

On the Existence of Small Clauses in English

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Kim, Jong-Bok. 2013. On the Existence of Small clauses in English. *English Language and Linguistics* 19.1, 67-88. The existence of small clauses (NP-Predicate sequence as a constituent) has been rather controversial: there are arguments for and against the postulation of the SC in the English grammar. In this paper, we discuss phenomena where the NP-Predicate sequence forms a constituent and accept the view that English employs the SC as the complement of verbs like *imagine*, in the absolute construction, the SAI (subject-auxiliary inversion) construction, and so forth.

Key words: pseudocleft, cleft, absolute construction, small clause, SAI

1. Introduction

Small clauses (SC), selected by verbs like *consider*, *prove*, *imagine* and so forth, have been taken to form a constituent made up of a subject and a nonverbal predicate, as exemplified by the following.

- (1) a. Kim considered [_{SC} [Pat] [a good friend]].
b. Kim proved [_{SC} [the theorem] [false]].
c. Kim imagined [_{SC} [lives] [different from his own]].

The postulation of such a constituent is basically motivated by the Projection Principle requiring that all mappings between levels of linguistic representation be homomorphic with respect to argument structure (Chomsky 1981). For example, the verb *consider* logically requires two arguments and this property is

kept intact in all levels of representations including syntax.

However, as noted by Stowell (1981, 1991), such isomorphic constraints are fragile, when considering more data.

- (2) a. *I consider [John [off my ship]].
 b. *I proved [the weapon [in his possession]].
 c. *I feared [John [unfriendly]].
 d. *I expect [that man [stupid]].
 e. *I imagined [John [stupidly]]

In these examples, the PP, AdvP or AP is not licensed as the predicate of the assumed SC, implying that the categorial or syntactic property plays an important role in the c-selection (category selection). However, as noted by Kitagawa (1985) and others, there are cases where the s-selection (semantic selection) also plays key factors in licensing a SC:

- (3) a. *The doctor considers that patient dead tomorrow.
 b. Our pilot considers that island off the route.
 (4) a. *I expect that island off the route.
 b. I expect that man dead by tomorrow.

The contrast here indicates that *consider* selects a complement expressing a state of affairs, but not the one describing a change of state. Meanwhile, the verb *expect* is the opposite: its complement describes a change of state.

As such, there are conflicting issues in the supposition of SC as syntactic constituents. In this paper, we critically review the arguments for and against the supposition of SC as a constituent, and suggest that we cannot eliminate the notion of SC though it exists in narrower environments than literature has assumed. That is, the SC exists as the complement of the *imagine* type of verb, and in constructions like the *with* absolute construction.

2. Arguments for the Small Clause

Literature has proposed several arguments for the supposition of SC. For example, Radford (1988) and Safir (1983) argue for the distinction between the finite S and SC, based on the fact that the SC cannot take an overt complementizer.

- (5) a. *It is [that Bob in the Army] that I can't imagine.
 b. It is [_{SC} Bob in the Army] that I can't imagine.

In the *it*-cleft example (5b), the focused expression is an SC not a finite CP. The constituenthood property in other environments also supports the existence of the SC. As observed in the following, the SC behaves like one unit in the cleft, topicalization, and right node raising construction (Aarts 1992, Basilico 2003).

- (6) a. What I can't imagine is [Bob in the army]. (wh-cleft)
 b. [Bob in the army], I can't imagine. (topicalization)
 c. I can't imagine, but Frank can imagine, [Bob in the army]. (right node raising)

The usage of emphatic reflexives also support the SC constituent, as noted by Radford (1988). Emphatic reflexives can be floated but their antecedents need to be the subject, as observed from the following data set:

- (7) a. The president is coming himself.
 b. *We put the president in our car himself.
 c. *I looked behind the president for guards himself.

Consider the behavior of emphatic reflexive in the SC candidate.

- (8) a. I consider the president entirely responsible himself.
 b. I fear the president responsible himself.

The floated reflexive *himself* has the NP *the president* as its antecedent, supporting its subjecthood in the surface structure.

The expression 'not-NP' also seems to support the SC analysis. As pointed out by Postal (1974), the *not-NP* can appear only in the subject position.

- (9) a. Not many gorillas have learned to dance.
 b. I would prefer for not much to be said about this.
 (10) a. *Joe kissed not many models.
 b. *Jane fears not much money.
 c. *John talked to Bob about not many problems.

Examples like (10) are unacceptable since *not-NP* appears in the non-subject position. Consider again SC candidate examples.

- (11) I consider [not many people suitable for the post].

The grammaticality of such examples implies that the expression not-NP here also functions as the subject, supporting the SC analysis.

The distribution of *alone* is also similar: the expression can occur only in the post-subject position (Postal 1974).

- (12) a. England alone saved the labour of a hundred clerks.
 b. *Call England alone.
 c. *I believe that alone.
 d. *I talked to John alone.

However, the following data indicate that the NP *John* functions as the subject, supporting the SC analysis:

- (13) a. I consider [John alone responsible for the failure].
b. I find [John alone responsible for this].

The adverb interpolation can also argue for the supposition of the SC. No adverb can intervene between the lexical head and its NP complement.

- (14) a. *John lost carelessly his book.
b. *John considers seriously Bill foolish.

Consider the following.

- (15) a. John found Bill repeatedly annoying.
b. John considers Bill sincerely foolish.

Such cases may not strongly support the SC analysis since we could assume that the adverb is modifying the following predicative expression. However, consider the scope of the sentential adverb *probably*.

- (16) a. I have found that probably Minimalism is the most convincing approach to language.
b. I have found that Minimalism is probably the most convincing approach to language.

The adverb *probably* scopes over the sentence it modifies. Now consider the following.

- (17) I consider [Minimalism probably the most convincing approach to language].

The sentential adverb *probably* scopes over the SC, not the matrix clause.

3. Arguments Against the Small Clause

Contrary to the arguments for the existence of the SC, the literature including Williams (1983), and Hukari and Levine (1991), Napoli (1993), Pollard and Sag (1994), and Baltin (1998), has argued against the existence of the SC in English.

Citing agreement examples like (18), Safir (1983) argues for the existence of SC.

- (18) a. [Workers angry about the pay] is just the sort of situation that the ad campaign was designed to avoid.
 b. [Workers angry about the pay] does indeed seem to be just the sort of situation that the ad campaign was designed to avoid.

The matrix verb here is singular, which may not be accounted for with the assumption that *workers* is the subject with the following AP as a modifier. However, as pointed out for Baltin (1998), there are cases where the plural subject accompanies with the singular verb.

- (19) a. Several angry workers is just the sort of situation that the ad campaign was designed to avoid.
 b. Workers who are angry about the party is just the sort of situation that the ad campaign was designed to avoid.

What the data suggest is, as Baltin (1998) hints, that subject-verb agreement in English is semantic-based, rather than morpho-syntax sensitive. The point worth noting here is that the agreement factor neither supports or counterargue against the SC.

It is suggested that binding facts can also support the SC analysis. Consider the following.

- (20) a. Mary believes that Bill_i is angry at himself_i.
 b. *Mary_i believes that Bill is angry at herself_i.

The examples illustrate the fact that the reflexive here requires its antecedent within the same clause. This is also observed in the following.

- (21) a. Mary considers Bill_i kind to himself_i.
 b. Mary finds Bill_i kind to himself_i.
 (22) a. John expected the men_i to like each other_i.
 b. *The men_i expected John to like each other_i.

However, note that the binding facts cannot be a strong argument for the SC if we attribute the behavior not to the surface structure but to the argument structure as suggested by Sag et al. (2003), and Kim and Sells (2008). That is, what matters here is the argument structure of the verb in question. Consider the argument structure of *like*.

- (23) ARG-ST <NP, NP[*anaphor*]>

Given the Binding Condition such that an anaphor needs to be argument-bound, the anaphoric second argument in the ARG-ST here requires its antecedent in the same ARG-ST. The only possible expression here is the first one, serving

as the subject.

Pollard and Sag(1994) also cast doubt on the constituent of SC, citing the following cleft examples.

- (24) a. *What we considered was [Leslie in complete control of the situation]
 b. *It was [Leslie in complete control of the situation] that we considered.

However, note that similar sentences are acceptable with the verb *fear*.

- (25) a. What we feared most was [Leslie in complete control of the situation]
 b. It was [Leslie in complete control of the situation] that we feared most.

The contrast between (24) and (25) indicates that the possibility of having the SC in the cleft focus position has to do with the lexical semantics of the matrix verb, not with the issue of simple syntactic constituent.

In addition, Pollard and Sag (1994) point out that the facts concerning the complex NP shift also support the non-SC analysis: the complex NP shift does not operate on NPs that are subjects at the point of application (Postal 1974).

- (26) a. *Are happy – all of the men who recovered from mononucleosis?
 b. *I regret the fact that were destroyed – so many of our priceless relics

Unlike such examples, the sentences involving an SC cases can undergo the complex NP shift:

- (27) a. We would consider acceptable — any candidate who supports the proposed amendment.
b. We would regard as acceptable — any candidate who supports the proposed amendment.

The acceptability of these may indicate the non-subjecthood property of the SC. However, once again note that examples like (27) can be analyzed in a different way. That is, these examples can be taken to be not the complex NP shift, but as an extraposition.

4. Nonfinite Sentences as a Constituent

As we have seen so far, there are pros and cons for assuming the SC constituent in English. In what follows, we will discuss cases where non-finite Ss (including SC) clearly behave as a syntactic constituent.

4.1. Lexical Variations

As we have seen, there are conflicting arguments for the SC involving verbs like *consider*. In fact, as noted by Culicover and Jackendoff(2005:132), the *imagine* class of verbs behave differently from the *consider* class of verbs in the pseudocleft.

- (28) a. What I imagined/found/visualized/conceived of was [Robin drunk].
b. *What I considered/judged was [Robin drunk].

Culicover and Jackendoff (2005) point out that the clausal complement of the *consider* class is difficult to be focused in the pseudocleft.

- (29) a. What I found was that Robin was stupid.
 b. *What I consider/judged was that you were on the right track.

The contrast indicates that the *imagine* class of verbs is different from the *consider* class of verbs in selecting an SC as its complement.

4.2. Infinitival CP

In the treatment of infinitival CP, the complementizer *for* is assumed to take a nonfinite infinitival S.

- (30) a. Fred intends [for [Sam to review that book]].
 b. They arranged [for [the woman to get the best medical treatment]].
 c. It is intolerable [for [John to get away with this]].
 d. [For [students to do it on their own]] would be impossible.

The bracket constituent here has two elements: the complementizer *for* and a nonfinite sentence consisting of a noun phrase functioning as the subject and an infinitival clause serving as its predicate. Note that the subject and the infinitival clause do not occur as a constituent in certain environments:

- (31) a. *[Sam to review the book] is arranged.
 b. *[The woman to get the best medical treatment] is intended.

However, note that it is not difficult to find cases where the infinitival S behaves like a constituent.

- (32) a. I prefer for [Tom to do the washing] and [Bill to do the drying].
 b. Mary meant for, but nobody else meant for, [Sandy to do the washing].

What this means is that the infinitival S occurs only in a limited or controlled position. For example, the infinitival S in (31) is not licensed, but it is required by the complementizer *for* in (32). The occurrence of the expletive as its subject or the idiomatic subject seems to support this too.

- (33) a. It would be unusual for it to snow here.
b. It would be unwise for there to be no fire exist.
c. It would be difficult for the cat to be out of the bag.

The expletives *it* and *there* here function as the subject of the infinitival VP. The subject *the cat* in (33c) also forms a unit with the following VP, inducing an idiomatic meaning.

4.3. Gerundive Clauses

The English gerundive construction displays a mix of nominal and verbal properties. With regard to nominal properties, they can occur in syntactic positions that generally only admit NPs. For example, they can appear as the complement of a preposition as in (34a), as a clause-internal subject as in (34b,c), and as the focus of a cleft as in (34d) (Malouf 2000):

- (34) a. They didn't approve of [my leaving without a word].
b. Tom believes that [John's taking a leave of absence] bothers Mary.
c. Why does [John's taking a leave of absence] bother Mary?
d. It's [John's taking a leave of absence] that bothers Mary.

However, the internal syntax of gerundives exhibit clause properties, too: they can take accusative NP complements (like the verbs they are derived from), can be modified by adverbial modifiers, and even can be negated with the negator *not* (Malouf 2000):

- (35) a. Tom's calling (*of) the roll started each day.
 b. Tom disapproved of my quietly/*quiet leaving before anyone noticed.
 c. Tom's not having bathed for a week disturbed the other diners.

The gerundive verb also selects the same complements as the verb form it is derived, and the subject can be either genitive (GEN) or accusative (ACC).¹⁾

- (36) We are talking about [Pat's/Pat taking a leave of absence].

Note that both ACC and GEN gerundive construction can be coordinated, though the verb agreement factor may be slightly different.

- (37) a. [Pat's coming] and [Chris's leaving] ??bothers/bother John.
 b. [Pat coming] and [Chris leaving] bothers/?? bother John.

The coordination data strongly support the postulation of the gerundive nonfinite S as a constituent.

4.4. *With* Absolute Construction

The *with* absolute construction consists of the subject and predicate, but no verb in the predicate, introduced by *with* or *without*:

- (38) a. They were standing against the wall [with their hands above their heads].
 b. They were wandering around [without any clothes on].
 c. [With the children so sick], we weren't able to get much work done.

1) When the gerundive subject is accusative, it has more clausal properties.

Note that the *with* absolute can also accompany *what* and can license a coordination, supporting its syntactic constituenthood.

- (39) a. What with [the prices being so high] and [my wife being out of work], I can't afford to buy new refrigerator.
 b. What with [his daughter working for the bank] and [his son working for the airlines], no one would be take care of the little sisters by the day.

We cannot take the expressions after *with* or *what with* to form an NP because of their clausal properties:

- (40) a. What with [it raining all day long], I didn't get a chance to hang the washing out.
 b. With [the cat out of the bag], there is not much point in trying to hid the truth.

The subject in (40a) is the expletive *it* while the one in (40b) is the idiomatic subject. Further sentential properties of the absolute construction are observed in various syntactic phenomena from naturally occurring data.

- (41) a. At least Doc was probably safe back there now, what with [Mad Dog Tannen arrested and all]. (passivization)
 b. What with [there being no possibility of advancement], Linda is determined to find a new job. (there insertion)
 c. What with [his daughter working for the bank and his son [e] for the airlines], no one would be take care of the little sisters by the day. (gapping)
 d. What with [Emil obviously afraid of snakes and all], we sent him home. (S-adverbs)

- e. What with [everything all dug up], you can't trust a slant.
(quantifier floating)

Phenomena like passivization, there-insertation, and gapping are all sensitive to sentence level expressions, supporting the bracket expression here forms a clausal unit like SC.

4.5. Verbless Clause

Similar to the absolute construction, English also licenses cases like the following.

- (42) a. The weather being cold, the children stayed at home.
b. The sun having set, they made a fire.
c. He left the room, the dog following him.

In these examples, the predicate is a nonfinite VP. Even though there is no expression introducing the nonfinite clause, the clause functions as a subordination clause whose meaning depends on context. Note that this verbless subordinate clause can have an AP, an NP, or a PP as its predicate.

- (43) a. [His face pale with anger], he stormed out of the room.
b. The contestants, [some of them primary school children], were kept waiting for two hours.
c. There he sat, [his back against the hot stones of the tower].

In these examples, it is obvious that the bracket part is a constituent, modifying the main clause. The possibility of having coordination examples further support the existence of SC.

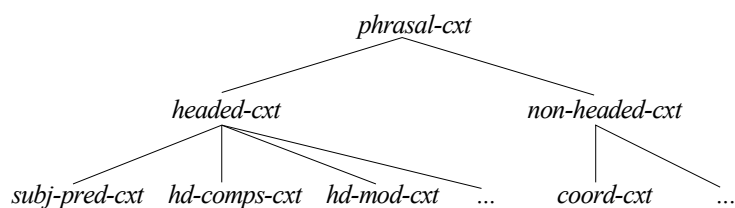
- (44) a. [_{SC} [His house flooded] and [his wife missing]], John cried on Brown's shoulder.
 b. [_{SC} [No food in the fridge] and [no money left in the account]], John didn't know what to do.

Having no overt expression determining the structure of the bracket expression, it appears to be reasonable to assume that the SCs are coordinated in such sentences.

5. Implications: A Construction View

The discussion we have made so far indicates that English allows various types of sentential constructions. Within the philosophy of Construction Grammar where licensed phrasal constructions, like lexical items, are learned pairings of form and function (Goldberg 2006 and references therein), phrasal constructions are related in a network in which nodes are related by inheritance links. For example, phrasal constructions will have the following hierarchy.

- (45) Inheritance hierarchy for the phrasal constructions in English



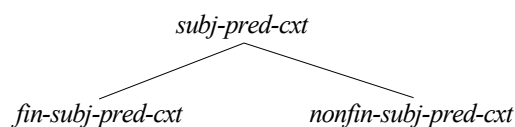
The phrasal constructions have two subtypes: headed and non-headed constructions, the latter of which includes coordination. The headed-construction (*headed-cxt*), reflecting X'-schema, includes several subconstructions. The subject-predicate construction (*subj-pred-cxt*) combines a subject with its predicate

(licensing finite or nonfinite Ss) whereas the head-complement construction (*hd-comps-cxt*) licenses the combination of a head with its complement(s) (generating all headed phrases like NP, VP, AP, and PP). Of the two licensed phrasal construction, the former will have the following constructional constraints (Kim and Sells 2008 for the feature values used in this paper).²⁾

$$(46) \left[\begin{array}{l} \textit{subj-pred-cxt} \\ \text{SUBJ} \langle \ \rangle \end{array} \right] \Rightarrow \boxed{1}, \mathbf{H}[\text{SUBJ} \langle \boxed{1} \rangle]$$

The construction simply states that the predicate combining with its subject will form a well-formed phrasal construction, whose property will be inherited to its subtype constructions (Sag 2012, Chaves 2012).

(47) Subconstructions of the *subj-pred-cxt*



As illustrated here, we classify the subject-predicate construction into two subtypes, depending on the finiteness of the predicate. The typical declarative sentence will be an instance of the finite subject-predicate construction as in (48a) while all nonfinite subject-predicate constructions including the SC are instances of the nonfinite subject-predicate construction as in (48b).

- (48) a. [[The students] [accepted the existence of small clauses]].
 b. John imagined [[Amenda] [lingering on the porch]].

2) In representing the constructional constraints, we follow traditional grammar rule formats. The formats can be easily converted into finer-grained formal systems as sketched in Sag (2012).

One important property of the subject-predicate construction is the assignment of CASE values to the subject. In English, structural cases (*scase*) are realized as NOM, ACC, or GEN and each subconstruction is constrained with the realization of CASE values as represented in the following.³⁾

- (49) a. [*fin-subj-pred-cxt*] \Rightarrow $\boxed{1}$ [CASE *nom*], **H**[SUBJ $\langle \boxed{1} \rangle$]
 b. [*nonfin-subj-pred-cxt*] \Rightarrow $\boxed{1}$ [CASE *scase*], **H**[SUBJ $\langle \boxed{1} \rangle$]

The constructional constraint in (49a) specifies that the subject of a finite predicate clause gets NOM case, which, following traditional wisdom, generates typical declarative sentences like *He left*. Meanwhile, the subject of the nonfinite subject-predicate construction can get any structural case value. First consider gerundive constructions with the ACC or GEN subject.

- (50) a. Pat disapproved of me quietly leaving before anyone noticed.
 b. Pat disapproved of my quietly leaving before anyone noticed.

Note that the *nonfin-subj-pred-cxt* can have its subject to bear NOM case also, as illustrated by examples like the following.

- (51) a. John suggested that **he** go to Seoul in March.
 b. I recommend that **she** not smoke.

This way of case assignment implies that the nominative case depends not on the finiteness but on the constructional environment.

Note also that the present analysis can easily license a variety of idiosyncratic constructions. For example, consider the so called 'Mad magazine'

3) The type *scase* will thus have three subtypes *nom*, *acc*, and *gen* as its values.

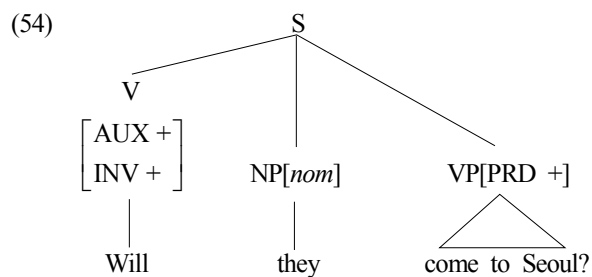
sentences (Lambrecht 1990, Chaves 2012).

- (52) a. [[Him] [wear a tuxedo]]?!
 b. [[My boss] [give me a raise]]?

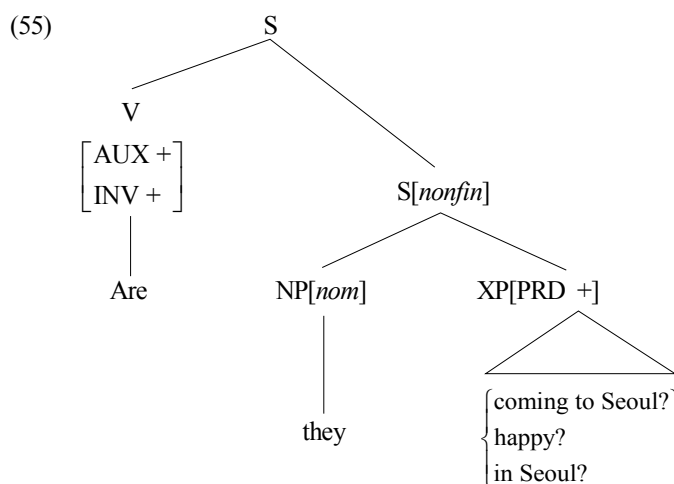
There is no tense marking on the head verb and the subject must be ACC. The simple as well as coordinated *with*-absolute construction is also licensed in the same manner.

- (53) a. With [[him] [organizing things]], we will never get anything done.
 b. What with [the prices being so high] and [my wife being out of work], I can't afford to buy new refrigerator.

Note that this analysis also gives us a new analysis for the so-called SAI (Subject-Auxiliary Inversion) construction. Within the surface-oriented perspective, the SAI has been assigned a flat structure like the following, generated by an independent SAI rule (Pollard and Sag 1994, Sag et al. 2003, Kim and Sells 2008).



Since we now allow a NOM nonfinite subject-predicate construction, we would have a structure like the following.⁴⁾



The key point is that the inverted auxiliary now selects a *nonfinite-subj-pred-ct*. One immediate advantage of such a structure can come from coordination examples like the following (Chaves 2012).

- (56) a. What book did [[John buy] and [Bill read]]?
 b. Where did [[Mary vacation] and [Bill decide to live]]?

Given flat structures like (54), we may need a special mechanism for such coordination examples. However, the present system predicts such structures with no further grammar rules.

6. Conclusion

The existence of SC (small clauses) has been rather controversial in both

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- 4) The systematic relationship between noninverted and inverted auxiliary verbs can be also captured by assuming that the inverted auxiliary lexically combines with a sentential complement whose VFORM head feature value is identical with the noninverted one. This would block examples like **Are they come to Seoul?*

theoretical and empirical grounds. Within the Principles and Parameters approaches, the postulation of the SC appears to be a natural consequence. The Projection Principle requires one-to-one mapping relations between argument structure and syntactic structure, supported by several linguistic phenomena. However, within the non-derivational perspective in which nonisomorphic relationships between the two structures are also possible, the SC is not a necessary constituent.

In this paper, we have seen that even within the nonderivational perspective, there is evidence to posit the SC as a syntactic constituent though it exists in limited environments. Cases like gerundive and (*with* or verbless) absolute constructions are strong candidates employing the SC constituent. In addition, the *imagine* class of verb also employs the SC as its complement. This position also offers a binary structure for the SAI constructions, departing from the nonderivational, flat structure adopted by Pollard and Sag(1994) and subsequent work. Questions further remain what controls or licenses the SC as a constituent in a precise manner. At this point, we conjecture that the licensing of the SC depends on lexical as well as constructional properties.

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