Adjectival as-phrases as intensional secondary predicates

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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 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).

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.

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 marketplace 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. ⊬ The camera was new.  
b. Peter sold the camera as new. ⇒ 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) \[[as]\] = \[λe,λx,λw'.∃φ[φ = P(x) & ∀w' ∈ info(e)[φ(w') = 1]]\]

The arguments of as are (i) a property P, the content contributed by the adjective, (ii) an individual x, the associated individual, and (iii) 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. \[\text{[new]}^e = \lambda x.e. \lambda w. \text{new}'(x)(w)\]

b. \[\text{[as new]}^e = \lambda x.e. \lambda e. \exists \phi [\phi = \lambda w. \text{new}'(x)(w) \& \forall w' \in \text{info}(e)[\text{new}'(x)(w') = 1]]\]

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 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 combinatorial rule, I assume the version of Maienborn’s (2001) MOD in (13), i.e., a generalized version of predicate modification.

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

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. \[\text{[sell]} = \lambda x.e. \lambda y.e. \lambda e. \text{sell}'(x)(y)(e)\]

b. \[\text{[sell as new]} = \lambda x.e. \lambda y.e. \lambda e. \text{sell}'(x)(y)(e) \& \exists \phi [\phi = \lambda w. \text{new}'(x)(w) \& \forall w' \in \text{info}(e)[\text{new}'(x)(w') = 1]]\]

c. \[\text{[Peter sell as new the camera]} = \lambda e. \text{sell}'(\text{the-camera}')(\text{Peter'})(e) \& \exists \phi [\phi = \lambda w. \text{new}'(\text{the-camera}')(w) \& \forall w' \in \text{info}(e)[\text{new}'(\text{the-camera}')(w') = 1]]\]

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 \supset \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 \(\phi\), 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 verkauf.
   ‘Peter sold the camera as new.’

   (= (1-a))

b. Die Post hat den Brief als unzustellbar retourniert.
   ‘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**


