

Benjamin Bruening  
*By-Phrases in Passives and Nominals (2013)*

## 1 Claim

- most previous analyses claim that by-phrases in passives get  $\theta$ -roles they cannot elsewhere
- it is claimed that by-phrases are not special in passives
- they are blocked outside passives and in nominals for the same reason: the absence of an external argument

## 2 Empirical background

Contrasts of the type seen in (1) and (2) have been analyzed as indicating that the by-phrase in passives is able to receive certain  $\theta$ -roles (e.g. *receiver* or *experiencer*) it cannot in nominals:

- (1) a. The present was received by my mother-in-law  
b. The receipt of the present (\*by my mother-in-law)
- (2) a. Harry was feared by John  
b. \*Harry's fear by John

In the sentential domains, only passives can have a by-phrase, unaccusatives or “sporadic advancement” cannot:

- (3) a. The ship sank (\*by a saboteur)  
b. \$5000 buys a lot of heroin (\*by junkies)

Thus researchers are tempted to conclude that by-phrases have a special status in passives, i.e. that of getting any  $\theta$ -role, whereas they are unable to assign one independently in e.g. unaccusatives and in nominals.

## 3 More facts

By-phrases pattern exactly the same as two other kinds of adjuncts, instrumentals and external-argument-oriented comitatives (unaccusative examples):

- (4) a. \*The ship sank with a torpedo

- b. \*The ship sank with a henchman

By-phrases with nominals like *receipt* in fact do exist, whereas by-phrases with nominals like *sight* are universally banned:

- (5) a. ... after the date of the receipt of the letter by the GDS (Google)
- b. the sight of the damage (\*by the investigators)

But synonyms of *sight* like *perception* do allow them:

- (6) The perception of light by the patient

By hypothesis (following Grimshaw (1990)), *sight* is a result nominal (no external argument), whereas *perception* is a complex event nominal (it has an external argument), which allows for a by-phrase. Now, the threeway pattern of by-phrase–instrumental–comitative can be tested with both kinds of nominals:

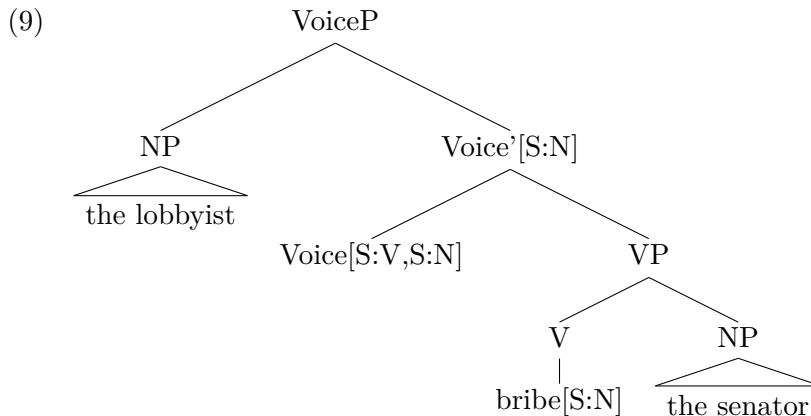
- (7) a. The perception of light with a photosensor
- b. \*The sight of blood with a microscope
- (8) a. The bat’s perception of the sound with its hunting mates
- b. \*The sight of the crime scene with one’s assistant

Thus the hypothesis that what bans by-phrases in non-passive sentential environments and in many nominals is the absence of an external argument seems warranted.

## 4 The analysis

### 4.1 Active voice

To start with, external arguments need a Voice layer above VP; labels of the form “[S:N]” are selectional features. (9) represents an active sentence:

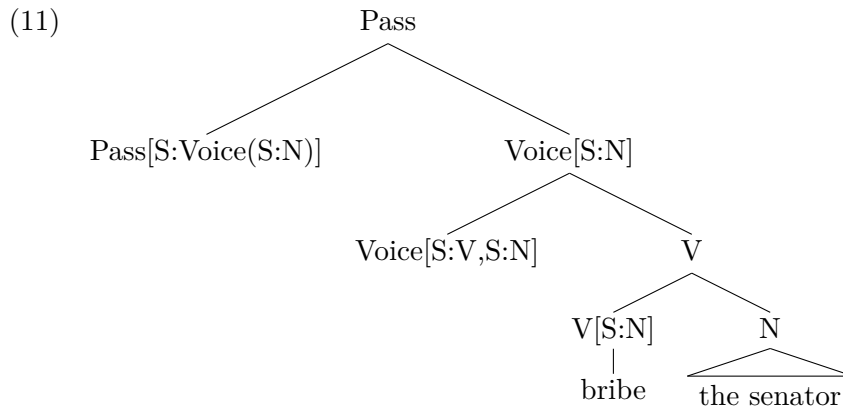


Semantic interpretation:

- (10) a.  $\llbracket \text{bribe} \rrbracket = \lambda x \lambda e. \text{bribing}(e, x)$   
 b.  $\llbracket VP \rrbracket = \lambda e. \text{bribing}(e, \text{the senator})$   
 c.  $\llbracket \text{Voice} \rrbracket = \lambda f_{\langle s, t \rangle} \lambda x \lambda e. f(e) \ \& \ \text{Initiator}(e, x)$   
 d.  $\llbracket \text{Voice}' \rrbracket = \lambda x \lambda e. \text{bribing}(e, \text{the senator}) \ \& \ \text{Initiator}(e, x)$   
 e.  $\llbracket \text{Voice}P \rrbracket = \lambda e. \text{bribing}(e, \text{the senator}) \ \& \ \text{Initiator}(e, \text{the lobbyist})$

## 4.2 Passives

The passive involves a head Pass which disrupts the saturation of the [S:N] feature of a Voice projection, i.e. Voice won't have an external argument.



Instead, Pass ensures that the external argument will be existentially bound (12), yielding (13):

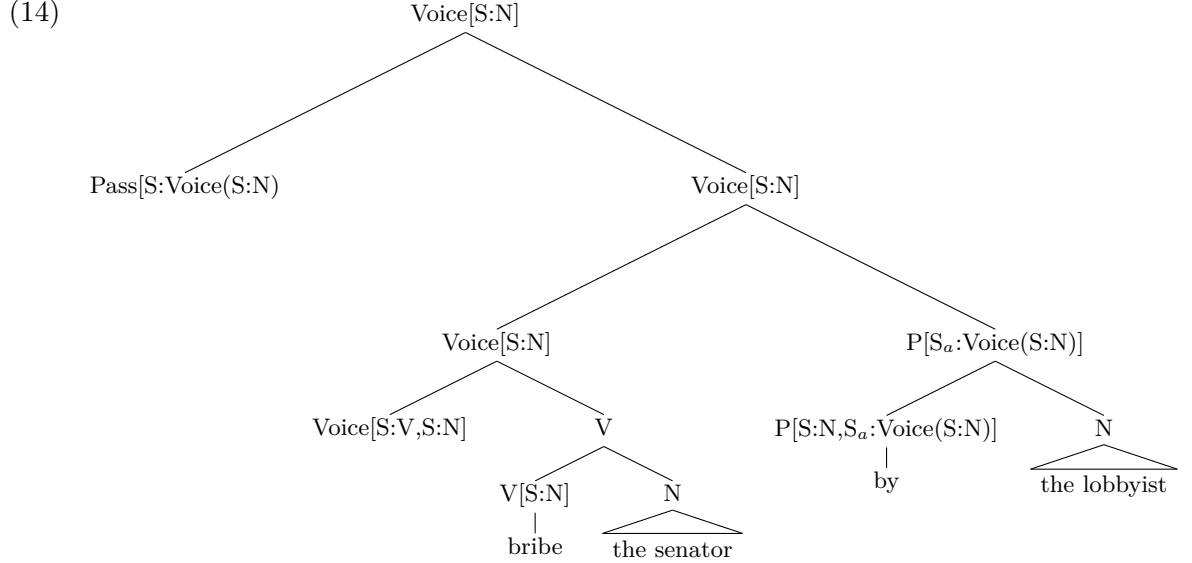
- (12)  $\llbracket \text{Pass} \rrbracket = \lambda f_{\langle e, st \rangle} \lambda e. \exists x: f(x, e)$   
 (13)  $\llbracket \text{Pass} \rrbracket$  (highest projection) =  $\lambda e \exists x: \text{bribing}(e, \text{the senator}) \ \& \ \text{Initiator}(e, x)$

Further important points:

- movement of the object to the surface subject position is ignored here on crosslinguistic grounds
- morphology is the result of Pass, Voice and V being spelled out as the past participle
- the semantics of the passive is seen as entirely independent of the auxiliary *be*, which can be dropped in reduced passives (*Everyone bitten by a dog...*)

### 4.3 Passives with by-phrases

A by-phrase is a PP adjunct with selectional feature [S:Voice(S:N)], just like passive. It adjoins to an unsaturated Voice projection. But, as an adjunct, it doesn't project, which means that after merger, the upper node is still a Voice projection and its [S:N] feature is not checked. This allows Pass to merge as well, yielding a passive with by-phrase:



The semantics of *by* is as in (15); *by* first combines with its argument, and the result merges with Voice, yielding a structure truth-conditionally equivalent to an active sentence:

- (15)
- a.  $\llbracket by \rrbracket = \lambda x \lambda f_{\langle e, st \rangle} \lambda e. f(e, x)$
  - b.  $\llbracket by \text{ the lobbyist} \rrbracket = \lambda f_{\langle e, st \rangle} \lambda e. f(e, \text{the lobbyist})$
  - c.  $\llbracket Voice \rrbracket$  (highest projection) =  $\lambda e. \text{bribing}(e, \text{the senator}) \ \& \ \text{Initiator}(e, \text{the lobbyist})$

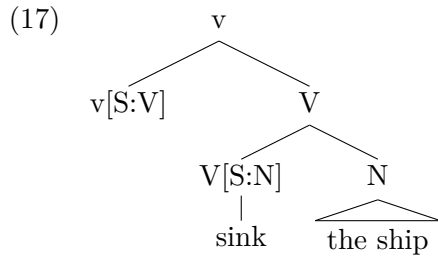
As the external argument is already saturated by the by-phrase, Pass applies semantically vacuously (but still has a morphological reflex):

- (16)
- a.  $\llbracket Pass \rrbracket = \lambda f_{\langle (e), st \rangle} \lambda e. (\exists x): f(x, e)$
  - b.  $\llbracket Voice \rrbracket$  (highest projection) =  $\lambda e. \text{bribing}(e, \text{the senator}) \ \& \ \text{Initiator}(e, \text{the lobbyist})$

Crucially, Pass cannot apply to an active Voice projection, since such an active Voice projection has its selectional features already checked. The other two adjuncts, instrumental phrases and external-argument-oriented comitatives are also equipped with a selectional feature [S:Voice(S:N)], which fits well to the claim that they are just like by-phrases and are banned when there is no external argument.

#### 4.4 VPs without external arguments (unaccusatives, “sporadic advancement”)

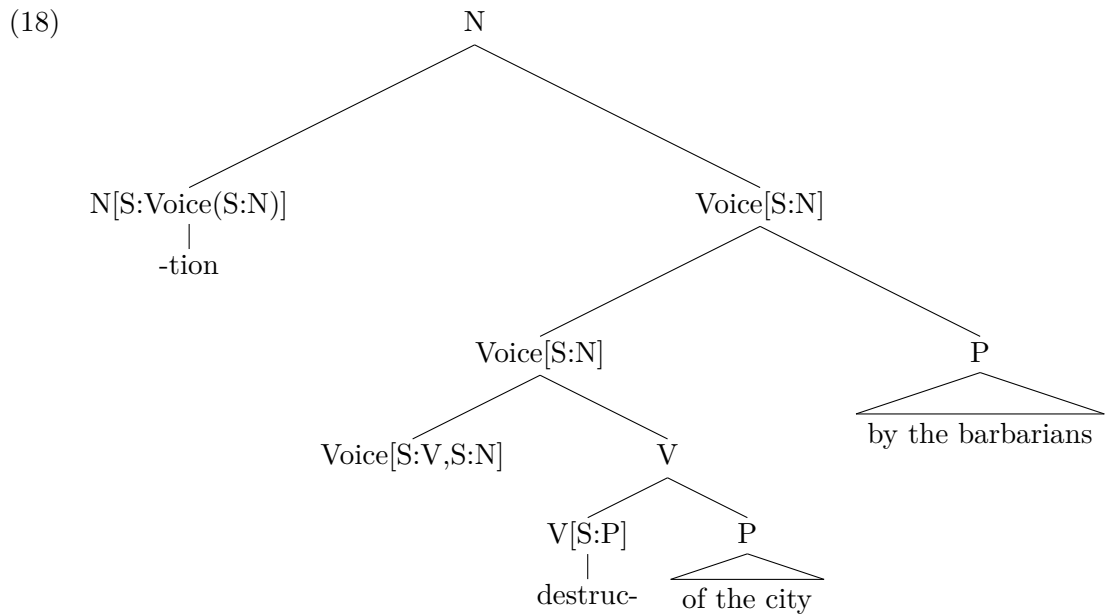
Such structures don’t contain a Voice projection; instead, they have a projection of their own (labeled *v*):



Since by-phrases and other adjuncts select Voice, they simply cannot be merged here.

#### 4.5 Nominals

The nominal *destruction* has a complex structure resembling that of the passive. It contains a V layer and a Voice layer and allows by-phrases:



This extends to synonyms of *sight* like *perception*.

In contrast, nominals like *sight* or *fear* never allow by-phrases, nor any other adjunct of this kind. They are not deverbal and don’t contain any nominalizer like *-tion*, nor any V or Voice layer; they are *root nominals*:

