

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, Perlmutter 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

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.
- (11) a. Under the bed seems like it is an unoriginal place to hide.
b. Sickeningly sweet seems like it's how Calvin likes his cereal.

Finally, if the subject position of CR predicates is non-thematic, PRO will not appear there because PRO must be assigned a theta role:

- (12) a. The workers expect for it to seem like they are successful.
 b. ??The workers_i expect PRO_i to seem like they are successful.
 c. It is important for it to seem like you want the job.
 d. ??It is important PRO_{arb} to seem like you want the job.

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 to 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 extraposition, (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 (7). 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.

- (20) a. That book sounds like everyone should own a copy.
b. Her apartment sounds like there must be a wonderful view.
c. From what you say, your car sounds like you need a new clutch.

Lastly, if a thematic use of CR predicates is possible, we predict that PRO should in fact be able to appear in the subject position, contrary to what we

indicated in (12). This seems to be the case and, as expected, such examples are interpreted with the CR predicate meaning ‘act like’ or ‘put on the appearance of’:

- (21) a. The workers_i want PRO_i to at least seem like they are busy.
 b. You should really attempt PRO to sound like you’re content in this job.
 c. It is important PRO_{arb} to seem like you want the job.
 d. Harry tries PRO to look to everyone like he is stoned. (Rogers 1974:79)

To summarize, we claim that true Copy Raising exists only where the pronominal copy is in subject position, agreeing with Rogers 1974b and Ura 1998. Our partitioning of the data contrasts with that in Lappin 1983, 1984 and Heycock 1994, which assume that all uses of CR predicates are non-thematic. In what follows, we consider possible analyses of CR. In section 4 we return to an explanation of why CR is only available with subjects.

3 A movement analysis of CR

The observations that CR predicates have a non-thematic subject position and that only subjects in the complement clause can ‘raise’ to that position make CR sound like SSR and suggest a movement analysis. In that light, section 3.1 presents Ura’s (1998) movement analysis of CR in Igbo. Section 3.2 extends the analysis to English and discusses theoretical problems.

3.1 Ura’s (1998) movement analysis of CR in Igbo

Ura 1998 provides a Minimalist movement analysis of the Igbo CR example in (22), which parallels the English construction in all relevant respects. In what follows, we develop his analysis more fully.

- (22) Ézè_i dI m̄ kà O_i hŨ-rŨ Adá
 Eze seems to.me COMP_{he} see-ASPECT Ada
 ‘Eze seems to me like he saw Ada.’

According to Ura, the central challenge inherent in a movement analysis of CR is why A-movement is possible from the subject position of a finite clause, a Case position, in violation of the economy condition of Last Resort, stated informally in (23).

- (23) *Last Resort* (Chomsky 1993, 1995)
 syntactic operations must be motivated

Under Ura’s assumptions, movement is driven feature checking and an element may move if and only if the derivation would otherwise crash (Ura 1998:71). The puzzle is that it would appear that an element should have no motivation to move from a Case position. Ura’s solution is to propose that checking is a syntactic

operation in the grammar and, as such, is also subject to Last Resort. Checking occurs only if the derivation would crash without it. In other words, some feature checking will appear to be optional and a DP may move from a Case position if it in fact does not check features there. This will permit movement from a Case position, as required in CR.

In what follows, we step through his proposed derivation and show how it accounts for the fundamental characteristics of the construction. The derivation proceeds from the bottom up and we will substitute English words for (22).

First the complement clause is formed:

(24) $[_{CP} \text{ COMP}[_{TP} \text{ Eze } T \text{ } [_{VP} \text{ see Ada}]]]$
 $\checkmark\text{EPP}$

To satisfy Last Resort, the subject DP *Eze* checks the strong EPP feature of the embedded T° , as shown in (24). Crucially however, the DP does not check Case or \emptyset -features. In contrast to the strong EPP feature, these do not need to be checked because they are weak and only cause a derivation to crash if they remain unchecked at LF.

The matrix clause is then formed and the embedded subject raises to the matrix specifier of T° :

(25) $[_{TP} \text{ Eze}_i \text{ } T \text{ } [_{VP} \text{ seems } [_{CP} \text{ COMP}[_{TP} \text{ } t_i \text{ } T \text{ } [_{VP} \text{ see Ada}]]]]]$
 $\checkmark\text{EPP}$ $\checkmark\text{EPP}$
 $\checkmark\text{Case, } \checkmark\emptyset\text{-features}$ $\times \text{Case, } \emptyset\text{-features}$

The movement obeys Last Resort since the strong EPP feature of matrix T° is checked. In the matrix clause *Eze* also checks Case and \emptyset -features, as shown. If the derivation stopped here, it would crash because the embedded T° contains uninterpretable, unchecked Case and \emptyset -features. These features must be checked somehow. Ura 1998 proposes that at this point a language-particular rule, which we will call Rule S, steps in. Rule S spells out the trace with a pronominal copy:

(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 \emptyset -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:

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) a. *This is the painting that everyone wonders whether *t* will be for sale.
b. ?This is the painting that everyone wonders whether *it* will be for sale.

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) a. *I’d like to meet every linguist that we can’t remember when we had seen *him* last.
b. *There is no painting that John wonders whether *it* will be for sale.

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) a. No one seems like she wants to go to Antarctica.
b. Many students appear as if they won’t pass this time.
c. Every argument seems as though it is flawed.

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 some Germanic languages, for example West Flemish, Dutch, and German, lack IPs (Merchant 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

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} Richard_i T seems [_{XP}like[_{TP} he_i T [_{VP}is in trouble]]]]

It should be evident that all features (EPP, Case, and \emptyset -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).

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:

- (40) a. John seems like he is ill.
b. *John seems that he is ill.

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 *v*P 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-thematic positions, one like that of the Minimalist Program.

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Notes

¹To our knowledge, the construction was first noted in Postal 1974.

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.

³It seems to follow from Chomsky's (2000) phase machinery in the following way: phases include CP. In order for a phrase 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.

⁴While we couch our analysis in Minimalist Program terms, our basic proposal could in principle be developed in any framework that allows the base-generation of a thematic argument in a non-thematic position, such as lexicalist frameworks like HPSG and LFG.

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