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Richard returns: Copy Raising and its implications

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1 Introduction

In a series of CLS papers in the early 1970s (Rogers 1971, 1972, 1974a) Andy Rogers christened a transformation which he called Richard. The purpose of Richard was to derivationally relate sentences like (1a) and (1b).¹

(1) a. It seems like Richard is in trouble.
   b. Richard seems like he is in trouble.
   c. Richard seems to be in trouble.

Given its similarity to well-known Subject-to-Subject Raising (SSR) out of an infinitival clause in (1c), Richard has become known as Copy Raising (CR). For the purposes of this paper we identify Copy Raising as a construction in which some constituent appears in a non-thematic position with its thematic position occupied by a pronominal copy. In English, CR predicates include seem, appear, look, sound, and perhaps others (Rogers 1974b). Unlike in infinitival SSR, in CR, the predicate takes a tensed clause complement introduced by one of the particles like, as if, or as though:

(2) a. It seems/appears/looks/sounds like/as if/as though Richard is in trouble.
   b. Richard seems/appears/looks/sounds like/as if/as though he is in trouble.

CR has not received a great deal of attention in the literature, particularly in comparison to infinitival SSR (but see Joseph 1976, Perlmutt and Soames 1979, Lappin 1983, 1984, Déprez 1992, Heycock 1994, Ura 1994, 1996, 1998, Moore 1998). We suggest two reasons for this. First, CR is perhaps viewed as a marked or uncommon construction in English, the language upon which much of syntactic theory is built. Cross-linguistically however, CR exists in a variety of typologically distinct and genetically unrelated languages, including Samoan (Chung 1978), Igbo (Ura 1998), Hebrew (Lappin 1984), Haitian Creole (Déprez 1992), Irish (McCloskey and Sells 1988), Turkish (Moore 1998), and Modern Greek (Joseph 1976). Second, CR poses considerable challenges for some syntactic theories. Within the derivational Standard Theory, these include i) apparent A-movement from a Case position, ii) apparent A-movement out of a finite clause, and iii) questions regarding the status of the pronominal copy. This paper addresses some of the implications that CR has for syntactic theory under

¹To our knowledge, the construction was first noted in Postal 1974.
the assumption that it is not a marginal construction cross-linguistically and should not be ignored by theoreticians.

The paper is organized as follows: section 2 reviews evidence that CR predicates do involve a non-thematic subject position. Section 3 considers a movement analysis of CR based on Ura 1998 and shows that it faces theory-internal and empirical difficulties. Our central argument against the movement analysis is that the pronominal copy does not have expected characteristics under a movement analysis in which the pronoun is the spell out of a trace. Section 4 presents an alternative base-generated analysis of CR and provides support for it. Section 5 concludes with a discussion of some consequences and open issues.

2 Evidence for a non-thematic subject position
This section investigates the thematic nature of the subject position of CR predicates. Although CR predicates represent the canonical raising predicates in English, we propose that they are actually ambiguous between a thematic and a non-thematic use, as originally suggested in Rogers 1974b in different terms. In section 2.1 we first investigate subject CR, examples in which the pronominal copy occupies the embedded clause subject position. Section 2.2 turns to examples where the pronominal copy is in a non-subject position. We will conclude that the non-thematic use of CR predicates is only available with subject CR. The non-subject construction necessarily involves a thematic use of the predicate and thus is not Copy Raising as we defined above.

2.1 Subject copy raising
The tests below that evidence a non-thematic position in subject CR examples are well known and we will not dwell on them. The reader is referred to the literature on SSR, which also passes the tests (see Perlmutter and Soames 1979).

To begin, the examples from (1), repeated below, in which CR alternates with an extraposition structure provide evidence that the subject position of CR predicates can be non-thematic. (3a,b) can be synonymous.

(3) a. It seems like Richard is in trouble.
   b. Richard seems like he is in trouble.

Second, a number of diagnostics for a non-thematic position rely on the fact that such predicates place no selectional restrictions on their subject; therefore, non-arguments and idiomatic elements are free to appear there. The examples in (3) through (7) demonstrate that the expletives there and weather it, idiom pieces, and funny NPs can all appear in the subject position of a CR predicate.2 The there expletive and idiom data were first discussed in Rogers 1974b. The examples in (5) are from Horn 1981, which provides a clever argument that the it in (5a) is the weather it and not the it of extraposition, despite surface identity. The reader is referred to Horn 1981 for details.

(4) a. %There looks like there’s gonna be a riot
   b. %There seem like there are problems.

(5) a. It seems like it’s raining harder than it is. (mistaken or contradictory)
   b. It seems to be raining harder than it is. (mistaken or contradictory)
   c. #It seems that it’s raining harder than it is. (contradictory only)
   (6) a. %The shoe looks like it’s on the other foot.
   b. %The shit appears as though it’s going to hit the fan very soon.

(7) a. %Exception seems like it was taken to the recounting of votes.
   b. %Advantage appears like it was taken of the workers.

The cognitive synonymy of (8a,b) provide a third piece of evidence. If the matrix predicate is non-thematic, the examples have identical theta role distribution and are thus predicted to be synonymous.

(8) a. John seems like he interviewed Bill.
   b. Bill seems like he was interviewed by John.

Kaplan-Myrth 2000 provides a fourth argument based on the contrast in (9). The ungrammaticality of (9a) follows because the NP John does not receive a theta role from the matrix predicate, or anywhere else. The sentence is thus ruled out by Full Interpretation. No such violation occurs in (9b) where the matrix verb eat assigns an external role to John.

(9) a. *John seems like there is no tomorrow.
   b. John eats like there is no tomorrow.

A fifth argument comes from non-DP subjects discussed in, among others, Davies and Dubinsky 1998. (10a,b) illustrate PP and AP subjects, respectively. If CR predicates do not restrict their surface subjects then we correctly expect that such non-DP subjects will be able to appear in the construction, (11).

(10) a. Under the bed is an unoriginal place to hide.
   b. Sickeningly sweet is how Calvin likes his cereal.

2There is some dialect variation in the acceptability of some of the examples, which we notate with %. We return to this split at the end of the section.
We conclude from these various diagnostics that the subject position of CR predicates may be non-thematic, at least when the pronominal copy is in the embedded subject position.

### 2.2 Non-subject examples

In addition to subject CR examples like those above, a number of researchers (Rogers 1974b:94-98, Lappin 1983:122, Heycock 1994:290) have noted apparent Copy Raising examples in which the pronominal copy is a non-subject:

(13) a. Bill sounds like Martha hit him over the head with the record.
    b. The roach looks like me like Abbie gave it to Myrna.
    c. Ermintrude looks like the cat got her tongue.
    d. Mary appears as if her job is going well.
    e. That book sounds like everyone thinks it should be banned.

We will propose that these non-subject examples do not actually involve a non-thematic use of CR predicates and thus do not instantiate CR as we defined it. Instead, CR predicates are ambiguous between a thematic and non-thematic use. The non-thematic use is limited to pronominal copies in subject position, as in section 2.1. Non-subject examples, (13), necessarily involve a thematic use.

An initial observation in support of this claim is that such examples uniformly fail the above diagnostics (see also Rogers 1974b:96-97). Expletives, idiom pieces, funny NPs, and non-DPs are impossible:

(14) *There seems like John expects there to be an election.
    (15) a. *The other foot appears like the shoe is on it.
        b. *His bite sounds like his bark is worse than it.
    (16) a. *Much headway seems like we made it on that problem last night.
        b. *Tabs appear as if the government keeps them on us.
    (17) a. *Under the bed seems like an unoriginal place to hide will be it.
        b. *Very tall appears like he likes his body guards it.

The ungrammaticality follows if the matrix predicates are necessarily thematic. Expletives and the like will be unable to appear in the subject position of these predicates because they will receive a theta role. If this is correct, we must admit that predicates like seem, appear, look, and sound, at least when they are followed by finite clauses introduced by like, as if, or as though, are ambiguous between a thematic and non-thematic use. The non-thematic use is possible only with extraposition it and subject CR. The thematic use is available in all cases but is necessarily found with non-subject examples.

While this partitioning of the data may seem non-optimal, it is supported by a number of further facts. Rogers himself concluded (Rogers 1974b:97) that “Richard, if it exists at all, does not apply to superficial non-subjects of like-complement sentences”. A similar conclusion is reached in Martin 1996:101-105, which proposes that seem and appear in their SSR uses are “lexically ambiguous between raising verbs and control verbs”. If they are control verbs, then they assign an external theta role.

The claim that perception verbs like look and sound can have a thematic use is relatively uncontroversial (Rogers 1972). This claim is less clear with the semantically weaker seem and appear. We believe that in their thematic use the verbs assign an external theta role similar to the patient role and the predicates are reasonably paraphrased as ‘act like’ or ‘put on the appearance of’. In support of this characterization, there is a contrast in available interpretations between the subject CR example in (18a) and the non-subject example in (19a). The former has both meanings in (18b,c) while the latter has only the meaning in (19b). The non-subject example is not accurately paraphrased with exaposition, (19c).

(18) a. He seems like he’s ill.
    b. =He is acting like he’s ill.
    c. =It seems like he is ill.

(19) a. He seems like Kim just dumped him.
    b. =He’s acting like Kim just dumped him.
    c. #It seems that Kim just dumped him.

This division provides a way to understand the dialect variation seen in (4) to (17). For those people who do not accept expletives and idiom pieces in CR, we hypothesize that they do not allow non-thematic uses of CR predicates. All non-extraposition uses of the CR predicate involve a thematic subject position.

Additionally, Heycock 1994:292 provides examples of CR predicates in which the matrix subject has no copy pronoun in the embedded clause, (20) (her judgments). If these examples are acceptable, one analysis compatible with our proposal is that the matrix subject is receiving a theta role from the CR predicate.
A-chain with a pronominal copy of the head of the A-language-particular rule that supplies informally in (23).

(26) Rule S (Ura 1998:74)
A language-particular rule that "supplies an intermediate position of the A-chain with a pronominal copy of the head of the chain."
The Rule S repair strategy serves two purposes: the pronominal copy appears in the embedded clause, deriving the fundamental property of CR, and the spelled out pronoun checks the Case and a-features of the embedded T. Application of Rule S also obeys Last Resort since the derivation would not converge otherwise. Returning to the derivation, Rule S applies yielding the surface form of the sentence with all features checked:

\[
(27) \quad [\text{TP E} \text{z}_1 T \{\text{vp} \text{ seems } [\text{CP} \text{ COMP}[\text{TP} \{j_1 \text{ T} \{\text{vp} \text{ see } \text{Ada}}\]}}]]
\]

\[
\quad \check{\text{EPP}}
\]

\[
\check{\text{Case, } \check{\alpha}-\text{features}}
\]

Ura's analysis successfully assimilates CR to SSR with the fewest possible disturbances. It crucially assumes that i) CR involves ordinary A-movement, ii) feature checking is an optional operation, and iii) some languages, like Igbo, have a language-particular trace spell out rule, Rule S. In the next section, we turn to some less desirable aspects of the analysis.

### 3.2 Challenges

Although the analysis seems mechanically sound, we believe it raises a number of questions. First, the movement illustrated in (25) would appear to violate well-known locality conditions on A-movement. In particular, it violates the Tensed S Condition of Chomsky 1973:

\[
(28) \quad \text{Tensed S Condition (Chomsky 1973)}
\]

A-movement is impossible from a tensed clause

Ura 1998:82 recognizes this difficulty and responds that "the Tensed S Condition has lost its theoretical validity under assumptions of the Minimalist Program, according to which A-movement is constrained only by the Last Resort Condition and the Shortest Move Condition". While this may be have been true, the Tensed S Condition appears to be a valid empirical generalization in English and it has been captured at most other stages of the Standard Theory. It continues to be a part of the Minimalist Program in Chomsky 2000.³

Second, we question the desirability of a language-particular Rule S. Within the Minimalist Program, parametric variation is restricted to the lexicon; the computational system is claimed to be invariant across languages (Chomsky 1995). Rule S clearly violates this desideratum. Furthermore, Rule S is ultimately stipulative and unexplanatory, a solution whose complexity we think is on the order of the complexity of the problem. While it accounts for CR, it apparently has no other consequences in the grammar of Igbo.

The final difficulty comes from a closer investigation of the pronominal copy, for which we turn to English. Given that nothing in the above derivation was Igbo-specific, the analysis carries over straightforwardly to the English equivalent. To repeat the gist of the derivation: the structure is merged, the embedded subject moves to the higher clause, and Rule S spells out the trace as a pronominal copy. At first glance, English would seem to provide support for the analysis because it seems to show independent evidence of Rule S. It is well known that in English illicit traces in Abar-chains can be 'repaired' by being spelled out as pronouns (Chomsky 1977, Kayne 1984, Sells 1984):

\[
(29) \quad \begin{align*}
\text{a. } & \ast \text{This is the painting that everyone wonders whether it will be for sale.} \\
\text{b. } & \ast \text{This is the painting that everyone wonders whether it will be for sale.}
\end{align*}
\]

Following Chao and Sells 1983 and Sells 1984 we will call pronouns that show up in a position from which movement would otherwise be illicit intrusive pronouns (IPs). There are a number of reasons to believe that the CR pronoun is not an intrusive pronoun however.

The first observation is that intrusive pronouns are not fully natural for most speakers and they have a 'last resort' feel. The CR pronoun in contrast does not have this characteristic and is fully grammatical (Heycock 1994:291).

Chao and Sells 1983 and Sells 1984 explore a number of differences between IPs and other pronouns. One is that IPs cannot be bound variables:

\[
(30) \quad \begin{align*}
\text{a. } & \ast \text{I'd like to meet every linguist that we can't remember when we had seen him last.} \\
\text{b. } & \ast \text{There is no painting that John wonders whether it will be for sale.}
\end{align*}
\]

Sells' (1984) account of this restriction is that intrusive pronouns are type e and consequently cannot serve as a higher type. The CR pronominal copy is not an IP since it can be a bound variable (Lappin 1983):

\[
(31) \quad \begin{align*}
\text{a. } & \text{No one seems like she wants to go to Antarctica.} \\
\text{b. } & \text{Many students appear as if they won't pass this time.} \\
\text{c. } & \text{Every argument seems as though it is flawed.}
\end{align*}
\]

A final, more speculative reason to believe that the CR pronoun is not an intrusive pronoun comes from cross-linguistic patterns. It has been claimed that

³It seems to follow from Chomsky's (2000) phase machinery in the following way: phases include CP. In order for a phase to move out of a phase it must first move to the edge of the phase that immediately contains it because phase-internal phrases are not accessible to movement into the higher phase (the Phase Impenetrability Condition). For A-movement out of a CP, the DP must first move to the edge of CP. There is no motivation for this however, since no feature would be checked.
some Germanic languages, for example West Flemish, Dutch, and German, lack IPs (Mereghant 1999 and references therein). Initial investigation however indicates that some of these languages may well have CR. A Dutch example is given in (32).

(32) Hij ziet eruit, alsof hij moe is
he sees there.out as.if he tired is
‘He seems as if he is tired.’

We conclude that the CR pronoun is not an intrusive pronoun. If this is correct, however, then the derivation of CR does not involve a last resort strategy that spells out traces and, more generally, a movement analysis should be abandoned.

4 A base-generation analysis of CR

So far we have determined that CR involves a non-thematic subject position related to an embedded subject pronoun. The relation between the two is not one of movement however and the CR pronoun is not a last resort intrusive pronoun. Accepting these results, we would like to pursue an alternative, base-generation analysis of CR.

Earlier versions of the Principles and Parameters framework included D-structure and the Theta Criterion. Thus, base-generation of a DP in a non-thematic position was not possible. In the current Minimalist Program, however, there is no D-structure and no Theta Criterion (Brody 1993, Chomsky 1993, 1995, Boskovic 1994), opening up the possibility of merging an argument directly into a non-thematic position. What is important is that the Principle of Full Interpretation (FI) be satisfied: at LF everything must receive an interpretation. In what follows, we develop our base-generation analysis (section 4.1) and present evidence for the proposal (section 4.2).

4.1 The analysis

Our analysis is as follows: the CR subject is merged directly into the matrix subject position after the embedded clause with its subject pronoun is formed. A syntactic relation must be formed between the two subjects, otherwise the matrix subject will violate FI. We propose that the relevant relation is a base-generated A-chain, which we represent with coindexation. (33) is a representative structure.

(33) [TP Richardi T seems [XP like[TP he, T [VP is in trouble]]]]

It should be evident that all features (EPP, Case, and θ-features) are independently checked in the matrix and embedded clauses by the two DPs. The only non-canonical aspect of the structure is that an A-chain is formed between the two base-generated DPs prior to assignment of a single theta role at LF. The motivation for chain formation is that if the derivation ended without it, the matrix DP Richard would not receive an interpretation, in violation of FI.

We assume that chain formation is not a language-particular option. Rather, a chain may be freely formed subject to independent well-formedness conditions (see Rizzi 1990, Brody 1995, and others). Crucially, representational constraints on chains require that chain links be local in some sense. Chomsky’s (1995) Minimal Link Condition or Rizzi’s (1990) Relativized Minimality will prevent chain formation across an intervening element, thereby accounting for the fact that CR chains can only be created between a matrix DP and an embedded subject position. Non-subject CR is impossible for the same reason that non-subject movement raising is impossible (see Moore 1998 for further discussion).

4.2 Evidence for a base-generation account

The most obvious advantage of the base-generation account is that it does not violate the Tensed S Condition or encounter the Last Resort problem associated with movement from a Case position. Since there is no movement, constraints on movement are not relevant.

A further argument in favor of base-generation stems from interpretational differences between SSR and CR subjects. The basic observation is that in SSR the raised DP can be interpreted in either its raised position or its base position (May 1977, 1985, Diesing 1992, and others). The CR subject however is restricted to being interpreted in the higher subject position. We propose that this contrast follows from the distinct derivations: movement versus base-generation.

To illustrate, the SSR example in (34a) with a strong quantifier is ambiguous, with the two interpretations in (34b,c). For the meaning corresponding to (34b), the DP two people is interpreted at the position of the trace, under the scope of seem. In this reading, there apparently are two winners. For (34c), the DP is interpreted in its surface position. The DP has scope over seem and there are two apparent winners. The ambiguity is attributed to the movement relation between the two positions and the availability of Quantifier Lowering at LF (May 1977, 1985), which optionally reconstructs a DP into the position of its trace for purposes of interpretation.

(34) a. Two people, seem t1 to have won the lottery. seem > 2, 2 > seem
b. It seems that two people have won the lottery. seem > 2
   c. Two people are such that they seem to have won the lottery. 2 > seem
Such an ambiguity is not present in CR (Lappin 1984). The corresponding CR example in (35a) is unambiguous. The matrix subject can be interpreted only in the main clause, with the DP two people obligatorily taking scope over seem, (35c).

(35)  a. Two people seem like they have won the lottery.  *seem > 2, 2 > seem
    b. It seems like two people have won the lottery.  seem > 2
    c. Two people are such that they seem like they have won the lottery.  2 > seem

Under the base-generation analysis, the DP cannot be interpreted in the embedded clause, the unavailable interpretation in (35b), because Quantifier Lowering is blocked by the pronominal copy. The pronoun, not being a trace, prevents reconstruction. We take this to be evidence in favor of a base-generation account.

A similar argument in favor of the base-generation account comes from an interpretational contrast with adverbs of quantification. In SSR, a bare plural subject can be “bound” by an adverb of quantification in either the matrix clause (36), or the embedded clause, (37) (Lewis 1975, Diesing 1992, Kratzer 1995). This follows from the claim that the variable associated with the bare plural subject can be bound at LF in its raised position, (36c), or base position, (37c).

(36)  a. Cows rarely seem to be intelligent.
    b. Few cows seem to be intelligent.
    c. rarely x cow(x) seem [...] 

(37)  a. Cows seem rarely to be intelligent.
    b. It seems that few cows are intelligent.
    c. seem [rarely x cow(x)...] 

These two possibilities are not available in CR. A bare plural subject can only be bound by an adverb of quantification in the matrix clause (38). Placing the adverb of quantification in the embedded clause results in anomaly, (39).

(38)  a. Cows rarely seem like they are intelligent.
    b. Few cows seem like they are intelligent.
    c. rarely x cow(x) seem [...] 

(39)  a. *Cows seem like they are rarely intelligent.
    b. *It seems like few cows are intelligent.
    c. *cow(x) seem [rarely x...] 

The lowered reading represented by the LF in (37c) is ruled out in part by our claim that the matrix subject in CR cannot be lowered into the pronominal copy at LF. The example receives no interpretation because the adverb of quantification must bind something, yet the embedded clause contains no free variable: the bare plural subject is not present and the predicate itself is individual-level, providing no spatio-temporal variable. The LF in (39c) thus violates the Ban on Vacuous Quantification (Kratzer 1995). For reasons of space we omit an additional parallel argument based on the fact that a SSR subject with a weak determiner can have an existential or a proportional reading, while a CR subject is restricted to a proportional interpretation.

A base-generation analysis of CR, then, straightforwardly accounts for why the construction is not sensitive to conditions on A-movement, as well as the fact that the CR subject is restricted to being interpreted in the matrix clause at all levels of representation, in contrast to SSR subjects.

5 Conclusions and remaining issues

We have proposed a based-generation approach to CR that overcomes the problems of a movement account. However, several analytical issues remain.

The first is the question of what role A-chains play in a highly derivational framework like the Minimalist Program. This framework has been moving away from constraints on representation towards constraints on derivation (see e.g. Epstein and Seely 1999). But, as we have argued, CR requires a base-generated analysis. So the question arises of what an A-chain is in such a framework.

There is one “representational” relation that has been proposed within the Minimalist Program, called Agree. According to Chomsky 2000, this is an operation “which establishes a relation (agreement, Case-checking) between a lexical item and a feature F in some restricted search space (its domain)” (p. 101). Agree essentially creates a relation between (potentially) base-generated items, without movement. Its role has been to replace LF feature movement and explain Procrastinate: Agree is preferred over Move. So one obvious possibility is that Agree is what is at work in CR.

This suggestion is attractive as it exploits an already needed mechanism within the framework without (re-)introducing a GB-style representational relation like the A-chain. However, for Agree to be what is at play in CR there are several additional challenges to be faced. First, the theta role on a DP must be assumed to be an uninterpretable feature; thus, in CR, the matrix subject has an uninterpretable feature that must be checked, invoking Agree. Second, Agree must be able to relate not just heads to phrases, as is illustrated in Chomsky 2000, but also phrases to phrases, establishing a relation between the matrix subject and the embedded pronoun. Our view is that Agree may be the right relation for CR, but the above assumptions would require justification.

The second analytical issue to address is the fact that CR is restricted to clauses introduced by particles such as like, as if, and as though. The A-chain relation we argue for cannot be established in non-CR structures:
We speculate that a category distinction between these particles and that may provide an answer. Heycock 1994, building on Maling 1983, indicates that like is a preposition and that is a complementizer. The fact that CR is possible with a PP complement but not a CP complement may find its explanation in Chomsky’s (2000) notion of Phase. The hypothesis is that the derivation is broken down into (roughly propositional) phases. Once the derivation has completed a phase, the internal structure of that phase is no longer available for further derivation. Chomsky suggests that CP and vP are phases. What (40) perhaps indicates is that the A-chain formation (or Agree) in CR respects phases; that is, the relevant relation between the two DPs cannot be formed across a CP phase boundary.

We conclude, then, that A-chain-type relations between phrases can be base-generated. Additionally, this analysis supports an architecture in which phrases can be base-generated in non-thermatic positions, one like that of the Minimalist Program.

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