

## Passive as Object Promotion: Relational Grammar

Master: 04-046-2012 (colloquium)  
 IGRA: 08, Topics in Syntax (seminar)

Tuesdays, 17:15–18:45, NSG S102  
 SoSe 2014, Universität Leipzig

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### 1. Background

*Observation:*

- In all the approaches discussed so far in the course (lexical as well as syntactic), *subject demotion* has been identified as the core property of passive (either because there is a lexical or syntactic (cf. Bruening’s analysis) rule of external argument reduction, or because the external argument cannot be realized as a proper, canonical syntactic DP argument (it shows up as an inflectional head, or as an empty category, or, in Collins’ case, as a DP governed by P).
- In contrast, the Relational Grammar approaches identifies *object promotion* (advancement) as the core property of passive.

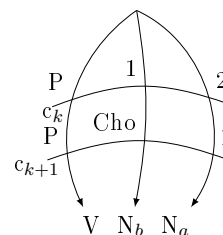
### 2. Passive in Relational Grammar (Perlmutter & Postal (1983))

*Claims:*

- Passive cannot be characterized in terms of word order.
  - Passive cannot be characterized in terms of case.
  - Passive cannot be characterized in terms of verbal morphology.
  - Passive can and should be characterized in terms of grammatical relation changing: “subject” and “direct object”, “indirect object” are *primitive notions* of grammar.
- (1) *Two universals:*
- A direct object of an active clause is the (superficial) subject of the ‘corresponding’ passive.
  - The subject of an active clause is neither the (superficial) subject nor the (superficial) direct object of the ‘corresponding’ passive.
- (2) *Relational Grammar, Concepts and Terminology:*
- Relational Network (RN):* structure of clauses (and sentences); consists of
    - Node:* linguistic element (of all sorts)

- Relational Sign:* encoding of grammatical relations: 1 (subject relation), 2 (direct object), 3 (indirect object)
  - Coordinate:* encoding of levels where relations hold
- b. *Arc:* ordered pair of nodes (<dependent,governor>); 1 relational sign; nonnull sequence of coordinates. E.g.:  
 [2 <45,589> ( $c_1, c_2$ ):  
 Node 45 bears the direct object relation to the clause node 589 at the  $c_1$  and  $c_2$  levels.
- c. *Stratum:* level that arcs belong to (identified by coordinates)

- (3) *Passive by object promotion:*  
 Passive is a rule that sanctions the existence of a 1-arc for a nominal  $N_a$  in stratum  $c_{k+1}$  of a clause node C, where  $N_a$  heads a 2-arc in stratum  $c_k$  of C, and where there is some nominal,  $N_b$ , which heads a 1-arc in stratum  $c_k$ .



*Note:*

- P = predicate relation
- Cho = chômeur relation, see below.

- (4) *Interacting constraints:*

- Stratal Uniqueness Law:*  
 Let  $n$  be a variable ranging over the set of relational signs for term relations, let  $c_k$  be a single arbitrary coordinate, let  $c_x, c_y$ , etc. be variables over sequences of coordinates (which may be null), and let  $a, b, d$  be variables over nodes. Then, if [  $n <a,b> (c_x, c_k, c_y)$  ] and [  $n <d,b> (c_w, c_k, c_z)$  ] are both arcs in some RN,  $a = d$ .
- Chômeur Condition:*  
 If an RN, Q, contains the distinct arcs [  $n <a,b> (c_x, c_i, c_y)$  ], [  $n <d,b> (c_{i+1}, c_v)$  ], where  $d \neq a$ , then Q contains the arc [ Cho <a,b> ( $c_{i+1}c_z$ ) ]
- Motivated Chômage Law:*  
 Only the Chômeur Condition can sanction the chômeur relation.

*Open problems:*

- Impersonal passives. (Something needs to advance from 2 to 1 here but it is unclear what. Expletives, which may potentially also be empty, are an option.)
- Passives with 3-to-1 advancements. (*Sue was given a watch.*)

- Pseudopassives. (*That bed had been slept in.*)

*Outlook:*

The *1 Advancement Exclusiveness Law* (Perlmutter & Postal (1984)) ensures that unaccusatives (which, by assumption, already involve 2-to-1 advancement) cannot undergo passivization.

- (5) *1 Advancement Exclusiveness Law:*  
There can at most be one advancement to 1 per clause.

### 3. Passive in GPSG (Gazdar et al. (1985))

*Note:*

Like the Relational Grammar account (and unlike virtually all the other accounts we have encountered in class so far), the analysis developed by Gazdar, Klein, Pullum & Sag (1985) in Generalized Phrase Structure Grammar (GPSG) identifies *object promotion* as the core property of passive, not *subject demotion*.

- (6) ID Rules:  
a.  $VP \rightarrow H[2], NP$   
b.  $VP \rightarrow H[3], NP, PP[to]$
- (7) LP Statements:  
a.  $[SUBCAT] \prec \sim[SUBCAT]$   
b.  $[+N] \prec P^2 \prec V^2$
- (8) Passive Metarule:  
 $VP \rightarrow W, NP$   
 $\downarrow$   
 $VP[PAS] \rightarrow W, (PP[by])$
- (9) Passive Auxiliary:  
 $VP[+AUX] \rightarrow H[7], XP[+PRD]$
- (10) Feature Co-Occurrence Restriction:  
 $([+PRD] \& [VFORM]) \supset ([PAS] \vee [PRP])$
- (11) Plus: Lexical Rule for Passive Form Interpretation (p. 219)

Gazdar, Gerald, Ewan Klein, Geoffrey Pullum & Ivan Sag (1985): *Generalized Phrase Structure Grammar*. Blackwell, Oxford.

Perlmutter, David & Paul Postal (1983): Toward a Universal Characterization of Passivization. In: D. Perlmutter, ed., *Studies in Relational Grammar 1*. Chicago University Press, Chicago, pp. 3-29.