatical aspects of SFs is that they show non-sentential grammatical properties as well as sentential ones. This unique nature of SFs has been a hard nut to crack for previous studies on SFs. For illustration, observe the contrast in the following examples:

(4)  A: Who does John's sister love?
        b. *John's sister loves himself.

(5)  A: Who did the soldiers believe were intelligent?
    B:  a. Themselves.
        b. *The soldiers believed that themselves were intelligent.

While (4a) behaves like its full-sentential counterpart (4b) in binding, (5a) behaves as if it is not a part of the sentential counterpart (5b). In general, there are cases in which SFs appear to be completely parallel with sentences in grammatical behavior, whereas there are also cases in which SFs appear to be non-parallel with sentences. Here I call the former connectivity and the latter anti-connectivity. Any adequate analysis of ellipses should predict these seemingly paradoxical behaviors of SFs.

SFs have been called “fragment answers” or “short answers” in the literature (e.g. Morgan 1973, 1989; Merchant 2004; and Nishigauchi 2006), assuming that the expressions referred to as SFs here are specifically used in Question-Answer pairs (for instance, all the examples of Morgan 1973 are Q&A examples). But this is a typical misconception about SFs. SFs are in fact found in varieties of other environments as well Also nearly unlimited is the formal varieties of SFs. Languages generate SFs from any kind of XP: NP to CP (including Small Clause) \(^2\). Surprisingly, even morphologically

\(^2\) An interesting exception is relative clause. Though other CPs can emerge as SFs, SFs in the form of relative clause, according to Morgan (1973), cannot be generated. This constraint cannot be reduced to a ban on an SF being a CP of [N [CP]] or a
non-independent elements (e.g. “pro” of “pro-communist”) can appear as SFs.

In the two following subsections, I briefly describe two important properties of SFs: tenselessness and focus.

2.2. Two Crucial Properties of Sentence Fragments

2.2.1. Tenselessness

A unique and general property of SFs is that they have no tense (Progovac et al. 2006). This property of “Tenselessness”, I claim, is the most important nonsentential property of SFs. Given that tense is a grammatical category indispensable for matrix clauses, tenselessness marks that SFs are grammatically quite different from (complete) sentences. The fact that SFs lack tense is easy to demonstrate in VP fragments.

(6) What did you do to Susan?
   —Kiss her.  
   (Culicover and Jackendoff 2005:243)

(7) What did John do?
   —Play baseball.  
   (Casielles 2006)

(8) A: What is President Dicky most likely to do next?
    B: Make Tricia his adviser on consumer affairs.  
    (Morgan 1973:722)

The VP fragments in the examples above are all non-finite in form, regardless of the tense specification in the antecedent sentences. When fragments do not include verbs, however, it is difficult to observe whether they are tensed or not. Assuming existence of null T, absence of formal marking of tense does not necessarily mean absence of tense. But, since there is no instance of tensed SFs, the present generalization can be retained.

Tenselessness is the key to the definition of SFs, with which we can distinguish SFs from the other elliptical constructions. Thus, SF is redefined as (9).

(9) SF is a tenseless expression with a sentential interpretation.

complex modifier. See Morgan for arguments and data.
In the subsequent sections, I argue that the tenselessness of SFs is closely related to its unique grammatical property, i.e. anti-connectivity.

### 2.2.2. Sentence Fragments as Focus

There is another important general property of SFs: the focus property, which has been pointed out in some previous work (Merchant 2004; Cilicover and Jackendoff 2005; and Nishigauchi 2006, 2010). That an SF serves as a focus is quite natural, because only SFs come up to the surface in an utterance. Since what is not explicitly represented is presupposed to be redundant in the context, an SF inevitably functions as new information; hence it is necessarily interpreted as a focus. When there is more than one SF as in (10), each SF is focused.

(10) Q: Which psycholinguist comes from which university this year?
   A1: Susie, from UCLA.
   A2. Susie comes from UCLA this year.

Though the focus property of SFs led some previous researchers to assume syntactic parallelism between SFs and some focus construction, i.e. dislocation or cleft, SFs do not perfectly parallel with the focus constructions in grammar. For instance, (11) below demonstrates that the possibility of dislocation is not a prerequisite for generation of SFs.

(11) a. What did he {begin/fail} to notice it?
    b. His salary was too small.
    c. His salary was too small, he {began/*failed} to notice.

I will revisit this issue in section 4.

### 2.3. Generation of Sentence Fragments

What has been mainly discussed in the previous research of SFs is how SFs are generated. There are two main approaches to this question: ellipsis approach and direct generation approach. In ellipsis approach, SFs are derived from a full sentence through deletion of the other parts and, therefore, SFs have full
sentential syntactic structures (at least in some invisible level). In direct generation approach SFs are generated as what they appear, without forming full sentences even in covert syntactic representations. Preceding studies of each approach are listed below.

(12) a. Ellipsis Approach:

b. Direct Generation Approach:
   Yanofsky (1978); Barton (1990, 1998, 2006); Stainton (1995, 2006);
   Jackendoff (2002); Culicover and Jackendoff (2005); Progovac (2006); Casielles (2006)

Although ellipsis approach has been comparatively well worked out and favored by most syntacticians, I will show that it is infeasible for a variety of reasons. Direct Generation approach, on the other hand, seems better than ellipsis approach, because it can avoid those problems which ellipsis approach cannot overcome. The problem is that the detail of direct generation approach remains unclear in the previous analyses and that the architecture of syntax-semantics interface has not been worked out to deal with SFs.

2.3.1 Ellipsis Approach
In the earlier version of ellipsis approach, an SF is simply generated from a full-fledged sentence through ellipsis, as illustrated in (13B).

(13) A. Who saw the man?
   B. [Mary [VP saw the man]]

The strikethrough in (13) represents a PF deletion. That is, the VP in (13B) is still present in syntax. The following are the typical assumptions that the ellipsis approach is purported to hold as their advantage.
(14) (i) SF is regarded as a kind of “ellipsis constructions” such as VP-Ellipsis, Sluicing, Gapping and so on.

(ii) SF has a sentential structure in the syntax-semantics interface.

(iii) SF is expected to assume the same properties as a sentence.

(iv) It is compatible with the mainstream of syntax.

To recapitulate, SF is derived from a full sentential structure by deletion. Therefore, (i) we need no ad hoc rules specific to SF; (ii) it is straightforwardly guaranteed that SFs have sentential interpretation; (iii) Connectivity is expected under the normal condition; (iv) it has been fully worked out in the standard model of UG, which is probably the main reason why most syntacticians favor the approach.

However, ellipsis approach faces against not a few empirical problems. As mentioned above, SFs show both connectivity and anti-connectivity. Since ellipsis approach expects SFs to have the same grammatical properties as sentences, all instances of connectivity constitute supporting evidence for ellipsis approach. On the other hand, all anti-connectivity phenomena constitute counterevidence against it, because anti-connectivity cannot be predicted in this approach.

Furthermore, the earlier versions of ellipsis approach have a crucial theoretical problem: constituency violation. There are a number of SFs requiring ellipsis of non-constituents, which means that the approach inevitably violates a general restriction on ellipsis. Three of simple examples are shown below.

(15) A: Did you see Mary?
    B: No, Joan.
    \[TP I saw [NP Joan]].

(16) A: Who do you believe to be a genius?
    B: Bill.
    \[TP I believe [TP Bill [I to [VP be a genius]]]]

(17) A: What kind of scotch does Harriet drink?
    B: (Very) Expensive.
    \[Harriet drinks [DP (very) expensive [NP scotch]]]
This problem is solved by Merchant (2004), by hypothesizing movement of SFs to higher positions, though this modification introduces new problems.

Merchant (2004) claims that generation of SF includes two processes: (i) movement of SF to the Spec of an FP (Functional Phrase) higher than the TP and (ii) ellipsis of the TP including the trace of the SF. For example, according to Merchant (2004), the generation of the SF in (18A) is roughly illustrated in (19).³

(18) Q: Who did Mary see?
       b. [John, [TP Mary saw t₁]]

(19) \[
\begin{array}{c}
\text{FP} \\
[\text{DP John},] \\
\quad F' \\
\quad F \\
\quad \text{TP} \\
\quad \text{she saw t₁}
\end{array}
\]

Merchant’s analysis has another good point. Though Merchant keeps it undetermined what the FP is, he suggests that it may be FocusP. If so, Merchant’s analysis captures our intuition that an SF serves as a focus.

Nevertheless, even Merchant’s elaborated version of ellipsis approach is far from feasible. First of all, the analysis also leaves the anti-connectivity phenomena unsolved. That is, Merchant’s analysis holds the same empirical problems as previous ellipsis analyses. Furthermore, the analysis also has unique empirical problems; there are SFs which cannot undergo movement.

³ Merchant’s analysis of SF parallels with his analysis of Sluicing, the detail of which I do not touch here (see Merchant 2001, 2004, 2008).
Here I just introduce one piece of evidence, which comes from double object constructions (For other kinds of evidence, see Culicover and Jackendoff 2005; Casielles 2006). It is well known that an indirect object (or first object) of double object construction cannot go through A’-movement such as WH movement.

(20)  
   a. *Who did you give the book?  
   b. *Who will you buy a bicycle?

Contrary to what Merchant should expect, indirect objects can appear as SFs\(^4\).

(21) *Who did John give the book?  
(22) A: (I heard) Mary gave you the book.  
     B: No, John/him.

In conclusion, ellipsis approach does not work anymore, even if movement of SFs is incorporated to the process of generation. Since the infeasibility of the approach is undoubtful now, one should explore another way to generate SFs. The alternative proposed in the literature is what I call direct generation approach, which I will briefly introduce next section.

**2.3.2. Direct Generation Approach**

Direct generation approach (henceforth, DG approach) assumes that SF is not derived through an ellipsis operation and is base-generated just as what it

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\(^4\) Minor part of native English speakers do allow A’-movement of indirect objects. For instance, Steedman (1985) exhibits (i) below (his (19b)) as an acceptable sentence, though Postal (1998: §4, note 17) judges it unacceptable.

(i) This woman, Harry offered, and Mary actually gave, an autographed copy of *Syntactic structures.*

This fact is, however, not problematic to the present argument, because there are native speakers of English who are sensitive to the contrast between (21) and (22). At least for these native speakers, (22B) cannot be generated through combination of movement and ellipsis.
appears. For example, according to DG approach, the syntactic structure of the short answer in (23), ‘Mary’, consists of an NP alone without any higher projections such as VP, TP or CP.

(23)  A. Who saw the man?
    B. [NP Mary].

Since Yanofsky (1978), the validity of DG approach has been argued for by several researchers (Barton 1990; Stainton 1995; Ginzburg and Sag 2000; Culicover and Jackendoff 2005 and articles in Progovac et al. 2006). The main argument for DG approach is that it is free from the empirical problems which cause ellipsis approach hard troubles.

DG approach, however, has held a big problem that it is unclear how grammatical phenomena in SFs are explained. DG approach is inconsistent with theories of Mainstream Generative Grammar (MGG) (Culicover and Jackendoff 2005: 3), because these theories have been developed to apply to full-fledged sentences. But no effective invention to describe the grammatical phenomena of SFs in DG approach has been proposed. This is the reason why DG approach appears not to be feasible or valid for an explanatory theory.

There have emerged two frameworks for DG approach to stands on, presented in Progovac (2006) and Culicover and Jackendoff (2005), respectively. Progovac (2006) proposes a version of DG approach which goes along with MGG. In Culicover and Jackendoff (2005), on the other hand, DG approach is based on Jackendoff’s radical model of the language faculty. I will sketch them in the remaining of this section.

Based on the Minimalist Program (MP), Progovac (2006) deals with Small Clause SFs like (24), leaving aside the SFs consisted of one single word.

(24)  a. Him worry?!
    b. John tall?!
    c. Class in session.
    d. This a bargain?!

Presupposing that sentences are derived from Small Clauses, Progovac claims that Small Clauses SFs are the smallest products of syntax. Assuming that the
syntax is able to generate an expression smaller than a sentence, in other words, syntax generates not only a CP but any XPs, Progovac makes possible that narrow syntax produces SFs, nonsentential expressions.

The problem of Progovac's analysis is that she does not show how to deal with grammatical phenomena in SFs. She leaves most of grammatical phenomena in SFs untouched, except for an anti-connectivity case phenomenon in English, her solution of which will be considered to be inappropriate later. This problem is a side effect of grounding on MP. Progovac’s analysis unexpectedly reveals that DG approach is not compatible with MP, the mainstream of syntax. I will return to Progovac's analysis of case phenomena in SFs in section 5.

Culicover and Jackendoff (2005: Ch 8) (henceforth, C&J) develop DG approach, based on Jackendovian Parallel Architecture (Jackendoff 1983, 1997, 2002, 2007 and others). Due to limitation of space, I avoid explaining the detail of Parallel Architecture here. Among its unique features, what is closely related to the present discussion is the following.

(25) (i) The syntax-semantics interface does not require uniformity between representations of the two components, contrary to the basic assumption of MGG. In this model, then, it is not obligatory that an expression with a sentential meaning has a sentential syntactic structure.

(ii) Semantic structure is conceptual structure (CS). CS is a linguistic-independent representation and the level to unify information from various cognitive components. Therefore, a semantic representation (a CS representation) is structured only with non-linguistic information. This makes it possible that a sentential semantic interpretation comes out from a nonsentential syntactic structure.
(iii) The lexicon is directly connected to the interfaces among the three components. That is, lexical information is fully available in the interfaces.

(iv) The syntax-semantics interface excludes ungrammatical syntactic expressions by syntactic-semantic correspondence rules.\(^5\)

To deal with grammatical phenomena in SFs, C&J propose a mechanism named Indirect Licensing (IL), where syntactic constituents are licensed by elements outside their syntactic structures. Though the detail of IL is not elaborated enough, it seems that various elements potentially serve as indirect licensers, e.g. lexical items, correspondence rules, antecedents and so on. Whatever IL is like, we need such a mechanism for DG approach.

3. Case in Sentence Fragments

In this section we overview case phenomena of SFs. The simplest expectation about them should be that SFs accompany the same cases as their correspondents; accordingly, one should expect, for example, that a subject SF has nominative, which is not true in English. SFs sometimes behave quite differently from sentences with respect to case. That is, SFs show both connectivity and anti-connectivity in case phenomena. My discussion here concentrates on English, German and French. These three languages show different patterns in case phenomena in SFs.

English is a language where connectivity phenomena and anti-connectivity phenomena co-exist. The anti-connectivity case phenomenon of English is that subject SFs appear in accusative case (ACC), not nominative which their

\(^5\) Interfaces among the three components of the language faculty, i.e. Syntax, Semantics and Phonology, have their own correspondence rules, respectively. The correspondence rules restrict mismatches between representations which can infinitely augment in Parallel Architecture (each component has its “formation rules,” which limit its representation formally). In this sense, Parallel Architecture is a constraint-based theory.
correspondents receive (Morgan 1989; Merchant 2004; and Progovac 2006).

(26) a. Who can eat another piece of cake?
   b. *I/*we/*he/*she/*you.
   c. Me/?us/him/her.
   d. I/we/he/she/you can eat another piece of cake.
   e. *Me/*us/*him/*her can eat another piece of cake.

(Morgan 1989:233)

Objects and obliques of English, on the other hand, bear the same case, namely ACC, both in sentences and SFs. That is, in English only subject SFs show anti-connectivity and the other SFs show connectivity.

In German, unlike English, no anti-connectivity phenomenon is observed. German nominal SFs carry the same case as their antecedents hold, without exception. In the examples below, nominal SFs in the answers appear in the same case forms as their antecedents (WH-pronouns in the questions).

(27) Q: Wem folgt Hans?  
   who.DAT follows Hans
   ‘Who is Hans following?’
      The.DAT teacher
      The.ACC teacher

(28) Q: Wen sucht Hans?  
   Who.ACC seeks Hans
   ‘Who is Hans looking for?’
      The.DAT teacher
   b. B: Den Lehrer.  
      The.ACC teacher

(Merchant 2004:679)

(29) Q: Wer hat der Kuchen gegessen?  
   who.NOM has the.MASC.SG.NOM cake eaten
   ‘Who ate the cake?’
A: Dein/*deinem/*deinen Bruder.
   your.SG.NOM/DAT/ACC brother
   ‘Your brother.’

In French, the situation is quite different from the other two languages. French case system has a case called tonic in addition to nominative, accusative and dative, and all French nominal SFs appear in tonic forms, regardless of what case their antecedents hold.\(^6\)

(30) a. A: Qui est-ce qui a le livre?
   ‘Who has the book?’
B: Eux / *Ils.
   3\text{RD}.MASC.PL.TONIC 3\text{RD}.MASC.PL.NOM
   ‘Them’

b. A: Qui est-ce que tu cherches?
   ‘Who are you searching?’
B: Eux / *Les.
   3\text{RD}.MASC.PL.TONIC 3\text{RD}.MASC.PL.ACC
   ‘Them’

It should be noted here that tonic (TON) is not a case specific to SFs. TON is also found in full sentences, namely in complements of prepositions, copula predicates, dislocations and coordinate structures.

Preposition Complement
(31) Venez avec moi.
   come.IMP.2\text{ND}.PL with 1\text{ST}.SG.TONIC
   ‘Come with me.’

\(^6\) In traditional descriptions, French case diagram does not include genitive. This is because French genitives serve only as possessors and Genitive arguments are not existent in French.
Copula Predicate

(32) Mon meilleur ami, c’est toi.

\[
\text{my.MASC best friend it-is 2^{ND}.SG.TONIC}
\]

‘My best friend is you’

Dislocation

(33) a. Moi, je préfère le café.

\[
\text{1^{ST}.SG.TONIC I prefer.1^{ST}.SG.PRS the.MASC.SG tea}
\]

‘I prefer tea.’

b. Qu’est-ce que tu fais, toi?

\[
\text{What-Q.NON-SUB 2^{ND}.SG.NOM do.2^{ND}.SG.PRS 2^{ND}.SG.TONIC}
\]

‘What are you doing?’

c. Il t’a aimé, toi.

\[
he you-have.3^{RD}.SG.PRS love.PP 2^{ND}.SG.TONIC
\]

‘He loved you’

Coordination

(34) a. Sa femme et lui sont venus me voir.

\[
\text{her lady and 3^{RD}.MASC.SG.TONIC be.3^{RD}.PL.PRS come.PP.PL me.DAT}
\]

‘His wife and him came to see me.’

Therefore it is inappropriate to conclude that French nominal SFs always show case anti-connectivity. Rather, the plausible description should be that any French nominal SF holds one case, TON, and thus anti-connectivity phenomena occur when the antecedents require other cases than TON.

4. Ellipsis Approach to SF Case Phenomena

In this section I argue that ellipsis approach fails to explain case phenomena in SFs. As illustrated above, there are two versions of ellipsis approach. The simpler version, where SFs stay in their base positions, expects that SF case phenomena show only connectivity. The facts illustrated in section 3, however, demonstrate that this is not true. Concerning English, the ellipsis approach
without movement wrongly predicts that a subject SF in English appears in nominative (NOM), the case for subjects in sentences. If (35A) is derived from (36) by deleting ‘watered the plants’, the SF answer to the question would be “I”, not “me.”

(35) Q: Who watered the plants?  
A: Me.  
(36) I watered the plants.

A possible defensive argument against this criticism is that (35A) is derived from another underlying structure, not from (36). There are two candidates for the underlying structure. One is a cleft sentence (i.e. “It’s me”: so-called an elided cleft). But Shütze (2001) points out two problems of this proposal. The first problem is that in most cases “It’s X” clefts do not harmonize with contexts where SFs like “Me” can be uttered, as exemplified below (cited from Shütze 2001).

(37) Q: Who wants to try this game?  
A: a. Just me/*I.  
b. #It’s (just) me.

The second problem is concerned with the distribution of quantificational DPs. Although quantificational DPs can appear as SF answers to questions as in (38Q), they cannot emerge in the focus position of a cleft.

(38) Q: Who wants to try this game?  
A: a. Everyone/No one!  
b. *It’s everyone/no one.

The other candidate for the underlying structure is some kind of dislocation construction. That is, “Me” in (35A) is a (left) dislocated NP. Merchant (2004: 703) argues that this SF is derived by deleting the IP of a hanging topic dislocation (HTDL) sentence as (39).

(39) Me, I watered the plants.
This claim, however, is not compatible with empirical evidence, either. First, as is also pointed out in Shütze (2001), such a position does not allow quantificational DPs.

(40)  a. *Every one, they/he want(s) to try this game.
     b. *No one, they/he want(s) to try this game.

Second, Casielles (2006: 127) suspects that (39) is not really one sentence on the intended meaning and rather it should be regarded as a series of two sentences, as in (41B).

(41)  A: Who waters the plants?
     B: ME. I watered the plants.

At least for some native speakers, (39) is inadequate as one sentence. To sum up, it is evident that the accusative subject SFs cannot be generated by the simple ellipsis approach, whatever underlying sentence one assumes.

Next, consider what Merchant’s version of ellipsis approach, where SFs moves to some functional head above TP, predicts about case phenomena. The proposal in Merchant (2004) is, in fact, not explicit enough to make an expectation about SF case phenomena, since he does not determine the status of the landing site. To push the present discussion forward, here I set a widely held assumption that an SF lands at a dislocation position (probably, [Spec, Focus]). Now, there arises another question: in which position are SFs assigned their cases, in their birth places or the landing sites? Given that both options are available in languages (for instance, Shütze 2001 reports both options are adopted in German, as dialectal variations), Merchant’s analysis expects there to be two types of case distribution in nominal SFs: in some languages SFs would follow their antecedents in case assignment, while in the other languages SFs would hold a particular case specified in each language. Apparently, this prediction seems fulfilled. German belongs to the former group, and English and French belong to the latter.

Following this discussion, accusative subject SFs in English would be no longer a problem for the ellipsis approach. Since in English pronominal SFs all
appear in the ACC form, it can be argued that all SFs in English are assigned
the case for dislocated nominals and then the subject SFs also get the ACC
form. However, it is impossible to derive the subject SFs through dislocation,
because (left) dislocation of subject is disallowed in English, as illustrated
below.

(42) *Me, watered the plants.

And, as argued above, it is also impossible to derive a subject SF from a HTDL
like “Me, I watered the plants.” In conclusion, even Merchant’s version of
ellipsis approach cannot give a general explanation of SF case phenomena.

5. The Standard Case Theory and Sentential Fragments

Here I briefly illustrate Progovac’s explanation of case phenomena in SF and
its shortcomings. Progovac (2006) proposes an elegant solution to the
problematic anti-connectivity phenomenon in English, based on the standard
case theory. However, extended to other languages, for instance, German, her
analysis immediately becomes stalled. This failure suggests that the standard
case theory is inconsistent with DG approach.

In her analysis, Progovac (2006) utilizes a special kind of case, “default
case.” A default case is defined as a case assigned to nominals which do not
undergo case licensing. Therefore, a default case is realized in the positions
targeted by no case licenser. One can find such a position in dislocations,
insertions, copula predicates, coordination and complements of prepositions, as
exemplified below (the default case in English is assumed to have the ACC
form).

\[\text{default case} \]

In the literature, it is not written who first proposed default case and when. It seems
that the idea of default case has been informally argued among researchers, especially
among those who work on child language.
(43) a. *Me, I like beans.*
   b. the best athlete, {her/*she}, should win.
   c. It’s *me.*
   d. {Us and them/*we and they} are gonna rumble tonight.
   e. He is taller than *me*.

Progovac (2006) assumes that a default case is an independent case, even if its form coincides with another case form (cf. Shütze and Wexler 1996; Shütze 2001; Radford 2002).

Returning to case in SFs, Progovac attempts to resolve accusative subject SFs in English which had been troublesome for MGG, by adding default case to the standard case theory. Progovac (2006) suggests that accusative subject SFs in English in fact carry the default case, not ACC. Given that an SF has no T in its syntactic structure, a subject SF cannot obtain NOM and, thus, a subject SF realizes with the default case.

Progovac (2006) demonstrates this with Small

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8 An anonymous reviewer doubts that post-than position is a default case position, because “He is taller than I” also exists in English. This vacillation is also found in other prepositions which can be used as conjunctions, such as but, as and except (Quirk et al. 1972). Existence of idiolects where NOM appears after such prepositions, however, does not weaken the present hypothesis that the ACC form is the English default case form, because it is not assumed here that default case position is universally fixed. Rather, default case position cross-linguistically varies in some range. For instance, in German, positions of P-complement are not default case positions. Generally, a default case is assigned to where other cases are not assigned. Thus, where a language set its default case position depends on what case system it has (see section 6). Therefore, the present argument expects that “than me” and “than I” are generated from different case systems, respectively. I postpone confirmation of this expectation here. For related discussion, see also note 11.

9 An anonymous reviewer informed that not a few native speakers accept “He is taller than myself.” This fact is interesting, especially for theory of binding, but I suppose it is irrelevant to the present discussion, because English reflexives show no morphological change relevant to case.

10 Exactly, T is divided into [tense] and [agreement]. Shütze and Wexler (1996) argue
Clause SFs. Small Clause SF, “Him worry?!”, for instance, projects VP as their maximal projection, not TP. Therefore, “him” within the Small Clause does not get assigned NOM and, instead, receive the default case, getting the ACC form.

(44) Him worry?!

\[
\begin{aligned}
&\text{VP} \\
&\text{him} \quad \text{V'}
\end{aligned}
\]

\[
\begin{aligned}
&\quad \text{worry}
\end{aligned}
\]

(Progovac 2006: 39)

This analysis of case in English SFs can be applied to SF case phenomena in French. In French, tonic (TON) is most suitable for the default case, because TON is found in the default case positions, namely complements of prepositions, copula predicates, dislocations and coordinated nominals.\(^\text{11}\)

\(^\text{11}\) One of anonymous reviewers points out that TON also appears in non-default case positions, as in (i), and suggests that TON is possibly not a default case. According to the reviewer, \textit{lui} in (i) is used as an emphatic pronoun.

(i) Tu es plus intelligent que lui.

\textit{You are more intelligent than he. TON}

Though, in French, as will be seen in section 6, pronouns in emphatic positions have TON, this does not fully cover its distribution; TON can appear in non-emphatic positions or positions not necessarily emphatic, as in (45), (46) and (48), and I presuppose that TON in such environment appears as the default case. In short, TON appears in both emphasized NPs and NPs in default case positions. I will propose, in section 6, that the former is the ‘true’ tonic and the latter is just the default case, though both have the same form. Returning to (i), it is unclear, I think, which case ‘lui’ takes. Even if the position after \textit{que} ‘than’ is not a default case position but an emphasized position, that complement of preposition is a place for the default case is
(45)  Venez avec moi.
*Come with me.*

(46)  Mon meilleur ami, c’est toi.
*My best friend is you*

(47) a. Moi, je préfère le café.
*I prefer tea.*

(48) Sa femme et lui sont venus me voir.
*His wife and him came to see me.*

With Progovac’s analysis, one should expect that any nominal SF in French appears in the TON form and, as seen above, this prediction is fulfilled.

German SFs, however, constitute counterevidence against Progovac. In German the default case seems to be NOM or have the same case form as NOM. Below are examples of the default case in copula predicate nominals, fixed expressions and titles.

(49) a. Er ist ein Lügner.
*He is a liar*

b. ein schöner Tag
*a.MASC.SG.NOM more-beautiful day*
‘a good day’

c. Harry Potter und der Orden des Phönix

Harry Potter and the order of the phoenix

‘Harry Potter and the order of the phoenix’

Then, if Progovac’s analysis is on the right track, all nominal SFs in German would realize in the NOM form, but, as observed above, the prediction does not conform to the facts. In general, Progovac’s analysis expects that all nominal SFs get some default case forms and then cannot deal with connectivity phenomena. Note that the failure of Progovac is not just the breakdown of her analysis. It also means that the standard case theory does not work in DG approach and thus cannot explain case phenomena in SF.

6. Indirect Licensing

An alternative mechanism of case licensing in DG approach is Indirect Licensing (IL), proposed by Culicover and Jackendoff (2005) (henceforth, C&J), which is likely to be a promising candidate. IL is a mechanism to license a syntactic element with a licenser outside the syntactic structure. With IL, C&J explain the selectional restriction on the SF in (50).

(50) A: Harriet has been flirting again.
B:  a. Yeah, with Ozzie.
    b. *Yeah, Ozzie.

(Culicover and Jackendoff 2005)

The problem here is that the example involves sprouting: “with” in (50a) is not present in the antecedent sentence. Hence, nothing in the antecedent sentence tells us that the complement of “flirt” requires preposition “with.” What licenses (50a) and excludes (50b)? C&J assume the lexical entry of flirt to be the licenser. Here I illustrate the lexical entry of flirt (henceforth, Lex (flirt)) by (51), following C&J (the representation is a simplified version of example (40) in C&J 2005: 260).
An important feature of this representation is that Lex (flirt) demands that it take ‘with NP’ as its complement. In (50a) the SF “withOzzie” fits properly into its complement. Remember that in Jackendovian Parallel Architecture, which C&J is based on, the syntax-semantics interface can directly refer to Lexicon. Assuming that appearance of flirt in the antecedent sentence activates or marks Lex (flirt) in the lexicon, the interface can utilize information of Lex (flirt) in licensing (50a).

C&J claim that IL by a lexical entry is generally required by grammar, not only for SFs, appealing to the facts illustrated in (52) below.

(52) a. Would you hand me those, please? [Gesturing toward scissors]
    b. Icelandic
       Viltu rétta mér hana?
       will.you hand me-dat it-fem.acc
       [pointing toward a book = bókina (fem.acc)]
   (Culicover and Jackendoff 2005:261)

In (52a), the demonstrative “those” is in the plural form, even though the target is a single object. The reason of this must be that the lexical entry of the word for the target (Lex (scissors)) sets its number in plural. But this word stays nowhere in the linguistic context. Thus, the only possible licenser of the demonstrative is Lex (scissors) in the lexicon. Similarly, in (52b), the deictic pronoun “hana” appears in the feminine form, though there is no trigger of this agreement in the linguistic context. This is also due to the lexical entry of “bókina (book)”, the word for the pointed object.

Though C&J have not argued how IL deals with the case morphology in SFs, the IL mechanism can be developed to take care of the case phenomena in question. Consider the connectivity phenomena in German. Given that German verbs specify case of their objects, lexical entries of the verbs may work as
indirect licensers. In (53), Lex (*folgen*) licenses dative case (DAT) and no other cases are licensed for its object. So it excludes “Den Lehrer”, the ACC object. In (54), Lex (*suchen*) licenses ACC of its object and disqualifies any other case there. Then, Lex (*suchen*) allows “Den Lehrer” and excludes “Dem Lehrer” (DAT).

(53) Q: Wem folgt Hans?
   *who.DAT follows Hans*
   ‘Who is Hans following?’
   
   *The.DAT teacher*
   
   *The.ACC teacher*

(54) Q: Wen sucht Hans?
   *Who.ACC seeks Hans*
   ‘Who is Hans looking for?’
   
   *The.DAT teacher*
   
   b. B: Den Lehrer.
   *The.ACC teacher*

(Merchant 2004:679)

C&J, however, cannot explain case assignment to adverbial nominals (as “I had no money *this month*”). Thus, the proposed mechanism of IL cannot apply to the adverbial nominals in German, since the licensing by a lexical entry is only available when a nominal is selected by a lexical element. Consider the following examples in.

(55) a. Das Gebäude liegt linker
   *the.NEU.SG.NOM building lie.3RD.SG.PRESENT left.MASC.SG.GEN*
   Hand.
   *hand*

   “The building stands left hand.”
b. Hans ist mir ein guter Freund
   _Hans is 1st.SG.DAT_ a.MASC.SG.NOM _good.MASC.SG.NOM_ friend
   “Hans is a good friend for me.”

c. Er Öffnet der Frau die Tür.
   _he open.3RD.SG.PRS_ the.FEM.DAT _lady the.FEM.SG.ACC_ door
   “He opens the door for the lady.”

d. Mir ist das Portemonaie herunter-gefallen.
   _1ST.SG.DAT_ is the.NEU.SG.NOM _wallet down-fall.PP_
   “I dropped the wallet.”

e. Sie ist letzte Nacht gestroben?
   _she is last.FEM.SG.ACC_ night _die.PP_
   “She died last night.”

It is now obvious that IL by a lexical entry cannot license these adverbial nominals.

The standard case theory cannot also deal with German adverbial nominals, not only because they are non-selected elements, but also because their case forms are determined according to their semantic functions: genitive case for the locative, dative case for the affected, and accusative case for the temporal NPs. This is significant because it indicates that not all cases of German are automatically determined in syntax but the case licensing of them involves semantics.

Indirect Licensing can, on the other hand, supply a way to license case of adverbial nominals. Remember that in Parallel Architecture syntactic licensing is also done by correspondence rules which mediate between a syntactic representation and a semantic representation in the interface. That is, the licensors of cases in adverbial nominals are the syntactic-semantic correspondence rules which link case forms to semantic roles. Returning to SFs, case licensing is also observed in the adverbial nominals of German. When adverbial nominals in German appear as SFs, they bear the same case as we observe in sentences.
Q: Liegt das gebäude linker Hand?
A: Nein, rechter Hand.

Q: Wann ist sie gestroben?
A: Letzten Monat.

cf. Es hat den ganz-en Tag geregnet.

a. Q: Öffnet er der Frau die Tür?
A: Nein, mir.

b. Q: Öffnet er der Frau die Tür?
A: Nein, dem Mann.
(59) a. A: Mir ist das Portemonaie herunter-gefallen.

1SG.DAT is the.NEU.SG.NOM wallet down-fall.PP

‘I dropped the wallet’

B: Mir auch.

1SG.DAT too.

‘Me, too’

b. A: Einem Mann ist das Portemonaie herunter-gefallen.

a.MASC.DAT man is the.NEU.SG.NOM wallet down-fall.PP

‘A man dropped the wallet’

B: Dem Lehrer?

the.SG.DAT teacher

‘The teacher?’

I assume that case morphology of adverbial nominals can be ascribed to the correspondence rules available in IL approach. In other words, the case licensing by correspondence rules can target these SFs too.

Let me briefly illustrate how the case licensing with (57) and (59a). The fragment in (57) is assumed to have a CS like (60) (here some irrelevant semantic features are omitted) and a syntactic structure like (61).

(60) [DIE ([x 3rd.PERSOM.FEM.SG]); [Time MONTH; LAST], ]

(61) [NP Letzten [N Monat]]

In the notation of CS used here, a predicate is represented by a conceptual function such as “DIE” and its argument(s) is/are put between round brackets, and adjuncts are located on the right of a semicolon (cf. Jackendoff 1990; Culicover and Jackendoff 2005). The case-correspondence rule relevant to (57) is written as (62).

(62) CS: [F…; [Time X,…], ]

SS: […YP<ACC>,…], ]
This rule examines whether a temporal element in a CS corresponds to an accusative NP (and vice versa). In (59a) the SF “Mir” has conceptual and syntactic structures as (63).

(63)  CS:  [FALL-DOWN ([WALLET; DEF]); [AFF- 1SG]; ]
       SS:  [NP Mir; ]

“AAF-” is an abbreviation of “affected -,” which stands for a function which assigns patient role12. The case-correspondence rule which licenses dative adjuncts is written as (64).

(64)  CS:  [F…; [AFF X]; ]
       SS:  […]YP<DAT>…; ]

Since German dative marks both beneficiary and patient role as in (58) and (59), the rule requires a dative element to have just affectedness, regardless of beneficiary or patient (+ / -). Just as in (57), this rule examines whether an affected person corresponds to a dative NP. Case-correspondence rules assumed here deal with no other syntactic element than a nominal. Therefore the rules make no different judgment for nominal SFs and its sentential counterpart. Hence, case connectivity phenomena can be correctly predicted even in DG approach.

The next issue we should consider is if IL can accommodate case anti-connectivity. Concerning English accusative subject SFs, Progovac’s analysis can be slightly revised and adapted to the present mechanism. If the correspondence rule for English nominative is sensitive to Tense, subject SFs are out of the scope of IL and then they appear in the default case form (the

12 Though it is assumed here that affected entities are adjunctive in CS, there is another possibility. Jackendoft (1990: Ch. 7) claims that affectedness is represented in a tier of argument structure, contrary to the standard assumption that affectedness is irrelevant to argument structure.
status of default case in the present system will be discussed later).

The prediction that NOM-licensing leads to anti-connectivity is, however, not confirmed in German. German nominal SFs, apparently, also take NOM, when it corresponds to the subject of the preceding sentence, as exemplified in (65).

(65) Q: Wer hat der Kuchen gegessen?
A: Dein/*deinem/*deinen Bruder.

Remember, however, that German default case has the same form as NOM. Therefore it is also possible that German nominal SFs in the NOM form carry the default case. Accordingly, the facts such as (65) do not necessarily constitute counterevidence to the prediction by the present approach. Though it seems nearly impossible to examine exactly which case German subject-SFs take, NOM or the default case, theoretically it is better to hypothesize that the subject SFs have the default case. If we assume that German subject-SFs keep NOM, we are faced with a theoretical problem that German NOM, unlike usual NOM, can survive without T. In conclusion, the present analysis can be adequately incorporated in German, too.

Next, consider the case phenomena of French SFs, which provide another piece of potential counterevidence against the present analysis. Since French verbs select a case for their complements, i.e. ACC or DAT, their lexical entries are available as (indirect) case licensers. Hence, it is expected that object SFs in French show connectivity, although they realize in the TON (i.e., tonic) form, the default case form. I claim, however, that this is due to a special property of TON. Tonic is not only assigned to the ‘default’ position, but to an emphasized or focused nominal, as exemplified in (66):\(^\text{13}\)

(66) a. Je n’ai vu que lui.

*I not-have.1ST.SG.PRS seen that 3RD.MASC.SG.TONIC
‘I saw only him’

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\(^\text{13}\) In (66a), ‘Que’ (*that*) functions as English ‘only’, cooperating with ‘n(e)’ (*not*). The scope is marked by the position of *que*.\(^\text{13}\)
Thus, as is predicted, all nominal SFs in French appear in the tonic form, because SFs are focused expressions. Accordingly, contrary to the discussion so far, nominal SFs in French do not carry the default case but the true tonic, and, therefore, the case phenomena in French SFs do not constitute counter evidence to IL.

In general, the IL approach can correctly characterize the case anti-connectivity in two different situations: when a case system is sensitive to Tense and/or when it is sensitive to focus. In the former situation, an anti-connectivity phenomenon occurs only when an SF corresponds to what receives a T-sensitive case (usually NOM) in a sentence. In the latter situation, all SFs in the language appear in one case form, and then most of them show anti-connectivity. If a language has no such case, there should arise no anti-connectivity. These three patterns are realized in English, French and German, respectively.

The status of default case in the Jackendovian system has not been examined yet. Since a default case appears where no other case can be licensed, it needs no specific condition: the condition for default case is just “elsewhere”. One may, then, ask how its occurrence is restricted without a licensor. Generally, when a nominal targeted by some case-correspondence rule has the default case form, the nominal is excluded by the rule. Consider a German example (67), where a temporal adverbial nominal which is usually assigned ACC holds the default case form.

(67) *Sie ist letzter Monat gestroben.

"She died last month?"

Since the CS of (67) contains a semantic element which has a temporal function, the correspondence rule for ACC is activated and targets the correspondent of the semantic element, “letzter Monat.” Then, the case of the adverbial nominal is checked and disqualified.
To sum up, IL can provide an adequate analysis of SF case phenomena, which the ellipsis approach and Progovac’s approach cannot deal with relying on the standard case theory. In the discussion so far, two kinds of indirect licensor for case were proposed: lexical entries and correspondence rules. Though the necessity of those licensers is undeniable, the detail of the licensing processes is far from being illuminated. Embodiment of case-correspondence rules and closer investigation of the system behind them are demanded, as future work.

7. Conclusion

The main claim in this article is that to explain the case phenomena in SFs a theory of case should include some mechanism to license cases by reference to some kind of non-syntactic information, at least Semantics and Lexicon. Such a mechanism is also necessary in analysis of the case phenomena in sentences, particularly for adverbial nominals. In this article I argued that Indirect Licensing in Jackendovian architecture is hopeful as a basis of such a mechanism. What differs from Culicover and Jackendoff (2005) in my argument is that syntactic-semantic correspondence rules serve as licensers of case as well as lexical entries.

The case licensing mechanism proposed here should be more examined by cross-linguistic research. Especially, it is interesting whether the mechanism can describe case systems of non-European languages. It has been pointed out without further adequate analyses that Japanese and Korean also exhibit case anti-connectivity. For example, in the languages case particles can be omitted in SFs, while they cannot in full sentences (See Morgan 1989 for Korean data). Also interesting is what SF case phenomena are like in languages where case marking is sensitive to distinction between definite/indefinite, e.g. Turkish, or animate/inanimate, e.g. Fore (a Papuan language) (cf. Hoop and Malchukov 2008).

To confirm the adequacy of Parallel Architecture and IL, we also need to know how IL licenses other grammatical phenomena, though in this article I have concentrated only on case phenomena. IL of other phenomena will be argued in future works.

This article is just the first step of serious research on case phenomena of
SFs. I hope that this article will be followed and strengthened by other cross-linguistic and elaborated studies on the related issues.

Endnotes:
SF appears to be a kind of “elliptical constructions” exemplified in (i), but SF should be distinguished from them.

(i)  
   a. Robin ate a bagel for breakfast, and Leslie did too. [VP-ellipsis]  
   b. Robin speaks French, and Leslie, German. [Gapping]  
   c. If you don’t believe me, you will the weatherman. [Pseudo-gapping]  
   d. Someone’s coming with Bill, but I don’t know who. [Sluicing]  
   e. Can’t let you through. [Argument drop]

Intuitively speaking, an SF consists of only a small part of a sentence and primafacie lacks the other major parts of the sentence. In the other elliptical constructions, on the other hand, only a small part of a sentence is elided and the larger part remains intact. Figuratively, if a sentence is compared to a house, an SF is only one of its components, such as a bathroom or a roof. In the same vein, if an elliptical construction is a house, then it only lacks one of its components.

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References


Press.


文断片における格現象

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本稿では、文断片における格現象を Jackendoff の三部門並列モデルに基づく間接認可のアプローチによって説明する。形式的には文に満たないが文に相当する意味を持つ表現である文断片は、生成文法の標準的アプローチにおいて、削除現象の一つであると見なされてきた（Merchant 2004 他）。この「削除分析」では、文との部分的な類似性（Connectivity）を捉えることができるが、文には見られない文断片固有の特性（Anti-connectivity）を説明できない。一方、文からの削除によらず、文断片のみを直接生成する分析（直接生成分析）では、文断片に文の統語構造を仮定しないので、Anti-connectivity を捉えることができるが、これまでは提案されてきたものでは、文法現象に具体的な説明を与える方法は、十分には示されていない（Culicover and Jackendoff 2005; Progovac 2006 他）。格現象に関しても、削除分析では、英語・フランス語に見られる Anti-connectivity を説明することができない。一方、直接生成分析では、文断片の統語構造上に格の認可詞が現れていないので、ドイツ語に見られるような Connectivity の現象の説明が困難になる。本稿では、Culicover and Jackendoff (2005)で提案された間接認可のメカニズムを拡張して、辞書及び意味構造の要素が格の認可詞になると想定することで、直接生成分析に基づく Connectivity の説明が可能であることを示す。また、英語・フランス語の Anti-connectivity は、(i) 時制の欠如と、(ii) 焦点であるという文断片の二つの特性から説明される。

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