Aspect and Discourse Structure: Is a *Neutral* Viewpoint Required?*

Frank Schilder

Centre for Cognitive Science 2 Buccleuch Place Edinburgh EH8 9LW, Scotland, U.K. Internet: schilder@cogsci.ed.ac.uk

Abstract

We apply Smith's theory of aspect (1991) to German - a language without any aspectual markers. In particular, we try to shed more light on the effects aspect can have on discourse structure and show how English and German behave differently in this respect. We furthermore describe how Smith's notion of a neutral viewpoint can be helpful for the analysis of discourse in German. It turned out that proposals claiming that the German Preterite covers the progressive as well as the simple aspect can not sufficiently explain the data presented in this paper (Bäuerle, 1988). Finally we give a situation-theoretic approach to formalize Smith's intuitions following Glasbey (1994) incorporating Allen's intervalcalculus (Allen, 1984).

1 Viewpoint and Situation Aspect

Smith (1991) presents two terms which are assigned to two distinct phenomena in language: viewpoint and situation aspect. This two-level theory gives an explanation for the difference between aspectual information understood as a view on a situation and temporal features of a situation. The former can be gained after applying a certain viewpoint chosen by the speaker and the latter one is stored in the lexical entry of a lexeme.¹ Situation Aspects Smith introduces three socalled "conceptual features" of situation aspects which have binary values $[\pm]$, namely *stative*, *durative* and *telic*. Five different situation aspects have emerged which are distinguished using these features and certain temporal schemata.² Examples:

- Sam owned three peach orchards. (State)
- Lily swam in the pond. (Activity)
- Mrs Ramsey wrote a letter. (Accomplishment)
- Lily knocked at the door. (Semelfactive)
- Mr Ramsey reached the lighthouse. (Achievement)

Viewpoints Smith postulates three different viewpoints. Schematically she uses an idealised time line where the initial and finishing points of a situation are indicated by I and F respectively. The duration of the situation can be drawn in two different ways: as an unstructured (---) and a structured (...) phase which has internal stages. The viewpoint is understood in this representation as a focus on parts or on the whole situation (///) (figure 1).

Figure 1: The a) imperfective b) perfective and c) neutral viewpoint

Two viewpoints correspond mainly to the wellknown opposition *perfective/imperfective*. However, additionally Smith assumes a so-called *neutral* viewpoint which contains the initial point and at least one internal stage.

Aspectually vague sentences which provide either an open or a closed reading back up Smith's consid-

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¹Besides the situation aspect described by the semantic entry of the verb many other sentential constituents (e.g. object or subject NPs) may have an influence on it (Krifka, 1992).

²See Smith (1991) for a detailed discussion.

erations (Smith, 1991:120).³

However, she restricts her analysis to single sentences and neglects the effects viewpoints can have in a discourse. We will therefore focus on this issue in the next section.

2 Discourse Structure

We investigate here which viewpoint is appropriate for the German *Preterite*. Bäuerle (1988:131), for instance, claims that this tense in German is ambiguous w.r.t. the *perfective/imperfective* view on a situation and gives the following evidence for it:

- a. Der Angeklagte fuhr nach Hause. Dort trank er ein Glas Trollinger. The defendant drove home. There he drank a glass of Trollinger.
 - b. Der Angeklagte fuhr nach Hause. Am Lustnauer Tor hatte er einen schweren Unfall und musste ins Krankenhaus eingeliefert werden.

The defendant was driving home. At the Lustnauer tower he had a serious accident and had to be admitted to the hospital.

In (1a) the VP fuhr nach Hause refers to a completed event and therefore contains an end point. In (1b) this end point is denied by the second sentence. Note that the English translation of (1b) is therefore only correct if an *imperfective* view is used.

This data shows that the use of the *Preterite* in German does not commit the speaker to saying anything about the end point. Every inference regarding the ending of a situation is due to the context or our world knowledge.

It may be concluded from (1) that we cannot assume a *perfective* viewpoint, because this view includes the end point of a situation. The following discourse will furthermore show that also the *imperfective* view is not applicable to the German *Preterite*.

It is commonly supposed that the *imperfective* viewpoint which refers to the middle of a situation omitting the initial as well as the final point can be used for describing a *background* within a discourse (cf. Smith, 1991:130):

(2) The defendant had an accident. He was driving home (at this time).

A direct German translation, however, expresses two subsequent events. At first the defendant had an accident and then he drove home:

(3) Der Angeklagte hatte einen Unfall. Er fuhr nach Hause (??zu der Zeit).

Adding the PP zu der Zeit ('at this time') the sentence functions as a background for the event described by the first sentence, but this discourse sounds awkward and the continuation with a state in (4) is clearly preferred.⁴

(4) Er war auf dem Weg nach Hause.

Discourse (3) shows that for the German *Preterite* the initial point is focussed by the viewpoint. This observation proves therefore that this tense is not ambiguous w.r.t the progressive and the simple aspect as Bäuerle (1988) claims.

To sum up, these two discourses can be seen to show that the German aspect system for the *Preterite* offers only a *neutral* view on every situation.

Moreover, this data disproves Bäuerle's explanation of (1), clarifies Smith's definition of a viewpoint and motivates the need for a *neutral* viewpoint in German.

It is obviously a shortcoming of Smith's description to define the viewpoint merely as a focus on parts or on the whole situation. It emerged from the discourse examples that a crucial function of the viewpoint is the commitment the speaker gives as to whether the end point has been reached or not. In English, the *perfective* view sets the end point⁵ and no cancellation is allowed afterwards. A *neutral* view on a situation gives only a confirmation of the initial point. It leaves open whether the end has been reached or not. Only the temporal knowledge derived from the situation aspect can provide further information which, however, may be overridden by the context.

3 A Situation-theoretic Formalisation

We follow Glasbey (1994:15) in her criticism of Smith's formalisation within Discourse Representation Theory (DRT) (Kamp & Reyle, 1993).⁶

³Following Smith (1991) we applied two tests to German data regarding the temporal properties of the end point of a situation which are discussed in Schilder (1995).

⁴Note that the PP at this time is not required for the English discourse to be fully understood.

⁵Provided that the situation aspect provides an inherent end point which is not the case for *states*.

⁶A new account presented by Asher (1993) to describe types of eventualities is currently being investigated. Note that the standard definition of DRT does not provide any description of types or other abstract entities.

Unlike DRT, STDRT (Cooper, 1992) has the notion of an event type which can be used for the information given by the situation aspect. Note that this event type does not have to be instantiated with a situation of this type; it will therefore not be introduced like a discourse referent in a discourse representation structure.⁷



Figure 2: The complete event type ϕ

The first sentence of (1) refers to a situation s_n , where s_n is of a type ψ . Type ψ can be seen as the part of an episode of the complete event type ϕ which is focussed by the *neutral* viewpoint. We have therefore to define the initial point and the first stage.

 $\alpha \triangleleft_{initial} \beta$ iff:

 $\begin{array}{l} \forall e, e'[[e : \alpha \land e' : \beta] \rightarrow e \trianglelefteq e' \land [\forall e''[e'' \trianglelefteq e' \rightarrow \neg e \trianglelefteq e''] \rightarrow t \ \{ \texttt{BEFORE, MEETS} \} t'']] \end{array}$

 $\begin{array}{l} \alpha \triangleleft_{first_stage} \beta \text{ iff:} \\ \forall e, e', e''[[e: \alpha \land e' : \beta \land e'' : \gamma \land \gamma \triangleleft_{initial} \beta] \rightarrow \\ e \triangleleft e' \land t'' \{ \texttt{MEETS} \} t \end{bmatrix}$

t, t', t'' are the occurrence times of e, e' and e'' respectively, \leq is the PART-OF relation between situations and **BEFORE** and **MEETS** are Allen's intervalrelations as defined in Allen (1984).

4 Conclusion

We showed that Smith's notion of a *neutral* viewpoint is crucial for German. In particular, we investigated the effects this viewpoint has on a discourse level and compared it with English. It may be concluded from this analysis that discourse structure differs depending on the language. A discourse grammar developed for English cannot easily be applied to German. This cross-linguistic account gives prominence to the underlying concepts instead of focussing only on the surface structure which is unalterably bound to the peculiarity of a single object language. In our analysis for German, we therefore highlighted the following two properties which can be stipulated regarding the *neutral* viewpoint:

- The end point of a situation is beyond the focus of this viewpoint. Default information given by the situation aspect may be overridden by the context.⁸
- The *neutral* viewpoint contains the initial point of the situation. Backgrounding – a typical function of the *imperfective* view where the initial point is not included – is therefore not applicable for this viewpoint.

Furthermore, the proposed formalisation provides an account which can handle the discussed phenomena within an implementation; this is ongoing work.

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⁷Figure 2 shows a simplified representation of the *accomplishment* event type. No account will be given of the treatment of PPs like *nach Hause* for the time being.

⁸A formalisation of this intuition by a non-monotonic reasoning mechanism is described in Schilder (1995).