

Adjectival *as*-phrases as intensional secondary predicates

Sarah Zobel

University of Tübingen/University of Göttingen

sarah.zobel@ds.uni-tuebingen.de

Abstract. This paper proposes a semantics for English adjectival *as*-phrases that contribute additional information on the internal argument of a transitive verb, as in *Peter sold the camera as new*. I argue that these *as*-phrases convey that the information that is available on the individual denoted by the internal argument at the time of the matrix event suggests that it has the property expressed by the adjective in the complement of *as*. This captures that the property expressed by the adjective does not necessarily hold of the individual denoted by the internal argument. This fact distinguishes these adjectival *as*-phrases from regular depictives (*Peter sold the camera as new*), as well as from a kind of nominal *as*-phrases that has been the topic of semantic and philosophical research (*As a judge, Peter earns 50.000 euros a year*). The fact that the adjectival *as*-phrases under consideration can be omitted *salva veritate* distinguishes them from adjectival *as*-phrases that occur as complements of certain verbs that express attitudes in the wide sense (*Peter considered the camera as new*).

The data. This paper proposes a semantics for English adjectival *as*-phrases as in (1).

- (1) a. *Peter sold the camera as new.*
b. *The Post Office returned the letter as undeliverable.*

The main idea to be defended is that in cases like (1), **adjectival *as*-phrases function as intensional secondary predicates that contribute additional information on an associated entity**, i.e., the internal argument of a transitive verb (underlined in the examples). In this sense, these adjectival *as*-phrases behave like object depictives. In contrast to run-of-the-mill object depictives, however, the property expressed by the adjective does not necessarily hold of the associated entity at the time of the matrix event (see Rothstein 2003 a.m.o.); compare (1) to (2).

- (2) a. *Peter sold the camera new.* $\Rightarrow$ The camera was new.
b. *The Post Office returned the letter torn.* $\Rightarrow$ The letter was torn.

In (2), the camera is asserted to have been new at the time of the sale, and the letter is said to be torn at the time it was returned. For the adjectival *as*-phrases in (1), I argue in contrast that they contribute that **the information that is available on the associated individual at the time of the matrix event suggests that it has the property expressed by the adjective in the complement of *as***. That is, these adjectival *as*-phrases express information-based modal properties. For instance in (1-a), the information available on the camera suggests that the camera was new.

Incorrectness of the ascription. The ascription of the adjectival property to the associated individual is usually understood as being false. This, I argue, is an implicature that arises in comparison with the object depictive: if the associated individual had had the property denoted by the adjective (and the speaker knew so at the time of speaking), the speaker would have chosen an object depictive instead of an *as*-phrase. Example (3) shows that the implicature can be cancelled.

- (3) *Peter sold the camera as new, and it was in fact new.*

The use of an *as*-phrase when the speaker knows that the adjectival property holds of the associated individual conveys that there was doubt regarding that fact at some point.

Connection to (optional) complement *as*-phrases. Given the above characterization, the adjectival *as*-phrases in (1) are comparable to those occurring as (optional) complements of verbs like ‘to consider’ and ‘to mark’ in (4) (see also Fabricius-Hansen & Sæbø 2011 on *as*-phrases with “behabitives”).

- (4) a. *Peter considered the camera as new.*
b. *The Post Office marked the letter as undeliverable.*

Apart from the different formal status as adjuncts vs. complements, a closer comparison also reveals semantic differences: The matrix verbs in (4) can be characterized as expressing attitudes in the wide sense (comprising classical attitudes and verbs of saying a.o.); the adjectival *as*-phrase provides the attitude content. In other words, the intensionality detected in (4) is plausibly contributed by the verb. This is not an option for the examples in (1). In addition in (4), the external arguments of the matrix verb, i.e., Peter and the Post Office, are necessarily understood as the attitude holders. For the *as*-phrases in (1), this matter is not as straightforwardly answerable.

Source of the claim. The individual denoted by the external argument of the transitive verbs in (1) does not have to be the source of the information which provides the basis

for the modal property. Consider (5): while Peter could have believed that the camera was new when he bought it, the information that suggested the newness plausibly did not originate with Peter.

(5) *Peter bought the camera **as new**.*

I argue that in many cases, **the source of the information is a claim by the individual with the most knowledge about the associated individual**. This assumption is not always feasible, though. Assume the following context for (1-a): Peter finds a camera in its original packaging and decides to sell it. The source of the information in this case is the state of the camera—though Peter might believe that the camera is in fact new.

Note that the individual denoted by the external argument of the transitive verb does not have to believe that the associated individual has the property denoted by the adjective:

(6) *Peter told me that he bought this jacket **as red**, but it was obvious to him from the pictures that it is maroon.*

In cases like (6), we sometimes find that the adjective occurs in scare quotes. To keep things simple, I ignore this additional complication for now.

An even more revealing example regarding the source of the information is the following example: An online market place for clothing was programmed to recognize the color of an item of clothing from the picture uploaded by the seller and to categorize it as having one of a few basic colors. Peter buys a maroon jacket which the color recognition software categorized as red.

(7) *Peter bought this jacket **as red**.*

In this scenario, no claim made by any conscious individual is the source of the relevant information regarding the jacket's redness.

Previous proposals. To my knowledge, no dedicated semantic analysis of adjectival *as*-phrases as given in (1), (5), and (6) exists. However, analyses of nominal *as*-phrases like (8) can be found a.o. in Landman (1989), Jäger (2003), Szabo (2003), and Asher (2011).

(8) *As a judge, Peter earns 50.000 euros a year.* (see Szabo 2003:1)

While all of these accounts fundamentally differ in how they try to solve the particular problems presented by nominal *as*-phrases of the kind in (8), they all hard-wire two inferences into the semantics of *as*: (i) the associated individual has the property contributed by the complement of *as*, and (ii) the *as*-phrase cannot be omitted *salva veritate*. Both of these inferences fail for the adjectival *as*-phrases under consideration:

- (9) a. *Peter sold the camera as new.* $\nRightarrow$ *The camera was new.*
- b. *Peter sold the camera as new.* $\Rightarrow$ *Peter sold the camera.*

Proposal: the semantics of *as*. I argue that (at least in the use considered here) English *as* contributes the content in (10).

(10) $\llbracket as \rrbracket^c = \lambda P_{\langle e, st \rangle} . \lambda x_e . \lambda e . \exists \phi [\phi = P(x) \ \& \ \forall w' \in \text{info}(e) [\phi(w') = 1]]$

The arguments of *as* are (i) a property *P*, the content contributed by the adjective, (ii) an individual *x*, the associated individual, and (iii) and event *e*. The content contributed by *as* can be paraphrased as: there is a proposition ϕ , which is built up from the combination of the property *P* and the individual *x*, i.e., ϕ is the proposition that *x* has the property *P*, which is true in all worlds *w'* that are accessible given a source of information associated with the event *e*.

To illustrate: if we assume the lexical entry in (11-a) for ‘new’, the adjectival *as*-phrase ‘*as new*’ in (1-a) comes out as in (11-b).

- (11) a. $\llbracket \text{new} \rrbracket^c = \lambda x_e. \lambda w. \text{new}'(x)(w)$
 b. $\llbracket \text{as new} \rrbracket^c = \lambda x_e. \lambda e. \exists \phi [\phi = \lambda w. \text{new}'(x)(w) \ \& \ \forall w' \in \text{info}(e) [\text{new}'(x)(w') = 1]]$

I follow Beck & von Stechow (2015) in their assumptions regarding the functional structure above VP and its interpretation. This means that at the level of VP, only the description of the event is provided. World and time dependence is brought in later by functional heads above VP. Since I adopt the assumption that an event only ever exists in one world, the world dependence for the conversational background *info* is fixed via *e*. Regarding the event-dependence of modal expressions, I follow Hacquard (2006) and Kratzer (2012).

Combining the *as*-phrase with the matrix clause. Following Rothstein (2003) for object depictives, I assume that the *as*-phrase is adjoined at V' between the internal argument and the transitive verb; like object depictives, the adjectival *as*-phrases may not be stranded:

- (12) **What Peter did as new was sell the camera.* (see Rothstein 2003:556)

As a consequence, I assume that the transitive verb first combines with the *as*-phrase before combining with the internal argument. That the *as*-phrase is positioned between the transitive verb and the internal argument is necessary since the *as*-phrase would otherwise not be able combine with the individual denoted by the internal argument. As combinatory rule, I assume the version of Maienborn’s (2001) MOD in (13), i.e., a generalized version of predicate modification.

- (13) **MOD:** For α , an m -place function, and β , an n -place function, with $m \leq n$, the result of combining α and β via MOD is an n -place function that identifies as many arguments of β with the arguments of α , and conjoins the descriptive contents of α and β .

If MOD is applied to the denotation of the transitive verb ‘sell’ in (14-a) and the denotation of the *as*-phrase derived in (11-b), we obtain the result in (14-b).

- (14) a. $\llbracket \text{sell} \rrbracket = \lambda x_e. \lambda y_e. \lambda e. \text{sell}'(x)(y)(e)$
 b. $\llbracket \text{sell as new} \rrbracket = \lambda x_e. \lambda y_e. \lambda e. \text{sell}'(x)(y)(e) \ \& \ \exists \phi [\phi = \lambda w. \text{new}'(x)(w) \ \& \ \forall w' \in \text{info}(e) [\text{new}'(x)(w') = 1]]$
 c. $\llbracket \text{Peter sell as new the camera} \rrbracket = \lambda e. \text{sell}'(\text{the-camera}')(\text{Peter}')(e) \ \& \ \exists \phi [\phi = \lambda w. \text{new}'(\text{the-camera}') (w) \ \& \ \forall w' \in \text{info}(e) [\text{new}'(\text{the-camera}') (w') = 1]]$

The result in (14-b) describes an event in which y sells x , and x is further described by a modal property that according to a source of information associated with the selling x is new. In (14-c), the full description of the event is illustrated.

The content provided in the functional structure provides the world and time anchoring of e (Beck & von Stechow 2015). We derive the proposition in (15) for example (1-a).

- (15) $\lambda w. \exists t [t \leq t^* \ \& \ \exists e [t \supseteq \tau(e) \ \& \ \text{sell}'(\text{the-camera}')(\text{Peter}')(t)(w) \ \& \ \exists \phi [\phi = \lambda w. \text{new}'(\text{the-camera}') (w) \ \& \ \forall w' \in \text{info}(e) [\text{new}'(\text{the-camera}') (w') = 1]]]]$

Consequences of the proposal. (i) Since the proposition ϕ , which is built from the associated individual and the property denoted by the adjective, is in the scope of the modal content contributed by *as*, it is not inferable that the associated individual has the

property denoted by the adjective (see Kratzer 2012). (ii) Since the property denoted by the entire adjectival *as*-phrase is analyzed as an intersective modifier of the matrix verb, the adjectival *as*-phrase can be omitted *salva veritate*. The proposal hence captures the central properties of the adjectival *as*-phrases discussed above.

Extensions of the proposal. Firstly, the results of this investigation can be extended straightforwardly to nominal *as*-phrases with the same function, see (16), if we assume (not implausibly) that indefinite singular DPs contribute properties.

(16) What do you do with a ferret you bought **as a dog**?! (internet example)

Secondly, the results are not restricted to English *as*-phrases. The same use is available at least for German adjectival *als*-phrases (*als* is the direct counterpart of *as*), see (17).

- (17) a. *Peter hat die Kamera **als neu** verkauft.*
 Peter has the camera as new sold
 ‘Peter sold the camera as new.’ (= (1-a))
- b. *Die Post hat den Brief **als unzustellbar** retourniert.*
 the post-office has the letter as undeliverable returned
 ‘The Post Office returned the letter as undeliverable.’ (= (1-b))

Note that for the German adjectival *als*-phrases no semantic analysis exists either. While Flaate (2007) mentions them, she attempts neither a formal nor descriptive semantic analysis of these uses.

Thirdly, the proposal can be fruitfully extended to those nominal and adjectival *as*-phrases that occur as (optional) complements of “behabitives” and comparable verbs. However at this point, further work is still needed.

References

- Asher, Nicholas. 2011. *Lexical Meaning in Context: A Web of Words*. Cambridge University Press.
- Beck, Sigrid & Arnim von Stechow. 2015. Events, Times and Worlds – An LF Architecture. In: *Situationsargumente im Nominalbereich [Situational Arguments in the Nominal Realm]*, Fortmann et al. (eds.), de Gruyter. 13–46.
- Fabricius-Hansen, Cathrine & Kjell-Johan Sæbø. 2011. Behabitive Reports. In: *Understanding Quotation*, Brendel et al. (eds.), de Gruyter. 85–106.
- Flaate, Inghild. 2007. *Die “als”-Prädikative im Deutschen. Eine syntaktisch-semantische Analyse* (Studien zur deutschen Grammatik 71). Stauffenburg.
- Hacquard, Valentine. 2006. *Aspects of Modality*. Ph.D. Thesis, MIT.
- Kratzer, Angelika. 2012. *Modals and Conditionals, New and revised perspectives*. Oxford University Press.
- Jäger, Gerhard. 2003. Towards an explanation of copula effects. *Linguistics and Philosophy* 26:557–593.
- Landman, Fred. 1989. Groups II. *Linguistics and Philosophy* 12:723–744.
- Maienborn, Claudia. 2001. On the position and interpretation of locative modifiers. *Natural Language Semantics* 9, 191–240.
- Rothstein, Susan. 2003. Secondary predication and aspectual structure. In: *Modifying Adjuncts*, Lang et al. (eds.), de Gruyter. 553–590.
- Szabo, Zoltan Gendler. 2003. On qualification. *Philosophical Perspectives* 17: Language and Philosophical Linguistics: 409–438.