

Positions and Interpretations

Trends in Linguistics

Studies and Monographs 245

Editor

Volker Gast

Founding Editor

Werner Winter

Editorial Board

Walter Bisang

Hans Henrich Hock

Heiko Narrog

Natalia Levshina

Matthias Schlesewsky

Niina Ning Zhang

Editor responsible for this volume

Volker Gast

De Gruyter Mouton

Positions and Interpretations

German Adverbial Adjectives
at the Syntax-Semantics Interface

by

Martin Schäfer

De Gruyter Mouton

ISBN 978-3-11-027644-2
e-ISBN 978-3-11-027828-6
ISSN 1861-4302

Library of Congress Cataloging-in-Publication Data

A CIP catalog record for this book has been applied for at the Library of Congress.

Bibliographic information published by the Deutsche Nationalbibliothek

The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available in the Internet at <http://dnb.dnb.de>.

© 2013 Walter de Gruyter GmbH, Berlin/Boston
Printing: Hubert & Co. GmbH & Co. KG, Göttingen
⊗ Printed on acid-free paper
Printed in Germany
www.degruyter.com

For my parents, Kord-Hinrich and Sabine Schäfer

Contents

1	Introduction	
1	Scope and aim	1
2	On adverbials and adjectives	3
2.1	Defining adverbials	4
2.1.1	Adverbial vs. subject	5
2.1.2	Adverbial vs. object	6
2.1.3	Adverbial vs. predicative	12
2.1.4	Adverbial vs. particle	14
2.1.5	Summary	16
2.2	Adverbial adjectives	17
2.2.1	Adjectives	17
2.2.2	Adverbs	19
2.2.3	Adjective or adverb?	21
2.3	Summary	23
3	Basic distinctions	24
3.1	Class properties of adverbial adjectives	25
3.2	Set-theoretic classifications of adjectives	25
3.3	Sentence and non-sentence adverbials	28
3.4	Other important semantic properties	29
3.4.1	Opacity	29
3.4.2	Veridicality	30
4	Structure of the book	30
2	The readings of sentence adverbials	
1	Introduction	33
2	Subject-oriented adverbials	34
2.1	Adverbial adjectives as subject-oriented adverbials	36
3	Speaker-oriented adverbials	37
3.1	Speech-act adverbials	38
3.2	Epistemic adverbials	39
3.3	Evaluative adverbials	42
4	Domain adverbials	45
5	Semantic constraints on possible sentence adverbials	47
6	Conclusion	48

3	The readings of verb-related adverbials	
1	Introduction	49
2	Manner adverbials	51
2.1	Introduction	51
2.2	Pure manner adverbials	56
2.3	Agent-oriented manner adverbials	58
2.4	Further orientations	62
3	Degree adverbials	63
3.1	Contexts and constraints for degree modification	65
3.2	Degree-manner ambiguities	66
4	Method-oriented adverbials	67
5	Verb-related adverbials and secondary predication	69
5.1	Resultatives	69
5.2	Ambiguities and blends	71
5.3	Depictives	75
6	Adverbial adjectives and the verb-adverbial combinatorics	78
6.1	Statives that allow manner modification	79
6.2	Mannerless statives	83
7	Verb-related adverbials and negation	85
7.1	Negation, adverbials, and the sentential base	86
7.2	Verb-related adverbials with scope over negation	89
8	Conclusion	94
4	Event-related adverbials	
1	Mental-attitude adverbials	97
1.1	Mental-attitude adverbials and opacity	99
1.2	Mental-attitude adverbials vs. secondary predication	100
1.3	Transparent adverbials	101
1.4	Transparent adverbials, depictives and negation	103
2	Event-external adverbials	104
2.1	Inchoative readings of <i>schnell</i> and <i>langsam</i>	105
2.2	Holistic usages	106
2.2.1	Holistic usages and the internal structure of the event	106
2.2.2	Quantified direct objects	110
2.2.3	Modifiers of complex events	115
3	The <i>wobei</i> -paraphrase	117
3.1	<i>Wobei</i> vs. <i>während</i>	118
3.2	Event-related adverbials and the <i>wobei</i> -paraphrase	120

3.2.1	Mental-attitude adverbials and the <i>wobei</i> -paraphrase	120
3.2.2	The <i>wobei</i> -paraphrase and event-external modification	121
3.2.3	The <i>wobei</i> -paraphrase and associated readings	123
4	Summary	125
5	The syntactic position of manner adverbials	
1	Introduction	127
2	Establishing syntactic positions	129
3	Adverbial modification and information structure	130
3.1	Focus projection	130
3.2	Adverbials and normal word order	134
4	Eckardt's account: Scrambled indefinite direct objects	135
4.1	Restricted combinations: Implicit resultatives and verbs of creation	136
4.2	The readings of indefinites and topicality	138
4.3	In-group readings	138
4.4	Problems for Eckardt's account	140
4.4.1	Frey vs Eckardt: The strong reading of indefinites	140
4.4.2	Manner adverbials and verbs of creation	141
5	Frey and Pittner: Object integration	141
5.1	Resultatives and integration	144
6	An alternative account: It's the adverbial's reading that is decisive	145
6.1	Adverbials out of the blue	145
6.1.1	Thetic sentences	148
6.2	Re-interpreting the controversial examples	152
6.2.1	Existentially interpreted w-phrases	152
6.2.2	W-phrases: Re-interpreting the data	154
6.3	Theme-rheme condition	157
7	More evidence and some subtleties	160
7.1	Clear minimal pairs	160
7.2	Lexical semantics and verb-adverbial combinatorics	163
7.3	Scrambling	164
8	Summary	165

6	Adverbials in formal semantics: The classical analyses	
1	The operator approach	167
1.1	Thomason and Stalnaker	169
1.2	The operator approach and scope	170
1.3	The operator approach as a general analysis of modification structures	172
1.4	Criticism of the operator approach	173
1.4.1	The cognitive inappropriateness of the intensional solution . . .	173
1.4.2	Entailments in the operator approach	175
2	The argument approach: McConnell-Ginet	176
2.1	Entailments in McConnell-Ginet’s approach	178
3	The predicate approach: Event-based semantics	178
3.1	Event-based semantics and intuitive plausibility	181
3.2	The scope of the event-based approach	182
3.3	Neo-Davidsonian approaches	182
4	Possible combinations: Events and the predicate-modifier approach	183
4.1	Adding events	183
4.2	Event-based semantics as a refinement	184
5	Conclusion	185
7	The semantic analysis of verb-related adverbials	
1	Manners in the ontology	188
1.1	The history of the idea	188
1.2	The cognitive status of manners	190
2	Manners in the representation	191
2.1	The technical aspects: Getting manners into the representation and specifying them . .	192
3	Benefits of the analysis	194
3.1	Differentiating the readings and the link to syntax	194
3.2	The syntax-semantics interface	195
3.3	Event-related modification: The difficult cases	198
4	Summary	201
8	Summary and outlook	
1	Results	203
2	Outlook	208

Notes	211
References	223
Index	232

Preface and acknowledgements

The starting point for this book was my dissertation, finished in the summer of 2005. Although both works tackle the same subject matter, the current book is a different work altogether, from its overall organization down to the individual chapters. The introduction has been rearranged and rewritten so that the discussion of the classical formal analyses of adverbials now forms the new chapter 6, while parts of the completely scrapped final chapters 6 and 7 of my dissertation now occur in changed form in the introduction and in chapters 2 through 5. The chapters on the different usages have been extended and heavily rewritten. In particular, this book includes a separate chapter for sentence adverbials and a much more detailed description of the adverbial usages below the sentence level, which are now divided into event- and verb-related adverbials, each presented in their own chapter. While my dissertation contains two chapters on the syntactic positioning of adverbials, I took the opportunity to rearrange and largely rewrite the material to form a single, more focussed chapter on the syntactic position of manner adverbials. And finally, the semantic analysis presented in chapter 7 is completely new.

Not surprisingly, this book has benefited from input by quite a number of people over quite a number of years.

The feedback and encouragement from Claudia Maienborn has been particularly valuable, as has our work on our joint HSK-entry *Adverbs and Adverbials*. Many thanks go to her.

Of almost equal importance was the possibility to present an early form of my new analysis at the 2007 CSSP conference in Paris, and to publish that analysis later in the conference proceedings. During this process, I received extremely helpful comments from Christopher Piñón and Olivier Bonami.

A continuous source of input and feedback for the development of the ideas presented in this book were the event semantics workshops that originated in Leipzig and later took place in Wuppertal, Tübingen, Berlin, Mannheim, Flensburg, and Kassel. These almost annual meetings allowed me to present various new aspects and developments of my work that in one way or another all made their way into this book, and I profited a lot from the feedback, discussion and support of its core group of participants, not only at the workshops themselves: Johannes Dölling, Markus Egg, Stefan Engelberg, Wilhelm Geuder, Holden Härtl, Daniel Hole, Claudia Maienborn, Irene Rapp, Britta Stolterfoht, and Tanja Zybatow.

We are now getting closer to the actual mechanics of writing, and here I would first like to thank the three native speakers here in Jena that served as my ad-hoc language advisory panel, Erica Haas, Allan Turner, and my assistant by special appointment, Chunky Liston.

In addition, my thanks go to the one anonymous reviewer and to Niina Zhang for their comments on the manuscript.

Finally, I would like to thank Volker Gast. Without his seemingly boundless enthusiasm, I would probably not have tried to publish this work. While already supporting this enterprise when he was not officially associated with my current publisher, he also later proofread and commented on the final version of the whole manuscript and suggested many improvements and clarifications.

This book was typeset with L^AT_EX on computers running Linux.

Abbreviations and notational conventions

Notational conventions:

1. Morphological marking for case, number and gender is only included in the glosses when this information is relevant for the discussion at hand.
2. Ungrammatical sentences are glossed but not translated.
3. Unless stated otherwise, references to other sections refer to sections of the current chapter.

Abbreviations:

NOM = nominative case

GEN = genitive case

ACC = accusative case

DAT = dative case

EFF = effective case

DEM = demonstrative pronoun

PASSP = passive participle

PL = plural

SG = singular

FEM = feminine

MASC = masculine

Chapter 1

Introduction

This chapter has three aims: In section 1, I set out the main ideas behind this book. In section 2, I explain in detail my usage of the term ‘adverbial adjective’, the term that describes the set of adverbials whose different usages stand at the center of this investigation. In section 3, I introduce the semantic notions that are needed in order to get the most out of the following chapters. Finally, I lay out the structure of the book in section 4.

1. Scope and aim

The topic of this work is German adverbial adjectives. The starting point for this investigation is the question of what these adverbials contribute to sentence meaning and the extent to which this contribution depends on their syntactic position within a sentence. Special attention is given to those adverbial usages that are traditionally understood as manner modification.

German adverbial adjectives are adjectives that are used as adverbials. Examples of typical occurrences of the adverbials of interest are given in (1), where the adverbials are printed in boldface.

- (1) a. *Sie hat **laut** gesungen.*
she has loud sung
‘She sang loudly.’
- b. *Der Zug fuhr **schnell**.*
the train drove fast
‘The train drove fast.’
- c. *Er löste die Aufgabe **intelligent**.*
he solved the problem intelligent
‘He solved the problem intelligently.’

The contribution of adverbial adjectives to the sentence meaning cannot be subsumed under a single cover term. Different usages must be distinguished. In (1), for example, the adjectives are used as manner adverbials. Their contribution to the sentence meaning consists in specifying the manner in which the events referred to by the verbal predicate are carried out. Examples of other usages include adjectives serving as mental attitude adverbials, cf. (2a), or adjectives serving as frame adverbials, cf. (2b).

2 Introduction

- (2) a. *Martha geht **widerwillig** zur Schule.*
Martha goes reluctant to school
'Martha goes to school reluctantly.'
- b. *Wir wissen, dass **wirtschaftlich** die USA den Krieg gewonnen haben.*
we know, that economical the USA the war won
has
'Economically, the United States have won the war.'

Roughly, mental attitude adverbials characterize the attitude of the agent of a sentence towards carrying out the activity described by the rest of the sentence. In contrast, frame adverbials limit the domain in which the proposition expressed by the rest of the sentence holds.

A single adjective may have different adverbial usages or different adverbial readings. An example is provided by the adjective *wirtschaftlich* 'economical', which functions in (2b) as a frame adverbial, but may also serve as a method-oriented adverbial, cf. (3).

- (3) *Dieses Problem ist nur **wirtschaftlich** zu lösen.*
this problem is only economically to solve
'This problem can only be solved economically.'

Wirtschaftlich 'economically' in (3) specifies a set of methods, namely economic methods, which present the only way to solve the problem referred to by the subject noun phrase.

These different adverbial usages of adjectives interact with the syntactic position of the adjectives, cf. e.g. (4).

- (4) a. *Wir wissen, dass **wirtschaftlich** die USA den Krieg gewonnen haben.*
we know, that economical the USA the war won
has
'Economically, the United States won the war.'
- b. **Wir hörten, dass **laut** die Leute gesungen haben.*
we heard, that loud the people sung have

The position before the subject is possible for the frame adverbial *wirtschaftlich* 'economically', but not for the manner adverbial *laut* 'loudly'. In contrast, *laut* 'loudly' is unproblematic in positions adjacent to the finite verb,

whereas for *wirtschaftlich* ‘economically’ the reading as a method-oriented adverbial is preferred, cf. (5).

- (5) a. *Wir wissen, dass die USA den Krieg wirtschaftlich gewonnen haben.*
 we know, that the USA the war economical won
haben.
 has
 ‘Economically, the United States won the war.’
- b. *Wir hörten, dass die Leute laut gerufen haben.*
 we heard, that the people loud screamed have
 ‘We heard that the people screamed loudly.’

That is, (5a) is preferably interpreted to mean that the USA used economic means in winning the war.

These characteristics of adverbial adjectives lead to the main questions to be dealt with in this work:

- (a) Which different adverbial usages of adjectives need to be distinguished?
- (b) Which usages are tied to which syntactic positions?
- (c) How can different usages of adverbial adjectives be formally analyzed?
- (d) How can the derivation of the formalizations be linked to the different syntactic positions?

In seeking answers to these questions, the focus will be on the usages of adjectives as non-sentential adverbials. There are two reasons for this decision: On the one hand, these usages, among them the large class of manner adverbials, represent the core usage for adverbial adjectives. On the other hand, they yield a bewildering number of further usages that is traditionally under-described in the literature. One important aim of this book is therefore to give an adequate descriptive overview of these usages, which will be divided into two larger classes: verb-related adverbials and event-related adverbials. As I will show, these two classes are bound to distinct syntactic positions. Based on the descriptive differentiation, I propose a new semantic analysis for the verb-related adverbials that allows a formal semantic distinction between the two groups. Finally, it is shown how the two distinct syntactic positions can be used in order to derive the correct formal representation for the two usages.

2. On adverbials and adjectives

This section (a) explains my usage of the terms *adverbial*, *adjective* and *adverb* and (b) argues for the classification of the word forms of interest in this

work as *adverbial adjectives* as opposed to the alternative classification as *adjectival adverbs*.

2.1. Defining adverbials

The term *adverbial* is used in this work to refer to a specific syntactic function, on par with other syntactic functions such as subject, object, particle, predicative and verb, cf. the labeled examples in (6) and (7) for illustration.¹

(6) *[Im Wald]*_{adverbial} *findet*_{verb} *Peter*_{subject} *auch*_{particle} *Pilze*_{object}.
 in.the wood found Peter also mushrooms
 ‘In the wood, Peter found even mushrooms.’

(7) *Peter*_{subject} *ist*_{verb} *klug*_{predicative}.
 Peter is intelligent
 ‘Peter is intelligent.’

Informally, adverbials are those elements that serve to specify further the circumstances of the verbal or sentential referent. They are restricted to a set of semantically limited usages, prototypically specifying time, place, or manner, and they are typically optional, cf. (8).

- (8) a. *Roland tanzte den ganzen Abend.*
 Roland danced the whole evening
 ‘Roland danced the whole evening.’
- b. *Frieda arbeitet an einem Gymnasium.*
 Frieda works at a grammar.school
 ‘Frieda works at a grammar school.’
- c. *Roland und Frieda tanzten wunderschön.*
 Roland and Frieda danced beautiful
 ‘Roland and Frieda danced beautifully.’

As shown by (8), adverbials can be realized by a variety of phrasal types: a noun phrase in (8a), a prepositional phrase in (8b), and an adverbial phrase in (8c). Formally, German adverbials can be identified with the help of the four criteria given in (9). Optionality, though a prototypical feature of adverbials, cannot be used here, as some adverbials are obligatory.

- (9) (i) Adverbials can serve as a *Satzglied* (see definition in (10)).
 (ii) The form of the adverbial is not determined by the verb.
 (iii) There are no agreement relations between adverbial and verb.
 (iv) Adverbials are restricted to a set of semantically limited usages.

The term ‘satzglied’ is used in German linguistics to refer to clause-level constituents which conform to the following three criteria (cf. e.g. Pittner 1999:47), corresponding to constituent tests at the sentence level:

- (10) (i) A *satzglied* can be positioned relatively freely in a sentence. More specifically, a *satzglied* can appear as the sole constituent before the finite verb in verb-second sentences in German. In terms of traditional German topological theory, the adverbial can constitute the *Vorfeld* ‘prefield’ of verb-second sentences on its own.²
 (ii) A *satzglied* can be elicited by questions.
 (iii) A *satzglied* can be pronominalized.

These properties of adverbials can be used to distinguish adverbials from other clause-level constituents.³ Below I will demonstrate this, focusing on the adverbial usage of adjectives.

2.1.1. Adverbial vs. subject

Subjects are prototypically realized by noun phrases, adverbials by prepositional phrases or adverbs. As adverbs and prepositional phrases cannot serve as subjects, this leaves noun phrases and clauses. In German, noun phrases serving as subjects have to agree with the verb in number. Adverbials do not enter into any agreement relationships, and consequently do not agree with any other clause-level constituents.

In contrast to noun phrases, clauses cannot be marked for agreement. In order to identify clauses as subjects, the theta-criterion can be used. Clausal subjects always carry the specific thematic role assigned by the verb to its subject argument. Furthermore, just like noun phrase subjects, clausal subjects are obligatory in the active voice (cf. the next section for more on thematic roles). Adverbials, in contrast, are never assigned a subject-theta role, and their status does not change with a change from active to passive sentence. And finally, subjects can always be elicited by using the question words *wer/was* ‘who/what’, whereas adverbials can never be elicited by these questions words.

2.1.2. *Adverbial vs. object*

The difference between adverbials and objects is most obvious when comparing objects with the prototypical case of an optional adverbial, but becomes harder to establish for those cases where the adverbial is non-optional. I therefore discuss the differentiation between adverbials and objects in two steps. First, I address the cases of free adverbials vs. objects. Secondly, I cover instances where the adverbial is subcategorized for by the verb.

Free adverbials vs. objects

The differentiation between free adverbials and objects revolves around the second point in the list of criteria in (9): the form of the adverbial is not determined by the verb. German transitive verbs, for example, select an object either in the accusative or in the dative case, cf. (11) and (12).

- (11) *Fritz hat **den** Kuchen gegessen.*
 Fritz has the.ACC cake eaten
 ‘Fritz ate the cake.’
- (12) *Das Spiel gefällt **dem** Jungen.*
 the.NOM game pleases the.DAT boy.DAT
 ‘The game pleases the boy.’

In contrast, if a noun phrase serves as an adverbial, its case marking is independent of the verb. For example, noun phrases in the accusative case can serve as temporal adverbials, specifying a time span. Their case marking is not affected by the choice of verb, cf. (13) and (14).

- (13) *Fritz hat **den ganzen Tag** den Kuchen gegessen.*
 Fritz has the.ACC whole.ACC day the.ACC cake.ACC eaten
 ‘Fritz ate the cake for the whole day.’
- (14) *Das Spiel gefällt dem Jungen **den ganzen Winter**.*
 the.NOM game.NOM pleases the.DAT boy.DAT the.ACC
 whole.ACC winter.ACC
 ‘The game pleases the boy for the whole winter.’

This criterion already suffices to distinguish optional adverbials from objects. However, the relationship between object and verb is not limited to form,

but also concerns other factors. To explicate this, I follow Jacobs (1994) and assume a multi-dimensional conception of valency, which differentiates between four conditions for complements X of Y:

- (15) (i) X is obligatory for Y, i.e. it must be realized.
 (ii) X is specific for Y with respect to its form (e.g. X is case marked).
 (iii) X is specific for Y with respect to its content (e.g. X must be [+volitional] etc.).
 (iv) X is an argument, filling an open position in the meaning of Y.

Free adverbials do not fulfill any of the conditions in (15). Objects may optionally conform to (15i), but, as we have seen, must conform to (15ii). In addition, they also conform to (15iii) and (15iv). Thus, some verbs require their object to be sentient, e.g. *quälen* ‘torment’, cf. (16).

- (16) a. *Peter quälte den Mann.*
 Peter tormented the man.
 ‘Peter tormented the man.’
 b. **Peter quälte den Stein.*
 Peter tormented the stone.

The argumenthood of objects can be established with the help of (a) thematic roles and (b) tests for argumenthood, which I will discuss in turn. Thematic roles are semantic relations that a noun phrase may carry based on the involvement of the entity denoted by the noun phrase in the action denoted by the verb. Classic thematic roles are agent, patient, beneficiary etc. A German verb can select for up to three thematic roles, one for the subject, one for the direct object and one for the indirect object.⁴ This also accounts for the limitation of the numbers of objects in a clause to two. The relation between an object and its thematic role is always stable; that is, if the thematic role *patient* is assigned to the direct object of a verb, then this thematic role (a) remains unexpressed if the direct object is not realized and (b) cannot be realized by the indirect object. In German, the *geschehen/tun*-test is often used to establish argumenthood (cf. Engelberg 2000:88-89). Thus, the impossibility to paraphrase (17a) by (17b) is argued to establish the direct object *der Mann* ‘the man’ as an argument of the verb *töten* ‘kill’.

8 Introduction

- (17) a. *Fritz tötet **den Mann**.*
Fritz kills the man
'Fritz kills the man.'
- b. **Fritz tötet, und das geschieht/tut er den Mann.*
Fritz kills, and that happens/does he the man

In contrast, the very same test shows that the instrumental adverbial *mit dem Gewehr* 'with a gun' is not an argument of the verb *töten* 'to kill'.

- (18) a. *Fritz tötet **mit dem Gewehr**.*
Fritz kills with the gun
'Fritz kills with the gun.'
- b. *Fritz tötet, und das geschieht/tut er mit dem Gewehr.*
Fritz kills, and that happens/does he with the gun
'Fritz kills, and that happens/does he with the gun.'

To conclude, objects, in contrast to free adverbials, usually fulfill at least three of the conditions given in (15).

Subcategorized adverbials vs. objects

Some verbs subcategorize for adverbials. The verb *wohnen* 'live',⁵ for example, subcategorizes for either a location (answering the question *Where do you live?*) or a certain mode of living (answering the question *How do you live?*), cf. (19) and (20), respectively.

- (19) *Fritz wohnt **in Landau/in der Parkallee**.*
Fritz lives in Landau/in the Parkallee
'Fritz lives in Landau/in the Parkallee.'
- (20) a. *Fritz wohnt **schön/mit allem Komfort**.*
Fritz lives nice/with all comfort
'Fritz lives nicely/with all comfort.'
- b. *Fritz wohnt **zur Miete/billig**.*
Fritz lives for rent/cheap
'Fritz lives for rent/for little rent.'

A sentence without either of the two adverbial modifiers is felt to be infelicitous, cf. (21).

- (21) **Fritz wohnt.*
Fritz lives

As *schön* ‘nice’ and *billig* ‘cheap’ in (20) show, adverbial adjectives can be used to fulfill subcategorization requirements. Sometimes, verbs exclusively subcategorize for adverbial adjectives, cf. (22).

- (22) a. *Er benimmt sich gut/schlecht.*
he behaves himself good/bad
‘He behaves well/badly.’
- b. *Er riecht gut.*
he smells good
‘He smells good.’
- c. *Er gebärdet sich merkwürdig.*
he acts himself strange
‘He acts strangely.’

These adverbials can in some cases be dropped. For the three verbs in (22), this seems possible for *sich benehmen* ‘behave oneself’ and *riechen* ‘smell’, but not for *sich gebärden* ‘act’, cf. (23a) and (23b) vs. (23c).

- (23) a. *Fritz benimmt sich (gut).*
he behaves himself (well)
‘He behaves himself.’
- b. *Jürgen riecht (schlecht).*
he smells (bad)
‘He smells.’
- c. **Er gebärdet sich.*
he acts himself

However, both (23a) and (23b) have to be interpreted in the same way as the sentences with the adverbial given in parentheses added. This makes the relationship between the verbs in (23) differ from e.g. the relationship between the verb *essen* ‘to eat’ and its optional object, cf. (24).

- (24) *Fritz isst.*
Fritz eats
‘Fritz is eating.’

In (24), although Fritz is certainly eating something, this ‘something’ is not explicitly specified.

If we resort to the criterion of form specificity, we could still argue that case marking distinguishes between objects and adverbials, but this hardly seems an adequate criterion, as the adverbials discussed do not allow any case marking, since they are not realized as noun phrases. The criteria for complementhood given in (15) and repeated in (25) are again a better guide, and it is useful to go through them step by step.

- (25) (i) X is obligatory for Y, i.e. it must be realized.
 (ii) X is specific for Y with respect to its form (e.g. X is case marked).
 (iii) X is specific for Y with respect to its content (e.g. X must be [+volitional] etc.).
 (iv) X is an argument, filling an open position in the meaning of Y.

Similar to objects, subcategorized adverbials may or may not be obligatory, that is, (25i) may or may not hold. As already said, (25ii) does not hold, but this is due to the phrasal categories of the adverbials under discussion. The third criterion, (25iii), is fulfilled by the adverbials. Thus, the subcategorization for e.g. *sich benehmen* ‘behave oneself’ in (22a) cannot be fulfilled by just any adverbial: local or temporal adverbials cannot be used for this purpose. This leaves us with (25iv).

If we use the the *geschehen/tun*-test introduced in example (17), we arrive at the conclusion that these adverbials are arguments, cf. (26) for *riechen* ‘smell’ and (27) for ‘behave oneself’.

- (26) **Fritz riecht, und das tut er/geschieht schlecht/gut/unerträglich.*⁶
 Fritz smells, and that he does/happens bad/good/unbearable
- (27) **Doris benimmt sich, und das tut sie/geschieht*
 Doris behaves herself, and that does she/happens
gut/schlecht/unmöglich.
 good/bad/impossible

A further argument for argumenthood is that the thematic role that an argument bears must be determined by the verb. For the adverbials under investigation this point is problematic. Standard accounts of thematic role systems assume that thematic roles allow the differentiation of entities, cf. the following quote from Dowty (1989):