A SMALL CLAUSE ANALYSIS OF
*AS IF-CONSTRUCTIONS*

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1. Introduction
What we refer to as as if-constructions in this article are types of sentences as in (1), where the subordinate clauses led by connectives like as if, as though or like appear as complements to verbs like seem, appear, look or sound:

(1) a. It seems as if John is a genius.
   b. John seems as if he is a genius.

One remarkable feature commonly observed in previous analyses of as if-constructions is that (1a) and (1b) are analogized to well-discussed constructions (2a) and (2b), respectively, where (2b) is regarded as derived from the underlying structure of (2a) through "raising" of a complement subject:

(2) a. It seems that John is a genius.
   b. John seems to be a genius.

So, for example, Cattel (1984) assumes John in (1b) to have undergone raising as in (2b), except that the remaining NP-trace, in (1b), is replaced by a pronoun he later in the derivation. Lappin (1983), while sharing

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[171]
the assumption that as if-construction and raising construction have a 
common structure, claims that John in (1b) is base-generated as a main 
subject, and that it is allowed to inherit a θ-role from the pronoun 
which it binds in the complement, i.e. he. This analysis weakens θ- 
criterion, and allows for two arguments to bear one θ-role. 
These analyses are both inadequate in the following respects. Since 
Cattel’s analysis assumes actual NP-movement, it wrongly predicts 
that examples like (3) are ill-formed due to Subjacency violation.

(3) Maryi appears as if heri job is going well.

Aside from the undesirable weakening of θ-criterion mentioned 
above, Lappin’s θ-criterion must be loosened further, since in the 
following example, one argument is allowed to inherit two distinct 
θ-roles.¹

(4) Billi seems as if hei is satisfied with hisi own job.

Finally, both analyses seem to overgenerate a sentence like (5). 
That is, since (5) has the same structure as (1b) for both analyses, the 
matrix subject John in (5) should also be allowed to move from the 
complement subject position with its trace replaced by a pronoun (for 
Cattel (1984)), or the matrix subject should be allowed to inherit a 
θ-role from the complement subject (for Lappin (1983)).

(5) *Johni seems hei is happy.

2. Small Clause Analysis

Since the problems of the previous analyses mentioned in Section 1 
seem to follow from two assumptions, i.e. (i) connectives like as if, 
as though or like are complementizers and (ii) it appearing in (1a) is ex- 
plicative it, we abandon those assumptions, and assume instead that 
(i’) those connectives are prepositions, and that (ii’) it in (1a) is “am-

¹ One might object that, in (4), the possessive pronoun bis cannot transmit its θ-role to 
Bill because they are too distant. However, such claims would be refuted by the acceptabil-
ity of the following example, where the pronoun them contained in adjunct inside as if-
clause is bound by the subjects of the higher verb look.

(i) Plus flawless skin, smooth brow and cheeks, lips, that i looked as if you could get a 
shock from themi. (BROWN N17-0040)
bient” *it, thus an argument or a quasi-argument. Furthermore, we also assume that (iii) all major categories may contain a structural subject position (cf. Stowell (1983)). These three assumptions lead us to the D-structures (6a) and (6b), respectively, for (1a) and (1b), where the preposition as if functions as a head of small clause:

\[
\begin{align*}
(6) & \quad \text{a. e seems } [_{PP} \text{it} [_{PP} \text{as if} [_{OP} \text{John is happy}]]] \\
& \quad \text{b. e seems } [_{PP} \text{John} [_{PP} \text{as if} [_{OP} \text{he is happy}]]]
\end{align*}
\]

1 Cf. Larson (1990) for the claim that subordinate conjunctions in general should be regarded as prepositions. Assumption (i') seems also supported by the fact that “as if-clause” can function as a postnominal modifier:

(i) It was just that; a sharp hurt as if a knife was cleaving something in the left side of his chest.

(A. Baron, King Dido, p. 60)

A question might be raised as to the appropriateness of the claim that seem subcategorizes for PP in (6), since it is generally assumed that “true” Raising verbs like seem do not subcategorize for PP complements, as in the following:

(ii) *[John] seems [_{PP} [_{PP} in his room]]

However, examples like (ii) are not strong enough to exclude our assumption, since it is not the case that none of the Raising verbs in English subcategorizes for PP complements. It is pointed out, in Stowell (1981: 291 (note 13)), that the verb keep, in its thematic properties of a Raising verb, subcategorizes for PP complements.

(iii) [John] kept [_{PP} [_{PP} inside the house]]

This fact leads us to regard the subcategorizational property of “true” Raising verb as illustrated in (ii) as an accidental gap. In fact, it is simply not the case that seem does not subcategorize for PP complements. The fact is that it only selects ‘metaphorical’ PPs and refuses ‘locative’ and ‘directional’ PPs:

(iv) a. *Lee sure seems out of town.
   b. Lee sure seems out of it. (Maling (1985: 256))

(v) a. *Lee sure seems onto the roof.
   b. Lee sure seems onto something. (ibid.)

One might argue that the ability of the metaphorical PPs above to occur as predicate complements should be ascribed to the process of lexical reanalysis by which they are reanalyzed as complex adjectives. However, Maling (1983) points out that the ability to occur prenominally, i.e. the usual test for lexicalization, is not suggestive of the lexicalized status of the metaphorical PPs above:

(vi) *An out-of-it student walked into my office. (Maling (1983: 258))

(vii) *An onto-something reporter hounded the President. (ibid.)

Furthermore, if the predicate complement “like NP” in the following example is a PP, rather than AP, as argued in Maling (1983), it should be concluded that the PP complements of seem are not even restricted to metaphorical PPs, thus dissolving the aforementioned question about the structure (6):

(viii) Toby seems very much like his grandfather. (Maling (1983: 268))
We regard the small clause subjects, i.e. *it* and *John* to be \( \theta \)-marked by *as if* as “bearer of appearance (or atmosphere).”\(^1\) SC subjects *it* and *John* move from the Spec of PP position to the matrix subject position to receive Case.\(^2\) Note that, in this analysis, such problems as illustrated in (3)–(5) are dissolved, since, in the S-structure derived from (6b), neither the NP-movement nor the inheritance of \( \theta \)-role relates the matrix NP and the coreferential pronoun in complement directly.

While our assumption (1\( \prime \)) does not deviate much from the tradition

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\(^1\) Our analysis illustrated in (6) implies that the P' headed by the prepositional head *as if* is a predicate of the preceding subject, i.e. *it* or *John*. It should be noted that, though this claim might seem somewhat odd because of the complicated nature of the predicate in this case, it is a natural consequence of maintaining the strict version of \( \theta \)-criterion. For example, the presence of two NP arguments *John* and *be* in the D-structure (6b) necessitates that of two \( \theta \)-roles assignable to NP arguments. Since the pronoun *be* is obviously \( \theta \)-marked by *happy*, on the one hand, and *seem* only assigns Proposition, on the other, we must conclude that *John* is assigned the external \( \theta \)-role of the only remaining candidate of \( \theta \)-assinger, i.e. the preposition *as if*. If *John* is an external argument of *as if*, the P' headed by *as if* proves to be the predicate of *John*.

As another possibility of \( \theta \)-marking, we can also regard the SC subjects in (6) to be jointly \( \theta \)-marked by *seem* and *as if*, in accordance with proposals in Chomsky (1986) or Stowell (1991). Although it is not possible to regard *seem* and *as if* as constituting a complex verb at LF, with the trace of *John* intervening between them, it seems possible to regard the assignment of the external \( \theta \)-role of *as if* to be constrained by the relation between *seem* and the PP headed by *as if*. That is, the PP headed by *as if* must be a complement of its governing verb, and the PP complement must be \( \theta \)-marked as Proposition. These natural restrictions seem to account for the fact that, in the following sentences, where those restrictions are not fulfilled, the matrix subjects are \( \theta \)-marked not by *as if*, but by the matrix verbs:

- John walked as if he was drunk.
- John behaved as if he was drunk.

\(^2\) Incidentally, it should be noted that we need to account for the fact that, in contrast with the derivations in (6), the adverbial modifiers such as *right*, which is another instance of the specifier of PP, cannot be moved, as shown in the following example:

- *Right* is spilled [PP t [\( \prime \) under the table]]

Although it is not a problem inherent in our analysis, but a problem belonging to small clause analyses in general, I would like to point out that an approach taken by Stowell (1981: 288) for the articles occurring as specifiers of NPs is also applicable to this case. Stowell proposes that the prenominal articles be adjoined to the following nominal head by means of a word-formation rule, with the result that they are not movable. In this respect, it seems reasonable to assume that the adverbial modifiers like *right* in (1) are also adjoined to the following prepositional head, thus not movable, since they share with prenominal articles properties needed for the word-formation rule. That is, they are not phrasal categories and they always precede their heads.
of generative grammar, we must show some evidence supporting our assumption (ii'). Our first motivation for (ii') comes from the fact that it in *as if*-construction fulfills criteria for being ambient *it* pointed out in Bolinger (1973: 268): (i) ambient *it* can be replaced by *things* or *everything*, as shown in (7), and (ii) ambient *it* can be modified by *all*, as in (8):

(7)  a. They are making *it*/*things* unpleasant for him.
    b. *It*/Everything is finished between us.

(8)  It's *all* finished between us.

These criteria hold true for the *it* in *as if*-construction as well, as illustrated in (9) and (10). Note also that expletive *it* does not have such properties, as shown in the parentheses:

(9)  *It*/Things/*Everything* seemed as if we were already in trouble.

(*It*/Things/*Everything* seemed that . . .)

(10) It *all* seemed, ( . . . ), as though this broken-nosed man with the muscular arms and wrestler's neck was merely the caretaker trying his hand at the boss's work.  (BROWN K.25-0450)

(*It* *all* seemed that . . .)

Another reason for assuming (ii') is that we actually find argument *it* as the subject of another type of *as if*-construction, i.e. the construction of the type "*it* be as if . . ." as in (11). Note that *it* in (11) is obviously an argument referring to the situation represented in the preceding context.

(11) (The very faces of the people bore this expectation of fun and pleasure.) *It* was as if they could hardly wait to get into their costumes, cover their faces with masks and go adventuring.

(BROWN N.18-0260)

In this light, D-structure (6a) represents the form in which *as if*-construction of the type (11) is embedded as the complement to *seem* in the form of small clause, and *it* in (6a) can be identified, in our analysis, with argument *it* in (11).

3. Problems Resolved
In this section, we will take up four major problems concerning *as if*-constructions which are inexplicable for the previous analyses, and
show how our analysis can solve them naturally. For ease of reference, hereafter, we will refer to our analysis as SC analysis and the previous analyses as CP analysis, since it is commonly assumed in the latter that *as if*-construction derives from the structure with CP complement.

3.1. Restrictions on Subjects

It has been pointed out that there are restrictions imposed on the matrix subject of *as if*-constructions. Thus, Lappin (1983: 123) points out that idiom chunks are excluded from this position.

(12) a. *Advantage seems / appears as if it had been taken of John.
    b. *Much headway seems / appears as if it had been made on the project.

Note that this fact is mysterious for CP analysis, in that the corresponding raising constructions are impeccable, as in the following:

(13) a. Advantage seems / appears to have been taken of John.
    b. Much headway seems / appears to have been made on the project.

However, closer observation reveals that this restriction is more complicated than Lappin points out, since, with another class of idiom chunks as its matrix subject, *as if*-construction clearly improves its acceptability, with idiomatic sense intact.¹

(14) a. *The shit seemed as if it were going to hit the fan, but the problems were not discovered at all.
    b. *A little birdie seemed as if it were going to tell me, and I expected it, too.
    c. *The cat seemed as if it would be let out of the bag soon, but they made every effort to conceal the secret.
    d. *Our goose seemed as if it were cooked, but the Dean’s unexpected scandal saved us.

¹ Examples in (14e) and (14f) are cited from Rogers (1972). Note that the judgement of acceptability of examples in (14), including (14e) and (14f), differ among informants. For example, while 7 out of 10 informants of mine accept (14e), (14f) is accepted only by 3. Nonetheless, this observation does not undermine our assumption shown below that there are two different classes of idiom chunks, since, in marked contrast to the varied status of the examples in (14), all of my informants flatly refuse the examples in (12).
A Small Clause Analysis of \textit{As If}-Constructions

The shoe looks like it is on the other foot.

His bark sounds like it is worse than his bite.

Before considering this problem, let us note that since the subject of small clause is a position \( \theta \)-marked by the head of small clause, only arguments or quasi-arguments can be generated at that position. Ari-moto (1989: 68) points out that while quasi-arguments are admitted as the subject of SC complement to \textit{consider}, as shown in (15a)-(15c), it is never the case with non-arguments, as in (15d) and (15e).

(15) a. I consider it hotter here than in Africa.
b. We consider it obvious that John is intelligent.
c. Consider your goose cooked.
d. *I consider there great opportunity here.
e. *I consider it seeming that John is intelligent.

Now, while the example (15c) seems to show the argumenthood of idiom chunks, unacceptability of the examples in (16) below leads us to presume that, as is claimed in Napoli (1988), idioms are divided into two different classes in terms of \( \theta \)-theory, i.e. those idioms whose constituents are thematic, on the one hand, and those whose constituents are athematic, on the other hand.

(16) a. *I consider advantage taken of John.
b. *I consider much headway made on the project.

What Napoli (1988) proposes as a criterion for distinguishing between the two kinds is "analyzability" of idioms. That is, if idioms are analyzable into lexical subparts and can be extended in "creative" ways, those subparts are thematic idiom chunks. In other words, the idiom chunks in analyzable idioms are quasi-arguments which rank high in argumenthood. For example, since, in the extended idiomatic expressions (17a), the idiom chunk \textit{the shit} must receive a \( \theta \)-role from the VP \textit{fouled our day}, it should be regarded as thematic. In this respect, it is noteworthy that all the idioms appearing in (14) assume this property of analyzability.\(^1\)

\(^1\) Examples in (17a), (17b) and (17d) are cited from Napoli (1988). Note that (17d) indicates the argumenthood of \textit{your goose} in (15c). As in the case of the examples in (14), the judgement of the examples in (17) also varies among my informants. Some detest any degree of extension applied to idiomatic expressions and refuse all the examples in (17). In-
(17) a. The shit hit the fan and fouled our day.
b. A little birdie told me and flew away.
c. The cat was let out of the bag and wreaked havoc.
d. The Dean cooked our goose and ate it.
e. The shoe is on the other foot and it hurts.
f. Even though his bark sounds worse than his bite, it still annoys everybody.

In marked contrast to idioms in (14), those in (12) are obviously not analyzable, indicating non-argumenthood of their subparts, i.e. advantage and headway, as shown below:

(18) a. *Advantage was taken and eaten of John.
b. *Much headway was made and advanced on the project.

Now, in SC analysis, contrastive facts in (12) and (14) follow naturally from the assumption that the subject of small clause is a θ-position, and that while idiom chunks in (12) are athematic those in (14) are thematic. That is, since athematic idiom chunks like advantage or headway cannot be base-generated as a subject of small clause, the examples in (12) cannot be generated.

Another restriction on the subject of as if-construction is shown in the synonymous examples below observed by Rogers (1972):

(19) a. It looks like there is going to be a riot.
b. There looks like there is going to be a riot.
c. *There looks like it is going to be a riot.

The question raised by these examples is why it is admitted as the matrix subject in (19a) and there is not in (19c). This divergence of acceptability does not follow from the previous assumption that the matrix subjects it and there in (19) are equally expletive elements, thus non-arguments. On the contrary, our analysis will appropriately rule in (19a), while ruling out (19c), because only the matrix subject it in
(19a) can be base-generated as the subject of small clause due to its status as ambient *it*, i.e. a thematic element.

As to the acceptability of (19b), we should note that although it is obviously more acceptable than (19c), the status of (19b) is quite unstable, because all of my informants who accept (19b) invariably admit that (19a) sounds more natural than (19b). Given this fact, the question for us is why (19b) is marginally accepted although our analysis excludes its D-structure, on a par with (19c) due to the athematicity of matrix subject.

It is generally assumed, as in Burzio (1981), that, in core cases, the expletive *there* must be followed by *be* functioning as an auxiliary, accounting for the fact that it is excluded from the subject position of small clause, as shown in (15d) above. On the other hand, it has often been observed that under certain syntactic or semantic conditions, this prohibition against *there* at SC subject is relaxed exceptionally. Thus, Napoli (1988: 337) points out the case where the presence of a deictic locative within the SC complement of a perception verb improves the acceptability of the whole sentence.

(20)  a. *I could see *there* looming the prospect of financial disaster.
    b. I could see *there* looming *before my very eyes* the prospect of financial disaster.

Whatever analysis may be adopted for examples like (20b), it seems a property of *there* occurring as SC subject that its illicit status is offset by certain factors within the small clause. In this respect, it seems quite reasonable to regard *there* in (19b), in comparison to *there* in (19c), to be in a condition more favorable for the restoration of acceptability, because the second occurrence of *there* within the small clause bound by the matrix *there* is followed by *be* and offsets the absence of *be* which must support the matrix *there*. On the other hand, (19c) must remain ill-formed, with no elements within the small clause to improve the status of *there*. In sum, the difference of acceptability observed among the examples in (19) conforms precisely to the prediction of SC analysis.

3. 2. Distributions as Small Clause

It is expected in SC analysis that the small clause headed by prepositions like *as if* will occur in other positions generally occupied by small clauses than the complement position of verbs like *seem*. First, small
clauses generally appear as the complement of attributive *be*, as in (21a), yielding a sentence of predication, as in (21b), through “raising” (cf. Stowell (1978)):

(21) a. e is [so John [honest]]
    b. John is honest.

Secondly, existential sentences, as in (22b), are also derived from similar SC structure (22a) through *there*-insertion:

(22) a. e was [so a girl [drunk]]
    b. There was a girl drunk.

Finally, small clauses appear as the complement of ECM verbs.

(23) I consider [so John [foolish]]

Now, the examples in (24)–(26) below show that all the distributions above are also shared by small clauses headed by prepositions like *as if*, verifying the prediction above.

(24) a. ...the process is as if it were instantaneous. (N. Chomsky and H. Lasnik, “Principles and Parameters Theory,” in J. Jacobs et al (eds.) *Syntax: An International Handbook of Contemporary Research*, p. 4)
    b. The effect is as if he had materialized out of nowhere. (BROWN J64–0790)

(25) a. But there was a look about her mouth as though she were tasting lemons. (BROWN K23–0070)
    b. There was a feeling as if an enormous hand had grasped the machine. (Crofts, *The 12. 30 from Croydon*)

(26) a. We understand [so these [as if there were quotation marks around the free direct speech]] (R. Quirk et al., *A Comprehensive Grammar of the English Language*, p. 1033)
    b. A dozen cows mooed sadly and regarded [so us [as if we were insane]] ... (BROWN K09–0950)

We cannot regard the *as if*-clauses in (24) as CP’s, i.e. as arguments, since while CP complement of *be* is allowed to undergo permutation with subject, as illustrated in (27), (28) shows that it is not the case with *as if*-clauses in (24), as is generally the case with sentences of predication.
A Small Clause Analysis of As If-Constructions

(27) a. The question is [cp whether he had materialized out of nowhere]
b. [cp whether he had materialized out of nowhere] is the question

(28) *As if . . . . is the process / the effect.

The treatment of the examples in (26) also seems quite difficult for CP analysis, since verbs like understand or regard do not subcategorize for NP followed by CP.¹

Furthermore, as is also predicted by SC analysis, we find such as if-constructions as in (29), where the italicized subject of SC complement is preposed by "passive," and (30), where the small clause headed by as though appears as an SC complement of a perception verb see.

(29) a. It is striking, however, that despite this difference of analysis, [7] is interpreted as if it were an elliptical variant of [6]. (R. Quirk et al., A Comprehensive Grammar of the English Language, p. 907)
b. . . . communion between husband and wife is such that their actions are not always to be regarded by criminal law as if there were no marriage. (BROWN H17-0040)

(30) Most children love the animated puppet faces and their flexible bodies, and they prefer to see them as though the puppets were in action, rather than put away in boxes. (BROWN A30-1510)

3.3. Restrictions on Coreference

It is pointed out by Lappin (1983: 122) that there is a coreference restriction imposed on as if-construction of the type (1b) (= (31a)). That is, the matrix subject must bind a pronoun in as if-clause, as shown in (31)-(33):

(31) a. Johnₙ seems as if heₙ is a genius.
b. *John seems as if Bill is a genius.

(32) a. Billₙ seems as if Mary is chasing himₙ.
b. *Bill seems as if Mary is chasing Sam.

(33) a. Maryₙ appears as if herₙ job is going well.
b. *Mary appears as if John's job is going well.

¹ It is not clear whether the verb regard in (26b) expresses recognition or perception. In the latter case, (26b) does not count as an example of ECM construction. However, the fact that the verb regard subcategorizes for the small clause headed by as if seems evident in (29b) below, where the same verb cannot be regarded to represent perception.
As we mentioned in Section 1, since the pronoun coreferential with the matrix subject does not necessarily occur as an embedded subject, CP analysis seems to have difficulty in associating the two coreferential NP's. This restriction, however, will turn out to be more problematic for previous analyses, since, as we shall see, there are a number of exceptions. At this point, our claim is that syntactic conditions on coreference are too strong and inadequately rule out some sentences, and that, only by taking a $\theta$-theoretic approach based on SC analysis, will such sentences be ruled in correctly by general semantic principles.

It was claimed, in Section 2, that the subject of small clause headed by prepositions like as if is $\theta$-marked by the latter as "bearer of appearance (or atmosphere)." This claim leads us to infer that the semantic content of as if-clause must be compatible with the $\theta$-role assigned to the SC subject, since it is independently observed that the presence in a sentence of an element which is semantically incompatible with a particular $\theta$-role assigned to another element in the same sentence ruins the whole sentence, as shown below:

\[ (34) \]

\begin{align*}
\text{a. } & \text{John (=} \text{AGENT}) \text{ deliberately rolled the ball down the hill.} \\
\text{b. } & \text{*The ball (=} \text{THEME}) \text{ deliberately rolled down the hill.}
\end{align*}

First of all, this principle explains the contrast of acceptability as in (31)-(33), as indicated in (31')-(33'). In (31), John's appearance or atmosphere under the hypothetical condition of his being a genius can be defined almost uniquely as, say, "brightness," whereas we cannot agree on any specific appearance which John should assume when Bill is a genius. In (32), Bill should look "annoyed" if he was chased by Mary, whereas Mary's chasing Sam does not imply any appearance to be assumed by Bill. In (33), while Mary should look "happy" with the success of her own job, her appearance in face of the success of John's job depends on their individual relation.

\[ (31') \]

\begin{align*}
\text{a. } & \text{X's appearance of X's being a genius} \\
\text{b. } & \text{*X's appearance of Y's being a genius}
\end{align*}

\[ (32') \]

\begin{align*}
\text{a. } & \text{X's appearance of Y's chasing X} \\
\text{b. } & \text{*X's appearance of Y's chasing Z}
\end{align*}

\[ (33') \]

\begin{align*}
\text{a. } & \text{X's appearance of X's job's going well} \\
\text{b. } & \text{*X's appearance of Y's job's going well}
\end{align*}

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1 Fuji (1990) also points out the elusiveness of coreference restriction on as if-construction.
This approach also accounts for a wide range of exceptions to the coreference restriction. One type of exceptions observed in Inada (1984: 29) is the case where as if-construction is ill-formed although the coreference restriction is satisfied, as in (35b), in marked contrast to (35a):

\[(35)\]  
\[a. \text{The man}_i \text{ sounded as if he}_i \text{ was talking to a sick woman.}\]  
\[b. \ast \text{The man}_i \text{ sounded as if the sick woman was talking to him}_i.\]

In our analysis, (35b) is excluded, on a par with the (b) examples in (31)-(33), due to the semantic incompatibility, since only in (35a), but not in (35b), the atmosphere of the man is uniquely definable, as indicated in the following:

\[(35')\]  
\[a. \text{X's atmosphere of X's talking to a sick woman}\]  
\[\quad (\rightarrow \text{GENTLENESS})\]  
\[b. \ast \text{X's atmosphere of the sick woman's talking to X}\]

The other type of exceptions to the coreference restriction, quite opposite to this case, occurs when as if-construction is accepted although a matrix subject does not bind any pronoun within as if-clause. The example (36) from Fuji (1990) (attributed to T. Yagi) describes the situation where the person (=I) pretends that he already had other dollar bills in his pocket before he sticks five dollar bills therein. Note that (36) violates the coreference restriction, with the subject of look, i.e. I binding no pronoun within the clause led by like.

\[(36)\]  
\[I \text{ folded them} (=\text{five hundred-dollar bills}) \text{ up and stuck them in my}\]  
\[\text{pants pocket and tried to look like they were joining others. (p. 5)}\]

In our approach, we need not regard (36) as a counterexample, because, in the context represented in (36), the appearance of the person is uniquely definable based on the hypothetical condition of five dollar bills’ joining other bills. Namely, the appearance of “pretense” can be defined, due to the implication from discourse represented in the italicized part in (36'):

\[(36')\]  
\[X's \text{ appearance of five hundred-dollar bills' joining other bills in X's}\]  
\[\text{pants pocket, when, in fact, X does not have other bills}\]  
\[\quad (\rightarrow \text{PRETENSE})\]
(36) shows that the lack of the coreference relation can be compensated for by discourse factors, whereas the examples as in the following represent the cases of pragmatic compensation.

(37) (What you think I care about that? I mean our children.) She sounded as though they already existed. (BROWN K28-0370)
(38) The Province Sunday Journal article (Jan. 29) asking whether ( . . . ) sounds as though The Province Journal is desperate for news. (BROWN B15-1355)

Although these examples also violate the coreference restriction, they differ from (31b)–(33b), in that the matrix subject is in a close "whole-part" relation with the subject of as though-clause. In (37), the referents of two italicized NP's are not physically separate entities yet, with their relation being between a woman and her "future" children that she expects. The relation between a journal and its particular article is also as close in (38). Since, in each case, the whole-part relation is close enough for the second NP to be considered, in effect, as referring to the same entity as the referent of the first NP, the semantic content of as though-clause does not prevent the θ-marking of SC subject.

In Section 2, we claimed that the matrix subject it in (1a) is ambient it, thus a (quasi-)argument. Accordingly, we now have to regard (1a) as another instance of violation of coreference restriction, with it binding no pronoun within as if-clause. However, ambient it differs remarkably from other NP's referring to objects like individual persons, in that the appearance or the atmosphere of its referent under a particular hypothetical condition, i.e. the total environment, is always uniquely definable based on our common experience of life, due to its "all-encompassing" nature. We assume that, under such circumstances, θ-marking of SC subject can be licitly performed, irrespective of the semantic content of as if-clause, since any situation can be predicated of the total environment and binding relation in question becomes unnecessary for such predications. This claim is supported by the fact that as if-construction is freed from coreference restriction when its main subject is occupied by locative NP's, as in (39) or other NP's with similar generality of reference, as in (40).

(39) But Sutherland looked as though someone had worked out a uniform
architectural plan on Main Street. (Fuji (1990: 5))

(40) The scene I witnessed / The situation I witnessed seemed as if everybody in the village hated the newcomers.

Obviously enough, the matrix subjects in (39) and (40) are replaceable with ambient it. In this respect, it is noteworthy that replaceability with NPs assuming generality of reference is an independently observed property of ambient it, as shown below:

(41) a. It’s pleasant in California.
   b. California is pleasant.

Finally, let us note that SC analysis also accounts for another mysterious fact for CP analysis, i.e. ill-formedness of (42b) and (43b) pointed out by Lappin (1983: 123).

(42) a. It seems as if snow is falling on Mt. Hermon.
   b. *Snow seems as if it is falling on Mt. Hermon.  (Snow seems to be falling on Mt. Hermon.)

(43) a. It seems as if cows are grazing in Fred’s field.
   b. *Cows seem as if they are grazing in Fred’s field.  (Cows seem to be grazing in Fred’s field.)

The (b) examples above are problematic for CP analysis in three respects, i.e. (i) they do not violate coreference restriction, (ii) their corresponding raising constructions are impeccable, as shown in parentheses, and (iii) they become acceptable depending on the content of as if-clause, as shown below:

(44) a. Snow seems as if it is white in normal light.
   b. Cows seem as if they are lethargic to the casual observer.

The first problem does not occur in our analysis, since in spite of the binding relations observed in (42b) and (43b), the appearance of snow cannot be defined based on the hypothetical condition of its falling on a particular mountain, nor can the appearance of cows be defined based on the condition of their grazing in a particular field. The acceptability of the raising constructions is by no means a problem, either, because it is only to the subject of as if-construction that the θ-role of bearer of appearance (or atmosphere) is assigned. Finally, the acceptability of the examples in (44) is rather supporting evidence for
SC analysis, since, in contrast to the cases of (42b) and (43b), appearance or atmosphere of snow is definable based on the hypothetical condition of its being white in normal light, and so is the appearance of cows based on the condition of their being inertial.

3.4. Scopal Property

Lappin (1984: 238–240) points out that while as if-construction with a quantifier as its matrix subject, as in (45), exhibits the lack of scope ambiguity, such ambiguity is observed in the corresponding raising construction (46).

\[(45)\]
Everyone seems as if he is working hard.
\[(46)\]
Everyone seems [s\(t\) to be happy]

While the quantifier everyone in (46) can take both matrix scope and embedded scope reading, the same quantifier in (45) does not have embedded scope reading. It is generally assumed that the embedded scope reading for the quantifier in (46) is acquired by virtue of the fact that the trace of the quantifier at the embedded subject position becomes a variable bound by the lowered quantifier at LF. From this assumption, Lappin concludes that the matrix subject in (45) appears as such at D-structure, since if the derivation of (45) involved NP-movement from the embedded subject position, the remaining trace would become a variable at LF and permit embedded scope reading.

On the other hand, in SC analysis, scopal property of (45) can be directly attributed to a similar property represented by small clause constructions in general, as illustrated below:

\[(47)\]
Everyone seems [s\(c\)\(t\) happy]

Stowell (1991) claims that unavailability of embedded scope construal for examples like (47) represents the property of small clause as a possible domain of quantification, and that it is not related to the application of NP-movement, pointing out similar lack of ambiguity observed in the SC construction (48), which has not undergone NP-movement.
(48) John proved two assumptions false.

(*TWO<PROVED) (TWO>PROVED)

If the lack of embedded scope reading is a property of small clauses in general, whatever account is applicable to (47) should also explain the scopal property of *as if*-construction in (45). So, for example, the solution for the fact in (47) proposed by Suzuki (1991) is also applicable to (45). Suzuki assumes that the structures of (46) and (47) are different, in that while the category of an infinitive clause is TP, that of a small clause is AgrP. Therefore, S-structures corresponding to (46) and (47) would be (46') and (47'), respectively:

(46') Everyone seems [TP t' to [AgrP t be happy]]
(47') Everyone seems [AgrP t happy]

In (46'), while TP is an argument θ-marked by the matrix verb, AgrP is not an argument, since a tense element does not θ-mark AgrP. On the other hand, AgrP in (47') is an argument, since the matrix verb θ-marks AgrP, in the absence of intervening TP. At this point, Suzuki claims that the adjunction of *everyone* to AgrP at LF, i.e. the operation needed for embedded scope reading, is allowed only in (46'), but not in (47'), since the latter case of adjunction violates the assumption in Chomsky (1986) that syntactic adjunction is possible only to a maximal projection that is a non-argument.

Assuming this analysis, S-structure for (45) would be (45') below. Since AgrP in (45') is an argument θ-marked by *seem*, as it is in (47'), adjunction of *everyone* to AgrP at LF will be prohibited for the same reason as in (47'), thus blocking embedded scope reading for *everyone*.

(45') Everyone seems [AgrP t' [PP as if he is working hard]]

Although it is beyond the scope of this article to discuss the syntactic category, as well as the internal structure, of small clauses in general, it seems to be an advantage of SC analysis over CP analysis that the idiosyncratic fact in (45) can be attributed to a general property of SC constructions.

4. Further Consequences of SC Analysis

In this section, we will consider two problems which might be raised in our analysis and try to suggest possible solutions for them.
First, the type of construction as in (26) is not very productive, and so-called "Raising-to-Object" construction is generally incompatible with SC complements headed by prepositions like as if:

(49) *We believed / considered / regarded John as if he were a prodigy.

In view of the well-formedness of similar examples in (26), it seems that the ill-formedness of the examples in (49) should not be ascribed to violation of subcategorization. On the other hand, it has often been pointed out that "Raising-to-Object" construction is a restrictive construction, on which several semantic conditions are imposed. Thus, Bolinger (1977) points out that this construction is admitted only when the string of matrix verb plus "raised object" is compatible with the meaning of the whole sentence. For example, the lower acceptability of (50b) below derives from the incompatibility between the meaning of believe John and that of the whole sentence:

(50) a. I believe John to be telling the truth.
    b. *I believe John to be telling a lie. (Bolinger (1977: 127))

In this respect, it seems natural to expect a similar semantic conflict in (49), because, while the meaning of the matrix verb asserts the truth of the following proposition, that of as if-clause generally implies "counter-factuality" of the same proposition and tends to cancel the preceding assertion.

The examples in (49) seem to infringe on another semantic restriction on "Raising to Object" construction, as well. It is pointed out in Borkin (1975: 85–92) that the complements whose predicates describe attributes of the raised NP are more easily broken up by "Raising to Object" than those describing a temporary state of affairs:

(51) a. I know Sam to be competent in everything he does.
    b. *I know Sam to be ready to leave now.

The examples in (49) also violate this restriction, since the predicate of small clause headed by prepositions like as if tends to describe a temporary state of its subject due to the inherent counter-factual meaning of as if-clause.

As another problem in our analysis, we have to consider whether the SC analysis proposed here applies to the constructions with sub-
ordinate conjunctions other than as if-class. For example, if the sub-
ordinate conjunctions of time are also of the category P, they should
also function as the head of small clause. This prediction seems to
be borne out by the following examples, where conjunctions such as
until, while, before, after and when appear as the head of SC complements.
Note that the SC subjects in (52) have undergone movement to matrix
subject position, as in the derivations in (24).

(52) a. Her stay in the United States must be until she finishes her Ph.D.
course.
b. His stay in London was while he was working for a business
company there.
c. His appearance in the classroom used to be just before / after /
when our teacher would come in.

However, a problem similar to the one in the first question remains
also in this case, since, as illustrated in (53), this type of small clause
seems to refuse “Raising to Object” construction even more strongly
than those headed by prepositions like as if. That is, it is impossible
to find well-formed examples in this case corresponding to (26).

(53) a. *We believed his appearance before / after / when our teacher came
in.
b. *We believed her stay in the States until she finishes her Ph.D.
course.

Note, however, that these examples are not real counterexamples
to SC analysis, since they also violate the aforementioned semantic
constraints on “Raising to Object” construction. First, they in-
volve “incompatibility” in terms of Bolinger (1977), which is incurred
by the irrelevance of meaning between believe his appearance and the
whole sentence in (53a), on the one hand, and between believe her stay
and the whole sentence in (53b), on the other hand. Secondly, the
examples in (53) run counter to Borkin’s (1975) constraint as well, be-
cause the predicates headed by prepositions of time do not describe
the attributes of the NP “raised” to “matrix object” position, i.e.
his appearance and her stay in the States.

In addition, the examples in (53) are also disfavored by another
semantic restriction imposed on “Raising to Object” construction
proposed also by Borkin (1975) which rules out the example (54b)
below:

(54) a. I believe John to be a suitable candidate.
    b. *I believe John to be a French teacher.

Borkin points out that the complement representing the speaker’s subjective judgement in (54a) is more easily broken up by “Raising to Object” than that expressing objective proposition in (54b). This restriction should also exclude the examples in (53), since the proposition of small clauses headed by prepositions of time is extremely objective. It seems noteworthy that the small clause headed by prepositions of time detests “Raising to Object” construction more strongly than that headed by prepositions like *as if, since while all of the three semantic constraints on “Raising to Object” construction are violated in the former case, at least the last restriction represented in (54) is observed in the latter: SC complement headed by *as if always represents the speaker’s subjective judgement. It is probably due to this semantic factor of subjectiveness that the small clause headed by prepositions like *as if can be found as the complement to the verb triggering “Raising to Object,” as in (26).

5. Conclusion

We have argued that *as if-constructions (1a) and (1b) both derive from the D-structures containing small clause complements by means of NP-movement. We claimed that SC analysis is not only exempt from the theoretical problems of previous analyses as mentioned in Section 1, but it explains various empirical facts about these constructions, as shown in Section 3. SC analysis seems to show that we do not have to treat *as if-constructions as if they were “irregular” constructions.

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