

Effects of the verb *process* referent on the manipulation of discourse objects properties

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THEORETICAL FRAMEWORK

In the present study we analyzed the psychological relevance of a verb categorization defined within the scope of the problematics pursued in enunciative semantics studies (Culioli, 1990, 150). We focussed our attention on the operations of predication induced by verbs on discourse objects.

According to the enunciative perspective adopted, the operations of predication carried out by verbs depend on the *aim* conveyed by predicates on their surrounding arguments, *i.e.* grammatical subject and complements. The *aim* of a predicate corresponds to its *process type* referent, *i.e.* action vs. state (François, 1990; Fuchs, 1991; Vendler, 1967). The type of process a verb refers to corresponds to the internal temporal consistence of the situation evoked by the predicate out of conjugation. The *process type* constitutes the verb implicit meaning which determines the orientation of the predication. As a general hypothesis we consider that action verbs orientate the predication towards the complements governed by the verb, whereas state verbs implicate a predication direction towards the grammatical object.

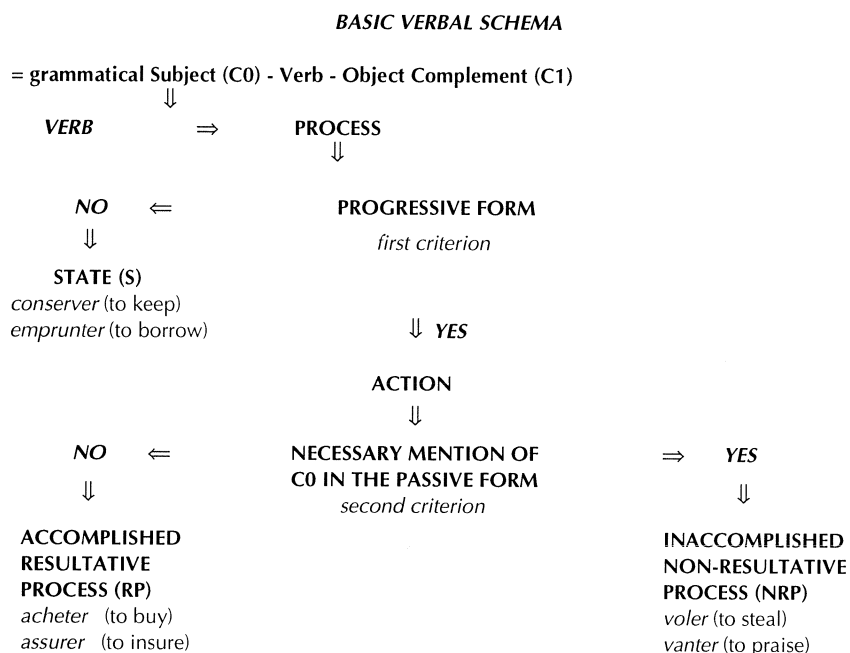
The syntactic characteristic of the verb, as opposed to that of substantive, provides for the realization of the operations of predication. The categorization of process types adopted in this study concerns transitive French verbs. We consider the subject-verb-object complement form as the basic verbal schema. The grammatical subject is defined as a complement of rank 0 (C0), the object is defined as a complement of rank 1 (C1) and the predicative complement is defined as a complement of rank 2 (C2) (Gross, 1975).

The categorization was defined on the basis of Fuchs and Léonard's criteria (1979, 315). According to those criteria the aspectual value of a verb is identified with the accomplished vs. unaccomplished situation evoked by the predicate out of conjugation (Fig. 1). From this opposition, three process types and/or verb categories were defined: resultative processes (RP), non-resultative processes (NRP) and states (S) (Gallo, Rouault, 1992, 113).

GENERAL HYPOTHESIS

The general psycholinguistic hypothesis stated that the manipulation of discourse objects properties is brought about both by the verb referent (*i.e.* process type a verb refers to) and by co-text characteristics, *e.g.* semantic features of the C0, C1 and C2 associated to the predicate.

**Figure 1: Verbs categorization as a function of process types (Gallo & Rouault, 1992).
The categorization is defined from Fuchs and Leonard's criteria (1979).**



This hypothesis is a generalization of Fuchs's considerations on the «stability» of term meanings defined in lexical semantics categorizations (1994, 103). According to this author the meanings of a term, defined as «stable», correspond to salient typical values of the lexeme. Typical values of a lexeme are produced by factors belonging to its context of occurrence. Therefore a lexeme signifier is the result of co-text factors synergy. The process type a verb refers to is part of its signifier. From the previous considerations one may infer that the «stability» of the verb process referent partly depends on the predicate linguistic environment, *i.e.* the co-text.

In a previous study we tested the effect of the C0 animate *vs.* inanimate semantic features on the subjects' evaluations of the type of situation (resultative *vs.* non resultative) evoked by action verbs (RP and NRP) as opposed to state verbs (S) (Manes Gallo, Bonnotte, 1995). But in this first study the factor semantic features of the C1 was not controlled. In this new study we focussed our analysis on the C1 syntactic and semantic features that were liable to exert an effect on the evaluation of the *aim* conveyed by verbs of actions (RP and NRP). We claim that the *aim* of action verbs is realized by the following co-text factors: a) syntactical components, corresponding to the case marking of complements governed by the verb, *i.e.* the surface occurrence of the subcategorized complements (C1 and C2) may be marked or not; b) semantical components represented by the C1 semantic features, *i.e.* continuum of animate *vs.* inanimate argument features (Manes Gallo, Bonnotte, 1995, 33).

EXPERIMENTAL STUDY

The common objective underlying the three Experiments carried out was to analyze the per-

formance of native French speakers in a comprehension task. In Experiment 1 we tested the effects of the two semantic factors – process type and C1 semantic features – on the evaluation (a) of the resultativity vs. non resultativity of the situation evoked by a verb and (b) of its direction of predication, defined in terms of the modification vs. non modification of the C1 properties. An interaction between process types and C1 animate vs. inanimate features was expected on the two evaluations. The effect of the interaction was expected to be proportional to the degree of C1 animate features. For instance, the association between the RP *acheter* (to buy) and the animate-with-an aim C1 *un gardien de but* (a goalkeeper) ought to evoke a high resultative situation and to induce a C1 modification. In contrast, the association between the same RP and the semi-animate C1 *un magnétoscope* (a video-tape recorder) ought to evoke a low resultative situation and to induce no modification of the C1 properties. The aim of Experiment 2 was similar to that of Experiment 1. A syntactic factor was taken into account, *i.e.* the surface case marking of C1. Our hypothesis was that the lack of C1 surface instantiation might favour a less resultative evaluation of the situation evoked by RP and NRP. This result was not expected for the evaluation of state verbs (S). Experiment 3 had two goals. We wanted to verify, first, if the direction of predication of verbs was generalized to the predicative complement (C2) for each process type; second, if the generalization of the predication direction towards C2 depended on the C1 semantic features. For instance, we tested if the C1 inanimate semantic feature contributes both to inhibit the predication of action verbs towards C1 (*i.e.* RP and NRP do not induce any modification of C1 properties) but to generalize the direction of predication towards a modification of C2 properties.

METHOD

Subjects

The subjects who participated to the three Experiments were undergraduate students at the French University of Lille 3. They were all native French speakers. 22 subjects participated to Experiment 1 (mean age : 20.9 years), 18 subjects participated to Experiment 2 (mean age : 20.5 years) and 18 subjects participated to Experiment 3 (mean age : 19.10 years).

Materials

For the three Experiments the preparation of the materials implied the selection of six verbal items: a) referring to states (S), non-resultative processes (NRP) or resultative processes (RP), and b) which could be inserted in the basic predication subject-verb-object complement syntactic form. The selected verbs ought to be associated with four different object arguments. The four object arguments were selected on the basis of their variable degree of animate features, *e.g.* animate with an aim (human being), semi-animate or entity that necessitates a constant human intervention for its functioning (delivery-van) (Manes Gallo, Bonnotte, 1995, 32).

Procedure

Subjects had to answer to questions about : a) the resultative vs. non resultative characteristic of the situation evoked by propositions where verbs, referring to different process types,

occurred; b) the direction of predication induced by a verb on its subject and the sub-categorized complements, according to the type of process the predicate refers to.

Subjects' answers (or evaluations) were expressed by means of three scales, each with sixteen points [-8, +8], but without a 0 point.

RESULTS

According to the general hypothesis tested in this study, the manipulation of discourse objects properties depends on both the resultative vs. non resultative situation evoked by a verb and several co-text factors. In particular, we consider that the manipulation of discourse objects is brought about by : a) two semantic factors, *i.e.* the process type a verb refers to and the C1 semantic features; b) two syntactic factors, *i.e.* the case marking of C1 and C2 subcategorized complements.

The results showed that both the process type a predicate refers to (*i.e.* action vs. state) and the surface occurrence of the object complement (C1), have an effect on the evaluation of the resultative vs. non-resultative situation evoked by verbs. On the other hand, the animate vs. inanimate semantic features of the object complement exert an important effect on the evaluation of the direction of predication induced by action verbs (RP and NRP). Finally the surface case marking of a higher rank complement (C2) contributes to weaken subjects' evaluation of the *aim* conveyed by RP towards C1 argument. But the predication induced by this type of process is not generalized to C2, *i.e.* RP were not evaluated to modify C2 properties. To sum up, syntactic and semantic co-text factors contribute to the manipulation of discourse objects properties, balancing the actualization of the implicit *aim* conveyed by verbs of action.

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