The restrictive potential of weak adjuncts: nominal
*as*-phrases and individual quantifiers*

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Abstract
Starting from the observation that weak adjuncts can be interpreted as restricting co-occurring temporal and modal quantifiers, I show by the example of non-clausal, structurally high nominal *as*-phrases (e.g., *as a child*) that they are never understood as restricting individual quantifiers with which they associate. At first glance, this is surprising since the compositional ingredients seem to parallel the temporal and modal cases. I account for this contrast by showing that the structural configuration between *as*-phrases and individual quantifiers, as well as the semantic dependency between those two parts differs in crucial respects from those in the temporal and modal cases. Lastly, I propose an analysis for sentences containing *as*-phrases that associate with individual quantifiers which is based on the assumption that *as*-phrases and their associated constituents are connected via Non-Obligatory Control, which I analyze via discourse anaphora.

1 Introduction
Among the class of “free adjuncts” (i.e., non-clausal adjuncts contributing propositional content and providing additional information on an argument of the main predicate), two subclasses—*strong* vs. *weak*—have to be distinguished based on their interpretational possibilities (see [15]). For strong (free) adjuncts, like *being 10 years old* in (1), only a causal link to the proposition denoted by the remainder of the sentence can be understood regardless of co-occurring temporal or modal quantifiers.1

\begin{equation}
\begin{aligned}
\text{(1)} \quad & \text{Being 10 years old, Paul would have had to pay a fee.} \\
& (\approx \text{Since Paul is 10 years old, he would have had to pay a fee.})
\end{aligned}
\end{equation}

In contrast, weak (free) adjuncts, like the non-clausal, structurally high nominal *as*-phrases in (2), may interact with co-occurring temporal and modal quantifiers (TM quantifiers). In case they interact with these quantifiers, they restrict their domains of quantification to those times/worlds they describe (see [9], [15], [18], [19]). As a result, depending on the quantifier, either a temporal or conditional link between the content contributed by the adjunct and the remainder of the sentence is understood, see (2-b), (2-c). In addition, weak adjuncts always allow for the same causal link found with strong adjuncts, which arises when the former do not interact with a TM quantifier. If the host clause does not contain a TM quantifier, this is also the only available interpretation, see (2-a).2

1I would like to thank Keny Chatain, Julia Desmond, Kai von Fintel, Sabine Iatridou, Dóra Kata Takács, Thomas Weskott, and two anonymous AC reviewers for helpful comments and discussion.

2I use the term “causal” loosely. That is, the adjunct does not necessarily contribute a strict cause, but could also provide a reason/motivation or an explanation. Given that weak adjuncts contribute presuppositional content (shown in Sect. 2 for *as*-phrases), I paraphrase the causal interpretation with a *since*-clause (see [5]). The exact causal relations that can be expressed using free adjuncts are the subject of future work.

2In the causal reading, weak adjunct *as*-phrases are in competition with adjuncts formed with *being*, as in (1), which, being strong adjuncts, are not ambiguous. See [9], [15] for a discussion of these two forms.
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(2)  a. As a child, Paul likes sweets.
    (≈ Since Paul is a child, he likes sweets.)
  b. As a child, Paul was happy.
    (≈ When Paul was a child, he was happy.)
    (≈ Since Paul is a child, he was happy.)
  c. As a 10-year-old, Paul would pay a fee.
    (≈ If Paul were a 10-year-old, he would pay a fee.)
    (≈ Since Paul is a 10-year-old, he would pay a fee.)

Even though the temporal and conditional interpretations sometimes suggest an additional causal link between the as-phrase content and the remainder of the sentence, this additional link is inferred and strongly depends on world knowledge. That is, what the temporal interpretation of As a child, Paul was miserable does not express (in contrast to potentially (2-b)), is that Paul was miserable when he was a child since he was a child.

Given that weak adjuncts (i) may restrict TM quantifiers and (ii) depend on the denotation of an argument of the main predicate with which they associate (i.e., Paul in (2)), the question arises whether weak adjuncts can restrict individual quantifiers in case they associate with them, as in (3). In other words: can weak adjuncts freely restrict quantifiers over any kind of domain, or is their restrictive potential restricted to quantifiers over times and worlds?

(3) As a child, every guest likes sweets.

I show by the example of as-phrases that weak adjuncts cannot be understood as restrictors of individual quantifiers. They do, however, interact with individual quantifiers in a different manner, which I attribute to the way in which free adjuncts are linked to their host clause.

The paper is structured as follows. In Sect. 2, I introduce and modify a recent analysis of weak adjunct as-phrases and their interpretational possibilities proposed in [19]. Sect. 3 then discusses why, given the account presented in Sect. 2, it is plausible to expect that as-phrases can restrict individual quantifiers with which they associate, and I show that this expectation is not borne out. In Sect. 4, I show that the crucial difference between the interaction between TM quantifiers and as-phrases, on the one hand, and individual quantifiers and as-phrases, on the other, boils down to the difference between binding and co-reference. The semantic dependency between as-phrases and their associated constituents is formed via Non-Obligatory Control, which, in the case of individual quantifiers, behaves like discourse anaphora. The resulting analysis is illustrated for (3) in Sect. 5. Sect. 6 concludes the paper.

2 Syntax and semantics of weak adjunct as-phrases

Weak adjunct as-phrases, like all free adjuncts, contribute propositional content about a main clause argument (= the “associated constituent”). For as-phrases, this content is paraphraseable by a tenseless nominal copular clause: e.g., as a child in (2-b), which associates with Paul, can be paraphrased as ‘Paul be a child’. To capture this intuition, I assume, as in [19], that as takes two arguments: (i) a Small Clause that contains a predicatively used DP and (ii) the covert pronoun PRO, which depends for its value on the associated constituent, see (4).

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3In this paper, I only discuss every NP and most NP and focus on the common aspects of their interaction with as-phrases. For reasons of space, a thorough comparison of different quantifiers in connection with as-phrases has to be left for future work.

4For reasons of simplicity, I only use examples with indefinite DPs in the complement of as and leave aside other kinds of predicationally used DPs.
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(4) \[ asP \text{ PRO} \left[ DP \text{ a NP} \right] \]

At LF, as-phrases occur in two positions in the clause: They may adjoin below co-occurring TM quantifiers, as in (7), which allows for an interaction between the contents of the as-phrase and the quantifiers. This results in a temporal or conditional link. In addition, they may adjoin above all TM quantifiers, as in (10), where they outscope them and, hence, are unaffected by them. On the surface, I assume, the sentence-initial position arises from topicalization, which is reconstructed at LF.5

Regarding the semantics of as-phrases, I partly deviate from [19]. As in [19], I take PRO to obtain its interpretation from its associated constituent via Non-Obligatory Control, see [1], which then composes with the DP content yielding propositional content. Unlike [19], I take weak adjunct as-phrases to presuppose, rather than assert, the resulting propositional content (see also [9]). This is shown in (5), which gives the family of sentences test for (2-a).6

(5) a. As a child, Paul is not watching TV. \( \Rightarrow \) Paul is a child.
   b. Is Paul as a child watching TV? \( \Rightarrow \) Paul is a child.
   c. If Paul as a child is watching TV... \( \Rightarrow \) Paul is a child.

In sum, I propose the semantics for weak adjunct as-phrases in (6).

(6) \[ as \text{ PRO}_c \text{ a NP} \] ≜ \[ \lambda p_{[i, st]}, \lambda t'. \lambda w'. \lambda \phi [\lambda w_0 \lambda t. \lambda p(t)(w') \lambda \phi(w_0) \lambda \phi(t')(w_0)] \]

For the moment, I model the determination of the referent of PRO via the assignment function \( g \) and the specialized index \( c \); I will address this matter further in Sect. 4.7

The interpretations of the two possible syntactic configurations proposed above is illustrated for (2-b). In case the as-phrase, as a child, is adjoined below past tense, see (7), the temporal quantificational operator [PAST] in (8) (see [3]) binds the temporal argument \( t' \) of the as-phrase.

(7) \[ [ \text{PAST}] [ \text{as PRO}_c \text{ a child} \] [be Paul\textsuperscript{c} happy] ]

(8) \[ [\text{PAST}] \] ≜ \[ \lambda p_{[i, st]}, \lambda t. \lambda w. \exists \phi([\lambda w_0 \lambda t. \lambda \phi(t')(w') \lambda \phi(w_0) \lambda \phi(t')(w_0)]) \]

As a result, the presupposed content interacts with the contextually determined restrictor \( C \)—i.e., it places the requirement on \( C \) that it contain only times at which Paul is a child in \( w_0 \), see (9). That is, the as-phrase restricts [PAST] via what is sometimes described as “intermediate accommodation of the presupposed content in the restrictor of the quantifier” (see e.g., [16]).

(9) \[ [2-b] \text{temp} \] \[ \text{is defined if } \forall t' \in \text{C}[\text{child(Paul)}(t')(w_0)] \text{, and if defined is true iff } \exists t' \in \text{C}[\forall t < t_0 \land \text{happy(Paul)}(t')(w_0)] \]

If the as-phrase is adjoined above [PAST], as in (10), [PAST] does not bind \( t' \) and the propositional as-phrase content will be evaluated at \( t_0 \) in \( w_0 \); compare (9) to (11).

(10) \[ [ \text{as PRO}_c \text{ a child} \] [ [ \text{PAST} \] [be Paul\textsuperscript{c} happy] ] \]

(11) \[ [2-b] \text{caus} \] \[ \text{is defined if } \text{child(Paul)}(t_0)(w_0) = 1 \text{, and if defined is true iff } \exists t' \in \text{C}[t' < t_0 \land \text{happy(Paul)}(t')(w_0)] \]

5Weak adjuncts occur either sentence-initially, sentence-finally or in their base positions, as well as parenthetically. The parenthetical use only allows for a causal link, while the other occurrence possibilities show the full spectrum of interpretations.

6I leave it to the reader to verify that the same results obtain for those cases where the as-phrase restricts a TM quantifier, as in (2-b) and (2-c).

7I adopt the subscript/superscript notation employed in [4] to distinguish antecedents (superscripts) and anaphors (subscripts).
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(14-a): LS LS LS LS LS LS LS LS LS
(14-b): OC OC OC OC OC OC
(15-a): LS LS LS LS LS LS
(15-b): OC OC OC OC

Figure 1: Scenarios for examples (14) and (15)

Following [9], I assume that the causal link between the asserted and the presupposed contents in (11) arises via an inferred discourse relation, Result/Explanation (see [2]).

3 As-phrases do not restrict individual quantifiers

In Sect. 2, I assumed that weak adjuncts restrict TM quantifiers in case they are bound by them via a contextually determined restrictor variable $C$. The domain of individual quantifiers (e.g., every NP, most NP) is standardly assumed to be determined both by the NPs that they contain, as well as an additional restrictor variable $C$, which further cuts down the set of individuals described by the NP to those that are contextually given (see e.g., [8]). That is, every guest in (12) quantifies over all contextually given guests determined via $C$ in (13).

(12) Every guest brought a present.
(13) $[(\forall x)(\lambda t.\lambda w.\forall x[(x \in C \land P(x)(t)(w)) \rightarrow Q(x)(t)(w)])$.

Since (i) we find a semantic dependency between as-phrases and their associated constituents, and (ii) individual quantifiers provide a covert restrictor variable (like TM quantifiers), we might expect as-phrases to also interact and restrict individual quantifiers. To assess the restrictive potential of weak adjunct as-phrases with respect to individual quantifiers, let us consider sentences that do not include any TM quantifier beside the relevant individual quantifier to preclude any alternative interactions, as in (14).

(14) a. As a child, every guest likes sweets.
   b. As tourists, most visitors own cameras.

If the as-phrases in (14) were restricting the quantifiers, we would expect (14) to be interpreted like (15), where the as-phrase contents are contributed by restrictive relative clauses.

(15) a. Every guest who is a child likes sweets.
   b. Most visitors who are tourists own cameras.

Example (15-a) is true iff the set of contextually given individuals who are guests and children (●) is a subset of the set of contextually given guests who like sweets (LS). Example (15-b) is true iff the set of contextually given individuals who are visitors and tourists and own cameras (● + OC) is larger than the set of contextually given visitors who are tourists and do not own cameras (● + no OC). That is, for (15), the sets of individuals that are guests/visitors but not children/tourists (○ and ◦) are irrelevant, see Fig. 1.

In contrast, example (14-a) is intuitively true in a context where the contextually given guests (○ + ●) form a subset of the set of contextually given individuals who like sweets (LS),

8 The exact source of this inference is not central for the current purposes and is, thus, left for further investigation. See [9] and [15] for discussion.

9 I make the simplifying assumption that $C$ only contains individuals describable by the NP inside the quantifier. That is, in Fig. 1, ○ + ● are all guests and ○ + ◦ are all visitors picked by the respective value of $C$. 
and all guests are children (i.e., there are only •). And example (14-b) is true in a context in which the set of contextually given visitors who own a camera (◦ + • + oc) is bigger than the set of visitors who do not own cameras (◦ + • + no oc), and all visitors are tourists (i.e., there are only •), see Fig. 1.

Comparing the above descriptions, we find that neither (14-a) nor (14-b) is true in the scenarios given for (15-a) and (15-b), respectively, and vice versa. This is a first indication that the _as_-phrase contents, unlike the relative clauses in (15), do not restrict the Cs of _every_ and _most_ in (14).

A second indication is provided by the fact that the examples in (14) are necessarily understood with causal links between the _as_-phrase content and the content of the remainder of the clause: (14-a) expresses that every guest likes sweets since all guests are children, and (14-b) expresses that most visitors own cameras since all visitors are tourists. This causal link persists even if the main clause predicates are changed to properties that are not associated with children or tourists in general, as in (16).

(16)  a. As a child, every guest likes coffee. (odd given world knowledge)
     b. As tourists, most visitors own a black bag.

In sum, we can conclude that the _as_-phrases in (14) have the same causal interpretation that arises in case an _as_-phrase does not interact with a quantifier, and, hence, that _as_-phrases do not restrict individual quantifiers.

Importantly, this finding cannot be the result of a general unavailability of the mechanism outlined in Sect. 2 (“intermediate accommodation”) in the case of individual quantifiers. As (17) shows, if an individual quantifier binds into presupposed content, this content can be understood as restricting its domain of quantification (see [16]).

(17) Every i man loves his i wife. ⇒ Every man in C has a wife.
    (≈ Every man, who has a wife, loves his wife.)

So, how can the lack of domain restriction with individual quantifiers be explained? How does (18) (repeats (14)) differ from (17)?

(18)  a. As PRO_c a child, every_c guest likes sweets.
     b. As PRO_c tourists, most_c visitors own cameras.

As I am going to show in Sect. 4, the crucial differences are (i) that the semantic dependency between the quantifier and the _as_-phrase content that is established via PRO is not one of binding, and (ii) that the _as_-phrase is not evaluated in the scope of its associated individual quantifier. Together, these differences preclude an interaction between _as_-phrases and individual quantifiers that would parallel the interaction between _as_-phrases and TM quantifiers.

4  **How _as_-phrases and individual quantifiers interact**

4.1  **Non-obligatorily controlled PRO is not bound by its controller**

In Sect. 2, I assumed, following [1], that PRO, which I posit to model the connection between _as_-phrases and their associated constituents, obtains its semantic value via Non-Obligatory
Control (NOC). This assumption is motivated by (i) the observation that as-phrases do not have to be c-commanded by their associated constituents, see (19-a), and (ii) the possibility of as-phrases to contain arbitrary PRO, see (19-b).

(19) a. As PRO$_c$ a child, the presence of a stranger scared her$^c$. (cf. [17])
   b. As PRO$_{arb}$ a child, life is easy.

   The observation that PRO does not have to be c-commanded by its controller speaks against an analysis of NOC in terms of binding.$^{11}$ In addition, we find that quantifiers in the same clause that are not the associated constituent of an as-phrase cannot bind into it. In (20), the possessive pronoun cannot be bound by every boy in object position even though this quantifier has to be QRed to a higher position in the clause for reasons of interpretability.$^{12}$

(20) As PRO$_c$ his$_{i,j}$ friend, Mary$^c$ invited every boy$_i$.

That is, as-phrases seem to be inaccessible for binding by individual quantifiers occurring in the same clause.

It is commonly assumed for NOC into high adjuncts that the choice of controller is constrained by discourse pragmatic considerations (see [1], [17]). While the proposals in the literature differ with respect to which pragmatic notion is responsible ([1] assumes topicality, while [17] assumes logophoricity), the consensus is that the dependency is not a strictly structurally or lexically determined matter, compare (21-a) and (21-b).

(21) a. PRO$_i$ having just arrived in town, the grand old hotel impressed Bill$^c$.
   b. *PRO$_i$ having just arrived in town, the grand old hotel collapsed on Bill$^c$.

(examples taken from [17])

Given the pragmatically mediated connection between NOC PRO and its controller, I argue that PRO obtains its value in a discourse-dependent fashion: in case the controller is a quantifier, as in the examples central to this paper, I argue, NOC PRO behaves like a plural discourse anaphor (see a.o. [11]).$^{13}$

4.2 Discourse anaphora

Unlike proper names (and other referential expressions), individual quantifiers, being non-referential expressions, do not provide referents that can be picked up by personal pronouns in subsequent sentences, as illustrated in (22).

(22) a. Paul$_i$ came to the party. He$_i$ had a great time.
   b. Every$_i$ student came to the party. *He$_i$ had a great time.

The trouble with (22-b) is that third person singular he can be neither bound nor co-referent with every student—binding is impossible across sentence boundaries, and every student does not introduce a singular referent that could be picked up by he. In contrast, third person plural

$^{11}$Adler [1], in fact, argues that free adjuncts are never c-commanded by their associated constituents. She does not consider quantified associated constituents, though.

$^{12}$Note that a quantifier that occurs in a higher, embedding clause is able to bind into an as-phrase, as in (i).

(i) No boy believes that as PRO$_c$ his$_{i,j}$ friend, Peter$^c$ will invite Mary.

$^{13}$I thank an anonymous reviewer for suggesting a related line of inquiry.
they in (23) seems to be able to depend on every student. Specifically, every student intuitively provides the set of all contextually given students as a potential referent for they.

(23) Every\textsuperscript{i} student came to the party. They\textsubscript{i} had a great time.

As (24) shows, matters are more complicated: they may pick up either the set of contextually given MPs that attended the meeting, as in (24-a), the set of contextually given MPs that did not attend the meeting, as in (24-b), or the set of all contextually given MPs, as in (24-c).

(24) Few\textsuperscript{i} MPs attended the meeting. (example from [11])
   a. They\textsubscript{i} decided not to discuss anything important. (→ reference set)
   b. They\textsubscript{i} stayed home instead. (→ complement set)
   c. But they\textsubscript{i} all had drinks afterwards. (→ maximal set)

As [11] shows, the full spectrum of potential referents for they illustrated in (24) is not available with all individual quantifiers. While all quantifiers provide their reference set for subsequent discourse anaphora, the maximal set is only available with quantifiers for which the domain of quantification is presupposed to be non-empty (i.e., strong quantifiers, like every NP, all NP, most NP, or few NP), and the complement set is only available and accessible via inference with quantifiers that guarantee its non-emptiness (e.g., few NP).

4.3 NOC PRO as a discourse anaphor

Connecting back to the as-phrase data, I argue that NOC PRO is a discourse anaphor that picks up whichever referent (be it singular or plural) is provided by its chosen controller: if PRO depends on a singular referential expression, as in (2), it behaves like a singular anaphor; if it depends on an individual quantifier, it behaves like a plural anaphor.\textsuperscript{14}

As shown in the previous subsection, plural discourse anaphora that depend on strong quantifiers, like every NP or most NP in (25) (repeats (14)), can refer to either the reference set or the maximal set of the quantifier.

(25) a. As PRO\textsubscript{c} a child, every\textsuperscript{c} guest likes sweets.
    b. As PRO\textsubscript{c} tourists, most\textsuperscript{c} visitors own cameras.

Note, however, that the as-phrases in (25) can intuitively only refer to the maximal sets of their associated quantifiers (i.e., the sets of all contextually salient guests or visitors) and, hence, can only describe the maximal set scenario in Fig. 2. The reference set, which is the preferred referent for plural discourse anaphora according to [11], is unaccessible. This is noticeable for (25-b), which cannot express ‘most visitors own cameras since those visitors who own cameras are tourists’, which would be true in the reference set scenario in Fig. 2.

How can we account for the lack of this reading? Given the presuppositional nature of the as-phrase content, as well as its sentence-initial position, it is plausible to assume that the as-phrase content is checked against the context before the main clause content is evaluated. That

\textsuperscript{14}This interpretational flexibility is not surprising if we consider that PRO is a covert, morphologically number neutral pronominal element.
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is, when the referent for PRO is determined, the reference set of the quantifier has arguably not been computed, yet (see [11]). The maximal set, which every NP and most NP, as strong quantifiers, presuppose to be contextually determined and non-empty, is therefore the only available referent for PRO.

This line of argumentation is supported by the interpretational restrictions observed for appositive relative clauses (ARCs) (see [12]). It has been observed in the literature that, just like anaphoric pronouns, only plural appositives (including ARCs) can combine with individual quantifiers, see (26).

(26) a. *Every climber, an experienced adventurer, made it to the summit.
   b. Every climber, all experienced adventurers, made it to the summit.

Furthermore, [12] observes that the syntactic placement of ARCs constrains which set provided by the quantifier they can comment on: ARCs that occur sentence-externally, as in (27-a), can only comment on the maximal set (i.e., the set of all contextually salient climbers) while ARCs that occur sentence-finally, as in (27-b), can also comment on the reference set (i.e., the set of all contextually salient climbers that reached the summit).

(27) a. Less than half the climbers, who were (all) French nationals, made it to the summit.
   b. They interviewed less than half the climbers, who were (all) French nationals.

So, the order in which information in a sentence is evaluated arguably constrains which sets can be denoted by discourse anaphora, which accounts for why only the maximal set is an accessible referent for PRO in as-phrases.

5 The account: as a child, every guest likes sweets

The consensus in the literature is that plural discourse anaphora depending on individual quantifiers can only be adequately captured in a dynamic system (see i.a. [11]). Hence, a fully explicit formal analysis of the as-phrase data at issue would require the adoption of a system like those proposed in [4] or [11]. For reasons of space and simplicity, I will summarize the account of the data in the static system adopted in Sect. 2 and informally discuss the necessary dynamic aspects. I discuss the example sentence As a child, every guest likes sweets, for which I assume the syntactic structure in (28).15

(28) [ [asP as PRO. a child] [y [PRES] [ [every guest] [likes sweets] ] ] ]

Let us first turn to the interpretation of the as-phrase. Given that the as-phrase contains a singular predicate that can only be true of humans, the only plausible controller for NOC PRO is the quantifier every guest in subject position.16

Since quantifiers are non-referential, PRO acts like a discourse anaphor and picks up a set of individuals connected to this quantifier (see Sect. 4.3). Given that the content contributed by the as-phrase is presuppositional and, hence, checked against the available referents in the context of evaluation before the at-issue content of the sentence is evaluated, the only available

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15I do not assume QR of every guest in (28). However, in case the quantifier has to be QRred for reasons of interpretability, the binding facts in Sect. 4.1 suggest that it is QRred to a position below the as-phrase.

16In case more than one argument of the main clause predicate are plausible controllers, the controller is chosen based on a pragmatically determined hierarchy (see [1]). A corpus study reported in [10] shows that the majority of controllers of weak adjuncts are in subject position.
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referent is the maximal set containing all contextually given guests, see (29). Since every guest is a strong quantifier, this set is presupposed to be non-empty.

\[(29)\quad g(c) = \{x : [\text{guest}]^{g,w_0,t_0}(x)(w_0) \land x \in C\}\]

As a result, PRO denotes a set of single individuals, i.e., a plural individual (see a.o. [14]).

At first glance, the next step, combining the plural individual denoted by PRO with the predicationally used singular DP a child, appears to be problematic: morphosyntactically singular predicates cannot combine with morphosyntactically plural subjects (e.g., *the boys eats). Note, though, that the number mismatch in our case is different since PRO is morphosyntactically number neutral and semantically plural. We encounter a similar semantic mismatch with group nouns, see (30), which are morphosyntactically singular and semantically plural.

\[(30)\quad \text{Committee A is tall.} \quad \text{(example taken from [13])}\]

So, to derive the interpretation for the as-phrase in (32), I loosely follow the account for group nouns put forth in [13] and assume an operator \(P\) that turns a singular predicate into the corresponding, distributive plural predicate, see (31).

\[(31)\quad P([\text{a child}]^{g,w_0,t_0}) = \lambda X. \lambda \lambda w. \forall x \in X[[\text{child}]^{g,w_0,t_0}(x)(t)(w) = 1]\]

\[(32)\quad [[\text{as PRO}_e \text{ a child}]^{g,w_0,t_0} = \lambda \lambda P_{(t,\lambda t)}. \lambda X. \lambda \lambda w. \forall y \in \{x : \text{guest'}(x)(t_0)(w_0) \land x \in C\}[[\text{child'}(y)(t')(w') = 1], p(t')(w')]\]

To derive the interpretation of the sister of asP (i.e., the Y-node in (28)), I assume (i) the denotation of every in (13), and (ii) that [PRES] is an identity function on propositions (i.e., unlike [PAST], [PRES] has no effect on the temporal evaluation of its argument, see [3]). The resulting denotation—i.e., the propositional argument of (32)—is given in (33).

\[(33)\quad [[Y]^{g,w_0,t_0} = \lambda \lambda w. \forall x[[\text{guest'}(x)(t)(w) \land x \in C] \to \text{likes-sweets'}(x)(t)(w)]]\]

After combining (32) with (33), the sentence as a child, every guest likes sweets is analyzed to contribute the presuppositional and truth-conditional content in (34).

\[(34)\quad [[\text{as a child, every guest likes sweets}]^{g,w_0,t_0} \text{ is defined if}\]

\(i)\quad \{x : \text{guest'}(x)(t_0)(w_0) \land x \in C\} \neq \emptyset\)

\(ii)\quad \forall y \in \{x : \text{guest'}(x)(t_0)(w_0) \land x \in C\}[[\text{child'}(y)(t_0)(w_0) = 1]\]

and if defined = 1 iff

\(iii)\quad \forall x[[\text{guest'}(x)(t_0)(w_0) \land x \in C] \to \text{likes-sweets'}(x)(t_0)(w_0)]\]

As stated in Sect. 2, the presuppositional as-phrase content in ii) and the truth-conditional content in iii) are inferred to be related pragmatically by the discourse relation Result/Explanation. Hence, using this sentence, a speaker not only asserts that all guests like sweets but also conveys that they do so because they are children.

6 Conclusion

In this paper, I have shown by the example of non-clausal, structurally high as-phrases that weak adjuncts cannot be understood as restricting the domain of individual quantifiers with which they associate. I account for this lack of domain restriction by semantically analyzing the dependency between the as-phrase and its associated constituent, which I take to be
Non-Obligatory control, as co-reference, specifically discourse anaphora, rather than binding. Lastly, I provided an analysis of sentences containing as-phrases that associate with individual quantifiers which accounts for their attested interpretation.

References