

English *That*-Relative Constructions: An HPSG Approach

Chan Chung
(Dongseo University)

1. Introduction

- Grammatical functions of *that*-clauses (Pam Peters 2004: 534-535):
 - (1) a. adverb: The course isn't **that** easy.
 - b. determiner: **that** exciting trip
 - c. demonstrative: To go to Japan — **that** was her number one ambition.
 - d. complementizer: We knew **that** the idea was yours.
 - e. appositive: Doubts **that** the government would fund the project quickly surfaced.
 - f. relativizer: The TV program **that** we saw last night had a powerful impact on us.
- Goals of this paper:
 - (i) to explore a constraint-based analysis on the relativizer-*that* (*R-that*) constructions under the framework of the Head-driven Phrase Structure Grammar (HPSG: Sag 1997 and Pollard and Sag 1994)
 - (ii) to provide a theoretical support for the view of *R-that* as a relative pronoun.

2. Properties of Relative *that* (*R-that*)

2.1 Comparisons with the Complementizer *that* (*C-that*)

- *That*-trace effect:
 - (2) a. They are delighted with the book [that ___ has just appeared]. (*R-that*)
 - b. *They met the people that I thought [that ___ voted in the election]. (*C-that*) (Sag 1997)
- typical *C-that* does not function as a subject or object within the clause led by it.
- *C-that* clause does not combine with an NP to form a bigger NP structure.
- Comparison with appositive-*that* clauses
 - The appositive *that* does not function as a subject or object in the *that*-clause.

- The appositive-*that* clause can be used as a non-restrictive appositive clause:

- (3) a. She rejected their excuses, even this last one, [that investigations had taken several weeks].
(Quirk et al. 1985) (appositive-*that*)

b. *Our secretary, that is really rather good, keeps track of the money, too. (R-*that*)

- The head of the NP of the appositive-*that* construction is restricted to certain abstract nouns:

- (4) a. the fact that John wrote a letter to her
b. *the letter that John is an honest man

- Different distribution:

- (5) a. Everyone does not believe the claim that John is a spy that was made by Mary.
b. *Everyone does not believe the claim that was made by Mary that John is a spy.

- The R-*that* clause and *wh*-relative clause can conjoin (Sag 1997) while the appositive-*that* clause and R-*that* clause cannot:

- (6) a. Every essay which she's written and that I've read is on that pile.
b. Every essay that she's written and which I've read is on that pile.
- (7) a. *Only John didn't know the fact [that everyone believes] and [that the earth is round].
b. *Only John didn't know the fact [that the earth is round] and [that everyone believes].

2.2 Comparisons with *Wh*-Relative Pronouns

- R-*that* has all the three major functions that the usual *wh*-relativizers have:

- (i) it signals a subordinate clause,
(ii) it forms a noun phrase out of the subordinate clause, and
(iii) within the subordinate clause, it plays a role of a noun phrase (subject, direct object, etc.).

- Van der Auwera (1985): R-*that* is 'strongly' pronominal even though not fully pronominal, disputing against twenty-four different arguments that R-*that* is not a pronoun but a complementizer or conjunction.

Peculiar properties of R-*that* clauses

- R-*that* does not allow pied piping while most *wh*-relativizers do:

- (8) a. This is the candidate that I have spoken about.
b. *This is the candidate about that I have spoken.
- (9) a. This is the candidate whom I have spoken about.
b. This is the candidate about whom I have spoken.

Case matter? (Sag 1997)

Register mismatches?

Non-full pronominal property of R-*that*? (Van der Auwera 1985)

- R-*that* can be rarely used in non-restrictive relatives while *wh*-relativizers can freely be used:

(10) Our secretary, who/*that is really rather good, keeps track of the money, too. (Van der Auwera 1985)

- Arnold (2004): non-restrictive relative pronouns are like normal anaphoric pronouns, and non-restrictive relative clauses are interpreted like independent clauses carrying the 'totality' interpretation.

(11) a. Kim has three pets, which a neighbour looks after. #The others fend for themselves.

b. Kim has three pets. A neighbour looks after them. #The others fend for themselves.

(12) Kim has three pets which a neighbour looks after. The others fend for themselves.

- he greater independence of a non-restrictive relative clause correlates with a greater need for a stronger pronominality than that of R-*that*.

- R-*that* can function as an adverbial within the relative clause as do *wh*-relativizers such as *on/in/at/for which* or *when/where/why*. For example, it can represent bare-NP adverbs headed by *day, way, place*, etc.(Larson 1985, 1987; Van der Auwera 1985):

(13) a. She arrived the day that/when/on which I was ill.

b. I make cakes the way that/in which my mother made them.

c. I saw the place that/where/in which John lived.

d. This is the reason that/why/for which I did it.

(14) a. I saw Fred in the street that/where/in which John lived.

b. We parted in the same cordial fashion that/in which we had met.

At least two types of R-*that*: pronominal and pro-adverbial ones. The pro-adverbial one plays a role of an adverbial bare-NP or PP within the relative clause.

The antecedent of adverbial R-*that* seems to be lexically restricted to a certain group of abstract nouns that can often be used as an adverb without the preposition:

(15) a. You have been some place/*street.

b. *I saw the street that John lived.

No such lexical restriction on *wh*-counterparts:

(16) I saw the street where/in which John lived. (cf. (15b))

The confinement to the adverbial NP disappears when a non-adverbial NP occurs within a PP: e.g., (14).

- An adverbial R-*that* clause freely occurs when the antecedent is an adverbial PP, while it occurs with a strict lexical restriction when the antecedent is an NP.

- We need to assume structures like (17) to license sentences like (14) since the non-adverbial NP and adverbial *R-that* clause cannot form an acceptable constituent as shown in (18) (pace Larson 1987):

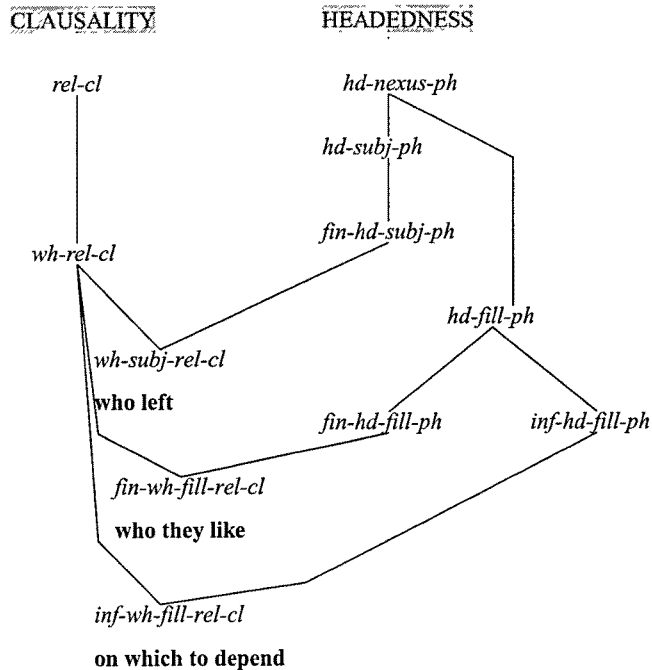
- (17) a. I saw Fred [_{PP} [_{PP} in the street] [_S that John lived]]].
 b. We parted [_{PP} [_{PP} in the same cordial fashion] [_S that we had met]]].
- (18) a. [_{PP} in * [_{NP} [_{NP} the street] [_S that John lived]]].
 b. [_{PP} in * [_{NP} [_{NP} the same cordial fashion] [_S that we had met]]].
- (19) a. [_{PP} in [_{NP} [_{NP} the street] [_S where/in which John lived]]].
 b. [_{PP} in [_{NP} [_{NP} the same cordial fashion] [_S in which we had met]]].

3. Analysis

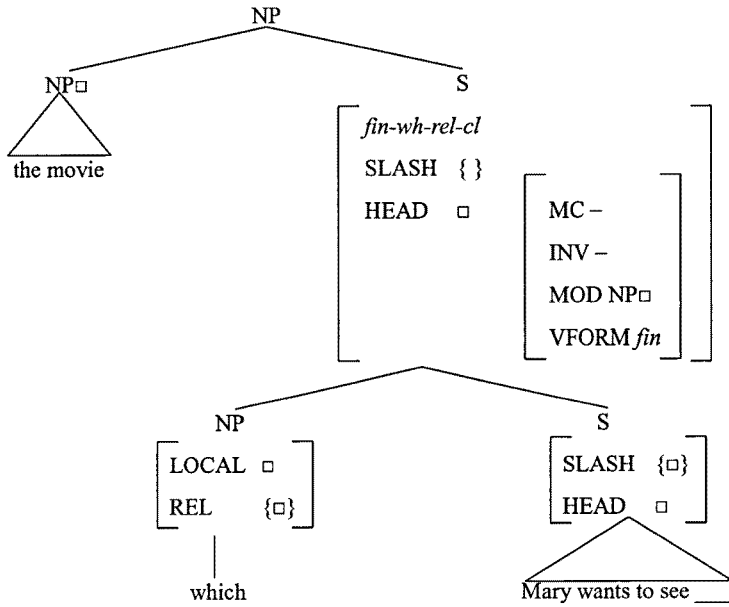
3.1 Theoretical Background

- Sag (1997):

(20)

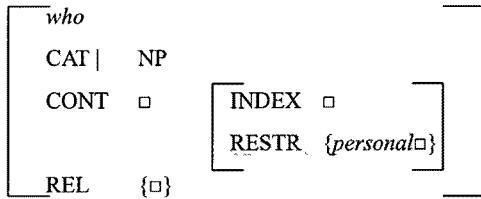


(21)

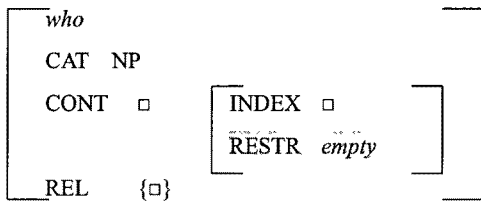


- Arnold (2004):

(22) non-restrictive relative pronoun



(23) restrictive relative pronoun

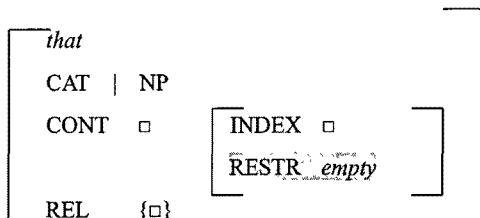


3.2 HPSG Treatment of R-that

- Van der Auwera (1985) and Arnold (2004):

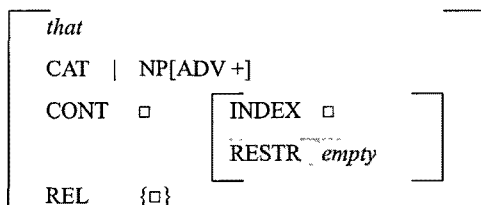
- (i) R-*that* is a 'strong' pronoun even though it is not a 'full' or 'real' relative pronoun,
- (ii) its relatively weak pronominality is the reason why R-*that* cannot be used in a non-restrictive relative clause.

(24)



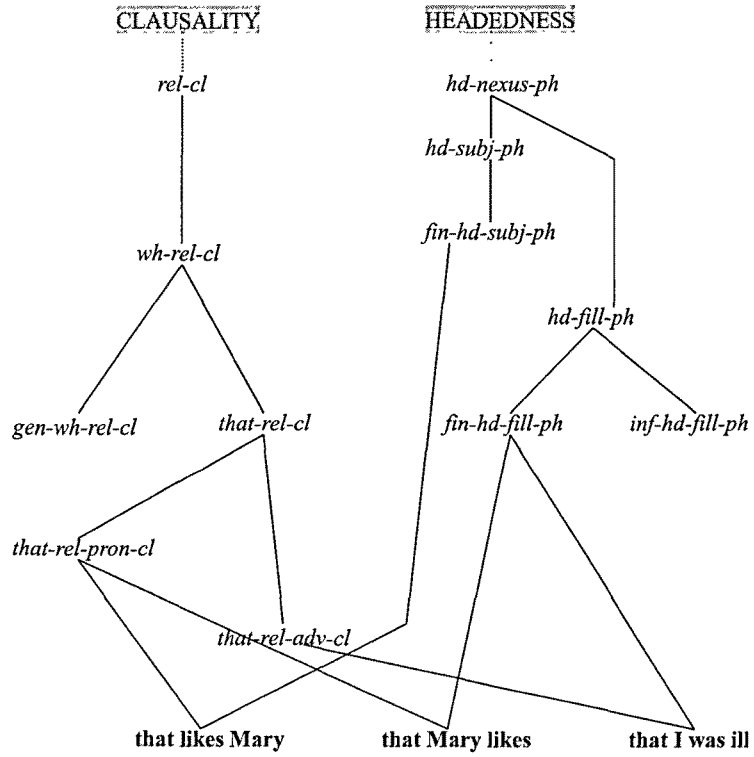
- Introduction of the feature [ADV(ERB) +] (Gazdar et al. 1985:100): e.g., AP[ADV +] for *very eagerly*.
- The adverbial bare-NP: NP[ADV +].
- At least two different ways of introducing the [ADV +] feature: lexical and structural specifications. -Lexical specification: to specific adverbial bare-nouns such as *moment, minute, hour, day, week, month, year, time, then, now, place, here, there, way*, etc. (Larson 1985).
- Structural specification: to temporal, spatial, manner, directional PPs, e.g., to the PP *in the street* in *I saw him in the street*.

(25)



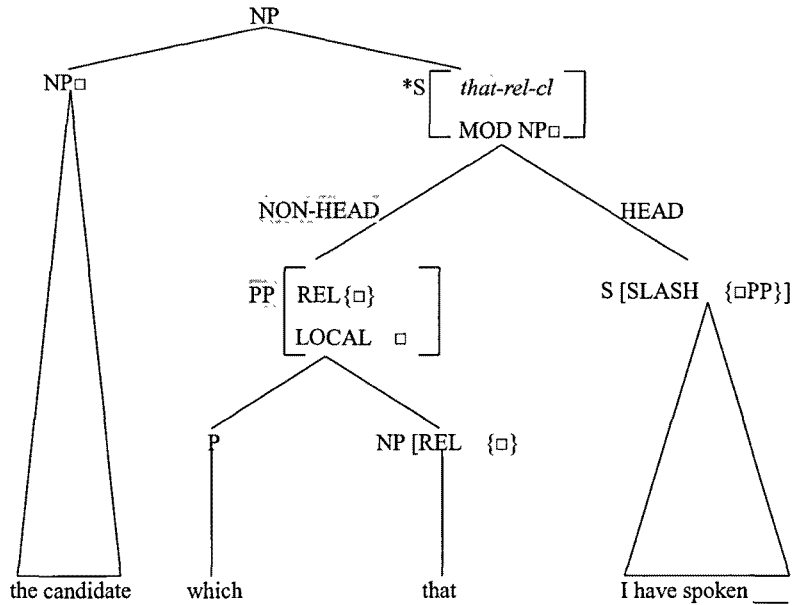
She arrived the day that I was ill/I saw Fred in the street that John lived ((13a) and (14a)).

(26)



(27) *that-rel-cl* ⇒ NON-HD-DTR | NP

(28)



- (29) a. We parted in the same cordial fashion [that we had met *PP*_____].
 b. We parted in the same cordial fashion [in which we had met *PP*_____].
 c. *We parted in the same cordial fashion [in that we had met *PP*_____].

- (30) a. John built himself a shed in which to keep his marbles.
 b. *John built himself a shed that to keep his marbles in.

- (31) a. I found an usher from whom to buy tickets.
 b. *I found an usher whom to buy a ticket from.

(32) *inf-wh-fill-rel-cl* ⇒ [NON-HD-DTR | PP] (Sag 1997)

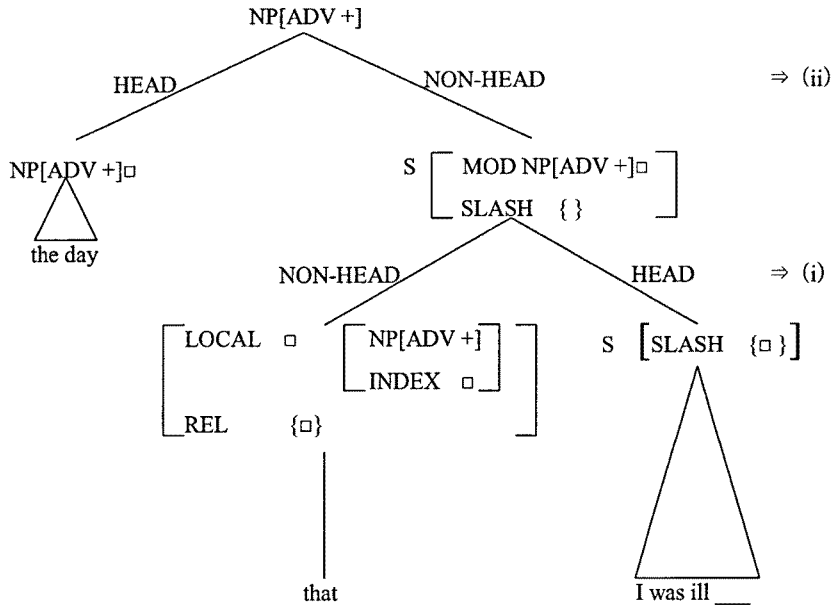
(33) *that-rel-adv-cl* ⇒ [HEAD MOD NP[ADV +] ∨ PP[ADV +]]

She arrived the day that I was ill

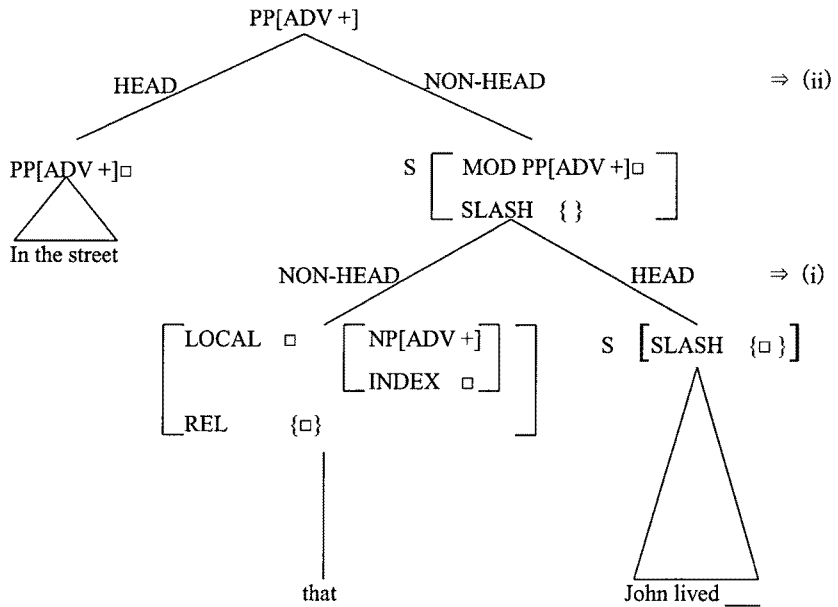
I saw Fred in the street that John lived

**I saw the street that John lived.*

(34)



(35)



(36) *I saw the street that John lived.

(37) I saw the street where John lived.

4. Conclusion

The main proposals:

- (i) the R-*that* clause is a subtype of *wh*-relative clause (Sag 1997), but it should be distinguished from the genuine *wh*-relative clauses (*pace* Sag 1997),
- (ii) the R-*that* clause has at least two subtypes, pronominal and adverbial ones, and each subtype carries its own constructional constraint that can be incorporated into Sag's (1997) multiple inheritance type hierarchy of *wh*-relative,
- (iii) the adverbial R-*that* is treated as a kind of adverbial bare-NP in terms of Larson (1985).
- Can be extended to the account of adverbial *wh*-relative constructions: an adverbial *wh*-relative clause has exactly the same structure as that of the adverbial R-*that* clause but is not subject to the constraint in (33) simply because it is a subtype of *gen-wh-rel-cl*, not of *that-rel-cl*.

References

- Arnold, D. 2004. Non-restrictive relative clauses in constraint based HPSG. *Proceedings of the 2004 International HPSG Conference*. Stanford: CSLI Publications. <http://csli-publications.stanford.edu>.
- Bouma, G., R. Malouf and I. Sag. 2001. Satisfying constraints on extraction and adjunction. *Natural Language and Linguistic Theory* 19, 1-65.
- Gazdar, G., E. Klein, G. Pullum, and I. Sag. 1985. *Generalized Phrase Structure Grammar*. Oxford: Basil Blackwell.
- Hudson, R. 1990. *English Word Grammar*. Oxford: Basil Blackwell.
- Hukari, T., and R. Levine. 1995. Adjunct extraction. *Journal of Linguistics* 31, 195-226.
- Jacobsson, B. 1963. On the use of *that* in non-restrictive relative clauses. *M. Språk* 57, 406-416.
- Kim, J-B. 2001. Constructional constraints in English free relative constructions. *Language and Information* 5, 35-53.
- Larson, R. 1987. "Missing prepositions" and the analysis of English free relative clauses. *Linguistic Inquiry* 18, 239-266.
- Larson, R. 1985. Bare-NP adverbs. *Linguistic Inquiry* 16, 595-621.
- Peters, P. 2004. *The Cambridge Guide to English Usage*. Cambridge: Cambridge University Press.
- Pollard, C. and I Sag. 1994. *Head-driven Phrase Structure Grammar*. Chicago: University of Chicago Press.
- Quirk, R., S. Greenbaum, G. Leech, and J. Svartvik. 1985. *A Comprehensive Grammar of the English Language*. London: Longman.

Language. New York: Longman.

Sag, I. 1997. English relative clause constructions. *Journal of Linguistics* 33, 431-484.

Van der Auwera, J. 1985. Relative *that*—a centennial dispute. *Journal of Linguistics* 21, 149-179.