

# Towards an analysis of the adverbial use of German *was* ('*what*')

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## 1 Introduction

The paper discusses the so-called adverbial use of the German wh-pronoun *was* ('*what*'), which establishes a non-standard wh-construction with an interrogative causal meaning. By means of empirical data based on d'Avis (2001) I will argue that the adverbial use of *was* is a consequence of a categorial deficiency of the pronominal element *was* ('*what*'). Furthermore, I will formally analyze the data against the background of existing accounts on wh-interrogatives couched in the framework of Head-driven Phrase Structure Grammar (HPSG), thereby showing that none of the previous proposals is sufficient to account for adverbial *was* ('*what*') in an adequate way.

The paper is structured as follows. Firstly, I will illustrate the empirical properties of adverbial *was* ('*what*'), and I will provide evidence that adverbial *was* ('*what*') behaves like a categorically deficient pronoun (cf. Cardinaletti/Starke, 1999; Abeillé/Godard, 2003). Secondly, I will present recent HPSG approaches to interrogative wh-constructions, and I will argue that they are not appropriate to deal with wh-clauses introduced by adverbial *was* ('*what*'). Thirdly, I will develop a new analysis covering the presented empirical facts, thereby arguing that an adequate account of non-standard uses of *was* ('*what*') requires a better differentiation between syntactic wh-fronting on the one hand and semantic interpretation on the other hand.

## 2 Empirical facts

Example (1) illustrates the interrogative case of the so-called adverbial use of *was* ('*what*') as observed by d'Avis (2001). The wh-pronoun *was* ('*what*') is used as a causal adverb contributing the meaning of *why* instead of the meaning of *what*.<sup>1</sup>

- (1) Was schlägst du denn schon wieder den Hund?  
'Why are you beating the dog again?'

The relevant empirical properties of adverbial *was* ('*what*') can be summarized as follows: First of all, adverbial *was* ('*what*') cannot be realized in-situ. As example (2a) illustrates, adverbial *was* ('*what*') is restricted to a clause-initial position (the so-called Vorfeld), which

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<sup>1</sup> Examples are taken from (d'Avis, 2001).

contrasts to any standard wh-phrase as (2b) shows. Example (3) indicates that adverbial *was* ('*what*') cannot be realized in echo questions neither.

- (2) a. \*Wann trifft sich Maria was mit ihrem Exmann?  
'when meet REFL Maria what with her divorcé'  
b. Wann trifft sich Maria warum mit ihrem Exmann?  
'When does Maria meet her divorcé for which reason?'
- (3) a. Hans will sich scheiden lassen, weil seine Frau zu viel arbeitet.  
'Hans wants to divorce because his wife works too much.'  
b. \*Hans will sich WAS scheiden lassen?  
'Hans wants REFL what to divorce'  
c. Hans will sich WARUM scheiden lassen?  
'Hans wants to divorce WHY?'

The reverse side of the just mentioned property of adverbial *was* ('*what*') seems to be that *was* ('*what*') contrary to *warum* ('*why*') cannot license another wh-phrase in situ in multiple wh-questions as can be seen in (4). In addition, adverbial *was* ('*what*') cannot be coordinated with another wh-phrase as is indicated by example (5).

- (4) a. \* Was spielt sich wer denn so auf?  
'what act REFL who PART that way up'  
b. Warum spielt sich wer denn so auf?  
'Why does who act that way up'
- (5) a. \* Wann und was will sich Maria scheiden lassen?  
'when and what wants REFL Maria to divorce'  
b. Wann und warum will Maria sich scheiden lassen?  
'When and why wants Maria to divorce?'

Last but not least, adverbial *was* ('*what*') cannot bear a focus accent, which is again in contrast to canonical adverbial wh-phrases like *warum* ('*why*').

- (6) a. \* Ich möchte wissen, WAS Maria sich scheiden lassen will und nicht wann.  
'I want to know what Maria REFL to divorce want and not when'  
b. Ich möchte wissen, WARUM Maria sich scheiden lassen will und nicht wann.  
'I want to know why Maria wants to divorce and not when.'

### 3 Adverbial *was* ('*what*') as a deficient pronoun

Cardinaletti/Starke (1999) as well as Déchaine/Wiltschko (2002) have investigated the class of pronouns in a variety of languages and have shown that pronouns are not homogenous at all. In fact, they differ distributionally, morphologically, semantically and prosodically. Cardinaletti/Starke (1999) conclude that the class of pronouns falls into three distinct subclasses, which they call clitics, weak and strong pronouns. They further claim that there is a ranking in deficiency between these subclasses: clitic pronouns are deficient with respect to

weak pronouns, which are in turn deficient with respect to strong pronouns. In addition, Cardinaletti/Starke (1999) give the following general properties of deficient pronouns: (i) Only deficient pronouns must occur at surface structure in a special derived position, which means that they cannot occur in theta- or base position. (ii) Deficient pronouns are restricted to positions that are usually occupied by maximal projections. (iii) Deficient pronouns are incompatible with coordination. (iv) There is a semantic asymmetry between deficient and strong pronouns. Since it can be shown that adverbial *was* ('*what*') possesses all of these empirical properties distinguishing deficient pronouns from strong ones, it seems to be plausible to assume that *was* ('*what*') belongs to the class of deficient pronouns. The peculiar syntactic and semantic properties of adverbial *was* ('*what*') thus follow from its deficiency. This analysis is superior to a conceivable alternative approach whereupon *was* ('*what*') is analyzed as a deviant complementizer. A pronominal status of *was* ('*what*') allows to account for the fact that *was* ('*what*') does not restrict the position of the finite verb (verb second vs. verb final) in the respective clause, which complementizers in German usually do. In addition, there exist interrogative, relative and indefinite wh-words, which are homophonous to adverbial *was* ('*what*') and doubtlessly belong to the class of (strong) pronouns. Finally, another non-canonical use of *was* ('*what*'), which may occur in exclamative constructions (cf. d'Avis, 2001), is evidence against a complementizer analysis. As illustrated by example (7) *was* ('*what*') specifies a degree as it means *wie sehr* ('*how*', '*how much*') in the exclamative case.

- (7) Was DER seinen Hund schlägt!  
 'How he beats his dog!'

It is not quite obvious how an analysis could look like that describes the meaning of a complementizer against the meaning of the constituent it combines with.

#### 4 Relevant HPSG approaches to wh-interrogatives

According to the standard HPSGian approach to wh-interrogatives proposed by Pollard/Sag (1994) wh-interrogatives belong to the class of strong unbounded dependency constructions and are thus analyzed as filler-gap structures. A nonlocal feature QUE is stipulated, whose value of type *npro* is lexically instantiated for all wh-words and percolates in a phrase according to the Nonlocal Feature Principle, which means that QUE is inherited from all daughters until bound. Pollard/Yoo (1998) deviate from the standard view suggesting that QUE is a *synsem* feature whose value is of sort *quantifier*. This means that each wh-word introduces a quantifier. Pollard/Yoo formulate a syntactic licensing constraint on wh-retrieval saying that the retrieval of quantifiers of wh-in-situ phrases is only allowed if there is a left peripheral wh-phrase whose quantifier is simultaneously retrieved.

The analysis of Ginzburg/Sag (2000)—an elaborated version of Ginzburg (1992) cast in constraint-based construction grammar—is based on a multi-inheritance hierarchy of sorts with associated sort constraints. Inspired by situation semantics, Ginzburg/Sag (2000) hold

the view that questions are basic semantic entities such as individuals and propositions. Objects of sort *question* are distinguished from other entities in terms of a feature called PARAMS, whose set value must always be non-empty for wh-questions. Syntactically, Ginzburg/Sag (2000) basically follow Pollard/Sag (1994) and argue for a non-local head-driven treatment of wh-interrogatives. Wh-words bear an optional WH specification, which means that the WH value of an interrogative word can either be a singleton set containing a parameter or an empty set. This assumption is necessary to handle in situ wh-words despite of the stipulated WH constraint saying that all non-initial arguments of a lexeme must be specified as [WH {}]. The Filler Inclusion Constraint (FIC), which requires that the non-head daughter of a wh-interrogative clause must be WH-specified, ensures that each interrogative clause is introduced by an expression that *is* or contains an interrogative wh-word. van Eynde (2004) enhances Ginzburg/Sag (2000) since he has shown that their approach does not suffice to account for relevant pied piping facts or results in implausible analyses. He, thus, proposes a local functor-driven treatment of the wh-property. The gist of his proposal is that all categories are either functors or heads, and functors select their head sisters via a *head* feature SELECT. In addition, van Eynde redefines objects of sort *category* as he introduces a MARKING feature with the values *marked* and *unmarked*. The MARKING value propagates from the functor daughter to the mother in head-functor phrases, or otherwise from the head daughter. Furthermore, van Eynde redefines the WH feature as boolean having the values *positive* and *negative*. He assumes that the appropriate locus for the WH feature is in objects of sort *marking*, and he stipulates that all words are negatively marked for WH in the lexicon, except for the wh-words, which remain underspecified. Since van Eynde reformulates the FIC as proposed by Ginzburg/Sag such that the non-head daughter of a wh-interrogative clause must be a sign with a positive WH value, wh-words are compatible with the FIC and they can also be used in situ, in which case their WH value is negatively instantiated.

## **5 Previous accounts are not adequate for analyzing adverbial *was* ('*what*')**

It can be shown that none of the aforementioned proposals can account for adverbial *was* ('*what*') without substantial changes. Two major reasons form the basis for this result in all existing analyses: First, it is assumed that any wh-phrase can be realized in-situ, and second there is no device that allows the fronted wh-phrase to have access to the information whether an in-situ wh-phrase is present or not. Consequently, there is no account that could exclude the ungrammatical examples given above in (2a) and (4a). The problem arises since two structural aspects of interrogative clauses, i.e. (i) the topicalization of a single wh-phrase and (ii) handling wh-phrases in situ, are mixed up in all accounts. It is hence impossible in these accounts to model adverbial *was* ('*what*') adequately because adverbial *was* ('*what*') may mark a clause as wh-interrogative but at the same time it is deficient in that it cannot be placed in-situ nor license an in-situ phrase.

## 6 An alternative approach

In this section I will sketch an alternative approach accounting for the empirical properties of adverbial *was* (*'what'*) presented in section 2. The approach is based on the assumption that adverbial *was* (*'what'*) is specified as an object of sort *deficient\_pronoun*, adapting the hierarchy of pronouns proposed by Cardinaletti/Starke (1999). The proposed analysis further combines merits of the approaches of Pollard/Yoo (1998) and van Eynde (2004). The fundamental idea is that two mechanisms are exploited to keep track of the wh-property in a phrase structure. First, van Eynde's boolean WH feature is used to ensure that at least one wh-phrase is realized clause initially in an interrogative clause. And second, the QUE value of Pollard/Yoo (1998) is used for licensing wh-in-situ phrases. In the following I will explicate this approach in more detail:

Adopting the feature architecture of van Eynde (2004), I assume that the MARKING value is associated with the WH feature, and that the WH propagation is constrained by the Generalized Marking Principle saying that the MARKING value is propagated from the functor daughter if present or from the head daughter otherwise. In the lexicon, adverbial *was* (*'what'*) bears a positively specified WH value, which is different from any other wh-word whose WH value remains lexically unspecified. It follows from this (i) that adverbial *was* (*'what'*) may introduce a wh-interrogative clause since it satisfies the FIC requiring that a fronted wh-phrase is specified as WH *positive*, and (ii) that adverbial *was* (*'what'*) itself cannot be placed in situ.

To account for the fact that adverbial *was* (*'what'*) does not license a wh-phrase in situ, which is contrary to any ordinary wh-phrase, I suggest to exploit the QUE value as defined by Pollard/Yoo (1998). I assume that adverbial *was* (*'what'*) is a functor that differs from any other wh-phrase in the requirement that it selects a VP whose QUE value is instantiated by the empty set and not by a wh-quantifier. As a consequence of this deficiency combined with the constraints on wh-retrieval, adverbial *was* (*'what'*) is unable to license the retrieval of any wh-quantifier introduced by a wh-in-situ phrase. Figure 1 depicts the partial SYNSEM value in the lexical entry of adverbial *was* (*'what'*).

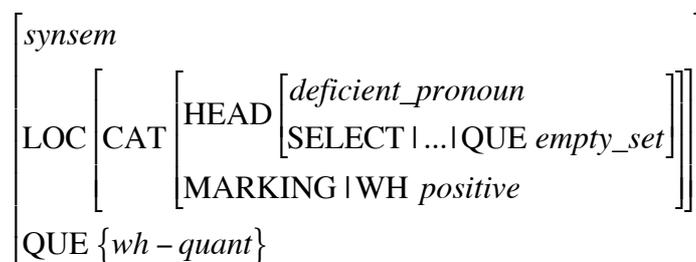


Figure 1: Partial lexical entry of adverbial *was* (*'what'*)

The remaining non-canonical properties of adverbial *was* ('*what*') mentioned above follow from more general constraints on objects of sort *deficient\_pronoun*. These constraints guarantee (i) that deficient pronouns are not stressed and, thus, cannot be focalized, and (ii) that objects of sort *deficient\_pronoun* may not be coordinated with objects of sort *strong\_pronoun*.

## 7 Conclusion

I hope to have shown that the adverbial use of the wh-pronoun *was* ('*what*') may be analyzed as a result of the property of being a deficient pronoun. By means of the empirical fact that *was* ('*what*') behaves ambivalently regarding the wh-property—it can be fronted in an interrogative clause, but it cannot license a wh-phrase in situ—it has been argued that it is necessary to separate two pieces of information to keep track of the wh-information in an interrogative clause. This insight has been implemented by exploiting two well-established wh-bookkeeping mechanisms.

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