Copy Raising Construction in English: A Usage-based Perspective

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Jong-Bok Kim. 2012. Copy Raising Construction in English: A Usage-based Perspective. *Language and Information 16.2*, 1–15. In accounting for the so-called copy raising (CR) in English, the movement perspective has assumed that the embedded subject of the CR verb's sentential complement is raised to the matrix subject, leaving behind its pronominal copy. This kind of movement-based analysis raises both empirical and analytical issues, when considering variations in the pronominal copy constraint. This paper investigates the actual uses of the construction, using online-available corpora. Based on this corpus search, we classify two different types of copy raising predicates (genuine and perception), and discuss their grammatical properties in detail. We suggest that the simple copying rule couched upon movement operations is not enough to capture great variations in the uses of the construction, and show that interpretive constraints, e.g., perceptual characterization condition, play an important role in licensing the construction. (**Kyung Hee University**)

Key words: copy raising, theta-role, interpretive constraint, perception, pronominal copy

1. Introduction

English employs the so-called copy-raising construction exemplified by corpus examples like (1):[1]

(1) a. The lifeguards seem like they are dancing across the water. (COHA 2002 MAG)

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[1] The examples we use are extracted from the corpus COCA (Corpus of Contemporary American English) and COHA (Corpus of Historical American English), both of which are freely available online. To increase the readability, we minimally modified the corpus examples.

b. It seems like the lifeguards are dancing across the water.

The main characteristics of the CR (copy raising) in (1a) is that the referent of the matrix subject is identical to that of the embedded subject. In terms of truth-conditional meaning, (1a) is also synonymous to the expletive subject one in (1b). In order to capture the systematic relation between these two sentences, Rogers (1971, 1972, 1973) and subsequent traditional movement analyses (e.g., Ura 1998, Moore 1998, Rezac 2004) have assumed a movement operation dubbed 'Richard' or 'copy raising' as sketched in the following:

(2) a. [e] seem like [the lifeguards] are dancing across the water.

 b. [The lifeguards]$_i$ seem like they$_i$ are dancing across the water.

As given in (2a), the movement operation raises the embedded subject to the matrix subject, leaving behind a pronominal copy. This will then generate sentences like (2b). When no movement operation occurs, the subject can be filled with the expletive *it* as in (1b). This kind of movement-based 'copy-raising' analysis seems to capture the systematic relation between the CR and its putative source, but also raises several intriguing questions (cf. Potsdam and Runner 2001, Landau 2011). The first question concerns how the subject of the matrix clause can be raised from the subject of the finite embedded clause which is a Case position. Movement from a Case position is quite unorthodox in traditional movement analyses, violating the Tensed S Condition (Chomsky 1981). A related question also arises with respect to the theta role of the matrix subject. If the matrix subject were raised from the embedded subject, would the matrix subject in the CR receive its theta role from the embedded predicate? If it were not raised from the embedded clause, what would assign a theta role to the matrix subject? In addition, the question arises of how the movement leaves an overt pronoun (a copy of some sort). What does it mean by the pronominal copy? Authentic data tell us that the copying process seems to be much more complex than the copy rule sketched in (2a).

    In this paper, we first investigate authentic uses of the construction, using the online available corpora COCA and COHA. Based on the corpus search as well as the previous literature, we discuss main grammatical properties of the construction and show that the licensing of the CR is closely tied up with the lexical properties of the verb involved and interpretive conditions in the CR.

2. General Properties

2.1 On the Predicate Types and Subject Properties

The CR is often found with traditional raising verbs like *appear* and *seem* as well as with physical perception verbs like *smell, feel, sound, look, taste*, and so forth. This is evidenced from the following corpus data:

(3) a. She <u>seems</u> like she is laughing hysterically. (COCA 2010 NEWS)

 b. She tried not to <u>appear</u> as if she was rushing away from the screaming house. (COCA 2003 FIC)

(4) a. The boy <u>looked</u> as if he expected to get shot at any moment. (COCA 2005 FIC)

    b. I <u>felt</u> as though I was in heaven. (COCA 2008 NEWS)

    c. The ham <u>tasted</u> like it had been in the icebox too long. (COCA 1991 FIC)

    d. You <u>smell</u> as if you have just been eating onions. (COCA 2003 FIC)

All these examples are synonymous with those with the expletive subject *it*, showing a systematic alternation between a non-expletive and an expletive subject:

(5) a. It seems like she is laughing hysterically.

    b. It looked as if the boy expected to get shot at any moment.

    c. It tasted like the ham had been in the icebox too long.

    d. It smells as if you have just been eating onions.

One main constraint we can observe from the data in (3) and (4) is that the matrix subject and embedded subject are in a coreferential relation and the latter serves as the former's pronominal copy. The violation of this coreferential and pronominal copy condition seems to yield ungrammatical sentences, in particular with the verbs *appear* and *seem*, as seen from the following (see Postal 1974, Potsdam and Runner 2001, Landau 2011, Asudeh and Toivonen 2012):

(6) a. *<u>The lifeguards</u> appear as if **he** was dancing across the river.

    b. *<u>He</u> seems as though **she** could either crack a smile.

    c. *<u>There</u> seems like **John** expects there to be an election.

The pronominal copy condition between the matrix and embedded subject also holds with the expletive subject *it* and *there*. Consider the following corpus examples:

(7) a. **It** seems as if **it**'s no fun being an actor anymore. (COCA 2009 MAG)

    b. **It** appears like **it**'s always cold outside and too hot inside. (COCA 1993 FIC)

(8) a. **There** seemed like **there** was always plenty of food. (COCA 1995 FIC)

    b. **There** sounds like **there** was a very cold side to her. (COCA 2008 SPOK)

When there is no agreement relation between the two subjects, we will have ungrammatical ones (cf. Potsdam and Runner 2001, Landau 2011):

(9) a. ***There** seemed like **it** was raining.

    b. ***It** sounds like **there** is a very cold side to her.

With the index value of the subject including person, number, and gender, we can expect that the coreferential relation between the two subjects also affects the subject-verb agreement in the matrix and embedded clause (cf. Kapalan-Myrth 2000):

(10)   a. There **looks** as if there **is** a problem.

b. There **look** as if there **are** problems.

c. *There **looks** as if there **are** problems.

Given that the expletive *there* in the embedded clause gets its agreement features from the postcopular NP, the matrix subject *there* in (10a), coreferential with the embedded *there*, must be singular too. Unlike this, the matrix *there* in (10b) and (10c) must be plural since the embedded *there* is plural. This is why (10c), violating the subject-verb agreement, is unacceptable.

The observations we have made so far indicate that the CR is sensitive to only a limited number of predicates and the agreement between the matrix subject and embedded subject seems to be a major constraint in the construction. In what follows, we will discuss cases where this kind of constraint does not hold.

2.2 On the Property of the Embedded Clause

As we have seen, the embedded clause of the CR is introduced only by *like, as if*, or *as though*, and the clause must be finite (cf. Moro 1997):

(11)   a. His parents seem like/*that they are more active with their children. (COCA 1997 FIC)

b. Prince appears as if/*that he bears the weight of the world on his narrow shoulders. (COHA 2007 MAG)

c. Max looked as though/*that he'd been plunged into deep sea. (COCA 1994 NEWS)

As noted by Asudeh (2002) and Bender and Flickinger (1999), the embedded clause acts like the complement clause of the matrix predicate.

The obligatoriness of the complement clause gives us the first argument for its complementhood:

(12)   a. The lifeguards appear *(as if they were dancing across the water).

b. She seems *(like she is laughing hysterically).

c. I felt *(as though I was in heaven).

In addition, these verbs select an AP as the predicative complement and can be replaced by the sentential complement (Kaplan-Myrth 2000, Asudeh 2002):
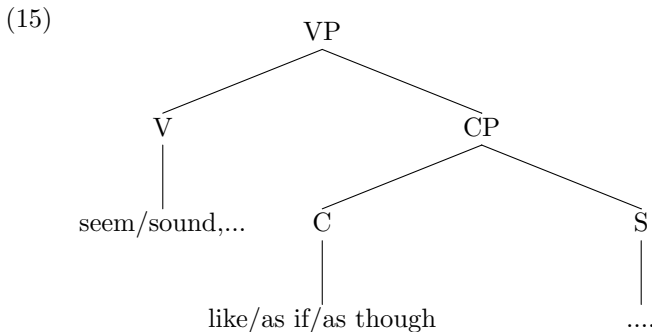
(13)   a. His imagery appears xeroxed/as if it is xeroxed.

b. The wines taste good/as if they are good.

The extraction possibility also supports the complementhood of the clause. The expression in the CR's complement clause can be extracted while the one from the adjunct clause cannot (see Bender and Flickinger 1999, Asudeh 2002):

(14)   a. *What did he start to talk as if he felt __ ?

b. What did Richard seem as if he was ashamed of __ ?

As seen from the contrast here, when the *as-if* clause functions as an adjunct clause as in (14a), no expression can be extracted from the clause. The situation is different in the CR construction as observed in (14b). The gap element in the embedded clause can be linked to the relative pronoun and *wh*-phrase, supporting the view that the embedded clause of the CR acts like a complement clause.

Reflecting these syntactic properties, we assume that the CR predicate selects a sentential complement headed by the complementizer *like, as if*, or *as though*, projecting a clausal expression like the following:[2]

(15)

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                        VP
                    ___/  \___
                   /          \
                  V            CP
                  |          __/  \__
                  |         /        \
            seem/sound,...  C          S
                           |          |
                   like/as if/as though   ....
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As illustrated here, the CR verb selects a CP whose complementizer is headed by *like, as if*, or *as though*. Following Huddleston and Pullum (2002), we take *as if* and *as though* as a single compound word. In general, *if* and *though* are not interchangeable, but the CR construction allows almost free replacement between the two. In addition, *if*-clause or *though*-clause cannot be repeated:

(16)   a. *Prince seems as if he has got everything and if he knows everybody.

       b. *It seems as though he's got everything and though he knows everybody.

These seem to support the view that both *as if* and *as though* are nonseparable and single compound expressions, respectively.[3]

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[2] As suggested by Asudeh (2002) and Asudeh and Toivonen (2012), we can treat *like* and *as* as a preposition selecting a finite clause. Neither the preposition nor the complementizer analysis will affect the main point of the present analysis.

[3] There are two things worth mentioning here. First, we can observe that the *like/as-if* clause can also appear in the complement position of non-CR verbs (see Bender and Flickinger 1999 for details):

(i)   a. The painter regarded him as if he'd said something particularly foolish. (COCA 2001 FIC)

      b. Many dogs treat cars as if they were animate. (COCA 1994 MAG)

In addition, there are cases where the embedded clause introduced by *like, as if*, and *as though* occurs in the adjunct position:

(ii) a. People switch jobs [as if they were double-parked]. (COCA 1994 MAG)

      b. The speaker spoke [as if he did not feel very sure of what he said]. (COHA 1828 FIC)

      c. The little gals cried [as if their hearts would break]. (COHA 1845 FIC)

      d. He ran [as if the track were the top of a hot stove]. (COHA 1995 MAG)

3. Genuine Copy Raising vs. Physical Perception Verbs

3.1 Similarities and Differences

As we have seen earlier, the predicates in the CR can be classified into two groups: GCR (genuine copy raising) with *appear*-type verbs (*seem* and *appear*) and PCR (perception copy raising) with verbs like *smell, feel, look, sound*, and *taste*. As noted by Rogers (1972, 1973), Lappin (1984), Asudeh (2002), Fuji (2005), Asudeh and Toivonen (2012) and others, the subject copy raising (pronominal copy) seems to be necessary in the GCR but is optional in the PCR type (data from Asudeh and Toivonen 2012):

(17)   a.   *Tina seems/appears like/as if/as though Chris has been baking sticky buns.

     b.   Tina smells/looks/sounds/feels/tastes like/as if/as though Chris has been baking sticky buns.

As such, at first glance, there seems to be a clear contrast between the GCR and the PCR in allowing the pronominal copy in the embedded subject. However, as noted by Heycock (1994), Landau (2009, 2011), the GCR type also allows cases with no pronominal copy in the embedded subject:

(18)   a.   When I talked to her, <u>she</u> seemed like **there** would be no issues.

     b.   <u>The situation</u> appeared as if **they** were trying to hide who they really are.

In these examples, there is no expression coreferential with the matrix subject. Our corpus search also supports this position. Both the GCR and the PCR allow the violation of the coreferential relation between the two subjects, leaving the presumed pronominal copy in various positions or being inferred from the context. For example, the corpus search yields many cases where the matrix subject is coreferential with the specifier of the embedded subject in both types:

(19)   a.   He appeared as if **his heart** were broken by her speech. (COHA 1828 FIC)

     b.   The girl seemed as if **her mom** was dying. (COCA 2001 FIC)

     c.   The judge looked as if **his candy** had been stolen. (COHA 1951 FIC)

     d.   LeRoi felt as if **his heart** had been ripped out of his chest. (COHA 2001 FIC)

     e.   She sounded as though **her thoughts** were a million miles away. (COCA 2010 FIC)

The *as-if* clauses here are all optional and function as modifiers, but are different from those in the CR construction in that they all cannot have the expletive *it* as the subject.

(iii)   a.   *It spoke [as if the speaker did not feel very sure of what he said].

     b.   *It ran [as if the track were the top of a hot stove].

These data tell us that the *like, as-if, as-though* occurs in many different syntactic positions.

Our search yields the opposite cases where the genitive specifier of the matrix subject is coreferential with the embedded subject of both the GCR and the PCR type alike:

(20)   a. Her skin appeared as if **she** didn't take a bath for years. (COCA 2009 NEWS)

        b. His voiced seemed as if **he** shouted all night. (COCA 2001 FIC)

        c. Her breathing sounds as though **she** is sleeping - she's faking it. (COCA 2007 FIC)

        d. His face looks as though **he** has emptied himself of every thought. (COCA 1991 NEWS)

There is also no difference between the GCR and the PCR in allowing the coreferential NP to be located in the object position:

(21)   a. The Peugeot appeared as if dust had created **it**. (COCA 2002 ACAD)

        b. Many of your story lines sound as if you take **them** right out of the headlines. (COCA 1998 SPOK)

        c. The lawn looked as if someone had brushed **it**. (COCA 1993 MAG)

        d. Everything else smelled like you'd squished **it** out between your toes. (COCA 2007 FIC)

The matrix subject can be also linked to the prepositional object in both types:

(22)   a. The forest appears as if a tornado had passed over **it**. (COHA 1850 MAG)

        b. The cabinets looked as though someone had thrown the pots into **them** from across the room. (COCA 1998 MAG)

        c. The others tasted as if all of the moisture and character had been wrung out of **them**. (COCA 1997 NEWS)

In addition to these cases, both the GCR and the PCR behave similarly in that the embedded clause includes no coreferential expression with the matrix subject, as evidenced from the following:

(23)   a. For me, **studying Yiddish** seemed as though I were traveling, instead, through the streets of a long-forgotten hometown. (COCA 2000 ACAD)

        b. In spite of that, or just for that reason, **she** appeared as if everything were finally in its place. (COCA 2002 FIC)

        c. **They** look as if air had been blown in and then sucked out. (COCA 2003 MAG)

        d. **You** sound as if the man has no choice in the matter. (COCA 1992 FIC)

The naturally occurring data we have seen so far makes unncessary the distinction between the GCR with *seem*-type verbs and the PCR with physical perception

verbs, contra the previous literature. Both types can license the pronominal copy not only in the subject but also in other positions such as the specifier of the subject, verbal object, and prepositional object position. Even the coreferential NP exists in the contextually inferred situation.

3.2 Lexical Properties and Theta-Role Assignments

Given the traditional assumption that the matrix subject is originated from the embedded subject, we would expect that the matrix subject receives no theta role from the matrix CR predicate. This position seems to be supported by several phenomena at first glance. However, we suggest that the matrix subject of the CR is ambiguous with respect to the theta-role bearing, as also pointed out by Potsdam and Runner (2001).

   Arguments supporting that the matrix subject carries no thematic role can come from the fact that CR predicates place no selectional restriction on their subject, allowing the expletive *it*, idiom pieces, and funny NPs. As noted in Potsdam and Runner (2001), the matrix subject can be part of an idiom. The following has the idiomatic reading (cf. Postal 1974, Rothstein 1991):

(24)   a. The cat seems like it is out of the bag.
       b. The cat looks like it is out of the bag.

The possibility of having an idiomatic meaning in these CR examples implies that *seems* and *looks* here do not assign a thematic role to the matrix subject. The so-called funny NP also can occur in the matrix subject position with its idiomatic reading on, supporting no thematic role to the matrix subject:

(25)   a. Good headway seems like it was made on my essay today.
       b. Heed seems like it was taken of my advice.

   A further support for the nonthematic role of the matrix subject can be found from examples with no subject at all:

(26)   a. Seems like I'm always bringing up things that are a drag, talking about fears, etc. (COCA 2005 NEWS)
       b. Seems as though I would have to take the first train for England. (COCA 2001 MAG)
       c. Appears like fishing brings out the best in a man. (COHA 1972 MAG)

(27)   a. Feels like I won the lottery. (COCA 2006 NEWS)
       b. Sounds like he is preaching exclusion. (COCA 2005 NEWS)
       c. Looks like they'll be building another wall. (COCA 2007 NEWS)

As seen from these, the corpus search yields many spoken and written examples where the matrix subject is not realized at all in the CR construction.

   The fact that no thematic role is assigned to the matrix subject means that the CR predicate selects only the sentential complement (headed with *like/as if/as though*) as its semantic argument. That is, the CR verbs (GCR and PCR) are

monadic verbs selecting only one internal argument, as represented in the simple first-order logic (where s1 and s2 represents a situation or event variable):

(28)   a. SEEM/APPEAR(s1)
       b. LOOK/FEEL/TASTE(s2)

This monadic treatment of the CR verbs will license examples with the subject being the expletive *it*:

(29)   a. It seems like you are ready.
       b. It sounds like you are misinformed.

The monadic treatment also provides us with a way to explain the pronominal copy examples:

(30)   a. <u>Prince</u> appears as if **he** bears the weight of the world on his narrow shoulders. (COHA 2007 MAG)
       b. <u>The tree</u> appears as if **it** were covered with deep pink blossoms. (COHA 1947 NF)

In such examples, the matrix subject and the embedded subject refer to the same individual, motivating the traditional pronominal copy analysis. In the monadic treatment, as long as we have a way of linking the matrix subject to the embedded one, we can keep the supposition that the matrix subject is not assigned a thematic role.

Intriguing cases are those with the pronominal copying in a non-subject position or no pronominal copy in the clause at all, whose data we have seen earlier and repeat here:

(31)   a. He appeared as if his heart were broken by her speech.
       b. Her skin seemed as if she didn't take a bath for years.
       c. The lawn looked as if someone had brushed it.
       d. Her apartment sounds like there must be a wonderful view.

In these examples, the assumed pronominal copy of the matrix subject is not in the embedded subject position. The coreferential NP is in the subject's specifier position, object position, or even does not exist in the embedded clause.

Evidence indicates that in such examples, the matrix subject gets a thematic role from the matrix CR predicate. Consider the following coordination data:

(32)   a. His hair [was blonde] and [looked as though he'd spent a lot of time fixing it]. (COCA 2005 FIC)
       b. He [lay down] and [once again appeared like he was never going to get up]. (COCA 1999 NEWS)

The subject *his hair* in (32a) is the shared argument of the canonical predicate *was blonde* and the CR predicate. The similar situation holds in (32b). With the first

predicate *lay down* clearly assigning a thematic role (e.g., theme) to its subject, the subject of the second predicate will share this theta-roled subject.

The second argument is noted by Potsdam and Runner (2001): when the pronominal copy is non-subject, we do not experience the canonical raising properties. For example, no idiom, no funny NP or no PP can serve as the main subject of the CR predicate when there is no pronominal copy in the subject:

(33)   a. *The other foot appears like the shoe is on it.

        b. *Much headway seems like we made it on that problem last night.

        c. *Under the bed seems like an unorginal place to hide will be it.

In addition, given the thematic subject position, we then expect it to be linked to the controller of control predicates. This prediction is supported by corpus examples:

(34)   a. He **attempted** to sound like he is speaking Chinese. (COCA 2010 FIC)

        b. Frank **tried** to look like he was wrestling with his conscience. (COCA 2007 FIC)

The verbs *attempted* and *tried* are control verbs and their VP complement thus must have a controller with a thematic role.

In sum, we may classify CR predicates into two groups: GCR and PCR. They at first seem to behave differently, but their differences are not clear as the literature has assumed. They both can be used either as monadic or dyadic: the dyadic uses assign a theta-role to the subject. In what follows, we will discuss how the two may behave differently with respect to interpretive constraints.

3.3 Interpretive Constraints

As illustrated in the previous section, both the GCR and the PCR type can override the pronominal copy or coreferential conditon between the matrix and embedded subject. Consider the following examples where the two associated NPs are in a deeper syntactic position:

(35)   a. The fact that **she** went alone seems like **she** wasn't afraid. (COCA 2009 MAG)

        b. **Richard** seemed like the judges had decided to support Mary's complaint that **he** cheated.

The two coreferential NPs in these examples are in the remote, deeper syntactic positions, challenging configurational based accounts.

A variety of authentic data indicates that the pronominal copy constraint depends on context. It seems that, as argued by Rogers (1971) and Landau (2011), as long as the CR construction in question observes certain interpretive conditions, the pronominal copying constraint can be overridden. Consider the following:

(36)   a. This noise seems/appears/sounds/*feels/*looks/*tastes like Eric is responsible for the production.

    b. The moon seems/appears/looks/*feels/*sounds/*tastes like the orbit is nearly circular.

    c. This book ?appears/??seems/sounds/looks/??feels/??smells like everyone should own a copy.

In (36a), from perceiving the sound of the noise, the perceiver can infer Eric's responsibility for the production, but we cannot look or taste the noise. In (36b), the visual perception of the moon helps us infer about the orbit, but there is no way for us to feel or hear it. That is, the auditory stimulus (*sound*) cannot give us any inference about the orbit, either. As for the book in (36c), the most natural verb is *sound* or *look* in the context where people are talking about the book. However, note that even *feel* or *smell* may be possible since we can have a context where one has direct experience with the book (and hold it, smell it). As such, the CR construction requires that the embedded event (or state) be plausibly inferable from the matrix perceptual event, which can be summarized as following:

(37) P-source Condition:
The matrix subject of the CR needs to serve as the source of perception (P-source) in the eventuality involved.

As also noted by Asudeh and Toivonen (2012), this condition ensures that subject is an entailed participant in the eventuality in question.[4]

    In addition to this P-source Condition, one important property we observe in the CR is that the subject represents given information. The CR sentence cannot be given in the beginning of any context, or the matrix subject cannot be indefinite:

(38) a. *A lifeguard seems like he or she is dancing across the river.

      b. *A girl seems like she is laughing hysterically.

All the corpus examples we have found indicate that the matrix subject is definite or generic: no true indefinite subject is found in the CR construction. What this indicates is that the matrix subject functions as the topic or given information, while the remaining predicate serves as comment or new information (cf. Gundel 1988). We suggest that the matrix subject of the P-source in the CR construction needs to be characterized by the remaining predicate (Takami 1992):[5]

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[4] Asudeh and Toivonen (2012) persuasively show that the P-source is neither an argument nor a thematic role, but it is a participant in the eventualities involved.

[5] Takami (1992) introduces the Characterization Condition for English pseudo-passives:

    (i) a. *I was waited for by Mary.

        b. I don't like to be waited for.

The simple fact that Mary is waiting for me does not characterize the property of 'me', but my tendency for not waiting for someone can tell a characteristic about me. The same condition can tell the following tough construction apart:

    (ii) a. *Friends are dangerous to meet in New York.

        b. New York is dangerous to meet friends in.

Meeting friends in New York does not tell any characterization property of the friends, but the statement (iib) describes the property or characterization of New York. See Kuno (1987) and Takami (1992) for further discussion of the Characterization Condition.

(39) CR's Perceptual Characterization Condition (PCC):
      The matrix subject of the CR construction, serving as the topic, is 'percep-
      tually characterized' by the rest of the utterance.

This PCC condition thus tells us that the utterance as a whole serves as a char-
acterization of the matrix subject in the CR construction. This condition explains
why examples like the following extracted from the corpora are natural even though
there is no pronominal copy at all:

(40) a. The house smells like you've been cooking all day. (COCA 2006 NEWS)
      b. You sound as though this is still work in progress. (COCA 1994 SPOK)
      c. Things appear as if you were standing at a window or in front of a view.
          (COCA 2004 MAG)

The matrix subject in (40a) is an overt or inferrable P-source (perceptual source)
participant which is 'characterized' by the event denoted by the embedded clause.
That is, each example here has no pronominal copy in the complement clause, but
it can be inferred that the subject is the perceptual source of the embedded event.
For example, the house's smell became its characteristic by the event of cooking all
day or the progress of the work is characterized by your saying. The matrix verb in
each case basically contributes to the 'perceived' nature of the characteristic. Note
that the subject *things* in (40c) also denotes a familiar situation around the speaker
and hearer. The NP does not denote new individuals. The remaining parts of the
utterance characterize the current state of affairs.

   This interpretive characterization condition can also explain the unacceptabil-
ity of examples like the following:

(41) a. *Bill appears as if Mary is intelligent. (Lappin 1984)
      b. *Tina seems like Chris has been baking sticky buns. (Asudeh and Toivo-
          nen 2012)

The fact that Mary is intelligent does not say any characteristic about Bill. Neither
does the fact that Chris has been baking sticky buns describe any characteristic
about Tina. The 'perceptually' characterized subject indicates that the character-
istic must be 'perceived' from a cause relation.

   The position we take is thus that the license of the CR construction does
not depend on the pronominal copy condition, but rather depends upon the CR's
characterization condition PCC specifying that the matrix subject is 'perceptually
characterized' by the rest of the utterance. As long as this pragmatic constraint
is observed, there is no need to stick to the co-reference constraint (or pronominal
copying). This pragmatic property of the construction ensures that CR construc-
tions carry a cognitive presupposition that is absent in the expletive counterpart
(cf. Rogers 1973):

(42) a. Harry looked to me like he was drunk.
      b. It looked to me like Harry was drunk.

Only the CR (42a) presupposes that I personally saw Harry. In addition, the subject is the perceptional source while the remaining predicate describes the aboutness of this subject in the perceptual term.[6]

4. Conclusion

We have seen that the CR construction, which can be classified into GCR (genuine CR) and PCR (perception CR) type, raises several challenging issues to traditional grammar, in particular, to movement analyses. The traditional analysis has followed the assumption that the embedded subject is raised to the matrix subject, leaving behind a pronominal copy in its place. This raises both empirical and theoretical issues. Theoretically, this runs against the canonical view that only non-cased expressions can be moved to a case-assigned position. Empirically, we have seen that the pronominal copy in the embedded subject position covers only part of the data. There is a great variation in the pronominal copy.

In this paper, we have suggested that the complexity and variations of the CR construction mainly have to do with the tight interactions among lexical semantics of the CR predicates and interpretive conditions. In particular, we have seen that the notion of perception source and interpretive conditions such as characterization one play crucial roles in licensing the CR construction.

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[6] There are several questions that remain to be answered: (a) why the most natural CR examples are those with the coreferential relations with two subjects (b) why there are lexical variations in licensing the absence of the pronominal copy. What we observe is that the matrix subject of the CR is linked to an individual participating in the event described by the embedded clause in the following ranking:

(i) subject > specifier of the subject > (prepositional) object > context-provided inferred individual

As argued in Ariel (1990), this hierarchy also reflects a 'referential accessibility hierarchy' that provides speakers with means to code the accessibility of the referent to the addressee. This explains why the matrix subject prefers to be coindexed with the most accessible individual in the embedded subject.

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