A Note on Transparent Free Relatives*

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Abstract

This paper is concerned with the syntactic structure of transparent free relatives (TFRs), exemplified by *John ate what appeared to be a worm*. We review Van Riemsdijk's (1998, 2000) multidominance analysis and Grosu's (2003, 2014) unified analysis and identify some empirical problems that each encounters. In the spirit of Schelfhout *et al.*'s (2004) parenthetical approach, we propose an alternative analysis of TFRs considering *a worm* to be the head of the entire construction and the rest—*what appeared to be*—to be a parenthetical modifier.

1. Introduction

Transparent free relatives (TFRs) in English have attracted some attention in recent generative literature (Wilder (1999); Van Riemsdijk (1998, 2000, 2001, 2006ab); Grosu (2003, 2014); Schelfhout *et al* (2004); Citko (2011)). The term was proposed by Wilder (1999) for a phenomenon that was noticed earlier by Nakau (1971) and Kajita (1977).[1] Examples are illustrated in (1a, b), where the italicized clauses are TFRs.

(1) a. Lakoff has made *what appears to be **a radically new proposal***.

   (Nakau (1971: 2))

   b. The man entered the cockpit carrying a gun, a razor, and a can of *what the crew took to be **gasoline***. (Kajita (1977: 54))

TFRs look like standard free relatives (SFRs), such as (2a, b), but a close comparison of the two shows a number of diverging properties of these constructions.

(2) a. That's *what this idiot said*.

   b. You can do *what you want*.

One salient difference, originally noted by Kajita (1977), is that the head of the entire SFR is the relative pronoun *what*, whereas that of the entire TFR is the predicative complement (*a radically new proposal* in (1a)). Evidence for this comes from McCawley's (1988: 733) observation:

(3) a. *What I read last summer* **was**/*****were** written by Hemingway.

   b. *What could best be described as **pebbles*** **were**/*****was** strewn across the lawn.

In (3a), the number value of the entire SFR is determined by the relative pronoun *what*, whereas in (3b), that of the TFR is determined by the predicative complement *pebbles*. This suggests that the predicative complement of the TFR seems to act as if it were an element of the matrix clause. Thus, TFRs are called "transparent". Following Schelfhout *et al.* (2004), we will refer to this predicative complement as the content kernel (CK) for convenience.[2]

To account for TFRs' transparency, three analyses have been put forward in the literature: the backward deletion analysis (Wilder (1999)), multidominance (MD) analysis (Van Riemsdijk (1998, 2001, 2006ab); Citko (2011)), and unified analysis (Grosu (2003)). As Van Riemsdijk (1998, 2001) and Grosu (2003) have criticized Wilder's (1999) analysis exensively, we will not review it here. The aim of this paper is twofold. First, we will make a critical comparison of the remaining two analyses and demonstrate that each faces some empirical drawbacks. Second, based on Schelfhout *et al.*'s (2004) parenthetical approach, which has escaped scholars' attention so far, we will pursue an alternative analysis of TFRs in which the CK is considered the head of the entire construction, with the rest of the relative clause actiug as a parenthetical premodifier to the CK. It is argued that this analysis is more successful than the rest with respect to the explanation of TFR properties.

This paper is structured as follows. Section 2 describes basic properties of TFRs based on the literature. Section 3 briefly reviews the MD and unified analyses of TFRs. Section 4 proposes an

alternative analysis of TFRs along the lines of Schelfhout *et al.* (2004). Section 5 concludes the paper.

2. Central Properties of TFRs

Based on the previous literature, this section describes two central properties of TFRs: the transparency and the parenthetical nature of the constructions. Due to space limitations, we cannot fully describe the properties of the constructions. For detailed descriptions, see Grosu (2003) and Kim (2012).

2. 1. Transparency

In addition to the number agreement in (3), a number of properties support the head status of CKs in TFRs. Let us discuss two of them here. As Kajita (1977: 54-57) originally noted, the CK can be nominal (1a,b), adjective (4a), adverbial (4b), or even verbal (4c).

(4) a. Her voice was soft and silky and *what I can only describe as **dangerous***.

b. He came out next day, but I didn't get a chance of speaking to him *what you might call **privately***.

c. Frank is awfully sensitive and it had upset him a lot to feel that my mother disapproved of him, and was *what he called **poisoning my mind***.

These examples suggest that the position in which a TFR appears depends upon the category of the CK. This point is collaborated by Wilder's (1999:689) observation. If the CK is adjectival, the TFR must be in a predicative complement or prenominal position (5a-c), and if the CK is nominal, the TFR must be in an argument positon (6a-c).

(5) a. John is *what you might call **stupid***.

b. **What you might call **stupid** just walked in.*

c. a *what I'd describe as **stupid*** decision.

(6) a. John is *what you might call **a fool***.

b. *What you might call **a fool** just walked in.*

c. *a *what I'd describe as **a failure*** decision.

Thus, the CK and the entire TFR should be matched in terms of syntactic category.

Additional evidence for *what* being the head of the SFR and the CK being the head of TFR comes from the definiteness effect observed in existential *there* sentences (Nakau (1971: 24-27)). As is well-known, SFRs have either a definite or a free-choice (universal) interpretation. For example, (2a)

means that is the particular thing or things the idiot said and (2b) means you can do anything you want, no matter what it is. Thus, SFRs cannot appear in the subject positon of a *there* sentence (**There is what you ordered on your desk*). TFRs, on the other hand, can appear in that positon as long as they have an indefinite reading as evidenced by the contrast of (7a) and (7b) (adapted from Wilder (1999: 689)).

(7) a. There is *what appears to be **a virus*** in this program.

b. *There is *what appears to be **the virus*** in this program.

This difference can be captured on the assumption that the relative pronoun *what* controls the definiteness of the entire SFR whereas the CK determines the definiteness of the entire TFR.

2. 2. The Parenthetical Function of the TFR

The parenthetical nature of the TFR was first noticed by Kajita (1977: 55). One source of support for the TFR being a parenthetical comes from the interpretation of proforms. As McCawley (1982: 96) observed, parentheticals are excluded from the interpretation of proforms. For example, *that* in (8) refers, not to *talk to us, it seems, about literature*, but to *talk to us about literature*.

(8) John talked to us, *it seems*, about literature, but Mary would never do that.

Similarly, the TFR minus the CK is not included in the construal of proforms. In (9), *that* refers not to *a combination of what appeared to be two adjectives* but only to *a combination of two adjectives*, thus excluding *what appeared to be*.

(9) A combination of *what appeared to be **two adjectives*** actually turned out to be exactly *that*, and not a combination of an adverb and an adjective. (Kajita (1977: 56))

This fact can be easily explained if we consider *what appeared to be* as a parenthetical qualifier of some sort.

Additional evidence for the TFR being a parenthetical is that TFRs appear in a right-peripheral position on a par with parenthetical clauses.

(10) a. *What John called **a banjo*** is lying on my desk.

b. A banjo is lying on my desk, or (at least) *what John called one*.

c. That decision was, *I think*, a terrible

mistake.

  d. That decision was a terrible mistake, (or at least) *I think (so)*.

<div align="right">(Schelfhout et al. (2004:8))</div>

The parallelism between (10a, b) and (10c, d) can be expected under the assumption that the TFR minus the CK is a parenthetical.

    An immediate question that arises at this point is what semantic function this parenthetical has. It acts as a hedge, expressing a level of uncertainty the speaker has about what he or she is saying (McCawley (1988: 733); Van Riemsdijk (2001, 2006 a)), or it serves as an intensional operator of some kind (Grosu (2003: 279)). This point can be shown by replacing the TFR minus the CK with lexical intensional modifiers such as *alleged(ly), presumab(ly)*, and *previous(ly)*).

(11) a. They served me *what they euphemistically referred to as* **a steak**.

    b. They served me an *alleged* **steak**.

<div align="right">(Van Riemsdijk (2006a:365))</div>

Van Riemsdijk (2006a:365) said (11a) and (11b) "leave open the possibility that the entity in question is not what the noun says it is." In each of the examples, the boldfaced entity may not be a steak, but it could turn out to be a hamburger.

    To summarize, we have described the two properties of TFRs: (i) the CK behaves as a part of the matrix and (ii) the TFR minus the CK is a parenthetical that functions as a hedge or an intensional modifier. Most of the previous studies on TFRs have paid attention to property (i). In the following section we will review two major approaches to (i): the MD analysis and the unified analysis.

3. Two Major Analyses

3. 1. The MD Analysis

    Van Riemsdijk (1998, 2001, 2006ab) developed the idea that a single terminal string is simultaneously dominated by two or even more nodes. Based on this, he proposed that the CK of the TRF is shared between the matrix and the TFR clause. In this analysis an example such as *He carried what the crew took to be a can of gasoline* will be assigned the multidimensional structure like the one given in (12).

(12)

<div align="right">(Van Riemsdijk (2006a:365))</div>
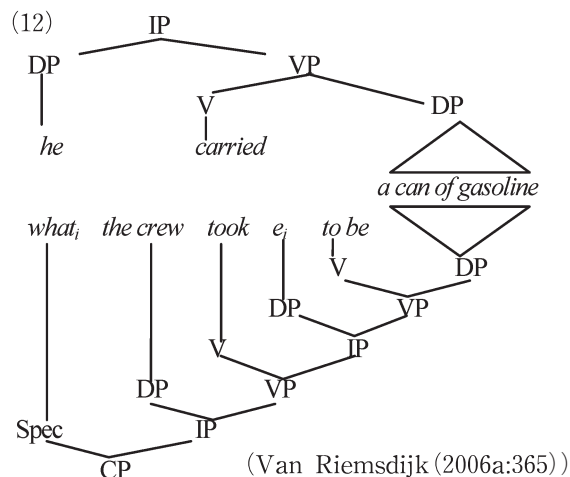
The CK *a can of gasoline* is simultaneously dominated by two VP nodes: the VP in the matrix and the VP in the TRF.

    The transparency of TFRs, observed in Sections 1 and 2, naturally follows from this structure. For example, the CK determines the agreement, syntactic category and definiteness of the entire TFR because the CK directly occupies the argument positon of the matrix verb.

    Another consequence of the MD analysis is that it can capture the fact that unlike SFRs, TFRs do not form an island for extraction, as shown by (13a,b) and (14a,b).

(13) a. *something that Mary invited *whoever is angry about*   (SFR)

    b. something that John is *what you might call angry about*   (TFR)

<div align="right">(Wilder (1999: 690))</div>

(14) a. *Who did they copy *whatever was identified as a picture of* ?   (SFR)

    b. Who did they copy *what was identified as a picture of* ?   (TFR)

<div align="right">(Van Riemsdijk (2006b:46))</div>

This is also attributed to the fact that the CK of the TFR occupies the complement position of the matrix verb out of which an element is generally assumed to be extracted.

    Though the MD analysis seems successful, it suffers from some problems. First it has difficulties accounting for the bound variable reading of pronouns, as noted by Kluck (2011: 98). Consider the following sentences.

(15) a. **Every professor**$_i$ was kissing [what seemed to be **his**$_i$ mistress].

    b. **Every student**$_i$ was kissing [what **he**$_i$ considered to be an attractive woman].

In (15a), the pronoun *his* in the CK allows a

variable reading, suggesting that *his* is c-commanded by the matrix quantifier *every professor*. This fact is compatible with the MD analysis because in a MD structure such as (12), the CK is within the c-command domain of the matrix subject. Similarly, the variable reading of *he* in (15 b) suggests that the TFR subject *he* is in the c-command domain of the matrix quantifier *every student*. This c-commanding relation is not established under the MD analysis, according to which no elements in the matrix clause c-command anything in the TFR except the CK. Specifically, it would wrongly predict that *every student* in (15b) should be unable to c-command the TFR subject *he*. This is not the case, however.

A similar problem stems from the distribution of NPIs inside the TFR. Consider the following sentences (adapted from Den Dikken (2005:99-100)):

(16) a. **None** of these people is what you'd call a (**remotely**) dangerous terrorist.

   b. **Nobody** gave that charity *what* {*anyone*/*everyone} *would* call **a red cent**.

   c. John is **not** *what* **anyone** *would call a clever guy*.

In the MD analysis, the c-command relation between the NPI (*remotely*) and its licenser (*none*) in (16a) is correctly established for the same reason that *every professor* in (15a) can c-command the pronoun *his* in the CK. In (16b), the NPI *anyone* in the TFR subject position, however, fails to be c-commanded by its licenser *nobody* in the matrix subject positon because in the MD analysis the matrix clause does not c-command anything in the TFR except the CK. For a similar reason, in (16c), *anyone* in the TFR cannot be c-commanded by *not* in the matrix, contrary to fact.

These two observations, taken together, suggest that the entire TFR is in the c-command domain of the matrix clause.

Another difficulty with the MD analysis concerns the fact, as noted by Kluck (2011:93), that movement of the entire CK into the matrix is impossible (17b, d) in contrast to extraction out of the CK (13b, 14b).

(17) a. Bea is *what you might call* **smart**.

   b. *Something$_i$ Bea is *what you might call* t$_i$. (Kluck (2011: 93))

   c. John is *what you might call* **a fool**.

   d. *What$_i$ is John *what you might call* t$_i$?

In the MD analysis, movement of the shared CK simply yields the well-known across-the-board (ATB) movement structure (18a-b), which has been assumed to involve MD structures (Citko (2011:55)).

(18) a. Which book$_i$ does [John like t$_i$] and [Mary hate t$_i$]?

   b. I know a book which$_i$ [John likes t$_i$] and [Mary hates t$_i$].

Given that the CK of the TFR is shared between the matrix and the TFR clause as in (12), it is expected that the entire CK should move in an ATB-fashion out of the TFR into the matrix. This is not the case, however (17b, d).

3．2．The Unified Analysis

Unlike Van Riemsdijk, Grosu (2003: 289) viewed TFRs as having basically the same structure as SFRs. In his view, the relevant parts of (1a) and (2a) are roughly represented as in (19a) and (19b), respectively.

(19) a. Lakoff has made [[$_{DP}$ *e*] [$_{CP}$ what$_i$ [$_{C'}$ C [$_{IP}$ appears to be [$_{SC}$ t$_i$ a radically new proposal]]]]]. (TFR)

   b. That's [[$_{DP}$ *e*] [$_{CP}$ what$_i$ [$_{C'}$ C [$_{IP}$ this idiot said t$_i$]]]. (SFR)

Like the SFR in (19b), the TFR in (19a) is composed of an overt CP and the null external head (represented by *e*), which has the same category as the CK *a radically new proposal*. Notice that the CK is deeply embedded inside the CP. This prevents the CK from interacting with the matrix, thus leaving unexplained the transparency of TFRs with respect to number agreement, category matching and definiteness. To accommodate this problem Grosu (2003:311) assumed that *what* is inherently unspecified for number and syntactic category and that it acquires specifications from the CK under equation with it. In (19a), *what* originates in the small clause and receives its number and other features from the CK under equation with it. Next, it moves into Spec, CP where *what* is accessible to the matrix in the same way that *what* in (19b) is.

There are two advantages of the unified analysis over the MD analysis. First, it can account for the distribution of bound pronouns and NPIs in TFRs. In the analysis, (15a) and (15b) are roughly represented as in (20a) and (20b), respectively.

(20) a. [$_{IP}$ **Every professor**$_i$ was kissing [$_{DP}$ *e*]

[$_\text{CP}$ what$_i$ [$_\text{IP}$ seemed to [$_\text{SC}$ t$_i$ be **his**$_i$ mistress]]]].

  b. [$_\text{IP}$ **Every student**$_i$ was kissing [$_\text{DP}$ e] [$_\text{CP}$ [what$_i$ [$_\text{IP}$ **he**$_i$ considered to [$_\text{SC}$ t$_i$ be an attractive woman].

In (20a), the pronoun *his* in the SC is correctly c-commanded by the matrix quantifier *every professor*. Similarly, in (20b), *he* in the TFR is c-commanded by the matrix quantifier *every student*, yielding a variable reading of *he*. A similar account is carried over to the distribution of NPIs.

It is worth noting here that the same distribution of bound pronouns and NPIs is also observed in restrictive relative clauses.

(21)a. ***Everyone*** there had a wife who loved **_him_**.

  b. ***Everyone*** got from Boston to a place **_he_** had been before. (Jackendoff (1977: 176))

(22)a. I **_didn't_** see a man who had had **_any_** drinks.

  b. We **_couldn't_** get from Boston to a place **_any_** of us had been. (ibid: 176))

The parallelism between (15a, b) and (21a, b) and between (16a-c) and (22a, b) strongly suggests that TFRs as a whole are within the c-command domain of the matrix clauses in the same way that the restrictive relative clauses are.

Second, the unified analysis can correctly predict the impossibility of the entire CK to move into the matrix. The analysis gives TFRs a complex DP structure consisting of DP and CP (19a), a well-known configuration that will lead to a violation of Complex DP constraint (**What did John meet a woman who hates___?*). The ungrammaticality of (17b, d) thus lends support to the unified analysis.

The discussions so far might lead to the conclusion that the unified analysis is superior to the MD analysis. As will be shown below, however, it suffers from some drawbacks. First, as Van Riemsdijk (2006b) argued, it cannot easily express the possibility of an element to be extracted out of the CK (13, 14). In the analysis, TFRs are treated as having the same complex DP structure as SFRs, which is taken to form a strong island for extraction. The analysis thus would predict no contrast between (13a) and (13b) in terms of grammaticality.[3]

Another problem with the unified analysis concerns a restriction on attributive adjectives. As

is clear from (23a-c), they do not permit post-head complements or modifiers. In other words, attributive adjectives must be adjacent to the nouns they modify.

(23)a. * a[very good at chess]friend

  b. * a[generous to a fault]sister

  c. * an[easy to find]place

     (Huddleston and Pullum (2002: 551))

As Van Riemsdijk (1998: 14) noted, such a restriction is also observed when TFRs are used as pre-nominal adjectives (24a, b).

(24)a. a *what seems to me to be **nervous*** person

  b. *a *what seems to be **nervous*** to me person

     (Van Riemsdijk (1998: 14))

If we take the position that the syntactic head of the TFR is the CK, the ungrammaticality of (24b) is directly attributable to the abovementioned adjacency condition on attributive adjectives. However, under the unified analysis in which *what* is argued to determine the category of the TFR, the ungrammaticality of (24b) is not straightforwardly explained as a violation of the adjacency condition in question.

There is yet another difficulty with the unified analysis, which concerns the possibility of bound anaphors in the TFR. Consider the following sentence:

(25) **_They_** live in what **_you guys_** often refer to as **_each other_**'s backyard

     (Van Riemsdijk (2000:6))

In (25), the anaphor *each other* inside the CK normally refers to the matrix subject *they*. Van Riemsdijk (2000:6) noted that the possibility of *each other* co-referring with the TFR subject *you guys* is not really excluded but "then the free relative is a 'normal' free relative, not a TFR." This fact cannot be readily explained under the unified analysis, which would allow *each other* to be bound by its antecedent *you guys* within its local domain; Condition A would be wrongly satisfied.

To summarize, we have shown that neither the MD analysis nor the unified analysis has succeeded in accounting for the properties of TFRs. In what follows we will pursue an alternative analysis based mainly on Schelfhout *et al.*'s (2004) parenthetical approach to TFRs.

4. An Alternative Analysis
4. 1. Schelfhout et al. (2004)

Schelfhout *et al.*'s parenthetical analysis is based

on the two claims that have been made in earlier studies on TFRs. First, like Van Riemsdijk, Schelfhout *et al*. took the CK to be the syntactic and semantic head of the entire TFR. Second, along the lines of Kajita（1977）and Wilder（1999）, the authors argued that TFRs are parenthetical in nature. As we observed in Section 2, TFRs share properties with parentheticals and semantically function as hedges or intensional modifiers. Based on these, the authors take the TFR minus the CK to be a parenthetical premodifier to the CK. Schematically, their analysis looks as follows:

（26）　John bought [par *what he took to be*] a banjo. In（26）, *what he took to be* serves as a premodifier to the CK *a banjo*, expressing doubt as to whether the referent is indeed *a banjo*. Notice that this modifying relation contradicts the view that finite clauses can only be post-modifying in English （Quirk *et al*.（1985: 1337））. Based on Wilder's （1999）observation, however, Schelfhout *et al*. argued that finite clauses can be premodifying in English only when they are used parenthetically. Consider（27a, b）, where the italicized parenthetical clause premodifies the boldfaced consituent.

（27）a.　This is a, *she thinks*, **stupid** decision.
　　　　　　　　　　　　　（Wilder（1999: 696））

　　　b.　More radical violence will break out this summer in New York, Chicago, and, *I guess*, **Los Angeles**.　（Kajita（1977: 59））

Given that parenthetical finite clauses are only premodifying and that TFRs are parentheticals, it comes as no surprise that *what he took to be* is analyzed as modifying the following CK.

4．2．The Syntactic Structure of TFRs

We have seen that the CK is the head of the entire TFR and that the rest is a parenthetical modifier to the CK. Structure（26）, however, is so sketchy and undetailed that it raises a number of questions:（i）does the parenthetical *what he took to be* form a part of the CK *a banjo*?（ii）If so, what structural position does the parenthetical occupy? In what follows, we will explicate the structure of a TFR while considering these questions.

An answer to question（i）will be obtained by considering the fact, noted by Nakau（1971:5）, that the entire TFR undergoes movements:

（28）a.　*What appears to be a radically new proposal* has been made by Lakoff.

　　　b.　*What appears to be a radically new proposal*, Lakoff has made.

　　　c.　It is *what appears to be a radically new proposal* that Lakoff has made.

It has been widely assumed that a string of words that undergo movement form a phrasal constituent. Thus,（28a-c）indicate that the parenthetical modifier *what appears to be* is a genuine part of the CK and that the entire TFR forms a constituent.

Let us turn to question（ii）. As we saw in Section 2, the parentheticals function as intensional modifiers, such as *allegedly* or *possibly*. Velde vas de（2011: 390）argued that these modifiers occupy a slot above articles, because they precede articles （***possibly** the worst performance of his career*）. Given this and that the parenthetical modifier precedes the article as in（1a）and（10a）, it would be reasonable to assume that the parenthetical modifier occupies a position higher than the D head which is occupied by articles. Two structural positions the parenthetical would occupy are conceived: Spec, DP and the DP adjunction site. We cannot take the former option as is evidenced by the fact that the parenthetical precedes a possessor（29）which has been taken to occupy Spec, DP（Abney（1987））.

（29）…the museum had only just got round to registering *what appeared to be **Audubon's** proofs*.　　　　　　　（BNC）

Instead, we propose the following structure for TFR where the parenthetical modifier adjoins to DP（the internal structure of *what he took to be* is set aside）.

（30）
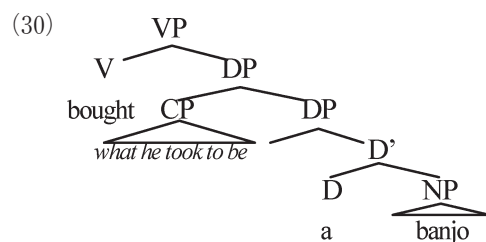
One obvious problem with this analysis is that in （30）, the parenthetical clause *what he took to be* lacks an argument（*a banjo*）that is selected by the verb *be*. This would lead to a violation of the theta-criterion because there is no（predicative） argument to which *be* assigns a theta-role. This problem does not arise in the MD approach, according to which the CK is simultaneously selected by the matrix verb and the TFR verb. Apart from this theoretical reason, however, we can hardly obtain any evidence that the verbs inside the

parentheticals select the CKs. Moreover, Quirk *et al.* (1985: 113-114) argued that parenthetical clauses are "defective syntactically: the verb or adjective lacks its normally obligatory complementation." This being so, it would be reasonable to suppose that the verbs in question lack complementation. This gains plausibility from the fact that, as shown in (4b, c), TFRs may be formed with syntactic categories that the verbs in the parenthetical do not independently select. Some relevant examples are repeated here as (31a, b), and an instance attested in the corpora is added as (31c).

(31) a He came out next day, but I didn't get a chance of speaking to him *what you might call **privately***. (Kajita (1977: 57))

  b. Frank is awfully sensitive and it had upset him a lot to feel that my mother disapproved of him, and was *what he called **poisoning my mind***. (ibid : 57)

  c. They never become fixed—or *what we call **entrained***—in a regular cycle. (COCA)

Obviously, in each of the examples in (31), the verb *call* does not independently take either adverbial categories (31a) or verbal categories (31b, c) as its complements. In spite of this, (31a-c) are grammatical. This seems to demonstrate that the verbs in the parentheticals lack their obligatory complementation.

4. 3. The Adequacy of the Parenthetical Analysis

In this section, we compare our analysis with the MD analysis and the unified analysis to establish which one, if any, is empirically more successful with respect to the explanation of the properties of TFRs. The properties of TFRs to be accounted for are as follows: (i) transparency (3-7); (ii) the ability of an element to be extracted out of the CK (13, 14); (iii) the distribution of bound pronouns and NPIs (15, 16); (iv) the inability of the whole CK to be moved into the matrix (17); and (v) the inability of the TFR subject to refer to an anaphor in the CK (25).

The transparency of TFRs, observed in Sections 1 and 2, can straightforwardly be accounted for under structure (30). The CK determines number agreement, syntactic categories or definiteness of the entire TFR because the CK is the syntactic and semantic head of the construction. In our analysis, for example, the categorial matching between the entire TFR and the CK (4-6) derives automatically

from the endocentricity requirement of X-bar theory, which requires that a head and its projection bear the same categorial specification. For example, if the head of the TFR is specified as [+N], the entire TFR must also be specified as [+N]. If the head of the TFR is specified as [+A], the entire TFR must be [+A], and so on. Thus, the analysis provides a straightforward account of the matching effect; no special mechanism is needed.

In addition, our analysis can capture the immunity of CKs for island effects (13a, 14a), which has posed a problem for Grosu's analysis. The relevant parts of (14a), for example, will have the schematic structure:

(32) Who$_i$ did they copy [$_{DP}$ [$_{CP}$ *what was identified as*] [$_{DP}$ a picture of t$_i$]]?

In (32), the CK *what was identified as a picture of* occupies the complement position of the matrix verb, out of which *wh*-phrases are generally assumed to be extracted.

The distribution of bound pronouns and NPIs in TFRs, which has failed to be explained by the MD analysis, can be predicted under our analysis. (15 a) and (15b) are roughly represented as in (33a) and (33b), respectively.

(33) a. **Every professor**$_i$ was kissing [$_{DP}$[$_{CP}$ what$_i$ seemed to be] [$_{DP}$ **his**$_i$ mistress]].

  b. **Every student**$_i$ was kissing [$_{DP}$[$_{CP}$ what **he**$_i$ considered to be] [$_{DP}$ an attractive woman]].

In (33a), *his* in the DP is c-commanded by the matrix quantifier *every professor*. Likewise, in (33 b), *he* in the parenthetical clause is c-commanded by the matrix quantifier *every professor*, yielding a variable reading of *he*. A parallel analysis would extend to the distribution of NPIs.

The failure of the entire CK to be moved into the matrix, which has posed a problem for the MD analysis, can be accounted for in our analysis. The relevant parts of (17d) will have the schematic structure given in (34).

(34) *What$_i$ is John [$_{DP}$ [$_{CP}$ *what you might call*] [$_{DP}$ t$_i$]]? The movement of *what* in (32) would yield the configuration in which part of the DP is moved. This is usually barred because of the widely-known constraint on movement: only phrasal constituents undergo movement (Radford (1988: 72)). (35b) and (35c) are ungrammatical because part of the DP is preposed (ibid: 70).

(35) a. *Your elder sister*, I can't stand.

b.　*_Your elder_, I can't stand sister.

c.　*_Elder sister_, I can't stand your.

The unacceptability of （34） can be ascribed to the above constraint on movement, which also rules out the ungrammatical examples of （35）.

Finally, the inability of the TFR subject to co-refer with an anaphor in the CK （25）, which Grosu's analysis cannot accommodate easily, is predicted under our analysis.　The relevant parts of （25） will be represented in simplified form, as in （36）.

（36）　**_They_** live in $[_{DP} [_{CP}$ what **_you guys_** often refer to as$][_{DP}$ **_each other_**'s backyard$]]$.

From this structure, it is obvious that _each other_ is not c-commanded by the antecedent _you guys_ embedded in the parenthetical clause, thus barring the former from referring to the latter.

5．Summary

In this paper, we have proposed a parenthetical analysis of TFRs, which analyzes the CK as heading the entire phrase, with the rest being adjoined to DP as a parenthetical modifier that semantically functions as a hedge or an intensional modifier.　A comparison of our alternative with the MD analysis and the unified analysis reveals that of the three analyses, ours is empirically superior because it accounts for a wider range of facts about TFRs than the rest.

One remaining problem with our analysis is that the verbs inside the parentheticals lack predicative arguments they would select.　We have assumed that the verbs in question do not take any complements, on the grounds that the lack of an obligatory complement occurs with parenthetical finite clauses in general （Quirk _et al._ （1985: 113-114）） and that TFRs are formed with syntactic categories the verbs in question do not independently select.　The implementation of this idea, however, needs further research.

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1　Nakau (1971) called examples of the type in (1a, b) as *pseudo-free relatives*.　Instead of this we will use *Transparent Free Relatives* merely because it is widely used in the literature.

2　Throughout the paper the CK is represented in boldface and the TFR in italics.

3　Grosu (2003: 296) argued that extraction possibilities are spurious because extraction out of the CK is not always possible.

(i)　*Who did she draw what no normal person would describe as a successful caricature of ?

The ungrammaticality of (i) might seem to be affected by *no normal person* in the TFR subject which would cause a negative island effect (Rizzi (1990)).　What matters is that there are speakers who distinguish between (13a) and (13b) and between (14a) and (14b).