

Transparent Free Relatives*

Chris Wilder

Zentrum für Allgemeine Sprachwissenschaft, Berlin

1. What it's about

The literature recognizes two types of Free Relative with *what*. Ordinary FRs as in (1) function like definite or universal argument DPs (Jacobson 1995). In specificational pseudocleft sentences (2), the *wh*-clause has been argued to form the predicate of the matrix clause, taking the adjective as its subject (Williams 1983, Iatridou & Varlokosta 1996).

- (1) John likes [what(ever) I cook]
(2) angry is [what John is]

The examples in (3) belong to a third type which does not reduce to either of the first two, although it shares properties with both. This type has gone largely unnoticed—the only discussion I have seen is in McCawley (1988). I call them *Transparent Free Relatives* (TFRs), for reasons that will become clear. TFRs occur as arguments (3a), predicates (3b) or attributes (3c):

- (3) a. [what seems to be a tourist] is lying on the lawn.
b. John is [what you might call a fool / stupid]
c. a [what you might call tricky] example

This construction shows syntactic behaviour which leads to a kind of paradox; with respect to various syntactic tests, the free relative behaves as if it were invisible. The goals of this paper are to sort out the relevant properties of TFRs, by contrasting them with ordinary FRs, and to suggest how to resolve the paradox they present. Section 6. adds some remarks on the relation of TFRs to specificational pseudoclefts.

2. Transparent Free Relatives vs. Ordinary Free Relatives

Ordinary FRs have the internal syntax of complement *wh*-clauses. The same *wh*-phrases (ignoring the *-ever* morpheme) are used in both: *what(ever)* (N); *which(ever)* (N); *who(ever)*. However, free relatives have the distribution of DPs, being licensed in DP-only positions, such as the goal argument position of ditransitive verbs (4)-(5). I shall assume a structure like (6), where a zero determiner takes a *wh*-CP complement:

- (4) he gave whoever she named a kiss
(5) * he V [whether I failed] NP (there is no such verb)
(6) [DP \emptyset_D [CP *what*_t \emptyset_C [IP you ordered t_j]]]

FRs also get interpreted like DPs, rather than interrogatives. In particular, they get a definite or universal reading, rather than an indefinite reading (7) (Jacobson 1995). As expected, they are also barred from the indefinites-only position in *there*-sentences (8).

- (7) [what you ordered] is on the desk
≠ something which you ordered ...
= the thing(s) which you ordered ...
(8) * There is [what you ordered] on the desk.

The properties of bare *what* are important in what follows. Jacobson (1995) notices that Free relatives with bare *what* are semantically vague with respect to the cardinality of the sets they can denote. Thus, while

* Earlier versions of this paper were presented in Berlin (July and November 1997), Leipzig (November 1997), and at WCCFL XVII in Vancouver (February 1998). For helpful comments I wish to thank those audiences, and especially A. Alexiadou, M. Den Dikken, H.-M. Gärtner, J. Merchant, C. Maassen, A. Meinunger, A. Munn, O. Percus, C. Schmitt and A. Steube.

example (9a) denotes a properly plural set, and (9b) denotes a singleton set, (9c) can be used denote either a singleton or a plural set. However, bare *what* is grammatically singular, regardless of interpretation: cf. (10), where *what* itself triggers singular agreement inside the FR; and the FR itself triggers singular agreement in the higher clause:

- (9) a. whatever dishes John ordered *proper plural*
 b. whatever dish John ordered *atom*
 c. what(ever) John ordered *either*

(10) [what(ever) is (*are) on the table], belongs (*belong) to me.

Also, FRs with bare *what* cannot be used to refer to humans. The deviance of (11a,b) is due to the fact that *invite* selects a [+human] object. Neither bare *what* nor an FR headed by *what* can fulfill that requirement.

- (11) a. # I liked what he invited (*ok*: what students)
 b. # I invited what he recommended

Note that neither [singular] nor [-human] is a rigid property of *what*, which as a determiner combines freely with [+human] NPs and with plural NPs.

Transparent FRs have the form of wh-CPs headed by bare *what* with the specific format (12). They always contain an internal small clause whose subject is *what*, and whose predicate XP can either be a DP or an AP. The wh-pronoun can be moved from a nominative or an accusative position, depending on the governing verb, cf. typical frames given in (13).

(12) [CP what_{tj} ... V [SC t_j XP_{PRED}] ...]

- (13) a. *trace of what (DP*)=Acc*
 ... V [SC DP* to be XP] (V = consider, take, etc.)
 ... V [SC DP* as XP] (V = describe, regard, etc.)
 ... V [SC DP* XP] (V = call, etc.)
- b. *trace of what (DP*)=Nom*
 [IP DP* .. V [SC t_{DP} to be XP]] (V = seem, be considered, etc.)
 [IP DP* .. V [SC t_{DP} as XP]] (V = be described, etc.)
 [IP DP* .. V [SC t_{DP} XP]] (V = be, be called, etc.)

All Transparent Free Relatives have this structure, but not all free relatives that have this structure are necessarily transparent, as we will see.

As noted, TFRs can function as arguments, predicates or attributes. When they appear in argument position, they appear to be ordinary referential DPs, like ordinary free relatives. But they differ with regard to the properties just reviewed, and more besides. (14) lists six important differences:

- (14) a. *Ordinary FRs* i) definite/universal reading only
 ii) barred from 'indefinites-only' position
 iii) singular agreement only with bare *what*
 iv) [-human] only with bare *what*
 v) wh-phrase can also be *whatever* (N), *who(ever)* etc.
 vi) strong island for extraction
- b. *Transparent FRs* i) weak indefinite reading also possible
 ii) can appear in 'indefinites-only' position
 iii) plural agreement possible with bare *what*
 iv) [+human] possible with bare *what*
 v) wh-phrase can only be bare *what*
 vi) no island effect w.r.t. extraction from XP_{PRED}

In contrast to ordinary free relatives, TFRs can have indefinite or weak existential interpretation, cf. (15a) (from McCawley 1988:733); and can also stand in the indefinites-only position (15b):

- (15) a. [what could best be described as pebbles] were strewn across the lawn.
 b. there were [what could be best described as pebbles] strewn across the lawn.

This case is a first illustration of the paradoxical properties of TFRs. The XP in the small clause clearly acts as a predicate within the FR. However, the FR is 'transparent' in the sense that XP simultaneously determines properties of the whole free relative. Thus, in (15), the FR seems to inherit indefiniteness from the XP predicate, which is an indefinite DP (*pebbles*).

This transparency is both syntactic and semantic. The predicate XP seems to form the semantic head of the TFR constituent; while the remainder of the FR functions as a modifier, cf. the paraphrase in (16):

- (16) a. there is [what appears to be an error] in this program.
 b. there is [an apparent error] in this program.

Syntactically, also, the predicate XP shows all signs of being the head of the construction. Most strikingly, it is *the category of XP* that determines the distributional possibilities for a TFR. If the predicate XP is adjectival, the TFR must be in an AP-position (17); and if the predicate is a DP, the TFR must be in a DP-position (18) (note that while copular sentences accept DPs or APs in predicate position, subject positions accept DPs but not APs and prenominal attributes inside DP can be AP but not DP):

- (17) a. John is [what you might call stupid] *predicate*
 b. * [what you might call stupid] just walked in *subject*
 c. a [what I'd describe as stupid] decision - *attribute*
- (18) a. John is [what you might call a fool] *predicate*
 b. [what you might call a fool] just walked in *subject*
 c. * a [what I'd describe as a failure] decision *attribute*

Where the predicate XP is a DP, it also determines other properties of the FR, such as definiteness and number. If the predicate is definite (19b), the whole TFR takes on a definite reading, and can no longer appear in the *there*-sentence:

- (19) a. there is [what appears to be [a virus]] in this program
 b. * there is [what appears to be [the virus]] in this program

If the predicate is plural, the TFR triggers plural agreement (20) (cf. also (15)); and if the predicate is [+human] (21), the FR takes a human referent:

- (20) [what seem/*seems to be [tourists]] are/*is lying on the lawn.

- (21) she invited [what I took to be [a policeman]]

Recall that ordinary FRs headed by bare *what* do not trigger plural agreement even if denoting a semantically plural entity; nor do they permit human referents. However, in *wh*-questions (22), we see plural agreement with *what*, though only in (22a), i.e. in precisely the TFR configuration (12). This can be related to facts (23) showing that a plural DP predicate as in (22a) is incompatible with a singular subject. So arguably, the plural in (20) does not show that the predicate DP directly determines the number features of the FR; as the transmission may be mediated by *wh*-movement of *what*:

- (22) a. what seem to be *t* the worst problems? (*seems)
 b. * what seem to be *t* on the table? (ok: seems)
- (23) a. * this seems to be [*t* the worst problems] (ok: these seem...)
 b. I consider [these (*this) terrible scissors]

A similar line might be attempted with [+human]—it could be that *what* may inherit [+human] from its DP predicate and transmit it via *wh-movement* to the whole FR. However, in *wh-questions*, even those with the TFR-configuration (12), *what seems far less compatible with human reference*:

- (24) a. ? what did you take to be a policeman?
 b. * what do you consider to be your best friend?

TFRs are not only transparent with respect to category and other features, they are also transparent with respect to extraction. Ordinary FRs form strong islands, like complex NPs (expected if FRs are in fact DPs):

- (25) a. * the student that Mary invited [who(ever) likes t]
 b. * something that Mary invited [whoever is angry about t]

Now consider (26). As far as extraction out of the predicate XP is concerned, TFRs are not islands at all. The contrast between (26) and (25) is huge. In terms of grammaticality, the extractions in (26) exactly match those in (27), where there is no FR at all containing XP:

- (26) a. ? the professor who I met [what you might call [a student of t]]
 b. something that John is [what you might call [angry about t]]
 (27) a. ? the professor who I met [a student of t]
 b. something that John is [angry about t]

To summarize: with respect to a range of syntactic tests, a Transparent Free Relative seems to have no interaction with the matrix clause containing it. Rather, it is the XP constituent—apparently a predicate contained *inside* the TFR—that interacts directly with the matrix clause.

3. XP_{PRED} is the head of the TFR constituent

McCawley (1988:732-733) cites a proposal from Kajita (1977) to account for the special properties of what I am calling TFRs. This invokes a process of 'Reanalysis' which transforms the structure (28a), with the predicate XP contained within the FR, into (28b). XP becomes the head of the structure, the FR a kind of modifier or adjunct:

- (28) a. [FR XP_{PRED}] → b. [XP [FR] XP_{PRED}]
 (29) a. John bought [FR what he took to be [DP a guitar]]
 b. John bought [DP [FR what he took to be] a guitar]

This is intuitively correct. (29) is ambiguous. In one reading, associated with the ordinary Free Relative structure (29a), the object of *bought* is a definite: 'the thing that he thought was a guitar'. In the second reading, the object of *bought* is indefinite: 'a guitar (or so he thought)'. In this reading the Free Relative is transparent; it merely modifies the indefinite *a guitar* (as McCawley notes, this modification has a metalinguistic flavour—the FR 'hedges' the description in the NP).

Assuming that TFR's have a structure like (28b) offers an immediate solution to most of our problems. The reason why XP (and not the free relative) determines grammatical properties of the TFR constituent, is that XP is the head of that constituent. This goes for number agreement, human reference, definiteness, and for the syntactic category of the constituent. As for why the free relative does not interfere with extraction out of XP, the reason is simple—the free relative does not contain XP.

How does the structure (28b) arise? There can be no transformational rule of Reanalysis deriving (28b) from (28a)—such a rule would alter theta-relations, turning an argument (the Free relative) into a modifier, and turning a predicate (XP) into an argument. Hence, we must assume that (28a) and (28b) are two independently generable structures.

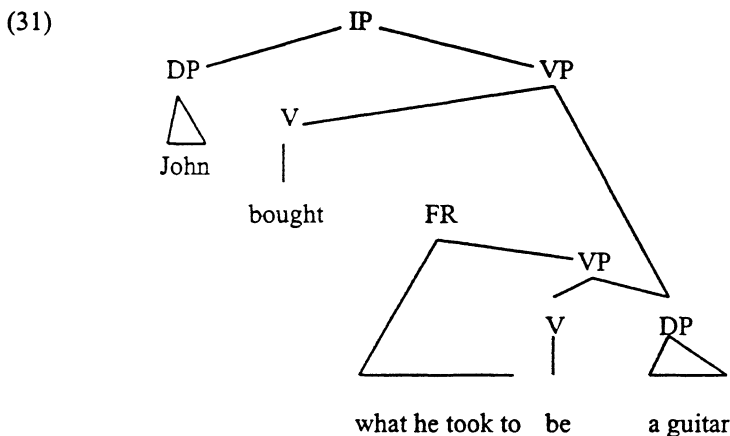
Looking more closely at the transparent structure (28b), it becomes apparent that the free relative is incomplete. The trace of *what* is an argument variable; it needs a theta-role. Yet there is no predicate in the relevant position to assign that theta-role. The missing predicate is of course XP. Thus, XP in the 'reanalyzed' structure is in fact a 'shared constituent'—it needs to be in two places simultaneously. Transparency dictates that XP is outside the FR; but XP must also be inside the FR where it acts as a predicate, theta-marking the trace of *what*.

So we have reached three conclusions about TFRs: (i) XP heads the TFR constituent, as in (28b); (ii) the structure (28b) is not transformationally related to ordinary FRs; and (iii) XP is in some sense a ‘shared constituent’. We now face two further questions about (28b):

- (30) a. What is the relation of the FR to the host sentence?
 b. What is the nature of constituent-sharing?

For (30a), I see two possible answers. Either the FR is an adjunct—i.e. is adjoined to XP in syntax; or the FR is some kind of parenthetical expression. There are grounds for assuming that the FR is a parenthetical, which I take to mean that it is syntactically disconnected from the host sentence, and that it gets inserted into the host sentence only in the PF-component (this is only tentative—other approaches to parentheticals are conceivable). In section 5, it is argued that TFRs have more in common with parenthetical expressions than with classical adjunct modifiers.

With respect to constituent sharing (30b), there are also two possible answers. In one view, sketched in (31), XP is literally simultaneously the daughter of two VP nodes, the VP in the FR and the VP of the matrix clause. This approach requires a theory of phrase structure which gives up the unique mother condition, to permit multiple dominance (cf. Moltmann 1992 for such an approach to constituent sharing in coordination):



The alternative, preserving standard assumptions about phrase structure, is to assume an ellipsis approach: there are two copies of XP, one in the FR and one in the matrix, one which surfaces as an empty category, giving one of the two options in (32):

- (32) a. John bought [_{FR} what he took to be [_{DP} a guitar]] [_{DP*} ∅]
 b. John bought [_{FR} what he took to be [_{DP} ∅]] [_{DP*} a guitar]

Here, I will adopt the ellipsis approach. In particular, I will argue for (32b)—the deleted copy of XP is the copy inside the TFR. There is no known ellipsis rule that could give us (32a); but there is an ellipsis rule that could generate (32b). This is Backward Deletion, also involved in so-called Right Node Raising constructions (see Wilder 1997).

Combining these two answers, my proposal is summarized in (33). In syntax, only XP is present in the matrix clause, where it interacts directly with the matrix with respect to argument/predicate status, category, definiteness, agreement, and extraction. Deletion takes place in the PF-component, following parenthetical placement (only then is the input configuration for Backward Deletion created).

- (33) a. *Syntax: independent phrase markers*
 [he bought [_{DP} a guitar]] [what he took to be [_{DP} a guitar]]
 b. *Phonology: parenthetical placement and deletion*
 John bought < what he took to be a guitar > a guitar

Two additional stipulations are needed to ensure correct placement and to guarantee that deletion takes place. If either of the conditions (34) is not met, the construction simply fails. (34a) excludes cases like (35a)—the FR cannot be placed farther left from the matrix XP, though there is no reason why Backward Deletion

should not apply in such cases. (34b) is needed to exclude (35b)—if there is no deletion in the FR, we get gibberish:

- (34) a. the TFR must be left-adjacent to XP in the host sentence
 b. XP in the TFR must be deleted
- (35) a. * <what he took to be a guitar> John bought a guitar
 b. * John bought <what he took to be a guitar> a banjo

4. Evidence for Backward Deletion

This section gives two arguments to support the Backward Deletion approach. One concerns identity, the second concerns word order.

4.1 Identity

We have already seen that deleted and overt XPs can fulfill different syntactic functions—the deleted XP is always a predicate in a small clause; the overt XP can be an argument, a predicate or an attributive adjective. If there really is phonological deletion in TFRs, we might expect that the deleted constituent and its overt antecedent would need to be identical phonologically, but not necessarily morphosyntactically. Evidence for this is provided by the contrast between (36a) and (36b). In the frame *call YP XP*, cf. (37), the predicate XP can be nominal or adjectival but not verbal. This takes case of (36b). In (36a), though, the verbal form *snoring* is able to license deletion of the homophonous nominal gerund in the FR, as in (38):

- (36) a. ? John is what I'd call snoring
 b. * John what I'd call snores
- (37) I'd call that [_{AP} boring] / [_{NP} snoring] / * [_{VP} snores]
- (38) John is < what I'd call [_{NP} snoring] > [_{VP} snoring]

4.2 Word order: placement of the overt copy of XP

The second argument for Backward Deletion concerns word order. The shared constituent of TFRs underlies the restriction (39): it must be positioned in the surface string so as to stand at the right edge of the Free relative. In other words, the shared constituent cannot appear properly contained within the FR. If we assume Backward Deletion, this is exactly what we expect—the spelled-out copy must be outside and to the right of the FR. Add to this the assumption about placement (34a), and (39) follows.

- (39) The 'shared XP' must appear at the right edge of the FR

The data in (40)–(42) illustrate this condition. Recall that TFRs in DP position can be ambiguous between an indefinite transparent free relative and a definite ordinary free relative (40a). If (39) is not met, as in (40b), the transparent indefinite reading disappears. The same goes for TFRs in predicate position (41). (41a) is ambiguous between a 'hedged AP' reading and a 'definite DP' reading; (41b) loses the 'AP' reading. In prenominal modifier position (42), only the transparent structure is available, and the structure fails if the AP is not at the right edge of the free relative.

- (40) a. John bought [what I described as a guitar] *ambiguous*
 b. John bought [what I described as a guitar to him] **TFR*
- (41) a. This was [what I described as stupid] *ambiguous*
 b. This was [what I described as stupid to John] **TFR*
- (42) a. a [what I described to John as stupid decision] *TFR only*
 b. * a [what I described as stupid to John] decision

4.3 The 'right edge' condition on the deletion target

There is a further fact that supports the generalization of constituent-sharing in TFRs to right node raising in coordination. Example (43a) is excluded because the *to*-PP cannot intervene between *as* and its adjective, cf. (43b). However, this account depends on an additional assumption, viz. that the AP-gap in the FR must be at the

right edge of the FR. (43a) could have had another derivation (43c), based on the word order in (41b), with the deleted adjective preceding the PP:

- (43) a. * a <what I described as to John ~~stupid~~> stupid decision
 b. * I described this as to John stupid
 c. (*) this is a <what I described as ~~stupid~~ to John> stupid decision

We can rule out (43c) out by appealing to the condition (44), which holds of Backward Deletion generally (cf. Oehrle 1991, Wilder 1997). The deletion site must be right-peripheral in the TFR (the domain referred to in (47); in coordinations, this corresponds to the conjunct):

- (44) A Backward Deletion target is at the right edge of its domain.

With respect to 'Right Node Raising', (44) accounts for contrasts like (45). In (45a), the deleted NP can be at the right edge of its conjunct, if it undergoes Heavy NP-shift. In (45b), the deleted NP is the goal object of a double construction. Such NPs cannot undergo Heavy NP-shift—cf. (45d), hence there is no way for the deleted NP in (45b) to be at the right edge of its conjunct.

- (45) a. Sue gave _ to Bill ~~that old diary of mine~~ and Mary will read that old diary of mine
 b. * Sue gave _ roses ~~the boy next door~~ and Mary visited the boy next door
 c. Sue gave _ to Bill [that old diary of mine] *ok HNPS*
 d. * Sue gave _ roses [the boy next door] ** HNPS*

4.4 OV-languages

These facts about TFRs seem to hold cross-linguistically as well. We predict that a language can only have a TFR modifying a prenominal adjective if the word order rules of that language allow an adjectival predicate to stand at the right edge of the free relative, that is, in postverbal position.

German is an OV language that does not allow predicative APs to follow the verb in free relatives (46); and German does not have TFRs (47). In Dutch, another OV language, predicative APs can follow the verb in free relatives (48)—and Dutch does have TFRs (49) (Dutch data from Marcel den Dikken, p.c.):

- (46) a. Dies ist [was ich als dumm bezeichnen würde]
this is what I as stupid describe would
 b. * Dies ist [was ich bezeichnen würde als dumm]
 (47) a. * eine [was ich als dumm bezeichnen würde] Entscheidung
a what I as stupid describe would decision
 b. * eine [was ich bezeichnen würde als] dumm-e Entscheidung
a what I describe would as stupid-AGR decision
 (48) Dit is [wat ik beschouw als tamelijk stom]
this is what I regard as fairly stupid
 (49) een <wat ik beschouw als > tamelijk stom-e beslissing
a what I regard as fairly stupid-AGR decision

5. TFRs as parentheticals

Turning now to the claim that TFRs are parentheticals and not standard adjuncts, it is a quite general fact about English that finite clauses are not tolerated inside premodifiers of adjectives, cf. (50a). If TFRs were adjuncts, then in prenominal position they would have to be analysed as pre-modifiers of the prenominal adjective, a blatant counterexample to the generalization. On the other hand, sentence parentheticals can pre-modify adjectives (50b):

- (50) a. * an [_{AP} [as clearly as mine is] stupid] decision
 b. This is a, [she thinks], stupid decision

Sentence parentheticals and TFRs also share properties of intonation and information structure. In (50b), the host sentence is foregrounded, the parenthetical backgrounded. In a TFR, the shared constituent in the matrix is foregrounded, the free relative (minus the shared XP) is backgrounded.

Ordinary sentence parentheticals do not have the 'constituent sharing' property of TFRs, but there is another type of parenthetical which does. This is the *Sluice Parenthetical*, discussed by Lakoff (1974) (cf. also McCawley 1988:739). (51) involves a sentence parenthetical containing a sluiced interrogative complement (*Sluicing*=IP-ellipsis), which serves to meta-linguistically 'modify' the matrix object, much like TFRs do.

(51) John invited <you'll never guess what kind of> people to his party

Sluice parentheticals involve constituent sharing at the right edge of the parenthesis—the noun of the wh-phrase is simultaneously the (bare indefinite mass or plural DP) object of the matrix clause. This is shown by the fact that neither clause of (51) is complete without the noun *people*:

- (52) a. John invited people to his party
 b. * John invited to his party
 c. You'll never guess what kind of people [_{IP} ∅]
 d. * You'll never guess what kind of

The analysis developed for TFRs can be applied directly to Sluice Parentheticals—parenthetical placement followed by Backward Deletion:

(53) John invited <you'll never guess what kind of ~~people~~> people to his party

In German, word order rules are such that the wh-phrase in a sluice ends up at the right edge of its clause. This means that we expect Sluice Parentheticals (unlike TFRs) to be possible in German, as indeed they are:

(54) Hans hat <du kannst dir nicht vorstellen, was für Leute> Leute eingeladen
H. has you can REFL not imagine what-sort-of people invited

Notice also that we have to make the same two stipulations (55) for Sluice Parentheticals as we did for TFRs, to guarantee that the parenthetical is placed correctly and that deletion takes place, excluding examples like (56):

- (55) a. the Sluice-SP must be left-adjacent to XP in the host sentence
 b. XP in the Sluice-SP must be deleted

- (56) a. * <you'll never guess what kind of ~~people~~> John invited [people] to his party
 b. * John invited <you'll never guess what kind of people> [idiots] to his party

These similarities between Sluice Parentheticals and TFRs underscore the claim made here that TFRs are a species of parenthetical expression.

6. TFRs and Pseudoclefts

One difference between ordinary FRs and TFRs still to be addressed (cf. (14) above) concerns the "what-only" restriction—TFRs can only be formed with bare *what*, cf. (57)-(58). Interestingly, this is also a property of specificational pseudoclefts (SPCs) (cf. Iatridou and Varlokosta 1996). To conclude, I comment briefly on the relation between the two constructions.

The *what*-only restriction has two subcases. First, *whatever* is not possible (57). Secondly, it concerns the choice between *what* and *who* in FRs with [+human] predicate DPs; *who* is not possible in (58).

(57) a. John is what/*whatever I'd call angry *TFR*
 b. I'd call what/*whatever John is angry *SPC*

(58) a. John is what/*who (I thought) was a policeman *TFR*
 b. what/*who John is is a policeman *SPC*

The SPCs in (57)-(58) are like the sentences containing TFRs, only turned inside out, as it were. The predication relation *inside* the TFR, between the trace of *what* and *angry* in (59a), is the same as the *external* predication in the SPC (59b), between the Free Relative and *angry*:

- (59) a. John is < what I'd call [_{SC} *t* angry] > angry TFR
 b. I'd call [_{SC} what John is angry] SPC

This suggests that the *what*-only restriction may reflect a common property holding of the internal predication (the small clause) inside TFRs and of the external predication between the FR and its associate in SPCs.

Suppose that the predications marked in (59) are underlyingly predications involving bare *that* as its subject, as in (60).

- (60) a. I'd call [that angry] TFR
 b. I'd call that (John is that) angry SPC

The *what*-only restriction follows on the reasonable assumption that bare *what* is the only wh-pronoun that can realize *that*.

If this is on the right track, then TFRs and pseudoclefts should have other properties in common with predications having bare *that* as their subject (cf. Higgins 1979:ch.5 for relevant discussion of copular sentences with *that* as subject). There is another restriction that holds of all three cases, illustrated in (61) to (63)—none of them works with *remain* or *become*:

- (61) * what John is remains / has become angry SPC
 (62) * John is < what remains / has become ~~angry~~ > angry TFR
 (63) (Did you hear him shouting?) *that*-predication
 a. that was (what you'd call) angry
 b. * that remains / has become (what you'd call) angry.

The correlation with predications having bare *that* as their subject may prove important in understanding why TFRs can only be formed from free relatives having the format (12). Also suggestive is the fact that the contrast in (64) between ordinary FRs headed by *what* and TFRs with respect to [+human] also correlates with the compatibility of *that* in (65a) but not (65b) with [+human] denotation.

- (64) a. <What I'd call ~~a policeman~~> a policeman just walked in.
 b. I invited [who / #what you met last night]
 (65) a. That's a policeman / I'd call that a policeman
 b. I met him / #that last night.

Of course, the ideas sketched in this section need careful working out, but that's a topic for another paper.

References

- Higgins, Roger. 1979. *The Pseudo-Cleft Construction of English*. New York: Garland.
 Iatridou, Sabine & Spyridoula Varlokosta. 1996. A crosslinguistic perspective on pseudoclefts. *NELS* 26:117-131
 Kajita, Masaru. 1977. Towards a dynamic model of syntax. *Studies in English Linguistics* 5:44-66.
 Jacobson, Pauline. 1995. On the quantificational force of English free relatives, in E. Bach, E. Jelinek, A. Kratzer & B. Partee, eds., *Quantification in Natural Languages* [Vol. 2]. Dordrecht: Kluwer.
 Lakoff, George. 1974. Syntactic Amalgams. *Chicago Linguistic Society* 10:321-344.
 Moltmann, Friederike. 1992. *Coordination and Comparatives*. Doctoral dissertation, MIT.
 Oehrle, Richard. 1991. Categorical frameworks, coordination and extraction. *WCCFL* 9:411-425.
 McCawley, James. 1988. *The Major Syntactic Phenomena of English*. Chicago: Chicago University Press.
 Wilder, Chris. 1997. Some properties of ellipsis in coordination. In: A. Alexiadou & T. Hall, eds., *Studies in Universal Grammar and Typological Variation*. Amsterdam: Benjamins.
 Williams, Edwin. 1983. Semantic vs. syntactic categories. *Linguistics & Philosophy* 6:423-446.