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Den Dikken, Marcel

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On the subject of subject-oriented adverbials

Marcel den Dikken

Centre of Linguistics of the University of Lisbon & Hungarian Research Centre for
Linguistics

Abstract: This paper focuses on the question of what serves as the subject of subject-oriented adverbials such as *wisely* in *John wisely didn't leave the house*. Direct predication between *wisely* and the nominal subject is ruled out, as is an analysis mobilising control of a PRO-subject local to AP, primarily on the basis of the fact that subject-oriented adverbials do not depend on the presence of an explicit nominal subject in the structural subject position of the clause that contains them. The syntax of subject-oriented adverbials is couched instead in a direct reverse predication relationship between the adverbial and the proposition (TP). The semantic link between the adverbial's experiencer argument and the subject is obtained via θ -binding.

Keywords: subject-oriented adverbial, predication, control, implicit subject, θ -binding

1. Introduction — Subject-oriented adverbials *versus* subject depictives

The primary goal of this paper is to address the question of what serves as the subject of so-called subject-oriented adverbials, exemplified in (1).¹ By way of setting the stage, I will start out by briefly comparing such adverbials to another type of modifier that has a dedicated relationship with the subject of the clause: subject depictives, illustrated in (2).

¹ Subject-oriented adverbials belong to what Ernst (2002) calls the class of predicationals. They are often referred to with the more specific term 'agent-oriented adverbials'. This latter term suggests that the adverbials in question can only associate to agents. This is in fact not the case. In the example in (i), the subject (while agentive) is not an agent (in the sense of bearing the θ -role 'agent', assigned with the help of 'little *v*'): it is the theme argument of the change-of-location predicate *fall*. That ergative verbs that combine with agentive subjects remain ergative (hence do not take an agent as their external argument) is clear from the fact that, even on their agentive construal, they continue to show the properties characteristic of their ergativity — incl. prenominal attributive use of their past participle and selection of the auxiliary *zijn* 'be' as opposed to *hebben* 'have' in Dutch (iia,b). In view of this, I will not use the term 'agent-oriented adverbial' in this paper.

- (i) the actors wisely fell exactly at the right time
- (ii) a. de [wijselijk precies op het juiste moment gevallen] acteurs
the wisely precisely on the right moment fallen actors
- b. de acteurs zijn/*hebben wijselijk precies op het juiste moment gevallen
the actors are/have wisely precisely on the right moment fallen

- (1) John *wisely* didn't leave the house
- (2) John didn't leave the house *drunk*

For depictives, the gold standard in the generative approach has been to posit a silent subject for it, with the connection between the depictive and its associate in the containing clause established via the mediation of this silent subject. The nature of this silent subject is PRO, the null pronominal anaphor that also occurs as the subject of control clauses. For the example in (2), this yields the structure in (3) (which employs the RELATOR phrase of den Dikken 2006 to represent the predication relation between the AP of *drunk* and its PRO subject).

- (3) John didn't [_{VP} leave the house] [_{RP} PRO [_{R'} RELATOR [_{AP} drunk]]]

Confirmation of the control approach to subject depictives comes from a variety of empirical domains. I will present the two most prominent ones briefly here (see den Dikken 2024 for further discussion). The first is the existence, in depictive secondary predication constructions, of partial and split control phenomena, exemplified by (4) and (5), respectively.²

- (4) PARTIAL CONTROL WITH SUBJECT DEPICTIVES
I_i'd rather not travel [PRO_{i+} together/drunk]
- (5) SPLIT CONTROL WITH SUBJECT DEPICTIVES
John_i broke up/split up with Mary_j [PRO_{i+j} drunk/angry at each other_{i+j}]

No single predicate can be predicated simultaneously of the subject and a non-subject (thus, a resultative such as *John sang Mary to sleep* cannot assert that both John and Mary ended up asleep as a result of John's singing), which is what (5) would involve on a direct predication approach to control.³

² As in Landau's (2000, 2013, 2015) work, the index 'i+' is used in (4) to indicate that the referent of PRO includes but is not confined to the controller.

³ Examples of the type in (4) and (5) are restricted. Note, for instance, the sharp contrast between (5) and (i), the latter involving a transitive verb taking a DP complement rather than a PP (as in (5)). Like (i), the example in (ii) is ungrammatical with *Mary* as the verb's direct object (Landau 2013:174); but it improves when the material in parentheses is added. A depictive can take the subject or the direct object as its associate, not both at the same time; when a depictive in principle allows either an object-related or a subject-related construal, it never seems to be possible to have split control. The fact that *Mary* in (5) and the version of (ii) with *up with* included is contained in a PP, which prevents it from serving by itself as the associate of the depictive (i.e., *John split/met up with Mary drunk* does not support an object-depictive reading), appears to be an important factor in opening up the split control interpretation for this sentence. I address this matter in the longer paper on which this short piece is based (den Dikken 2024). Space restrictions prevent me from discussing this further here.

- (i) *John_i divorced Mary_j [PRO_{i+j} drunk/angry at each other_{i+j}]
- (ii) John_i met *(up with) Mary_j [PRO_{i+j} angry at each other_{i+j}]

A second piece of support for the control analysis of subject depictives emerges from the grammaticality of insertion of a floating quantifier associated to the subject immediately to the left of a depictive secondary predicate.

- (6) a. John and Mary left the party [both stone drunk]
 b. [both stone drunk], John and Mary left the party

Assuming (as is entirely standard: see Sportiche 1988 and Doetjes 1997 for two different ways of deriving this⁴) that the floating quantifier must be local to a subject, we are led to postulate a silent subject for the depictive, analogously to the postulation of a silent subject for a control infinitive. This silent subject is PRO. Placing PRO in the specifier position of the small clause of which the AP is the predicate, we account for the fact that the depictive and the floating quantifier form a constituent together, as shown in (6b). This corroborates the analysis in (3).

For subject-oriented adverbials such as the one illustrated in (1), no proposal exists in the literature, to the best of my knowledge, according to which these adverbials are predicated directly of the subject. Such an analysis might seem attractive in light of the fact that (1) alternates with (7), not featuring *-ly* and involving direct predication between AP and the subject.

- (7) John was wise not to leave the house

The semantic equivalence of (1) and (7) is the reason why *wisely* in (1) is commonly referred to as a subject-oriented adverbial. But modelling the analysis of (1) on that of (7) would be a mistake. The clearest indication to this effect comes from the fact that subject-oriented adverbials are possible in sentences that lack an explicit subject of which *wisely* is predicable. The examples in (8) are actually occurring sentences taken from various news outlets in the United States.

- (8) a. there wisely was nary a mention of the Big Apple
 [Stratford Today newspaper]
 b. there wisely was talk of using the empty facility for another community purpose
 [Vallejo Times Herald newspaper]
 c. there wisely will be a 3.12-second delay to erase foul language
 [Democrat and Chronicle newspaper]

The grammaticality of (8) also shows that obligatory control is not a viable vehicle for the analysis of subject-oriented adverbials — a conclusion strengthened further by (9) and (10). Unlike (9a), (9b) does not support a reading in which both quarrelling sides are said to be wise. For subject depictives, we have seen that split control is possible (recall (5)); that it is not in (9b) tells us that *wisely* does not have a PRO subject. And while (6)

⁴ For a helpful overview of approaches to floating quantification, see Bobaljik (2003). The details of the syntax of floating quantifiers will not be relevant to an understanding of the point that (6) is meant to make in the present context. What matters for us here is that the floating quantifier must be local to a subject.

has shown that subject depictives allow a floating quantifier to their left, subject-oriented adverbials do not: the sentences in (10) are ungrammatical, no matter where the adverbial is placed.

- (9) a. John and Mary wisely didn't quarrel during the party
 b. John wisely didn't quarrel with Mary during the party
 (10) a. John and Mary [(*)both wisely] didn't leave the party together
 b. [(*)both wisely], John and Mary didn't leave the party together

The unavailability of a split control interpretation for (9b) and a floating quantifier in (10) is unexpected if the subject-oriented adverbial is assumed to harbour in its local entourage a silent subject controlled by a nominal constituent.

In section 2, I will show at greater length that there is no indication of any kind that the subject noun phrase with which the adverbial has a semantic connection is syntactically represented local to the adverbial, and that there are clear indications that it is not. With both direct predication of the subject and control by the subject eliminated as plausible syntaxes for subject-oriented adverbials, section 3 subsequently advocates for an analysis in which the subject of predication for *wisely* and its ilk is the entire proposition (see also Ernst 2003) — the TP of the sentence in (1). More precisely, the relationship between the adverbial and this proposition is argued to be REVERSE PREDICATION (in the sense of den Dikken 2006): the predicate appears in the specifier position of the RELATOR phrase, its subject serving as the RELATOR's complement.

- (11) [TP John [RP [AP wisely] [R' RELATOR [TP T=didn't [_{VP} John leave the house]]]]]

In (11), there is a direct syntactic and semantic relationship between the AP and the proposition — the segment of TP which contains T, the negation, and the base copy of the subject. This gives us the desired result that John's not leaving the house is said to have been wise. There is no syntactic relationship between AP and the subject *John*. But because the proposition in the complement of the RELATOR contains the base copy of *John* and since the entire proposition is said to have been wise, John's wisdom can be pragmatically inferred. In section 3, I will show that the connection between the adverbial and *John* can be tightened if modelled in terms of Higginbotham's (1985) relation of θ -binding. Doing so has advantages beyond a rapprochement between the adverbial and *John*, as I will demonstrate.

2. No direct predication of or control by the subject

2.1. Ruling out direct predication of a nominal subject

Adverbials in *-ly* are not otherwise predicable directly of a nominal argument (see (12)), and although (1) alternates with (7) (the version of (12) not containing *-ly*), which is a case of a direct predication relation between the AP and the subject, it would not be advisable to model the syntax of (1) on that of (7).

- (12) John was wise(*)ly (not to leave the house)

The clearest indication that modelling the syntax of (1) on (7) would not be right comes from the fact, already illustrated in section 1, that sentences with a subject-oriented adverbial can be impersonal and have an expletive subject, as shown in (8). Such is impossible in copular sentences of the type in (7): the examples in (13) are ungrammatical. There is nothing mysterious about the ill-formedness of (13): the AP needs a subject to assign a θ -role to. But if the syntax of (1) followed in the footsteps of (7), the same should be true for (1), which would then make the grammaticality of (8) difficult to comprehend.

- (13) a. *there was wise (of them) to be nary a mention of the Big Apple
 b. *there was wise (of them) to be talk of using the empty facility for another community purpose
 c. *there will be wise (of them) to be a 3.12-second delay to erase foul language

That the notional subject towards which the adverbial is oriented does not have to be explicit in the sentence that contains the adverbial is clear not only from (8): we see it also in (14), passive sentences (taken from the internet and checked with native-speaker linguists) which feature a subject-oriented adverbial.

- (14) a. the work wisely hasn't been tarted up for Broadway
 b. a time-tested plot that wisely hasn't been altered
 c. Nakamura, a Charlie Chan-type character, who wisely hasn't been watered down to fit contemporary ideas of political correctness
 d. Kind [proper name] plays Bing Bong, a character who wisely hasn't been mentioned in the marketing
 e. it (wisely) hasn't been done (on an active carrier) since
 f. Craig wisely hasn't been drawn into the furore that surrounded author Anthony Horowitz's comment

In Dutch (more easily than in English, which uses impersonal passives very sparingly), passives containing a subject-oriented adverbial can also be impersonal, as shown in (15) (examples once again taken from the internet; I myself accept these sentences fully).

- (15) a. er is wijselijk gekozen voor een opzet die de gitaren en vocalen van Bear en Bo Rhineheart naar voren schuift
 there has.been wisely chosen for a setup that the guitars and vocals of Bear and Bo Rhineheart to front pushes
 b. er is wijselijk besloten om de nieuwe school veel lager te bouwen, weg uit de gevaarlijke zone
 there has.been wisely decided COMP the new school much lower to build away out.of the dangerous zone
 c. er wordt wijselijk niet bij vermeld dat de betalingen gebeurden op een bankrekening in Jersey
 there gets wisely not with mentioned that the payments happened on a bank.account in Jersey
 d. er is wijselijk niet of nauwelijks op de heftige reacties gereageerd
 there has.been wisely not or hardly on the vehement reactions reacted

- e. er is wijselijk nauwelijks ruchtbaarheid aan gegeven
there has.been wisely hardly publicity to given
- f. er wordt wijselijk geen poging gedaan om een definitie te geven van
wanbeheer
there gets wisely no attempt done COMP a definition to give of
mismanagement

All of these examples make direct predication of a nominal subject impossible, and since these sentences cannot be ‘transformed’ into the pattern in (7), they also stand in the way of a structural assimilation of (1) and (7).

One last thing to be held against direct predication of the subject in the syntax of subject-oriented adverbials is that such adverbials are grammatical in transitive expletive constructions, which do have a subject but locate it further downstream than the adverbial. The following constructed examples from Dutch illustrate this.

- (16) a. er heeft wijselijk niemand van die appels gegeten
there has wisely nobody of those apples eaten
- b. er heeft wijselijk niemand vis gegeten
there has wisely nobody fish eaten

It would be impossible to create a direct predication relation between *wijselijk* ‘wisely’ and the occupant of the specifier of the vP sitting below the adverbial. Predicates can be predicated of specifiers that are structurally higher than they are (canonical predication) or of the complement of the RELATOR of which they are the specifier (reverse predication). But it is never possible for a predicate to be predicated of a specifier that is lower in the structure than the predicate’s base position and which hence is not a sister to (a projection of) the predication RELATOR. No theory of predication countenances the possibility of such predication, for good reasons (e.g., *he proved [the theorem false]* disallows a θ -relation between *prove* and *the theorem*). And there is no reason to loosen up the theory just to make it possible to represent (16) in terms of direct predication: we have already seen plenty of other indications that an approach to subject-oriented adverbials wherein the adverbial is predicated directly of a nominal subject is not on the right track.

It is worth noting about (14)–(16) that even when the subject-oriented adverbial occurs in passives and *there*-sentences and takes an implicit or low external argument as its associate, the adverbial itself still has to be high — between the occupant of the structural subject position (SpecTP) and the (extended) VP. For sentences in which the associate of the adverbial is in the structural subject position, it might reasonably be thought that the adverbial needs to be high in order to be close to the subject’s position. But when the associate is an implicit or low external argument, closeness to the subject cannot force the adverbial into a high position. The high structural position of subject-oriented adverbials must therefore be related to something other than the fact that it has some connection to the subject. I will return to this in section 3.

2.2. Ruling out control by a nominal subject

The grammaticality of the passive examples in (14) and (15) in Section 2.1 not only demonstrates that a direct predication approach to subject-oriented adverbials is not tenable. It also casts immediate doubt upon an approach to these adverbials that postulates

a PRO in the adverbial's local entourage and has this PRO controlled by a nominal element. There is some disagreement in the literature as to whether sentences of the type in (17), involving passives with subject depictives, are acceptable or not.⁵ But there can be no doubt that (14) and (15) are well-formed.

- (17) a. the book was written drunk
 b. at the commune, breakfast is usually eaten nude
 c. this song must not be sung drunk
 d. this issue must have been discussed stoned

What (17) shares with (14)–(15) is the fact that all involve passives with an implicit subject. For depictives, there is good reason to assume that they have a PRO-subject that needs to be controlled. Speakers ostensibly disagree with respect to the ease to which control of this PRO-subject by the implicit external argument of the passive is possible. The fact that (14) and (15) are broadly accepted (i.e., do not give rise to the kind of individual variation in the judgements which sentences like (17) evince) indicates that these examples are unlikely to involve control.

That postulating a PRO-subject for the adverbial and having it be controlled by the nominal subject would be inadvisable is shown also by the facts in (9) and (10) given in section 1. Split control and floating quantifiers are grammatical with subject depictives, which have a PRO-subject. The fact that (9b) cannot be interpreted in such a way that wisdom is attributed to both John and Mary and the fact that floating *both* in (10) is ungrammatical jointly indicate that control is not involved here.

Now that both the direct predication analysis and the control analysis have been eliminated for the syntax of subject-oriented adverbials, I will proceed in section 3 to arguing that subject-oriented adverbials are, after all, directly predicated of something — but not of the subject of the clause but of the entire proposition (see also Parsons 1990, Geuder 2002, Ernst 2003 for relevant discussion of the semantics).

3. A reverse predication approach to subject-oriented adverbials

3.1. A propositional subject for subject-oriented adverbials

The relationship between a subject-oriented adverbial and the proposition (TP) involves REVERSE PREDICATION (in the sense of den Dikken 2006): the predicate is the specifier of the RELATOR phrase within which the predication relation is established, and the subject of predication (TP) appears as the RELATOR's complement. The structure in (11), repeated here, summarises the analysis (using the lexical items of the example in (1), above).

- (11) [_{TP} John [_{RP} [_{AP} wisely] [_{R'} RELATOR [_{TP} T=didn't [_{VP} ~~John~~ leave the house]]]]]

⁵ Baker (1988: 318), Collins (2005: 101) and Bruening (2013, fn. 8) are the sources of the examples in (17). They find these sentences acceptable; accordingly, I have reproduced them without any acceptability diacritics. But Jaeggli (1986: 614), Landau (2000: 170, fn. 10), Roberts (1987: 70, sect. 3.2.2) and Watanabe (1993: 334, fn. 56) state that (for them and/or their informants) subject depictives cannot be controlled by the implicit external argument of a passive.

In (11), the AP establishes a direct predication relation (mediated by the RELATOR) with the segment of TP which contains T, the negation, and the base copy of the subject. The AP thus attributes the property that it denotes to John's not having left the house — and indeed, this is exactly what is said to have been wise in (1). The subject eventually makes it onto the outer edge of TP, for licensing purposes; but the predication relation between the AP and the proposition can already be established prior to movement of the subject: the subject is base-merged inside the TP segment that serves as the complement of the RELATOR.

The projection of T in (11) appears at first to be discontinuous: there is an RP 'baked' inside it. What makes this possible is the fact that the RELATOR has no categorial specification of its own (see den Dikken 2006): it is transparent to the categorial features present in its complement. Since the RELATOR's complement in (11) is headed by T, the categorial features of T 'percolate' up to the RELATOR phrase, after which the outermost segment of TP can be merged upon the completion of movement (internal merge) of the subject.

Note that if the predication relation between the AP and the proposition were modelled as a case of CANONICAL predication, it would be the AP's features that 'percolate' to RP, making it impossible for the structure above RP to be part of the extended projection of the V/T complex. This would plainly be problematic. The direct predication relation between AP and the proposition thus has to be modelled as REVERSE predication.

Modelling the relation between AP and the proposition as a case of REVERSE predication has two further empirical benefits. First, the reverse predication structure in (11) delivers the desired linear order (with the AP following the subject and preceding the finite auxiliary in T) on a silver plate. Secondly, (11) correctly rules out clause-final placement of subject-oriented adverbials: though (18) is grammatical, it only supports a manner reading for *wisely*, not a subject-oriented one.⁶

(18) John answered the question wisely

Since the subject-oriented adverbial is directly predicated of the proposition (TP), it must be located high up the tree such that the complement of the RELATOR that mediates its predication relation with the proposition takes as its complement the constituent containing tense, negation (if present), and the VP. It is for this reason that, regardless of whether there is a nominal subject in SpecTP in sentences with a subject-oriented adverbial, the adverbial must always be high in the structure — and, concomitantly (because reverse predication is involved), must always appear quite far to the left in the linear string.

⁶ With comma intonation, a subject-oriented reading can be procured, as in (i).

(i) John answered the question, wisely

I take this to be the product of extraposition of the adverbial from its underlying position in (11). Such extraposition is legitimate, as is fronting of the adverbial into the pre-subject field, illustrated in (ii). In principle, nothing prevents AP in (11) from being displaced into sentence-final or sentence-initial position. The result of such displacement will predictably have an effect on interpretation; it cannot procure a neutral output.

(ii) wisely, John answered the question

3.2. On the semantic relationship between the subject-oriented adverbial and the subject

From the discussion in section 2.1 we know that in the syntax of subject-oriented adverbial modification, there is no direct syntactic relationship between the adverbial and the subject. In the structure in (11), indeed, *wisely* is not in a predication relation with *John*. But we do get the clear impression that, when a subject is present in the sentence, the adverbial has a semantic connection to this subject. How are we to deal with this impression?

We could in principle leave this entirely to pragmatics, saying that because the proposition in the complement of the RELATOR contains the base copy of the subject and because the entire proposition serves as the subject of predication for the AP, it follows that the perpetrator of the event denoted by this proposition must have acted wisely. For sentences that include a subject-oriented adverbial but no (explicit) subject, this could perhaps be sufficient.

But for sentences that do have an explicit subject, it is possible and indeed advantageous to go a little further than leaving things to a pragmatic inference. An important thing to note is that adjectives that serve as the base for subject-oriented adverbials have two arguments: one is (a proleptic pronoun for) the proposition, and the other is the experiencer of the property denoted by the AP. These two arguments can both be expressed when the AP is headed by an adjective, as is shown in (19) and (20):

- (19) John was wise [PRO not to leave the house]
 (20) a. it was wise of John [PRO not to leave]/[that he didn't leave]
 b. [PRO not leaving]/[that he didn't leave] was wise of John

In (19), *John*, the experiencer, serves as the subject of the sentence and the proposition occurs to the right of the adjective.⁷ In (20), the experiencer is contained in an *of*-phrase while the proposition either occurs in the structural subject position (as in (20b)) or serves as the associate of a proleptic pronoun in the structural subject position (as in (20a)).

Importantly, however, for subject-oriented A+*-ly*, it is impossible to express the experiencer argument in the form of an *of*-phrase, regardless of where the adverbial phrase is placed (sentence-internally or sentence-initially) or which nominal type the experiencer argument is instantiated by (an anaphor, a pronoun or an R-expression):

- (21) a. John wisely (*of him(self)) didn't answer the question
 b. wisely (*of him(self)), John didn't answer the question
 c. wisely (*of John), he didn't answer the question

⁷ One might be tempted to represent the proposition as the complement of the adjective, but a complementation approach would be problematic for semantically parallel examples of the type in (i).

(i) John was a wise man/a fool not to leave the house
 The non-relational nominal expressions *wise man* and *fool* do not take a complement. (This argument runs parallel to the argument that in *tough*-movement constructions such as *John is tough to please*, the infinitive is not the adjective's complement: cf. *John is a tough man to please* and *John is a bitch to please*.)

It is not the case that *-ly* adverbials generally resist an *of*-PP: thus, *they acted independently of the government* is fine. No blanket statement about the fact that the AP is adorned with *-ly* in (21a–c) could account for the fact that no *of*-phrase can occur in these examples. One might think that the version of (21a) with the pronoun *him* incurs a binding theory violation. But (21b) and (21c) should be perfectly capable of averting such a violation; and besides, (21) remains bad with *himself*. One might also think that *wisely* in (21) does not allow the experiencer argument to be expressed in an *of*-phrase because the experiencer is already realised in the form of the matrix subject: the *of*-phrase would seem to be redundant. But redundancy is not usually a basis for ungrammaticality in natural language. Moreover, for sentences containing a subject-oriented adverbial that have expletive *there* as the structural subject (such as those in (8)), it would seem potentially very helpful to be able to make the experiencer argument of the AP overt — yet doing so is clearly impossible here, too, again no matter where the adverbial is placed. The examples in (22) and (23) (the latter featuring fronting of the subject-oriented adverbial) illustrate this.

- (22) a. there wisely (*of the author) was nary a mention of the Big Apple
- b. there wisely (*of the city council) was talk of using the empty facility for another community purpose
- c. there wisely (*of the programmers) will be a 3.12-second delay to erase foul language
- (23) a. wisely (*of the author), there was nary a mention of the Big Apple
- b. wisely (*of the city council), there was talk of using the empty facility for another community purpose
- c. wisely (*of the programmers), there will be a 3.12-second delay to erase foul language

The answer that I would like to give to the question of why no *of*-phrase can harbour the experiencer argument of the AP in subject-oriented adverbial modification constructions is that the experiencer θ -role cannot be *assigned* in these constructions because this θ -role is *bound* (in the sense of Higginbotham 1985) by the θ -role assigned to the subject of the sentence. This is similar to the proposal that Hoekstra & Roberts (1989) have made for middles such as (24).

- (24) this book reads easily

Although Hoekstra & Roberts say that the experiencer θ -role of the (usually obligatory) adverbial modifier of middles (*easily* in (24)) is θ -*identified* with the implicit external argument of the medialised verb, Ackema & Schoorlemmer (1995: 179) are right to say that θ -identification is not the right mechanism to link the two because the verb's external θ -role is actually assigned (to a silent argument) on Hoekstra & Roberts' (1989) analysis of middles. But θ -binding is an option that is available in principle in both Hoekstra & Roberts' (1989) analysis of middles and my current analysis of subject-oriented adverbials.⁸

⁸ Hoekstra & Roberts (1989) also tie the verb's event role to the external argument position in the θ -grid of the adjective+*-ly* combination. This is irrelevant to the discussion here.

The interest of middles in the present context lies not just in the fact that Hoekstra & Roberts (1989) resort to a Higginbotham (1985)-style mechanism in the analysis of their syntax. Middles are of interest also because they alternate with constructions in which the adjectival base of the adverbial takes (a placeholder for) a propositional subject:

- (25) a. it is easy [PRO to read this book]
 b. [PRO reading this book] is easy

And in (26), just as in (20), it is perfectly straightforward to express the experiencer argument, in the form of a *for*-PP:

- (26) a. it is easy for little children [PRO to read this book]
 b. [PRO reading this book] is easy for little children

Now consider what happens with the experiencer in middles. It is sometimes said to be possible for the experiencer argument of the adverbial modifier of middle constructions to be expressed in the form of a *for*-PP (see, e.g., Stroik 1992; but see Ackema & Schoorlemmer 2005 for a critical evaluation):

- (27) this book reads easily for little children

But although it is true that (27) works quite well, there can be no generalisation across middle constructions that the experiencer can be expressed in a *for*-phrase: (28a), the negated version of (27), is worse with the *for*-phrase included, and so (indeed, perhaps more so) are (28b–c).

- (28) a. this book does not read easily ??(for little children)
 b. a whale does not kill easily ??(even for an experienced whaler)
 c. a big city does not destroy easily ?*(for an average-sized army)

Whatever it may be that makes (27) relatively acceptable,⁹ I take the generalisation to be that the experiencer argument of the adverbial modifier of middles cannot be independently expressed in a PP. And I interpret this as being due to θ -binding of the base adjective's experiencer θ -role to the implicit external argument of the medialised verb.

There is a connection as well between the facts in (21)–(23) and *tough*-movement constructions. As Chomsky (1977) points out, *tough*-type adjectives can have an experiencer argument contained in a *for*-PP, and the infinitive, in turn, can have an overt subject preceded by the infinitival complementiser *for* — delivering two *for*+DP strings in sequence, as illustrated by Chomsky's examples in (29). But Chomsky also points out that this possibility of having two *for*+DP strings in sequence falls away when *tough*-movement promotes the direct object of the infinitive to the subject of the copular clause: the sentences in (30) are unacceptable.

⁹ Possibly, the *for*-phrase here is construable as an adverbial, equivalent to *on x's part* or *as far as x is concerned*: cf. the alternation between *for me, this is fine* and *on my part/as far as I'm concerned, this is fine*.

- (29) a. it is pleasant for the rich for the poor to do the hard work
 b. it is a waste of time for us for them to teach us Latin
 (30) a. *the hard work is pleasant for the rich for the poor to do
 b. *Latin is a waste of time for us for them to teach us

From (30b), it is particularly clear that the culprit is the *for* introducing the experiencer: (31a), with the experiencer left out but the complementiser+subject sequence retained, is fine while (31b), which preserves the experiencer but turns the subject of the infinitive into PRO, is ungrammatical.

- (31) a. Latin is a waste of time [for them to teach us]
 b. *Latin is a waste of time for us [PRO to teach us]

What *tough*-constructions, middles, and subject-oriented adverbial modification constructions all share is that in all three cases, the base adjective is predicated of a proposition and in addition has an experiencer argument. In (20), (26) and (29), the propositional argument and the experiencer argument can both be expressed discretely. But when the subject of the clause is an argument of the proposition of which the AP is predicated, as in (21), (27) and (30), the experiencer argument can no longer be expressed in the form of a PP.

Space does not permit me to delve into the depths of these parallels here. What matters right now is quite simply that these parallels are real, and that they confirm that, just as in *tough*-constructions and middles, the AP in subject-oriented adverbial modification constructions is predicated of the proposition, with the additional experiencer argument θ -bound by an argument of the verb and therefore not expressible in the form of a PP-dependent of the base adjective.

3.3. Some further remarks about experiencer arguments of subject-oriented adverbials

Before I conclude, a few remarks are due in connection with the fact that the experiencer argument of the base adjective of subject-oriented adverbials cannot be expressed in the form of an *of*-phrase even when the containing clause has no explicit subject: recall (22) and (23). For these particular examples, one may reasonably assume that *wisely*'s experiencer role is θ -bound by an implicit argument of the nominalisation (*mention*, *talk*, *delay*). Indeed, this seems to me a plausible approach to ensuring that expression of the experiencer argument of *wisely* as an *of*-phrase is impossible here. But cases such as (32a–b) require more of an effort to block the *of*-phrase. We understand, of course, that the amount of time for questions and discussion was put in place on the programme by the organisers of the event under discussion. But while in (32c) there is a verb (*left*) that introduces a θ -role to which the experiencer role of *wisely* can be bound, there is no predicate in (32a) and (32b) that can reasonably be assumed to introduce this θ -role: *time* is not a relational noun. We can consider allowing ourselves the liberty of setting up an underlying representation for (32a) and (32b) that supplies a binder for the experiencer role of *wisely* (for instance, by postulating an implicit relative clause, *left by the organisers*). But finding a syntactic justification for this will not be a straightforward matter.

- (32) a. there wisely (*of the organisers) was plenty of time for questions and discussion
 b. wisely (*of the organisers), there was plenty of time for questions and discussion
 c. the organisers wisely left plenty of time for questions and discussion

We should therefore remain aware of the fact that radically excluding an *of*-introduced experiencer of subject-oriented adverbials is a matter that may require more than an appeal to θ -binding by an argument of the main predicate of the clause. But it seems to me that such an appeal is beneficial not only as a major step in the right direction regarding the ban on an overt experiencer but also in establishing an insightful connection between subject-oriented adverbial modification constructions and middles and *tough*-movement constructions.

The relationship between the experiencer of the base adjective and an argument of the proposition is brought further into focus by the following empirical observations. From (33) and (34), it emerges that when the adjective heads a copular sentence and takes an overt experiencer in an *of*-phrase, there needs to be a link with an argument of the clause following the adjective: either its subject, as in (34a), or the implicit external argument of the passive, as in (34b). The grammaticality of (34b) may depend on the genericity of the utterance: (35) is much worse than (34b) (and also worse than active *it was wise of John that the question remained unanswered*), apparently due to the fact that the experiencer in (35) is specific, not generic.

- (33) *it is wise of the rich for the poor to do the hard work
 (34) a. it is wise of the rich that they make the poor do the hard work
 b. it is wise of the rich for the hard work to be assigned to the poor
 (35) *it was wise of John for the question to have remained unanswered

Note also that sentences of the type in (36) (recall (8)) alternate with (37) and (38), and that in each of these sentences an interpretive link is established between the experiencer of the base adjective and an implicit argument in the subordinate clause (the implicit agent of *talk* in (36)–(38)). This link is not a local (i.e., clausemate) one in the examples in (37) and (38).

- (36) there wisely was talk of *x*
 (37) it is wise that there was talk of *x*
 (38) it is wise for there to have been talk of *x*

This need not be problematic for a θ -binding analysis: θ -binding is almost certainly not to be likened directly to anaphor binding. But it does press home the fact that locality questions regarding the presumed relationship of θ -binding have to be addressed in future research.

4. Conclusion

This paper has been focused on the question of what serves as the subject of subject-oriented adverbials (exemplified in (1)), framed against the background of the analysis of subject depictives (illustrated in (2)). Direct predication between AP and the nominal

subject was ruled out for both subject depictives and subject-oriented adverbials. For (2), an analysis mobilising obligatory control of a PRO-subject local to AP is standard — an analysis that is supported by facts, briefly discussed in section 1 (see (4)–(6)), involving partial and split control and floating quantification in subject depictive constructions. For (1), a control analysis must be rejected precisely on the basis of the fact that subject-oriented adverbials do not give rise to partial/split control or floating quantifiers — indeed, they do not even depend on the presence of an explicit nominal subject in the structural subject position of the clause that contains them. The syntax of subject-oriented adverbials was couched in terms of a direct reverse predication relation between the adverbial and the proposition (TP). The semantic link between the adverbial’s experiencer argument and the subject was obtained via θ -binding.

- (1) John *wisely* didn’t leave the house
- (2) John didn’t leave the house *drunk*

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