

# The Stage/Individual Contrast Revisited

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## 1 Introduction

In this paper, I will try to shed some new light on the phenomenon that is known as the *STAGE/INDIVIDUAL CONTRAST*, a semantically based distinction between different predicate types that gives rise to a couple of unexpected effects in different areas of grammar. The phenomenon was firstly investigated in Carlson 1977, but this purely semantical account was unable to explain the observed syntactic contrasts. Therefore Kratzer 1989, Diesing 1988, and Diesing 1992 proposed alternative approaches that claim that the mentioned semantic contrast coincides with certain lexical/syntactical properties of the items involved. Although quite successful as far as the empirical coverage is concerned, this solution is only partially satisfactory since the classification of a predicate as belonging to the one class or the other turns out to be highly dependent from encyclopedic and contextual knowledge, while lexical properties are commonly considered to be less flexible. Besides this, there are some observations that are not in accordance Diesing's and Kratzer's theory. Therefore I will argue that the stage/individual contrast is in fact purely semantical in nature, while the apparent syntactic differences can be explained as consequences of general principles governing the interaction of information structure with both syntax and semantics.

## 2 The Contrasts

Predicates in natural language do not denote simple properties of individuals in the general case. Instead they are relativized to a time of evaluation. Except in marginal cases like predicates occurring in mathematical contexts, we are never able to infer from the fact that a predicate holds of some individual at a particular time that it holds at any other time.

- (1) Peter is altruistic.  
Peter will still be alive in ten years.  
≠ Peter will be altruistic in ten years

Nevertheless, properties differ with respect to the strength of this temporal dependency. Although it is not sure that Peter is still altruistic in ten years, he is of course more likely to be altruistic than to be an egotist at this time. Even such a weak inference is impossible in connection with certain other predicates like ‘available’.

- (2) a. Peter is altruistic.  
Peter will still be alive in ten years.  
⊨ It is more likely that Peter is altruistic in ten years than that he is not.  
b. Peter is available.  
Peter will still be alive in ten years.  
≠ It is more likely that Peter is available in ten years than that he is not.

Following the terminology in Carlson 1977, predicates that denote temporally “stable” properties like ‘altruistic’ are called INDIVIDUAL LEVEL PREDICATES, while those that resemble ‘available’ are STAGE LEVEL PREDICATES. It is quite obvious that the common sense entailments involved in (2) depend on a lot of extra-linguistic factors like encyclopedic and situative knowledge. Nevertheless the difference between these predicate types is closely connected to a whole bunch of contrasts in different areas of grammar. To start with, individual level predicates are excluded in the context of English *there*-sentences.

- (3) a. There are firemen available  
b. \*There are firemen altruistic

In German, subjects generally may occur either in a VP-internal or a VP-external position. These can be distinguished by means of the relative position of the subject and sentential adverbials like *wahrscheinlich* ‘probably’, where the latter is usually assumed to mark the VP-boundary. Bare plural subjects of stage level predicates may occur in either position, while individual level predicates exclude VP-internal subjects.

- (4) a. weil wahrscheinlich Feuerwehrmänner verfügbar sind  
 since probably firemen available are  
 ‘Probably, there are firemen available’  
 b. weil Feuerwehrmänner wahrscheinlich verfügbar sind  
 since firemen probably available are  
 ‘Probably, firemen are (generally) available’
- (5) a. \* weil wahrscheinlich Feuerwehrmänner selbstlos sind  
 since probably firemen altruistic are  
 ‘\*Probably, there are firemen altruistic’  
 b. weil Feuerwehrmänner wahrscheinlich selbstlos sind  
 since firemen probably altruistic are  
 ‘Probably, firemen are (generally) altruistic’

It is worth noting that different positions of bare plural subjects are related to different interpretations. In the lower position, they usually get an existential interpretation while in the outer position, a generic reading is preferred. Hence the contrast between (4) and (5) can be accounted for by means of the generalization that bare plural subjects of stage level predicates are ambiguous while individual level predicates only admit the generic reading. This is supported by the corresponding English data:

- (6) a. Firemen are available (ambiguous)  
 b. Firemen are altruistic (generic reading only)

A similar pattern can be observed in connection with weak quantifiers in subject position.

- (7) a. Many firemen are available (existential and partitive reading)  
 b. Many firemen are altruistic (partitive reading only)

While (7a) can be interpreted partitively (‘Many of the firemen ...’) or existentially (‘There are firemen ...’), only the former interpretation is possible in (7b).

Subjects of stage and individual level predicates also differ insofar as the latter form extraction islands, as it is illustrated in (8).

- (8) a. Feuerwehrmänner sind viele verfügbar  
 Firemen are many available  
 ‘There are many firemen available’  
 b. \* Feuerwehrmänner sind viele selbstlos  
 Firemen are many altruistic  
 ‘There are many firemen altruistic’

In German, it is generally possible to extract the head noun of a weak quantifier while the determiner is stranded, but this option is excluded with subjects of individual level predicates.

This list is by no means exhaustive. Nevertheless, it should suffice to give the reader an impression of the kind of phenomena involved. In the sequel, the most influential approach to explain these patterns — originating from Kratzer 1989, Diesing 1988, and Diesing 1992 — is briefly reviewed and its shortcomings are discussed. Finally, an alternative proposal is presented.

### 3 Kratzer’s and Diesing’s Proposal

Kratzer starts with the subsequent observation.

- (9) a. Always when a Moroccan knows French, she knows it well.  
 b. Always when Mary knows a foreign language, she knows it well.  
 c. Always when a Moroccan knows a foreign language, she knows it well.  
 d. \*Always when Mary knows French, she knows it well.

In her analysis, she follows Heim 1982 in the assumptions that (a) conditional sentences are mapped to a tripartite Logical Form consisting of a quantifier, a restrictive clause, and a nuclear scope, and (b) that indefinites are interpreted as open formulae introducing a free variable into the Logical Form. Hence the LF’s corresponding to the sentences in (9) should look like those given in (10).

- (10) a.  $always_x[marroccan'(x) \wedge know'(x, french')]$   
 $[know\_well'(x, french')]$   
 b.  $always_y[foreign\_lang'(y) \wedge know'(m', y)]$   
 $[know\_well'(m', y)]$   
 c.  $always_{x,y}[morroccan'(x) \wedge foreign\_lang'(y) \wedge know'(x, y)]$   
 $[know\_well'(x, y)]$   
 d.  $always[know'(m', french')] [know\_well'(m', french')]$

Under this perspective, the ungrammaticality of (9d) is easily accounted for by means of the

**“Prohibition against vacuous quantification**

For every quantifier  $Q$ , there must be a variable  $x$  such that  $Q$  binds an occurrence of  $x$  in both its restrictive clause and its nuclear scope.” (Kratzer 1989, p. 7)

that is obviously violated in (9d).

Surprisingly enough, the sentence becomes nevertheless grammatical as soon as we replace the individual level predicate *to know French* by the stage level predicate *to speak French*.

- (11) Always when Mary speaks French, she speaks it well.

This can be explained by the assumption that stage level predicates have an additional ‘Davidsonian’ argument place for the spatio-temporal

location of the eventuality described while such an argument is missing in the argument structure of individual level predicates. According to this hypothesis, the LF of (11) is (12).

(12)  $always_s[speak'(m', french', s)] [speak\_well'(m', french', s)]$

Here the ‘prohibition against vacuous quantification’ is fulfilled.

These differing argument structures are projected into syntax by means of the ‘Argument Linking Principle’ from Williams 1981.

**“Argument Linking Principle**

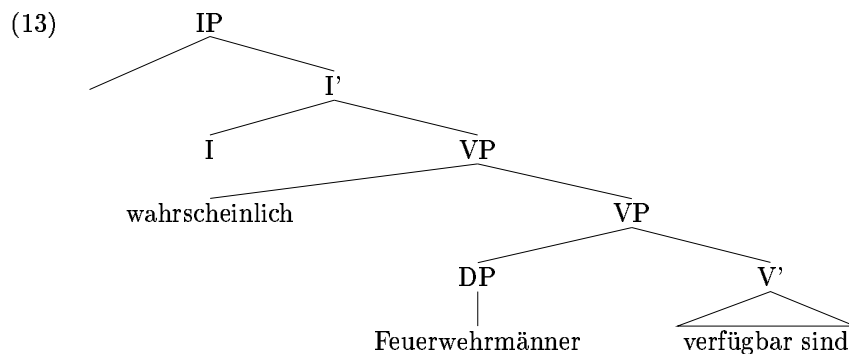
In deep-structure, all arguments except the external argument are realized within the maximal projection of their predicate.” (Kratzer 1989, p. 11, originating from Williams 1981)

If we add the assumption that the Davidsonian argument always occupies the highest position in the argument hierarchy, we get “Diesing’s conjecture” (cf. Diesing 1988) for free:

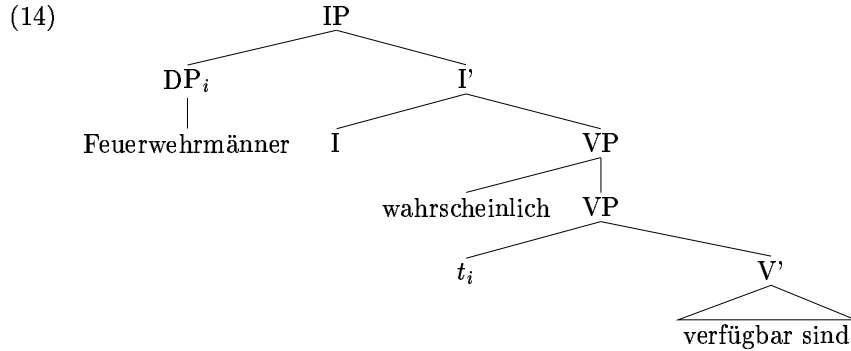
**Diesing’s Conjecture**

- stage level predicates base-generate their subject in SpecVP.
- individual level predicates base-generate their subject in SpecIP.

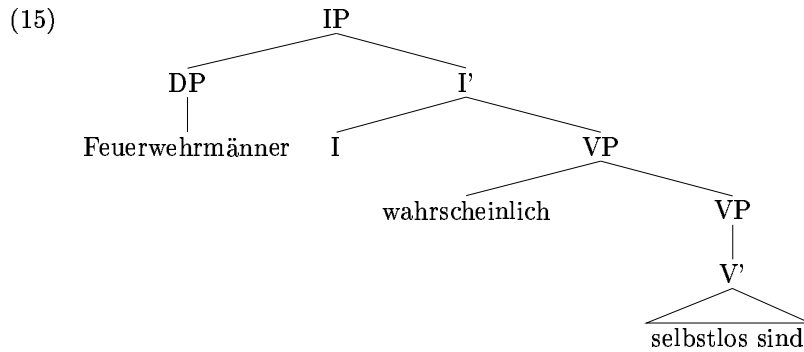
This immediately accounts for the German scrambling and extraction data. According to this proposal, the D-structure of both (4a) and (4b) looks as in (13).



If this configuration remains unchanged on S-structure, we get (4a). But the subject may be moved to the empty SpecIP position, such that we arrive at (14) as the S-structure of (4b).



In contrast, the hierarchically highest argument of individual level predicates is — due to the absence of the Davidsonian argument — the subject, which therefore appears in SpecIP in the D-structure of (5b).



Since the subject does not bind a VP-internal trace here, lowering is blocked both at S-structure and at LF, and hence (5a) is predicted to be ungrammatical.

According to Diesing, the interpretation of a bare plural — existential vs. generic — is rigidly determined by its position at LF. She also follows Heim 1982 insofar as indefinites are interpreted as open formulae, but she lets EXISTENTIAL CLOSURE apply to the VP, while the variable introduced by an VP-external indefinite must be bound by some operator. In the absence of an overt one, these variables are bound generically (these are roughly the intuitions behind her famous ‘Mapping Hypothesis’).

## 4 Problems

### 4.1 Syntactic Counterevidence

Although the approach described is conceptually pleasing and covers a considerable amount of data, it has nonetheless some shortcomings, both empirical and conceptual in nature. Let us start exploring the syntactic consequences of ‘Diesing’s Conjecture’. It predicts that subjects of individual level predicates always appear in scrambled position in German. There are at least two construction types that contradict this claim.

The primary distinction among natural language quantifiers is usually drawn between the proportional ones on the one hand and cardinal ones on the other. According to this point of view, weak quantifiers in their partitive reading fall into one class with strong quantifiers. Most unexpectedly, the strong quantifiers headed by *jeder* ‘every’, *alle* ‘all’, and *die meisten* ‘most’ can appear VP-internally in German as well as bare plurals and weak quantifiers in their existential reading (in fact, the former two usually even have to). Even more unexpectedly, they can do so in the subject position of individual level predicates.<sup>1</sup>

- (16) a. weil ja jeder Student Französisch kann  
since PRT every student French knows  
‘Every student knows French’  
b. ??? weil jeder Student ja Französisch kann  
since every student PRT French knows
- (17) a. weil ja alle Studenten Französisch können  
since PRT all students French know  
‘All students know French’  
b. ??? weil alle Studenten ja Französisch können  
since all students PRT French know
- (18) a. weil ja die meisten Studenten Französisch können  
since PRT most students French know  
‘Most students know French’  
b. weil die meisten Student ja Französisch können  
since most students PRT French know

It is noteworthy that the sentences in (18) are not wholly synonymous, although the difference is quite subtle. In a sense, the interpre-

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<sup>1</sup>The discourse particle *ja* syntactically behaves similar to a sentential adverb. Since it does not give rise to scope effects, it makes better test cases in connection with quantifiers.

tations of *die meisten* differ just in the respects that distinguishes the specific and the non-specific reading of an indefinite. (18b) is appropriate if the speaker knows of a specific group of students that each of them knows French, and this group happens to be the majority among all students. To utter (18b) felicitously, the speaker only has to know that a majority of French speaking students exists.<sup>2</sup>

Having thus shown that at least some subjects of individual level predicates occur VP-internally at S-structure, it can also be argued that even generic bare plural subjects bind a trace there. Take a look at the subsequent example:

- (19) weil Feuerwehrmänner wahrscheinlich AUCH selbstlos sind.  
 since Firemen probably ALSO altruistic are  
 ‘Probably, firemen are altruistic too’

The conventional implicature to be drawn from (19) is approximately: There are classes of individuals besides the class of firemen that are comparable to the firemen and whose members are typically altruistic. Hence the interpretation of *auch* ‘also’ crucially relies on the set of alternatives to *Feuerwehrmänner*. To say it in the terminology of Rooth 1985, the particle *auch* is associated with a focus on the subject *Feuerwehrmänner*. Hence *auch* has to c-command *Feuerwehrmänner* at LF, hence *Feuerwehrmänner* has to be reconstructed to a VP-internal position, hence on S-structure, there has to be a VP-internal subject trace.

These observations show that Diesing’s claim — subjects of individual level predicates are base generated outside VP — cannot be maintained without losing independently justified generalizations. Hence it strikes me more reasonable to assume that subjects are always base generated inside VP. The syntactic contrast between stage and individual level predicates thus appears to be a contrast between optional and obligatory scrambling of bare plural subjects rather than between different D-structures.

## 4.2 Semantical considerations

In de Hoop and de Swart 1989, the following data are discussed:

- (20) a. \* When John dies, he is unhappy.  
 b. \* When John destroys this house, he destroys it thoroughly.  
 c. \* When John kills this rabbit, he kills it cruelly.

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<sup>2</sup>Since singular indefinites behave completely in parallel, it is questionable whether it is really appropriate to treat *die meisten* as a strong quantifier at all. Besides its anaphora licensing potential, the mentioned effect provides another argument to treat it — as well as its English counterpart — as an indefinite, roughly synonymous to ‘a majority of ...’



Although only stage level predicates are involved, the sentences are as bad as the corresponding sentences with individual level predicates (and, accordingly, they become fine as soon as you replace subject or object by an indefinite). These predicates are characterized by the fact that the described actions cannot be repeated (de Hoop and de Swart 1989 call them ‘once-only’ predicates). Obviously, individual level predicates are by definition ‘once-only’. Hence we may conclude that *when*-conditionals are not sensitive for the stage/individual contrast at all. Hence they do not provide any evidence in favor or against particular assumptions about argument structure. Therefore it seems justified to assume that there is no difference between the predicate types under debate than the one mentioned in the beginning. As a kind of null hypothesis, it is desirable to derive the observed contrast solely from their different temporal semantic properties.

## 5 Topic-Comment Structure

### 5.1 Once again: German Scrambling

Notably, the syntactic opposition between subject in situ vs. subject scrambling has much more semantic impact than just the distinction between the generic and the existential reading of bare plurals. Most fundamentally, it forms a syntactic indicator of the thetic/categorical opposition (cf. Sasse 1987).

- (21) a. weil ja der PRÄSIDENT gestorben ist  
           since PRT the president died is  
           ‘since the PRESIDENT died’  $\implies$  thetic statement
- b. weil der Präsident ja GESTORBEN ist  
           since the president PRT died is  
           ‘since the president DIED’  $\implies$  categorical statement

(21a) forms a typical instance of a thetic statement, ie. subject and predicate together form a single prosodic unit, the focal pitch accent on the subjects projects up to a larger domain including the predicate, the sentence would be a reasonable answer to a question like “What happened?” etc. Here the subject remains in situ. If the subject is scrambled as in (21b), we get a categorical statement with all its typical features. Let us assume that categorical statements are those statements where the subject is a topic while thetic statements lack an overt topic-comment distinction. As I argued elsewhere (cf. Jäger 1995a, Jäger 1996), this observation can be generalized to the assumption that — in the absence of intervening focus effects — the scrambled item(s) in an embedded clause are just the topic(s) of that clause.

As mentioned above, Diesing’s prediction that subjects of individual level predicates must occur outside VP does not hold for strong quantifiers. Generic bare plurals, specific indefinites, partitive weak quantifiers, and anaphoric definites scramble obligatorily anyway. Hence the observational generalization that subjects of individual level predicates have to occur VP-externally only holds for non-anaphoric definites (ie. proper nouns or name-like definites like ‘the president’), and non-specific indefinites, including existential weak quantifiers.<sup>3</sup>

These are just the classes of DP’s that can occur as subjects ofthetic statements. Hence the syntactic contrasts observed in connection with the stage/individual distinction can perfectly derived from the single assumption that **individual level predicates cannot constitutethetic statements**.<sup>4 5</sup> Since English *there*-sentences form prototypical cases ofthetic statements, it is to be expected that individual level predicates cannot occur there. A detailed investigation of generic bare plural would go beyond the aim of this paper; nevertheless it is an empirically valid observation that they are always topics. A similar consideration holds for partitive weak quantifiers (cf. Jäger 1995b, Jäger 1996). The island effects mentioned in the beginning follow from the facts that (a) the subjects involved have to be topics, and (b) topics form extraction islands (cf. Meinunger 1996). Hence we basically have to clarify the semantic impact of the notions of “topic” and “thetic”.

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<sup>3</sup>Even here a certain restriction has to be made. A non-specific indefinite may occur VP-internally as subject of an individual level predicate if it contains a d-linked expression:

- (22) a. weil ja ein Student von mir Französisch kann  
 since PRT a student of mine French knows  
 ‘since a student of mine knows French’  
 b. weil ja drei Studenten von mir Französisch können  
 since PRT three students of mine French know  
 ‘since three students of mine know French’

<sup>4</sup>Heycock (p.c.) claims that this is not generally valid. She gives the subsequent counterexample:

- (23) A: Why didn’t you come here by car?  
 B: The ROAD is bad!

B’s answer seems to constitute athetic statement although it contains an individual level predicate. This datum is in fact challenging, but since this sentence cannot be an answer to a question like “What happened”, it is surely notthetic.

<sup>5</sup>Ladusaw 1994 comes to a similar conclusion. Nevertheless his approach differs from the one given here, since he equates the distinction between stage level and individual level predicates with a primary ontological distinction between ‘(parameterized) eventuality descriptions’ vs. ‘properties’. Here the opposition is taken to be founded in world knowledge, without further assumptions about ontology.

## 6 Thetic Statements and Temporal Discourse Linking

### 6.1 Thetic Statements and Quantification

In Chierchia 1992 convincing evidence is presented that the notion of “topic” is not a purely pragmatic one but can have influence on truth conditions and is hence semantical in nature. Investigating the famous ‘proportion problem’, he comes to the conclusion that adverbs of quantification do not bind unselectively all indefinites occurring in the restrictor but only those that are topics. The non-topical indefinites are existentially closed.

- (24) a. “Dolphins are truly remarkable. When a trainer trains a dolphin, she usually makes it do incredible things.” (Topic = ‘dolphins’)
- b. “Trainers from here are absolutely remarkable with all sort of animals. For example, if a trainer from here trains a dolphin, she usually makes it do incredible things.” (Topic = ‘a trainer from here’)
- (from Chierchia 1992, p.121)

In (24a), where the object of the antecedence of the conditional is the topic, we get the object asymmetric reading, while in (24b), the subject occupies this place.

If Chierchia’s generalization is correct, we expect thetic clauses to be excluded in the antecedence of conditional sentences, since they do not provide a topic to be quantified over. Nevertheless such sentences are fine.

- (25) a. If the PRESIDENT dies, the vice president usually succeeds in his place.
- b. If SNOW is falling, it is usually winter.

The Logical Form of the sentence in (25b) are approximated in (26).

(26)  $usually_t [snow\ fall'(t)] [winter'(t)]$

Intuitively, we quantify over time slices here. If we want to maintain Chierchia’s insight, we have to give up the assumption that thetic statements are topic-less. The linguistic item that introduces a temporal discourse referent — probably some functional element like Tense — should be considered to be a topic in these constructions. In matrix sentences, it behaves like nominal topics, i.e. it provides a quasi-anaphoric link to the preceding discourse.<sup>6</sup> This in mind, it has finally to be clarified why individual level predicates do not admit temporal topics.

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<sup>6</sup>Of course, a clause may contain both nominal and temporal topics simultaneously, thus creating multiple discourse links.

## 6.2 The Contingency of Topics

The notion of “topic” — or, closely related, “theme” — is usually circumscribed by two quite different pretheoretic intuitions. Firstly it is claimed that topics contain **old information**, and secondly, topics are claimed to express what a statement is **about**. While the concept of ‘old information’ can be given precise content in a dynamic framework, it remains unclear how ‘aboutness’ should be explicated. The least thing to be said is that a statement about a certain individual should enable the hearer to distinguish this individual from comparable ones. To put it in other terms: The comment part of a statement should express a property of the referent of the topic that is **contingent** in a suitable sense. This assumption is supported by the contrast given in (17) and (18) that are repeated in (27) and (28) for convenience.

- (27) a. weil ja alle Studenten Französisch können  
since PRT all students French know  
‘All students know French’  
b. ??? weil alle Studenten ja Französisch können  
since all students PRT French know
- (28) a. weil ja die meisten Studenten Französisch können  
since PRT most students French know  
‘Most students know French’  
b. weil die meisten Student ja Französisch können  
since most students PRT French know

Since (27) makes a statement about all students, this statement cannot be contingent. Accordingly, the subject cannot be a topic and the (b)-sentence sounds awkward. In contrast, in (28) no such conflict arises<sup>7</sup>.

Applied to statements with a temporal topic, this implies that the eventuality described has to be temporally contingent. This is in immediate contradiction to the defining property of individual level predicates, since these are the predicates that are temporally (at least normally) not contingent. Individual level predicates are excluded inthetic statements since the lexical semantics of the predicate, the encyclopedic knowledge connected with the expressed property, and the requirements of information structure immediately contradict each other.

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<sup>7</sup>I am indebted to Bill Ladusaw and Barry Schein who drew my attention to a flaw in the argumentation that I presented at the WCCFL-meeting concerning this point.

## 7 Conclusion

Kratzer and Diesing base their approach to the stage/individual contrast on three classes of observations:

1. There are minimal pairs where individual level predicates give rise to a violation of the prohibition against vacuous quantification and stage level predicates don't.
2. Bare plural subjects of stage level predicates are ambiguous between a generic and an existential reading, while individual level predicates admit only the generic interpretation.
3. Subjects of stage level predicates occur outside VP in German S-structure and they show the syntactic behavior that is expected of items that are not strongly governed.

1 is explained by the assumption that stage level predicates have an additional argument place. These differing argument structures are reflected in syntax, such that 3 can be derived. According to this proposal, stage level predicates base generate their subjects in SpecVP and individual level predicates in SpecIP. Diesing's 'Mapping Hypothesis' allows to derive 2.

In de Hoop and de Swart 1989 it is shown that *when*-conditionals aren't sensitive for the stage/individual distinction. Instead the line has to be drawn between predicates that denote iterable eventualities and once-only predicates. Hence the apparently most convincing evidence in favor of an argument structural approach proves to be misleading.

It is also questionable whether an analysis of generic bare plurals in the spirit of the Mapping Hypothesis is really appropriate. According to this proposal (that is based on ideas due to Kamp 1981 and Heim 1982), bare plurals are uniformly mapped to an open formula at some level of representation. The ambiguity arises from the fact that the free variable introduced may be bound by an operator or by existential closure. This line of argumentation presupposes that generic bare plurals are indefinites. In contrast, crosslinguistic facts show that the homonymy with plural indefinites is rather a language specific accident of English, German, and some other languages. In romanic languages, generics are generally homonymous with plural definites, as the French example (29) indicates.

- (29) a. Les étudiants sont pauvres  
the students are poor  
'The students are poor'/'Students are poor'
- b. ? Des étudiants sont pauvres  
INDEF students are poor  
'Some of the students are poor'  $\implies$  no generic interpretation

This in mind, it strikes me more reasonable to treat generic DPs as a class of their own instead of subsuming them under indefiniteness.

Finally, a closer inspection of the data showed that strong quantifiers may very well occur VP-internally as subjects of individual level predicates. There is even evidence that VP-external bare plural subjects bind a VP-internal trace. Hence the data are best accounted for by the assumption that subjects are always base generated VP-internally. To explain Diesing's observation, another perspective may be helpful. In German, the position of the subject is largely determined by its interpretation. Generics, anaphoric definites, partitive weak quantifier, and specific indefinites usually occur outside VP, while unspecific indefinites, existential weak quantifiers, strong quantifiers, and nonanaphoric definites remain in situ. These facts are not affected by the stage/individual distinction. What is to be explained is the fact that subjects of individual level predicates cannot cooccur with unspecific indefinites and nonanaphoric definites.

By way of generalizing the insights from Chierchia 1992 about the interdependence of topic-comment structure and the different proportion readings of donkey conditionals, we came to the conclusion that inthetic clauses, the Tense morpheme has to be considered to be a topic. Since the comment of a statement expresses something **about** the topic, it is plausible to assume that this property is contingent in an appropriate sense. Applied tothetic statements, this implies that the eventuality described has to be temporally contingent. Since individual level predicates express properties that are unrestricted temporally, they cannot constitutethetic statements. Subjects ofthetic clauses are always 'weak' DPs, i.e. unspecific indefinites (including existential weak quantifiers) or nonanaphoric definites. Hence the mentioned cooccurrence restrictions turn out to be consequences of information structural effects. Conceptually this way of reasoning has the advantage that no additional stipulations about the lexical and syntactic properties of the different predicate types are necessary.

## References

- Carlson, Gregory N. 1977. *Reference to Kinds in English*. Doctoral dissertation, University of Massachusetts, Amherst.
- Chierchia, Gennaro. 1992. Anaphora and Dynamic Binding. *Linguistics and Philosophy* 15(2):111–184.
- de Hoop, Helen, and Henriette de Swart. 1989. Over indefiniete objecten en de relatie tussen syntaxis en semantiek. ms., University of Amsterdam.
- Diesing, Molly. 1988. Bare Plural Subjects and the Stage/Individual Contrast. In *Genericity in Natural Language. Proceedings of the 1988 Tübingen Conference*, ed. Manfred Krifka. Tübingen.

- Diesing, Molly. 1992. *Indefinites*. MIT Press, Cambridge(Mass.).
- Heim, Irene. 1982. *The Semantics of Definite and Indefinite Noun Phrases*. Doctoral dissertation, University of Massachusetts, Amherst.
- Jäger, Gerhard. 1992. Diskurs-Verknüpfung und der Stadien-/Individuen-Kontrast. Master's thesis, Universität Leipzig.
- Jäger, Gerhard. 1995a. Topic, Scrambling, and *Aktionsart*. In *Proceedings of the Göttingen Focus Workshop*, ed. Inga Kohlhof, Susanne Winkler, and Hans Bernhard Drubig. 19–34. Arbeitspapiere des SFB 340 "Sprachtheoretische Grundlagen für die Computerlinguistik". Tübingen.
- Jäger, Gerhard. 1995b. Weak Quantifiers and Information Structure. In *Proceedings of NELS 25*, ed. Jill N. Beckman, 303–318. GLSA, Amherst.
- Jäger, Gerhard. 1996. *Topics in Dynamic Semantics*. Doctoral dissertation, Humboldt-Universität zu Berlin.
- Kamp, Hans. 1981. A Theorie of Truth and Semantic Representation. In *Formal Methods in the Study of Language*, ed. Jeroen Groenendijk, Theo Janssen, and Martin Stokhof. Amsterdam.
- Kratzer, Angelika. 1989. Stage-level and Individual-level Predicates. ms. University of Massachusetts, Amherst.
- Ladusaw, William A. 1994. Thetic and Categorical, Stage and Individual, Weak and Strong. In *Proceedings of SALT IV*, ed. Mandy Harvey and Lynn Santelmann, 220–229. Ithaca, Cornell University.
- Meinunger, André. 1996. *Discourse Dependent DP Displacement*. Doctoral dissertation, Universität Potsdam.
- Rooth, Mats. 1985. *Association with Focus*. Doctoral dissertation, University of Massachusetts, Amherst.
- Sasse, Hans-Jürgen. 1987. The thetic/categorical distinction revisited. *Linguistics* 25:511–580.
- Williams, Edwin. 1981. Argument Structure and Morphology. *The Linguistic Review* 1:81–114.