

This talk discusses iterative interpretations of delimited predicates. The distinct distributions of bare plurals and mass nouns, and their distinct affects on the aspectual interpretation of the predicate suggest that durative phrases are the source of iterative interpretations. Additionally, as a result of this inquiry support is offered for an aspectual head between vP and VP involved in the aspectual interpretation of the predicate.

It is widely assumed that bare plurals and mass nouns affect the aspect of the predicate in the same way (see e.g. Dowty 1979, Pustejovsky 1991): they result in a non-delimited interpretation of the predicate. This is supported by the bare plural's (1a) and the mass noun's (1b) ability to license a durative phrase (e.g. *for an hour*) as direct objects.

- (1) a. John pushed **sofas** into the bedroom for an hour.  
 b. John pushed **furniture** into the bedroom for an hour.

Observe however, that the distribution of bare plurals and mass nouns is not the same. When a bare plural is the complement of a goal preposition, the durative phrase is licensed (2a). In contrast, mass noun complements of a goal preposition do not license the durative (2b).

- (2) a. John pushed the sofa into **bedrooms** for an hour (until he found the right location for it).  
 b. John pushed the sofa into **storage** \*for an hour (until he found the right location for it).

To account for this distributional difference, I assume that there is an aspect head ( $Asp^{\circ}$ ) between vP and VP as in (3) (see Travis 1991). I propose that mass nouns and bare plurals establish distinct relations with  $Asp^{\circ}$ . Mass nouns establish an agree relation with this head. This explains why only direct object mass nouns can affect the aspect of the predicate: the direct object is closer than the indirect object. Bare plurals, on the other hand, raise and adjoin to  $AspP$  and as such must only be c-commanded by  $Asp^{\circ}$ ; thus both direct and indirect object bare plurals can affect the aspectual interpretation of the predicate. Moreover, observe that mass noun and bare plural subjects of transitives do not affect the aspect of the predicate, as neither licenses the durative phrase (4a and b respectively).

- (3) [TP T<sup>o</sup> [vP v<sup>o</sup> [ $AspP$   $Asp^{\circ}$  [VP V<sup>o</sup> ] ] ] ]  
 (4) a. Lightning destroyed the city \*for an hour.  
 b. Armies destroyed the city \*for an hour.

Along with their distributional differences, bare plurals and mass nouns exhibit differences in interpretation made salient by the presence of a punctual phrase (e.g. *in five minutes*). Bare plurals can license a punctual phrase, while mass nouns cannot. Thus, in (5a) with the bare plural, the punctual phrase is compatible under the interpretation that it (typically) took John five minutes to drink a beer for the first few years at college. In (5b), with the mass noun, no such interpretation is available.

- (5) a. John drank **beers** in five minutes (for the first few years at college)  
 b. John drank **beer** \*in five minutes (for the first few years at college)

It is typically assumed that punctual phrases are only compatible with delimited predicates (see Dowty 1979, Pustejovsky 1991, Tenny 1984 among others). Thus, I take the data in (5) as evidence that the presence of the mass noun forces a non-delimited interpretation of the predicate; i.e. the event never comes to an endpoint. On the other, in the presence of the bare plural, the predicate is interpreted as delimited, here interpreted iteratively; i.e. the event comes to an endpoint over and over again. It is tempting to claim that the source of the iterative interpretation is the bare plural itself, however, as observed by Vanden Wyngaerd (2001) a durative phrase alone can force an iterative interpretation of a predicate. Observe that there is no bare plural in (6a), yet there is an interpretation in which a single plane was spotted several times during a week.

- (6) a. John spotted a plane for a week.  
 b. \*John ate a bagel for a week

I claim that the durative phrase is responsible for the iterative interpretation of the predicate, and that any delimited predicate can be interpreted iteratively. However, observe in (6b) that the presence of the durative does not force an iterative interpretation, it results in ungrammaticality. The problem with (6b) is in the type of event expressed by the verb. After the eating event, there is no bagel left to eat again. In contrast, once a plane is spotted, nothing prevents it from being spotted again.

More formally, I propose that the durative phrase introduces an operator  $OP_{\langle DUR \rangle}$  that forces the event expressed by the predicate to be interpreted as ongoing for an indefinite length of time. Given a delimited

predicate, the event is interpreted iteratively; it comes to an endpoint over and over an indefinite number of times. I take the operator to be introduced at vP (7).

(7)  $[_{vP} \text{OP}_{\langle \text{DUR} \rangle} [_{vP} \text{V}^{\circ} [_{\text{AspP}} \text{Asp}^{\circ} [_{vP} \text{V}^{\circ} ] ] ] ] ]$

Given that the durative phrase is responsible for the iterative interpretation, we are left to understand the role that the bare plural plays in the interpretation of the predicate. Observe that when we substitute the singular indefinite in (6b) for a bare plural, the durative phrase is now licensed (8b). Observe also a difference in interpretation between (6a) with singular indefinite *a plane* and (8a) with bare plural *planes*. With the bare plural *planes*, there is an interpretation in which different planes are spotted over the course of a week. This is not available with the singular indefinite. That is, the plural allows a distinct object per spotting event interpretation. The bare plural *bagels* plays the same role and allows a distinct bagel per each eating event interpretation. The singular indefinites do not allow this interpretation; there must be a single *plane* spotted, or a single *bagel* eaten. The singular indefinites must get a wide scope interpretation outside the iterated event, while the bare plurals allow for a narrow scope interpretation within the scope of the iterated event. On my proposal this means that the indefinite must move above the operator introduced by the durative at vP ( $\text{OP}_{\langle \text{DUR} \rangle}$ ), and the bare plural can remain below it. The indefinite cannot remain in situ.

- (8) a. John spotted **planes** for a week.  
 b. John ate **bagels** for a week.

Observe that weak determiners, arguably interpreted in situ, create an ungrammatical utterance when the durative is present (9). Unlike the indefinites which can move outside vP (Diesing 1992), weak determiners are trapped within the scope of the durative operator, resulting in a ungrammatical utterance.

- (9) John spotted **many/few planes** ??for a week.

Observe related fact about numerals (10). Without the durative (10a), the sentence is ambiguous between an interpretation in which the two planes were spotted together at the same time, or one in which they were spotted separately at different times. When the durative phrase is added (10b), the ambiguity is lost; the only interpretation remaining is that both planes were spotted together at the same time over the course of a week. Again, the numerals must get a wide scope interpretation over the durative operator; they cannot remain in situ.

- (10) a. John spotted **two planes**. → ambiguous  
 b. John spotted **two planes** for a week → unambiguous

Contrast the pattern in (10) to the pattern in (11) in which there is a bare plural object. With no durative phrase (11a), bare plurals are also ambiguous between an interpretation in which a group of planes were spotted together at the same, and an interpretation in which different planes were spotted separately at different times. Observe, however, that when the durative is added (11b), the ambiguity remains.

- (11) a. John spotted **planes** → ambiguous  
 b. John spotted **planes** for a week → ambiguous

These facts follow from the proposal that bare plurals can move and adjoin to AspP. Adjoined to AspP, the bare plural remains within the scope of the durative operator and the resulting interpretation is that there is a distinct object per event. On the other reading of a single group of planes spotted over and over again, we must assume that the bare plural moves outside vP and consequently above the durative operator. Indefinites and numerals cannot adjoin to AspP and as such can only move outside vP and always be interpreted above the aspectual operator, never resulting in a distinct object per event interpretation.

I have argued that mass nouns and bare plurals establish distinct relations with  $\text{Asp}^{\circ}$ , an aspectual head between vP and VP. Mass nouns establish an agree relation and bare plurals can adjoin to AspP. Furthermore, I have claimed that the iterative interpretation of a delimited predicate arises from an operator introduced at vP by the presence of a durative phrase. As we saw, any argument within the scope of the durative operator cannot remain in situ (a mysterious requirement that is left for future research to explain). Therefore, the only option for indefinites is to move outside vP and outside the scope of the operator, never receiving a distinct object per event interpretation. Bare plurals, on the other hand, can adjoin to AspP, remaining within the scope of the operator and receive a distinct object per event interpretation.

### Selected References

- Dowty, D. 1979. *Word Meaning and Montague Grammar*. D. Dordrecht: Reidel  
 Vanden Wyngaerd, G. 2001. Measuring Events. *Language* 77, no.1: 61-89