

Same and Different are Additive Presupposition Triggers*

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1 Introduction

As first observed by Carlson (1987), *same* and *different* can give rise to external and internal readings, as illustrated by (1) and (2).

- (1) Daiwen read a book. Bao read the same/a different book.
- (2) Every girl read the same/a different book.

The external reading in (1) exhibits a fairly straightforward relationship where *a different* or *the same book* is compared with the antecedent expression *a book* in prior discourse. The internal reading in (2) is more challenging – since there is only a single book-denoting expression, it is difficult to see how to express the relevant comparison in a logical representation. Indeed Barker (2007) has argued that internal and external readings for *same* are completely different, and simply reflect a lexical ambiguity. Brasoveanu (2011) proposes a uniform account of internal and external readings for *different*, but this account relies on added complexity in the analysis of distributive quantification. More recently Hardt and Mikkelsen (2015) observe a distinction between *same* and *different* in external readings, where *same* is subject to parallelism effects that do not apply to *different*. To account for this, Hardt and Mikkelsen (2015) propose some unusual complications to the lexical meaning of *same*, namely that it includes a discourse parallelism requirement which is not part of the meaning of *different*.

In this paper, we argue that none of these innovations are required. We propose a novel account which rests on two simple claims: the first is that *same* and *different* are able to take scope, and the second is that they give rise to an additive presupposition. No distinctions between *same* and *different* are stipulated, other than the inescapable fact that *same* involves identity while *different* involves non-identity. Furthermore, we apply standard mechanisms of scope-taking and presupposition resolution to explain the diverse observations alluded to above.

Our analysis consists in elucidating the ways in which the presuppositions generated by *same* and *different* can be resolved in different contexts, and how this interacts with the different scopal possibilities. It emerges that the difference between external and internal readings is a reflection of the familiar distinction between presupposition binding and accommodation. Furthermore, we show that the parallelism effects observed by Hardt and Mikkelsen (2015) follow directly from the interaction between the scope-taking possibilities and the requirement that an additive presupposition must contrast appropriately with the host. Since our proposal relies entirely on standard mechanisms of presupposition resolution and scope-taking, it has evident conceptual advantages over previous proposals. Our proposal also has new empirical consequences involving the distribution of *same* and *different* in comparatives.

In section 2, we characterize the presupposition generated by *same* and *different* – both of them generate an additive presupposition, just as *too* does (Krifka (1999) and much subsequent work). We also describe the syntactic scope-taking possibilities of *same* and *different*. Then in section 3 we show that external readings reflect presupposition binding, and we show that the parallelism effects of Hardt and Mikkelsen

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(2015) reflect the way in which *same* and *different* have different scope-taking possibilities. In section 4 we show that internal readings reflect presupposition accommodation. In section 5 we examine a further consequence of our account, based on the fact that *different* can generate a presupposition arising from the local containing DP, while *same* must move to a higher position. We show that this provides a solution to a puzzle first identified by Heim (1985), concerning *same* and *different* in comparative constructions. In section 6 we compare our analysis to related work, and section 7 concludes.

2 Proposal: Same and Different are Additive

At the core of our proposal is the claim that *same* and *different* are additive just like *too* is.¹ That is, both *same* and *different* generate the same presupposition as *too*. At the same time, there is a basic syntactic difference: *same* and *different* are adjectives, while *too* is a sentential adverbial. Below we characterize the presuppositions of *same*, *different*, and *too*, and then present our syntactic analysis of *same* and *different* as scope-taking adjectives.

2.1 The Presupposition of *Same* and *Different*

Consider (3):

- (3) a. #Daiwen read *War and Peace*. Bao read the book.
- b. Daiwen read *War and Peace*. Bao read the book too.

It has often been observed that a discourse like (3a) is somewhat odd or degraded, compared to (3b) (see Sæbø, 2004; Amsili and Beyssade, 2006; Winterstein and Zeevat, 2012 among others). One way to explain this is based on the preference to maximize presuppositions (Heim, 1991): in (3b) it is presupposed that someone other than Bao also read *War and Peace*; something that could have been presupposed by (3a), but was not. It is important to note that this argumentation applies to alternatives like (3a) and (3b) above because they share the same propositional content (see Amsili and Beyssade, 2009 and Eckardt and Fränkel, 2012 for analyses of obligatory *too* using Heim’s Maximize Presupposition!) This illustrates the general property of additivity, which is described by Rossdeutscher et al. (2012:1783) as follows “...the host of the item is the case in addition to something else that was already stated” (see also Forker (2016)). In (3), the host² of *too* is *Bao read the book*. As Rossdeutscher et al. (2012) put it, *too* is additive because the host is true “in addition to something else that was already stated” – this is the presupposition generated by *too*. In (3), the presupposition is satisfied by “Daiwen read *War and Peace*”.

The contrast illustrated by (3a) and (3b) has been widely discussed in the literature. However, what has not previously been observed is that the degradedness of (3a) is also remedied by *same*, as shown by (4):³

¹Our claim that *same* and *different* are additive builds on the claim of Hardt et al. (2012) that *same* is additive. There have been other suggestions in the literature that *same* or *different* are presuppositional in some sense (see Dotlačil (2010:341) and Brasoveanu (2011:108)), but it has not been systematically investigated.

²Other authors use the term *prejacent* (Von Stechow, 1999; Iatridou and Tatevosov, 2016).

³An anonymous reviewer argues that *same* is not the only element that “makes too non-obligatory”, giving the following examples in (i):

- (i) a. Daiwen read *War and Peace*. Bao read a longer book.
- b. Daiwen read *War and Peace*. Bao read a similar book.
- c. Daiwen read *War and Peace*. Bao read a book by its author’s brother.

The reviewer asks, do “all these elements incorporate TOO”? While we would not rule out this possibility, the argumentation concerning Maximize Presupposition! does not apply here, since (ia-c) involve comparison of alternatives with different propositional content. Our argument that *same* incorporates TOO is based on three different cases: ‘Bao read the book’, ‘Bao read the book too’, and ‘Bao read the same book’. All three have the same propositional content. The first case is dispreferred, because the second and third case presuppose something not presupposed by the first; namely, that someone other than Bao read *War and Peace*. For example, consider (ib). We would require alternatives to *Bao read a similar book* not involving *similar* but with the same propositional content. It’s not clear what those alternatives would be. Similarly, analogous examples with *different* cannot be argued to incorporate TOO based on Maximize Presupposition!. Our argument is, rather, that on general grounds, *different* and *same* should have the same presuppositional behavior as *too*. We are open to the possibility that some or all of the above elements incorporate TOO, but we will need to leave this question to future work.

(4) Daiwen read *War and Peace*. Bao read the same book #too.

(4) is fully acceptable in the absence of *too*; indeed, on our view *too* now becomes somewhat infelicitous, similar to (5):

(5) Daiwen read *War and Peace*. # Bao also read the book too.

On the account we will propose, *same* generates the same presupposition in (4) as *too* in (3): namely, that someone other than Bao read *War and Peace*. This provides a natural explanation for the above observations: we argue that (4) has the same propositional content as (3a), but (4) generates a presupposition not made by (3a). This explains the preference for (4) over (3a). It also explains the fact that the cooccurrence of *same* and *too* in (4) is odd in much the same way as the cooccurrence of *also* and *too* in (5).⁴

Let us return to the presuppositional nature of *too*, illustrating with example (3b): we assume that *too* is syntactically adjoined to the TP *Bao read it*, which we describe as the Host, H. H generates a presupposition P – in this case, that someone else read *War and Peace*. This is a requirement that an antecedent P be found in surrounding discourse. Because this presupposition is additive, H must differ from P in a way that is foregrounded, while otherwise sharing the same background material. Since P is a presupposition, it must be true in the context in which H occurs. In general, then, we can describe *too* as generating an additive presupposition as follows:⁵

- (6) $[H \text{ TOO}]$ is an LF occurring in context c . It is felicitous iff there is an antecedent P such that:
- a. $[[P]] \neq [[H]]$
 - b. $[[P]] \in [[H]]^F$
 - c. P is true in c

Points (6a) and (6b) ensure that P contrasts appropriately with H .⁶ That is, (6a) ensures that P is not equal to H , while (6b) requires that P is an element of H^F , the focus value of H , which is the set of alternatives to H that can be constructed by different substitution for any focused elements within H . (6c) ensures that P is true in context, i.e., that it is presupposed.

Our definition assumes P to be propositional, since it is required to be true in (6c). This means both H and P would naturally be associated with sentential syntactic phrases, i.e. TP's. They can also be associated with DP's such as "the/a book", which make a truth-conditional claim of existence. In this paper H and P are restricted to TP's and such DP's. We suggest that other sub-sentential syntactic types are not possible for H and P, because they have lambda-bound arguments and thus their truth value in context cannot be meaningfully assessed.

We propose that *same* and *different* are *additive* in precisely the same way as *too* is. However, unlike *too*, *same* and *different* also involve scope-taking, as we see below.⁷

⁴An anonymous reviewer argues that *same* can cooccur with additive expressions like *also*, *as well* and *too*, as illustrated in (ii), and suggests that this casts doubt on our proposal that *same* and *different* are additive.

- (ii) Daiwen read War and Peace.
- a. #Bao also read the same book.
 - b. #Bao read the same book as well.
 - c. #Bao read the same book too.

While we acknowledge that such cases can occur, we find these to be redundant and somewhat degraded, similarly to the cooccurrence of standard additive particles such as *too* and *it also*, as in (iii):

- (iii) Daiwen read War and Peace.
- a. #Bao also read the book, too.
 - b. #Bao as well read the book, too.
 - c. #Bao also read the book as well.

It seems clear to us that such redundancy, while possible, has a somewhat intermediate status. Alexander Göbel (p.c. 6/12/2021), suggests that these are "a sort of speech error, where whatever corresponds to the message conveyed by the additive just happens to get pronounced twice".

⁵This account most closely follows that of Hardt et al. (2012), which is inspired by Singh (2008).

⁶This notion of "appropriate contrast" is taken from Heim (1997), building on the focus semantics of Rooth (1985).

⁷An anonymous reviewer suggests that overt *too* does not always determine the host according to its overt position, in examples like (iv).

2.2 The Syntax of *Same* and *Different*

Our proposal adapts the approach of Sun (2021), where *same* is decomposed into two elements: a simple identity relation, $\lambda x, y. x = y$, which Sun terms IDENT, and a scope taking element, termed -EQTV.⁸ We propose that the scope taking element is TOO, the denotation of the additive particle *too*, as defined above.

We posit a second meaning for IDENT given in (7). Here IDENT receives an index i , and thus it represents the property of being identical to u_i :

$$(7) \quad \text{IDENT}_i := \lambda x. x = u_i$$

We require the indexed IDENT to allow for external readings, where there is an antecedent in surrounding context (Hanink (2021) also makes use of an index for external readings, though on her account the index heads its own syntactic phrase). Sun does not consider such external readings, and we would expect that a similarly indexed IDENT would be required for her account to extend to external readings.⁹ We define NOT-IDENT as follows:

$$(8) \quad \text{NOT-IDENT} := \lambda x, y. x \neq y$$

$$(9) \quad \text{NOT-IDENT}_i := \lambda x. x \neq u_i$$

Here then is our proposal:

- (10) a. “too” := TOO
- b. “same” := TOO IDENT_(i)
- c. “different” := TOO NOT-IDENT_(i)

A relevant difference between our proposal and Sun’s analysis is that on Sun’s analysis EQVT and IDENT both contribute at-issue meaning in the form of identity relations, whereas on ours only (NOT-)IDENT contributes at-issue meaning and TOO, the correspondent of Sun’s EQVT head, is purely presuppositional. In other words, on our analysis *same* and *different* are presupposition triggers, on Sun’s they are not.

Further note that, in our definition of TOO above, the sentence adverbial *too* is syntactically adjoined to the host H. As an element of *same* or *different*, TOO undergoes covert movement, where it moves to a position adjoined to the host.

The claim that *same* and *different* take scope has been a widely-held view in the literature going back to the foundational works of Heim (1985) and Carlson (1987), as well as much subsequent work, including Barker (2007), Barker (2012), Hardt et al. (2012), Zhang (2016), Chatain (2020), and Sun (2021).

Let us consider a simple DP, in (11):

- (11) a different book

This DP has the following base-generated structure, where EqP stands for Equative Phrase (cf. Sun (2021:(12))):

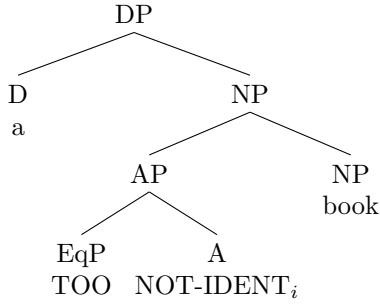
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- (iv) Alice ate a slice, Bob, too, ate a slice.

Here one might argue that *too* raises covertly to determine the matrix-level host, *Bob ate a slice*. We see this as a natural application of our approach – since *too* raises covertly when part of the interpretation of *same* and *different*, why shouldn’t it raise when associated with overt *too*? This would be interesting to pursue with *too* as well as related terms like *also* and perhaps *even*; however, we defer this to future work.

⁸There is precedent for decomposing *same* (and *different*) in Heim (1985). See Section 6 for discussion.

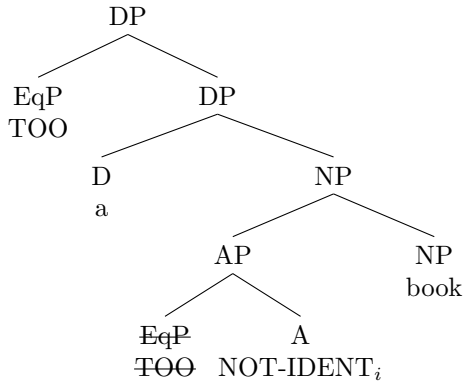
⁹In fact, Sun describes examples such as her (1a) as “external”, although they actually involve an *as*-clause.

(12)



We assume TOO raises to adjoin to the DP, as shown below:

(13)



The movement of TOO is motivated by the requirement that the host H be a saturated expression, which was discussed above concerning (6). In its base position TOO is the sister of an unsaturated expression, the NOT-IDENT property, and therefore must move. The DP, as a saturated expression, provides a suitable host.¹⁰ A related question is why TOO, as part of an AP, is allowed to move. Here we follow Sun's (2018) analysis of *same* in comparative constructions, in which EqP raises out of the AP to left-adjoin at the clausal level. We further note that on Bhatt and Pancheva's 2004 influential analysis of comparatives, DegP *-er* is a subpart of an AP and moves out of that AP to Merge with the standard clause. We suggest that the three cases are structurally analogous, even if the motivation for the movement differs.

As we saw above, NOT-IDENT_i represents the property of being not equal to u_i . This combines with the property *book* by Predicate Modification, giving the property $\lambda x.x \neq u_i \ \& \ \text{book}(x)$. When combined with the indefinite article *a*, we get the following logical representation, using DRT-style notation:¹¹

$$(14) \quad [u_j \mid \text{book}(u_j), u_j \neq u_i]$$

In this example, TOO moves to a position adjoined to the local DP. However, it is not limited to this; TOO can move to higher positions, constrained only by the general conditions governing syntactic movement, giving rise to alternatives in the scope possibilities for TOO. As we will see, these alternative scope possibilities are the key to explaining the observed variations in external and internal readings for *same* and *different*.

¹⁰A reviewer notes that *too* can attach to a DP (*Bao, too, read it*), as well as a TP (*Bao read it too*). This mirrors the possible interpretation sites of *different*, supporting our proposal that *different* incorporates TOO.

¹¹We are using DRT representations for two primary reasons: first, we rely on unselective binding in tripartite quantificational structures (Kamp, 1981; Heim, 1982), and second, we implement presupposition accommodation as the copying of drs's, following van der Sandt (1992). We write drs's in linearized form, as in Hardt and Mikkelsen (2015); Brasoveanu (2011) and much other work. In this notation, discourse referents are indicated to the left of the vertical bar and conditions on these discourse referents are indicated to the right. In (14) the discourse referent is the variable u_j and the conditions are that u_j is not identical to u_i and that u_j is a book.

2.2.1 Definiteness and Same/Different

Our decomposition of *same* and *different* provides a basis for explaining the fact *same* requires the definite article, while *different* requires an indefinite. In our account, like that of Sun (2021), a phrase like *same boy* involves the combining of two properties, IDENT_i , the property of being identical to an individual i , and the property of being a boy. As Sun (2021)[page 7] points out, this means “The phrase *same boy* ... has at most one individual in its extension ... we can attribute the impossible co-occurrence between *same* and indefinite determiners ... to the speaker preference of using a linguistic form with a stronger presupposition if that presupposition is satisfied.” Thus “a same boy” conflicts with a preference to maximize presuppositions (Heim, 1991).¹²

An analogous argument explains the preference for the indefinite article with *different*. With *the different NP*, the definite article presupposes that $[[NP]]$ denotes a singleton set in context. This contradicts the assertion of *different*, that the individual denoted by NP is non-identical to another individual in context, which means NP must denote a set with at least two elements.

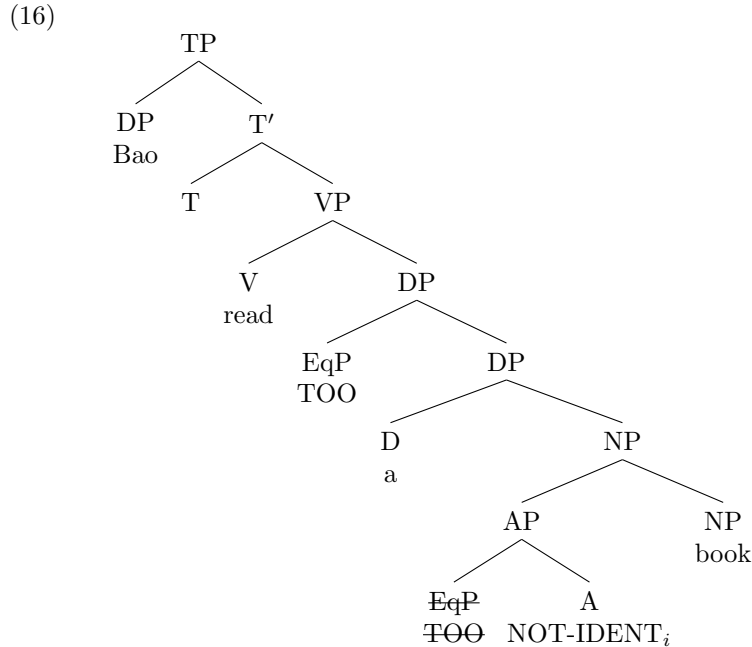
3 External Readings as Presupposition Binding

3.1 Deriving External Readings

We can now illustrate the proposal with examples of external readings involving *same* and *different*, starting with *different* in (15):

- (15) Daiwen read *War and Peace*. Bao read a different book.

We derive the following syntactic representation, shown in (16). *Different* is represented as TOO NOT- IDENT_i . Here, TOO raises to a position adjoining the local DP.



We note that both *Bao* and *different* naturally receive focus marking here.¹³ The host H is the local DP, which is the sister of TOO. We represent it with DRT-style notation:

- (17) $H = [u_j \mid \text{book}(u_j), u_j \neq u_i]$

¹²An explanation along the same lines is offered in Matushansky (2011:4).

¹³Focus on *Bao* is expected given the contrast with *Daiwen* in the previous clause. To corroborate our claim that *different* receives focus in we consulted with 6 native English speakers and all 6 preferred or accepted accent on *different*.

Since *different* receives focus, the focus value of H is as follows:

$$(18) \quad H^F = [u_j \mid \text{book}(u_j), X(u_j)]$$

The NOT-IDENT_i property can vary in the focus value of H. That is, we specify that the focus value consists of all propositions of the form of (18) with a substitution of some property for X. The condition that a property holds of u_j is essentially vacuous, since there are properties (such as that of being self-identical) that hold of all individuals. Therefore, the presupposed P that is required is simply that there exists a book.

We need to find an antecedent P that satisfies the 3 conditions on TOO. The obvious candidate is the name, *War and Peace*, which we represent as an individual that has the property of being the book, *War and Peace*, as follows:

$$(19) \quad P = [u_i \mid \text{WP}(u_i)]$$

We consider our conditions (6a) - (6c) in the definition of TOO above. It's clear that (6a) is satisfied, since H and P do not have the same denotations, and (6c) is also evidently satisfied, since u_i is already part of the context c . For condition (6b), P must be contained in the focus value of H: to determine this, we note that it is standard to consider contextual and world knowledge in this determination (Rooth, 1992b). In view of this, P is semantically equivalent to P' :

$$(20) \quad P' = [u_i \mid \text{book}(u_i), \text{WP}(u_i)]$$

We can see that P' is an element of H^F , since they are structurally equivalent, apart from the substitution of the property WP in P' for the variable X in H^F .

We turn now to an external reading involving *same*, in (21):

- (21) Daiwen read *War and Peace*. Bao read the same book.
a. Bao read the TOO IDENT_i book.

As in (15), we consider the possibility that TOO raises to the position adjoined to the local DP:

$$(22) \quad [\text{Bao} [\text{read} [\text{TOO} [\text{the} [\text{IDENT}_i \text{ book}]]]]]$$

Now H has the following representation:¹⁴

$$(23) \quad H = [u_j \mid u_j = u_i, \text{book}(u_j)]$$

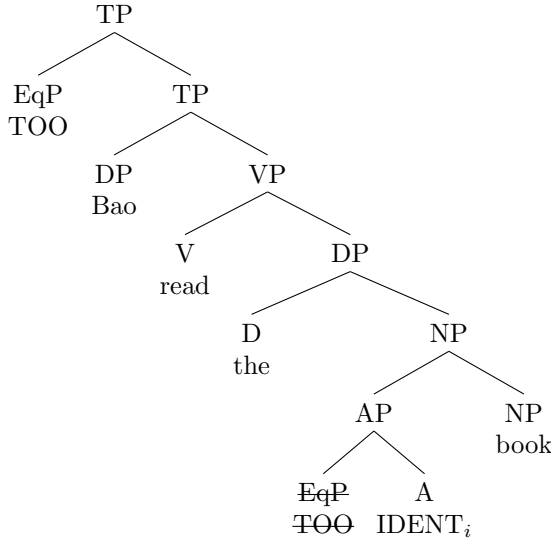
Again we can consider that P would be the book *War and Peace*, represented as follows (analogous to P' in (20)):

$$(24) \quad P = [u_i \mid \text{book}(u_i), \text{WP}(u_i)]$$

Observe that, in context c , it is established that u_i is the book *War and Peace*, and therefore in this context, H and P have the same denotations. This means that we fail to find appropriate contrast, as condition (6a) is violated. We therefore consider an alternative in which TOO raises to a higher position, as shown in (25):

¹⁴As in Kamp's original formulation of DRT (Kamp, 1981), the definite "the book" receives the same drs as "a book". Following much subsequent literature, we trace the difference to a presupposition arising from the definite article; namely, the requirement that prior context establishes the existence of a book. This presupposition becomes redundant given the presence of *same*, and thus we ignore it in our examples for the sake of simplicity.

(25)



Now, we give the representation for H and for H^F :

$$(26) \quad H = [b, u_j \mid \text{read}(b, u_j), u_j = u_i, \text{book}(u_j)]$$

$$(27) \quad H^F = [X u_j \mid \text{read}(X, u_j), u_j = u_i, \text{book}(u_j)]$$

The presupposition can now be satisfied by setting P to the complete preceding sentence, “Daiwen read *War and Peace*”, represented as follows:

$$(28) \quad P = [d, u_i \mid \text{read}(d, u_i), \text{book}(u_i), \text{WP}(u_i)]$$

It’s clear that (6a) is satisfied since the two sentences have distinct denotations, and (6c) is satisfied since the denotation of P has already been added to the current context, c . The denotation of P is an element of the focus value of H, since the subject *Bao* is focus-marked. Thus (6b) is also satisfied.

In these two examples, we have seen a difference in the scope of TOO resulting from covert movement. In (15), involving *different*, TOO raised to a position adjoined to the local DP – an individual-denoting position. In (21), TOO raised to a higher position, adjoined to the containing TP – an eventuality-denoting position. This is quite general – for *same*, TOO must always move beyond the local DP. Otherwise, H would always have the same denotation as P, thus failing to satisfy the presupposition generated by TOO.

In general, then, *different* can generate individual or eventuality-sized presuppositions, while *same* must generate an eventuality-sized presupposition. This difference was noted in Hardt and Mikkelsen (2015) and Hardt and Mikkelsen (2020), where stipulations were proposed in terms of the lexical meanings of *same* and *different*. Here we show that no such stipulations are required; the difference is derived from the general requirement that an additive presupposition contrasts appropriately with the host, as is known to be the case with *too*. We will now see how this can explain external and internal readings, as well as the parallelism effects observed with *same*.

3.2 Deriving Parallelism Effects

Hardt and Mikkelsen (2015) observe three different types of parallelism effects for *same*, and they note further that these effects do not arise in analogous cases involving *different* or pronouns. Hardt and Mikkelsen (2015) account for this contrast by stipulations concerning the lexical meanings of *same* vs *different*; here no such stipulations are required.

Negated Antecedent

The first contrast observed by Hardt and Mikkelsen (2015) involves negation, as in (29):

- (29) Daiwen didn't read *War and Peace*
 a. but she read a different book.
 b. #but Bao read the same book.

On our account, (29a) is felicitous because *different* can generate a DP-sized presupposition host, with TOO raising to adjoin to DP, as we saw in the derivation for (16). This results in the following host:

$$(30) \quad H = [u_j \mid u_j \neq u_i, \text{book}(u_j)]$$

As discussed above in section 3.1 (see in particular footnote 13), we assume there is focus on *different*, thus giving the following focus value for H:

$$(31) \quad H^F = [u_j \mid X(u_j), \text{book}(u_j)]$$

The presupposition is the antecedent *War and Peace*, i.e.,

$$(32) \quad P = [u_i \mid u_i = \text{WP}]$$

This antecedent satisfies our three conditions: (6a) is satisfied since P differs in denotation from H, and (6c) is satisfied since P is true in context (i.e., the book *War and Peace* exists). The condition (6b) is satisfied since we can ignore the difference in indexes on u_i and u_j , and we can assume that there is some property X that holds of u_i .

As we saw above in section 3.1, examples involving *same* always requires a larger presupposition host; TOO must raise higher than the local DP. In this case, TOO must raise high enough to include the contrasting *Bao*. Thus we have the presupposition host,

$$(33) \quad [b, u_j \mid \text{read}(b, u_j), u_j = u_i, \text{book}(u_j)]$$

To satisfy the presupposition, we consider the antecedent *Daiwen didn't read War and Peace*. Because of the negation, there is not appropriate contrast between (29) and (29b). The focus value of the host is the set of propositions of the form, $X \text{ read book}(u_j)$, and the negated antecedent, *Daiwen didn't read War and Peace*, is not an element of that set. A potential alternative is to raise the negation as follows:

$$(34) \quad [\text{NOT} [d, u_j \mid \text{read}(d, u_j), u_j = \text{WP}]]$$

In this case, the embedded drs denotes the proposition, *Daiwen read War and Peace*, which is an element of the host focus value as required. However, this is ruled out in our approach since it is not true in context.

Parallel Antecedent

The second contrast is illustrated by (35):

- (35) Daiwen praised *War and Peace* Parallel Antecedent
 a. but Hien read a different book.
 b. #and Hien read the same book.

Consider first the case of *different* – here, we select *a different book* as H, and the DP *War and Peace* serves as P, satisfying the appropriate contrast condition. For *same* the containing DP is not an option as H for reasons discussed above; instead we select the containing TP, *Hien read the same book*. The only option for P is *Daiwen praised War and Peace*, but here the appropriate contrast condition fails because ‘Daiwen praised *War and Peace*’ is not a member of the focus semantic value of ‘Hien read *War and Peace*’.¹⁵

¹⁵In assessing appropriate contrast, we are assuming contrastive focus on *Daiwen* and *Hien*, with no accent on the verbs *praised* and *read*. With this intonation pattern, the *same*-example (35b) is infelicitous, while the *different*-example (35a), is felicitous. Hardt and Mikkelsen (2015) address the case of contrasting verbs, arguing that discourse parallelism allows contrasts between similar pairs of verbs, like *praise* and *criticize*. We agree that discourse parallelism is relevant in this way; Hardt and Mikkelsen (2015) are relying on theories of parallelism such as Kehler (2002). Note that Kehler uses the occurrence of sentential *too* as a diagnostic for the imposition of parallelism constraints. Since we argue that *same* incorporates TOO, and that it takes clausal scope for independent reasons, it follows that *same* would be a diagnostic of discourse parallelism as well. Thus the observations made by Hardt and Mikkelsen about contrasting verbs would then also be a consequence of our account. Unlike

A reviewer provides the examples in (36b) and (37b) and suggests that they violate parallelism and yet are felicitous. (We have added focus accents to these examples.)

- (36) a. Daiwen HATED *War and Peace*.
b. The same book IMPRESSED her brother.
- (37) a. Daiwen met the woman that won the Pulitzer prize for *Beloved*.
b. She wondered whether the same book would receive ANOTHER prize.

At first glance, it appears that (36a) is not in the focus semantic value of (36b), though this is required by the conditions imposed by TOO. However, according to Rooth’s (1992a) (pp. 8–9), the calculation of focus semantic values does not require syntactic isomorphism, but allows for semantic inferences. From *The same book IMPRESSED her brother*, we can infer that Daiwen’s brother had a positive reaction to *War and Peace*. Focus accent on *impress* therefore includes people having other reactions to *War and Peace*, including someone hating the book.

We propose a similar explanation for (37). From the host clause in (37b), we can infer that *Beloved* won a prize, since receiving a prize entails winning a prize. The focus accent on *another* further means that the focus semantic value of (37b) includes *Beloved* winning the Pulitzer prize.

Distinct Antecedent

Following an observation of Hardt et al. (2012), Hardt and Mikkelsen (2015) argue that *same* gives rise to a “distinct antecedent” requirement: the eventuality denoted by the host must be distinct from the eventuality denoted by the antecedent. Example (38) illustrates.¹⁶

- (38) Daiwen caught a big fish
a. and she caught it without any fishing equipment
b. #and she caught the same fish without any fishing equipment

As Hardt and Mikkelsen (2015) point out, the most natural reading for (38a) is that there is a single fish-catching event, and on that reading, (38a) is felicitous while (38b) is not.

To see why (38b) is infelicitous, consider the options for the host H. We have already seen that, with *same*, H can never be the denotation of the immediately containing DP, since there won’t be appropriate contrast. But since here we have the same event, larger containing constituents also fail to exhibit appropriate contrast. If the host H is the containing TP, both H and P will denote the same event, thus again leading to infelicity.

This applies only on the same-event reading of (38); as Hardt and Mikkelsen (2015) also noted, (38b) is felicitous if one interprets it as referring to different fish-catching events. This can be facilitated with contrasting modifiers, as shown in (39), which does satisfy appropriate contrast.

- (39) Daiwen caught a big fish with a nice fishing pole, and then she caught the same fish without any fishing equipment.

Here the antecedent P is contained in the focus value of H, since we have contrasting manner modifiers, namely *with a nice fishing pole* and *without any fishing equipment*. This forces a multiple event interpretation, where Daiwen somehow catches the same fish on two different occasions. Thus our presuppositional account correctly rules out (38b) while allowing for the acceptable (39).¹⁷

Hardt and Mikkelsen, however, we do not take the unusual step of stipulating that discourse parallelism is part of the lexical meaning of *same* and *different*.

¹⁶This is based on example (15) from Hardt and Mikkelsen (2015).

¹⁷A reviewer offers the example with *different* in (v):

- (v) ??Daiwen caught a big fish and she caught a different fish without any fishing equipment.

(v) is permitted by our account: unlike (38b), the host here can simply be the DP *a different fish*, which contrasts appropriately with *a big fish*. If indeed (v) is infelicitous, the source of that infelicity must be sought elsewhere. We are uncertain about the reviewer’s judgment here, and offer a slight variant of (v) which we find felicitous:

- (vi) Daiwen was using her big fishing pole. She caught a big fish. Then she caught a different fish without any fishing equipment.

This concludes our discussion of external readings of *same* and *different* and we now turn to internal readings.

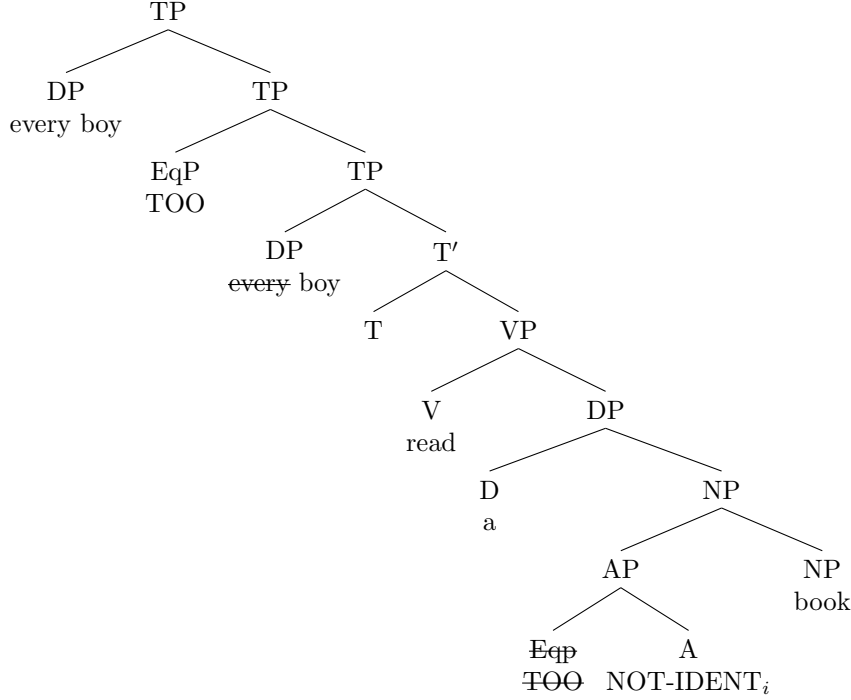
4 Internal Readings as Accommodation

4.1 Deriving Internal Readings

Example (40) involves an internal reading for *different*. We propose that it has the LF structure in (41).¹⁸

(40) Every boy read a different book.

(41)



As we see in (41), TOO raises to adjoin to TP, and *every boy* raises to adjoin above TOO. The semantic representation of (41) is the drs in (42).

(42) [Every [x | boy x] [TOO [y | boy x, book y, read (x,y), y ≠ z]]]

This is a tripartite quantificational structure, as is familiar from DRT. Note that we repeat the condition *boy x* in the nuclear scope, as well as in the restrictor. In the above structure, it is redundant to repeat *boy x* in the nuclear scope, since the same condition is applied to *x* in the restrictor. However, this condition will make a substantive contribution in the definition of the presupposition host and the resulting accommodation. This follows a general principle, which Pasternak (2020:6) terms the Interpreted Lower Restrictor Hypothesis (ILRH), and describes as follows: “When a DP of the form [DP D NP] undergoes movement, NP is also semantically interpreted at the trace position, so that after lambda abstraction the resulting predicate is restricted to individuals in [[NP]].”

Pasternak points out that the ILRH principle has been widely discussed in recent years, building on proposals of Fox (2002, 2003). Pasternak (p.5) points out that there have been “several empirical arguments ... in favor of ILRH”, noting that Erlewine (2014) applies this approach to issues involving association with focus, and he argues further that a puzzle involving Antecedent-Contained Deletion (ACD) provides “particularly compelling evidence for ILRH”, citing an account due to Sauerland (1998) and Sauerland

We suggest that (vi) is more natural than (v) because it includes a narrative particle *then* and establishes the relevance of the modifier *without any fishing equipment*.

¹⁸Elements that are crossed out are not interpreted.

(2004). Furthermore, according to Pasternak, ILRH has been used by authors such as Fox (2002), Sportiche (2005), and Romoli (2015) “to account for the famed conservativity hypothesis” of Barwise and Cooper (1981) and Keenan and Stavi (1986). As we will see, ILRH plays a key role in the account of internal readings; thus, we argue that this constitutes an additional piece of evidence supporting ILRH.

As usual, we determine the host, H , as the sister to TOO ; in (42), this is the following:

$$(43) \quad H = [y \mid \text{boy } x, \text{ book } y, \text{ read}(x,y), y \neq z]$$

We observe that *different* is focus-marked, and therefore the condition $y \neq z$ is replaced with a variable in the focus value of H :

$$(44) \quad H^F = [y \mid \text{boy } x, \text{ book } y, \text{ read}(x,y), X(y)]$$

Since there is no overt antecedent in context, the presupposition P cannot be bound, and therefore must be accommodated. In general, an accommodated presupposition P must closely match H semantically, except for focused elements. We suggest that there is some flexibility in terms of variable binding, in the construction of an accommodated P . In particular, the accommodated material P is constructed from H with the following optional changes:

1. Bound variables in H can be renamed in P
2. Free variables in H can receive a binder in P

This means that an accommodated P will only differ with H with respect to focused material or to indexing.¹⁹ Here we rename variables x and y as u and z respectively, and we bind u in the drs for P . Furthermore, we omit the focus-marked condition $y \neq z$ – as described above with respect to external readings, the condition that some property holds of an individual is essentially vacuous, thus we can ignore this condition in the construction of P :

$$(45) \quad P = [u \mid \text{boy } u, \text{ book } z, \text{ read}(u,z)]$$

Following van der Sandt (1992), accommodated content can occur at various *accessible* points, as defined in DRT. In our example there are three accessible points: the first is the VP or nuclear scope. We term this *in-situ* accommodation. The second accessible point is the restrictor, and the third is the context preceding (40); in DRT terms this is the top level. Here we pursue the second option, accommodation to the restrictor. Below we will make some remarks on the other two alternatives.

By accommodating the presupposed P to the restrictor, we get the following, with the accommodated material underlined.

$$(46) \quad [\text{Every } [x \text{ } \underline{u \text{ } z} \mid \text{boy } x, u \neq x, \text{ boy } u, \text{ book } z, \text{ read}(u,z)] [y \mid \text{boy } x, \text{ book } y, \text{ read}(x,y), y \neq z]]$$

The underlined material is P as defined above. It is here that the relevance of ILRH becomes clear – this is the requirement that leads to a copy of *boy* x appearing in H . When this is copied to the restrictor, we then have two predications of distinct boys, which is important in deriving the internal reading correctly. There is one additional condition: $u \neq x$. Hardt and Mikkelsen (2020) argue that this is a general condition on accommodation, to ensure that an accommodated variable is distinct from currently defined variables.

Recall that TOO gives rise to three conditions on the presupposition P . First, condition (6a) is satisfied: $P \neq H$, since we have stipulated that $u \neq x$. Condition (6b) is also satisfied, based on the (reasonable) assumption that x receives focus in H . Finally, condition (6c) requires that P is true in the context in which H occurs. This must be true, since the input context for the nuclear scope (H) is the output context of the restrictor (P). That is, anything asserted in the restrictor will be true in the context of the nuclear scope; since P is asserted in the restrictor, it is true in the input context for the H . We conclude that the presupposition generated by TOO is satisfied. Furthermore, (46) has the desired truth conditions: for every pair of boys x and u and book z such that u read z , there is a book y that x read, and the two books, y and z , are not identical.

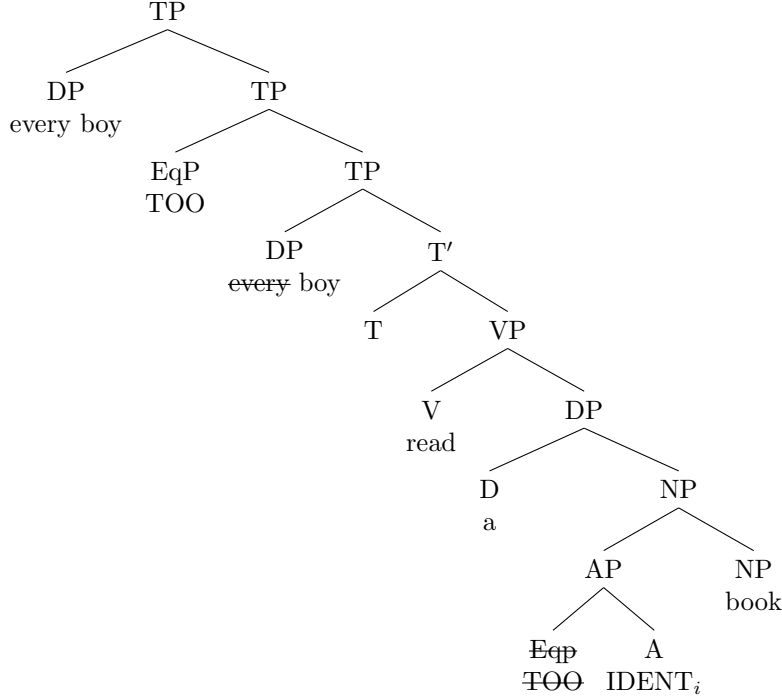
¹⁹This is similar to the appropriate contrast condition proposed in Heim (1997); this condition, as Heim (p 205) puts it “doesn’t care about indexing”.

Notice that we allow *every* to capture all 3 free variables in the restrictor; that is, we allow *unselective binding*. This is a basic feature of DRT, where an operator can be interpreted to range over each variable occurring free in the restrictor, as introduced in Heim (1982) and Kamp (1981). This is exactly what is desired here – we wish to consider all triplets $\langle x, u, z \rangle$ where x and u are boys, and z is a book that u read. (Equivalent for our purposes is a situation-based alternative (Heim, 1991; Elbourne, 2001) in which the restrictor ranges over minimal situations – in this case, the relevant triplets of boys and books. Moltmann (1992) is a somewhat similar alternative.)

We provide an analogous account for internal readings with *same*, as in (47):

(47) Every boy read the same book.

(48)



This yields the tripartite drs in (49):

(49) [Every boy $[x \mid \text{boy } x]$ [TOO $[y \mid \text{boy } x, \text{book } y, \text{read}(x,y), y = z]$]]

Here we identify the presupposition host H:

(50) $H = [y \mid \text{boy } x, \text{book } y, \text{read}(x,y), y = z]$

We observe that *same* is focus-marked, and therefore the condition $y = z$ is replaced with a variable in the focus value of H:

(51) $H^F = [y \mid \text{boy } x, \text{book } y, \text{read}(x,y), X(y)]$

Next, we construct P from H, just as we did for example (42) above – again we can ignore the property variable condition $X(y)$ and we rename y as z and x as u , resulting in:

(52) $P = [u \ z \mid \text{boy } u, \text{book } z, \text{read}(u,z)]$

Finally, P is accommodated into the restrictor (shown underlined in (53)):

(53) [Every $[x \ \underline{u \ z} \mid \text{boy } x, u \neq x, \text{boy } u, \text{book } z, \text{read}(u,z)]$ $[y \mid \text{boy } x, \text{book } y, \text{read}(x,y), y = z]$]

This gives the desired meaning: for every pair of boys x and u and book z such that u read z , there is a book y that x read, and the two books, y and z , are identical.

As Carlson (1987)[p 532] points out, a sentence with an internal reading “provides its own context”, which can be seen as another way of saying that they rely on accommodation. Of course these same sentences can occur in a context where no accommodation is needed, as in (54):

(54) Daiwen read *War and Peace*. Every boy read a different book.

In this case, an external reading is possible, where every boy read a book that was not *War and Peace*.

4.2 Alternative Accommodation Sites

We have seen how internal readings in (40) and (47) can be derived through accommodation of a presupposed P to the restrictor. In principle, van der Sandt (1992) would argue that the presupposed P could be accommodated at three different positions:

1. Top Level
2. Restrictor
3. Nuclear Scope

Accommodation to the restrictor is often the preferred option, as noted by van der Sandt concerning his example (53) (van der Sandt, 1992, p 363):

(55) Every man loves his wife.

This receives the following representation, with presupposed material underlined:

(56) [Every [x | man x] [| love (x,y), [y | wife (y), poss(x,y)]]]

The presupposed material is accommodated to the restrictor *drs*, as follows:

(57) [Every [x y | man (x), wife (y), poss(x,y)] [| love (x,y)]]

As van der Sandt notes, this captures the reading, “Every man who has a wife loves her”, which, he argues, is the most natural reading. Similarly, we find that accommodation to the restrictor gives the most natural reading for our examples (40) and (47).²⁰

In our judgement, these examples do not have natural readings associated with the alternative accommodation sites. It is notoriously difficult to determine the conditions under which a given accommodation is possible; here, we offer some suggestions concerning this particular case. We begin with the lowest-level reading, where the presupposition is accommodated within the nuclear scope, as follows:

(58) every [x | boy(x)] [y u z | boy(u), book(z), read(u, z), book (y), read(x, y), x ≠ u, y ≠ z]

This would be true as long as we can find, for each boy, some other boy who read a different book. This is a weaker reading than we derived above by accommodation to the restrictor. It would be true, for example, if nine boys read *War and Peace* and a single boy read *The Color Purple*. We don’t find this to be a possible reading; according to van der Sandt (1992) there is a general preference, such that, with a choice of accommodating to a higher or lower position, the higher choice is preferred. This would explain why accommodation to the restrictor is preferred over accommodation to the nuclear scope.

We turn now to the other alternative, involving accommodation to the top level, as shown in (59):

(59) [u, z | boy(u) book(z) & read(u, z)] ; every [x | boy(x)] [y | book (y), read(x, y), y ≠ z]

Here, we have an assertion that some boy *u* read some book *z*, and then it is asserted that every boy read a book that is not equal to *z*. This, of course, is an external reading for *different*. In general, accommodation

²⁰Beaver and Zeevat (2007)[page 14], discussing a structurally similar example to (55), agree that the domain restriction reading is “plausible”; however, they argue that availability of this reading is dependent on context. Beaver (2002)[page 1] argues that “intermediate accommodation cannot be triggered by presuppositions”. Instead, he suggests a process of “topical accommodation could justify the existence of the readings”. It is interesting to consider how contextual factors relate to the accommodation proposed here; however, this is an issue we leave for future work.

does not seem to be possible for external readings for *same* and *different*. An out-of-the-blue assertion of (60) or (61) is infelicitous.

(60) #Daiwen read the same book.

(61) #Daiwen read a different book.

Same and *different* pattern with *too* in this way; Kripke (2009) notes that accommodation with the additive presupposition trigger *too* is infelicitous in (62):

(62) #Sam is having dinner in New York tonight too.

Kripke (2009) points out that accommodation is infelicitous here, despite the fact that one can of course infer that someone else is having dinner in New York. Heim's (1992) proposes that (62) is infelicitous because *too* requires a salient alternative to *Sam* (p. 189; see also Geurts and van der Sandt (2004) and Grubic (2019) for relevant discussion). More concretely, we would say that the relevant alternative has not been introduced into the discourse context. Similarly with (60) and (61): the context does not provide for a salient individual other than *Sam* leading to presupposition failure. Heim formalizes this analysis of *too* as in (63).

(63) $\phi[\alpha_F] \text{ too}_i \text{ presupposes } x_i \neq \alpha \ \& \ \phi[x_i]$

Crucially for our purposes the presupposition contains a variable, x_i . In the infelicitous examples above, that variable cannot be resolved as the context fails to make an antecedent available; there is no salient alternative to *Sam*. Thus (60) and (61) are infelicitous for the same reason as (62); this provides further support for our proposal that *same* and *different* generate the same presupposition as *too*.

Note that, when the presupposition is accommodated into the restrictor, the accommodated variable is an element of the set that is the domain of *every boy*. We would suggest that the accommodated variable has therefore already been introduced into the context, and thus accommodation is permitted.

4.3 Multiple Occurrences

We now turn to cases involving two occurrences of *different* or *same*, such as the following:²¹

(64) Every linguist sent a different paper to a different conference.

In our view, the truth conditions are as follows: for every pair of linguists $\langle l_1, l_2 \rangle$ there are papers p_1, p_2 and conferences c_1, c_2 such that l_1 sent p_1 to c_1 , and l_2 sent p_2 to c_2 and $p_1 \neq p_2$ and $c_1 \neq c_2$.

We derive the following drs, following the same approach outlined in section 4.1, where each occurrence of *different* is represented as TOO NOT-IDENT, and each occurrence of TOO is adjoined to the nuclear scope.

(65) [Every $[x \mid \text{ling}(x)]$ [TOO [TOO $[y \mid \text{ling}(x) \text{ paper}(y), \text{conf}(w), \text{sent}(x,y,w), y \neq z, w \neq v]$]]]]

For each occurrence of *different*, there is a TOO adjoined to the nuclear scope. Both TOO's generate a presupposition based on the host to which it is adjoined. If we consider the innermost TOO first, we accommodate its presupposition by copying to the restrictor, giving the following (accommodated material underlined):

(66) [Every $[x \text{ u z } \mid \text{ling}(x), u \neq x, \text{ling}(u), \text{paper}(x), \text{conf}(v), \text{sent}(u,z,v)]$]
[TOO [TOO $[y \mid \text{ling}(x) \text{ paper}(y), \text{conf}(w), \text{sent}(x,y,w), y \neq z, w \neq v]$]]]

²¹Thanks to an anonymous reviewer for raising this issue, suggesting the following example:

(vii) Different linguists go to different conferences.

Sentences with multiple occurrences of same/different are noted in Keenan (1987) and Barker (2012), such as

(viii) The same people ordered the same dishes.

We won't attempt an analysis of these particular examples, because our analysis of internal readings is restricted to cases involving distributive quantification. Examples like (viii) involve bare plurals, raising additional issues that are beyond the scope of the current paper.

Just as with example (40), the accommodated material satisfies the presupposition of the innermost TOO. We now turn to the outermost TOO, and we observe that its presupposition is exactly the same as the innermost TOO. This is because the presupposition is determined by the host H, which in turn is fully determined by propositional content. Since, we claim, TOO adds nothing to propositional content, both occurrences of TOO have an identical host H and thus generate an identical presupposition. Thus the accommodated material satisfies the presupposition for the outermost TOO as well.

4.4 Too and Internal Readings

Our analysis draws a close parallel between *same* and *different*, on the one hand, and *too* on the other. In light of that it is initially surprising that *too* doesn't allow internal readings. This is seen in (67), which cannot mean 'There is a book that every boy read' on analogy with (68).

(67) #Every boy read the book too.

(68) Every boy read the same book.

One might expect (67) to exhibit an internal reading, since *too* has the same presupposition as *same* and we derive the internal readings for *same* based on the presupposition it generates, which is then accommodated in the restrictor. Specifically one could contemplate a similar derivation involving *too* for (67):

(69) [Every boy [x | boy x] [TOO [y | boy x, book y, read (x,y)]]]

Just as with *same*, here we would get the following host H and accommodate P:

Presupposition host H:

(70) H = [y | boy x, book y, read(x,y)]

Construct P to satisfy H:

(71) P = [u z | boy u, book z, read(u,z)]

Then P would be accommodated to the restrictor, resulting in the following representation:

(72) [Every [x u z | boy x, u ≠ x, boy u, book z, read(u,z)] [y | boy x, book y, read(x,y)]]

However, this is not possible for *too*. We tentatively suggest that this relates to the fact that *too* is syntactically adjoined to the matrix clause in example (67), while *same* or *different* appear syntactically within the nuclear scope. As we discussed in section 4, internal readings for *same* and *different* involve movement of TOO to a higher position in the tree; namely, it is adjoined to the nuclear scope. For *too*, this would require movement to a lower position in the tree, and we suggest that, at least in this case, such lowering is ruled out.

4.5 Island sensitivity

On our proposal, external readings involving *same* require movement of TOO to a higher position, to satisfy appropriate contrast, while this is not true of *different*. This suggests that external readings with *same* are subject to island constraints.²² In our judgment, this is correct, as illustrated by (73):

(73) ??Yifeng knows why Bao helped her next-door neighbor and Daiwen knows why she helped the same neighbor.

Here TOO must raise to adjoin to the matrix clause, which means it must escape the wh-island produced by *why*, and indeed we find (73) rather degraded; on the other hand, we find (74) to be fully acceptable, with *different* substituted for *same*:

²²A similar claim is made by Hardt et al. (2012), where the focus is on predicative uses of *same*.

- (74) Yifeng knows why Bao helped her next-door neighbor and Daiwen knows why she helped a different neighbor.

We see a similar effect with the following example involving an adjunct island:

- (75) Bao will be happy if the youngest student wins the lottery and Daiwen will be happy if ??the same/a different student wins the lottery.

Again, we find *different* fully acceptable, while *same* is somewhat degraded.

These cases reflect a basic feature of our account: *same* must always move so that it adjoins to a host that contrasts appropriately with an antecedent. In (73) and (75), the material within the island does not satisfy appropriate contrast, which forces *same* to move beyond the island, thus giving rise to the violation. If there is contrasting material within the island, *same* is not required to move beyond the island, and thus the violation does not arise. This is illustrated by the following variant²³ to (73):

- (76) Yifeng knows why Bao helped her next door neighbor last week but doesn't know why she sabotaged the same neighbor the very next day.

Here we have contrasting material (sabotaged, next day) within the embedded clause, which means that *same* is not required to move out of the island. In this case we detect no ill-formedness.

These judgments are delicate, and we performed an informal pilot study to explore them further. In our study, over sixty respondents were asked to rate sentences from 1 (perfect) to 5 (unacceptable). They gave an average score of 2.4 to example (73), while (74) received a score of 1.9. Similarly with example (75), the version with *same* received a score of 2.04, while the score with *different* was 1.4.

These results support our prediction that such examples with *same* are degraded compared to their counterparts with *different*. However, one might object that the examples with *same* receive an intermediate status, and indeed in our survey the counterparts of the above examples involving overt wh movement receive notably worse scores. We suggest that this relates to the type of violation involved with the movement of TOO with *same* and *different*. In our view, the violation is a pragmatic one, since TOO is required to move to produce a host whose presupposition can be satisfied. Thus it is not surprising that such violations are not as strongly felt as those involving syntactic ill-formedness.

It has previously been observed that *same* and *different* are subject to island constraints for internal readings. For example (77) is a variant of example (6a) from Carlson (1987):

- (77) *Every gorilla saw a women who fed the same/a different man.

We agree with Carlson's judgment that such an example is degraded, with *different* as well as *same*. This follows from the fact that same or different appears here within a wh-island, and the internal reading requires that TOO move from its surface position to adjoin to the nuclear scope, thus giving rise to a wh-island violation.

5 Comparatives

We have proposed that *same* and *different* both involve the additive presuppositional operator TOO, which, we argue, can move covertly to take various higher scope positions. We have shown that this allows us to derive a variety of observations, by relying on standard mechanisms of presupposition binding and accommodation. A key observation is that, with *same*, TOO must raise higher than the containing DP; otherwise it fails to satisfy the general conditions imposed by TOO. Here we show that this provides a solution to a puzzle first noted by Heim (1985:21-22), in her discussion of *same* and *different* comparative-like constructions, such as (78):

- (78) a. Ornette Coleman played a different tune than this one.
b. #Ornette Coleman played the same tune as this one.

²³Thanks to an anonymous reviewer for raising this issue, and supplying this example.

Heim notes that, (78b) “is, for some reason, very marginal” while (78a) is fully acceptable.²⁴

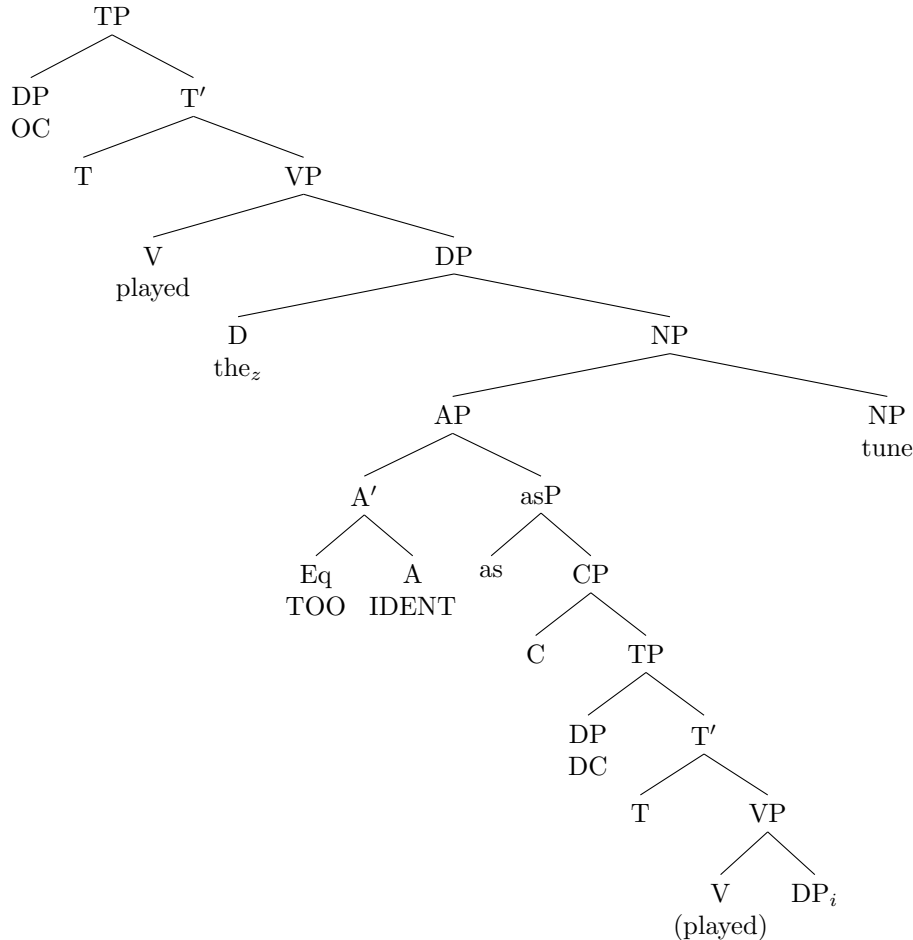
Our explanation of this puzzle is straightforward: *same* and *different* differ in the size of presupposition they trigger: as we have seen, *same* cannot generate a presupposition based on the containing DP; instead it must raise to a higher position in determining the presupposition. On the other hand, *different* allows for a presupposition based on the containing DP, as well as larger constituents. In the above examples, only the local DP presupposition can be satisfied. This means that *same* should be infelicitous and *different* should be felicitous.

We begin with the unproblematic (79): here, *same* and *different* are both felicitous.

- (79) a. Ornette Coleman played the same tune as Don Cherry. (Heim 1985:ex. 32)
b. Ornette Coleman played a different tune than Don Cherry. (Heim 1985:ex. 28)

To apply our approach to such examples involving comparatives/equatives, we use a simplified version of the approach in Sun (2021).²⁵ First, note that here we use the relational (NOT-)IDENT. Second, that the standard phrase, *as Don Cherry (played)*, appears at LF as a complement to *same* (TOO IDENT), as shown in (80):

(80)

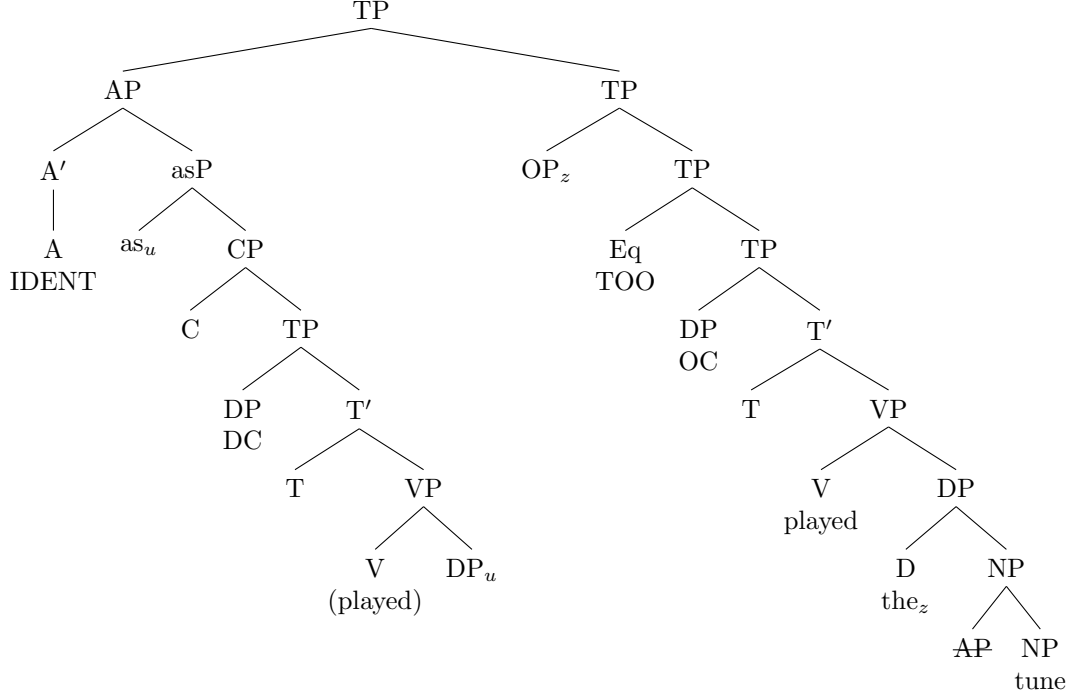


²⁴Heim gives (78b) a ?*, we annotate it # since we consider it to be pragmatically ill-formed rather than ungrammatical.

²⁵See Charnavel (2015), Hanink (2021) and Matushansky (2011) for related proposals. Other discussions of comparative constructions with *same* and *different* include Alrenga (2007) and Beck (2000). Alrenga (2007) has a somewhat different focus from ours. He argues that comparatives with *same* and *different* involve comparison along a dimension of similarity and not the binary IDENT and NOT-IDENT meanings that we are positing. Beck (2000) shows that German lexicalizes two distinct meanings of English *different*: *anders* and *verschieden* and argues that *anders* is a comparison operator and *verschieden* a relational adjective. Both can occur in comparative constructions.

We raise TOO to the TP level and then raise the IDENT as-clause (Sun, 2021)[page 6] resulting in (81):

(81)



Following Sun (2021)[page 7], we treat *than/as* as binder of *u* – the tune Don Cherry played; we also provide an OP that binds *z* – the index of the tune that Ornette Coleman played. Again following Sun (2021), we interpret these binders as lambda abstractors. On Sun’s account, this results in two properties or sets of individuals, whose maximal elements are then required to be identical. We take a different approach, inspired by Hanink (2021), where the resultant properties are converted to individual-denoting expressions as a result of iota-conversion, as shown in (82):²⁶

- (82) a. $[[\text{as Don Cherry played } u]] := \iota u. \text{ played}(\text{DC}, u)$
b. $[[\text{OC played the}_z \text{ tune}]] := \iota z. \text{ played}(\text{OC}, z) \ \& \ \text{tune}(z)$

IDENT is applied to its two arguments, represented by (82) (b) and (c), resulting in:

- (83) $\iota i. \text{ played}(\text{DC}, i) = \iota z. \text{ played}(\text{OC}, z) \ \& \ \text{tune}(z)$

This gives the desired reading for (78a): the tune played by Don Cherry is identical to the tune played by Ornette Coleman. Consider now the presupposition generated by TOO. The host H is represented as follows:

- (84) $H = [z \mid \text{Ornette Coleman played } z \ \& \ \text{tune}(z)]$

With Ornette Coleman receiving focus-marking, the focus value of H is the following:

- (85) $H = [z \mid X \text{ played } z \ \& \ \text{tune}(z)]$

- (86) $P = [i \mid \text{Don Cherry played } i]$

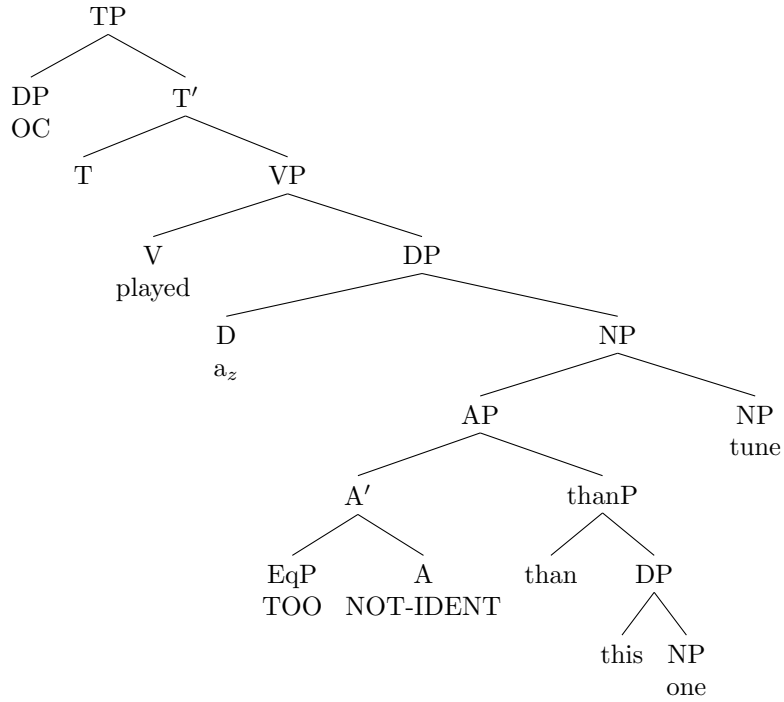
This satisfies the conditions on TOO, since P is true in context, and not identical to H, but it is in the focus value of H, since *Don Cherry* in P can be substituted for X in H, and *i* denotes the same tune as *z*.

We won’t provide the derivation for (78b) here – it is precisely the same, except we substitute NON-IDENT for IDENT and *than* for *as*. We turn now to the contrast between the acceptable (78a) and the

²⁶Relatedly Charnavel (2015:138) and Matushansky (2011:5) argue that the comparative clause in constructions like (81) denotes an individual.

degraded (78b). We begin by showing how the meaning is derived for the acceptable (78a):

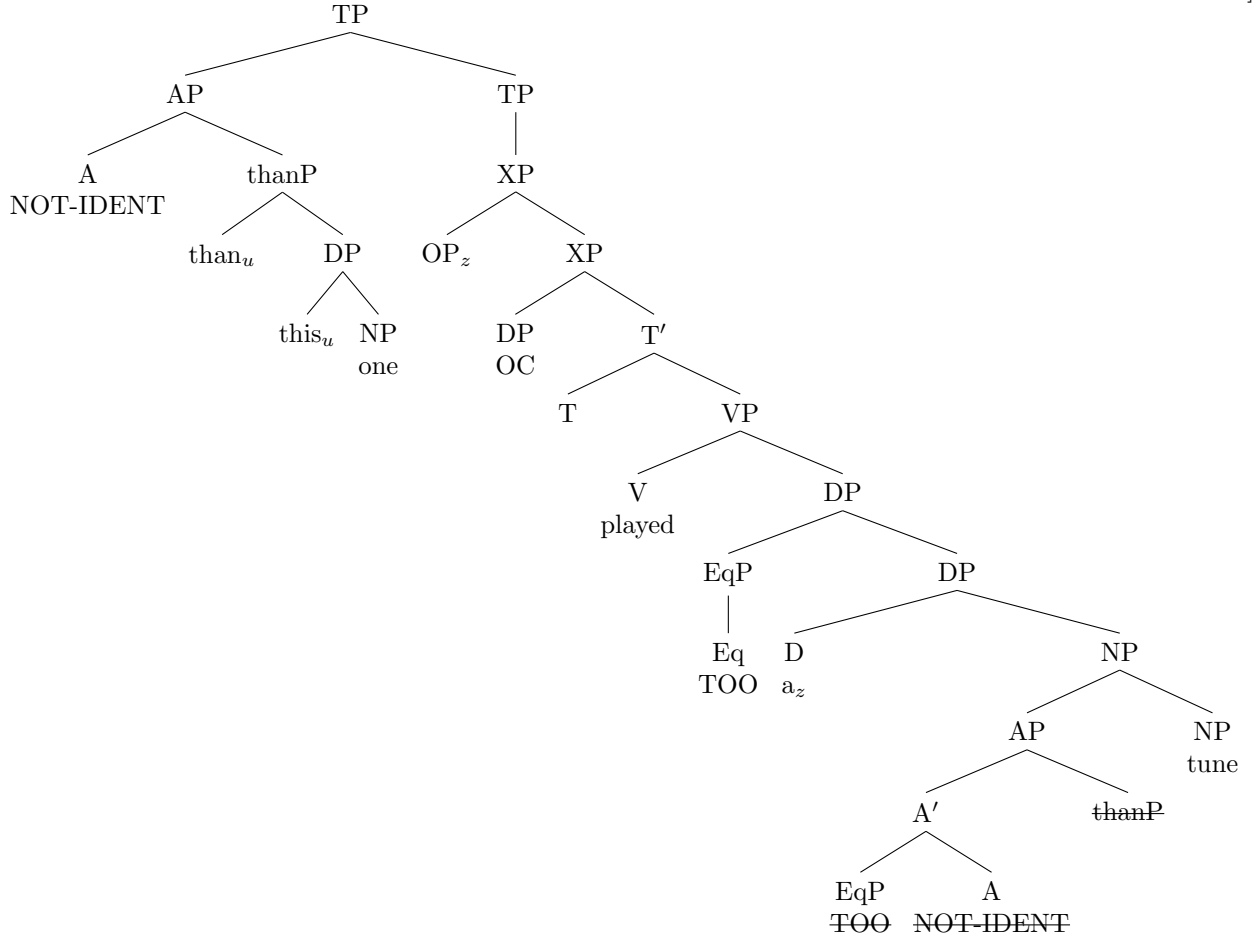
(87)



As before, we raise TOO to take scope over the containing DP. Also, NOT-IDENT and its complement *than*-Phrase is raised to adjoin to the matrix TP. This is shown in (88).

(88)

]



- (89) a. $[[\text{than this one}]] := \iota u. \text{this-one}(u)$
 b. $[[\text{OC played } a_z \text{ tune}]] := \iota z. \text{played}(OC, z)$

We apply NOT-IDENT to (89) a and b above, which results in the following semantic representation:

- (90) $\iota u. \text{this-one}(u) \neq \iota z. \text{played}(OC, z)$

That is, the tune played by Ornette Coleman is not equal to the tune picked out by the demonstrative “this one”. This is the desired reading, for the acceptable (78a). We now turn our attention to TOO; as usual, TOO plays no role in the derivation of at-issue meaning, but rather, places a presuppositional constraint. In the tree in (88), we can see that the Host determined by TOO is the DP $[a_z \text{ tune}]$, with the drs in (91):

- (91) $H = [z \mid \text{tune}(z)]$

The presupposed P is as follows:

- (92) $P = [u \mid \text{this}(u), \text{one}(u)]$

We consider the three conditions on acceptability for P and H: first, they differ in their denotation. As discussed above in section 3.1, we reason that *different* is focus-marked, and therefore the focus value of H is represented as follows:

- (93) $H^F = [z \mid \text{tune}(z), X(z)]$

That is, the focus value is the set of individuals that are tunes and have some additional property X, where X represents the substitution resulting from focus on *different*. We conclude that P is an element of the focus value of H. Finally, P is true in context, since the tune designated by *this one* exists, as asserted by P. Since the presupposition P satisfies the requirements imposed by TOO, example (78a) is felicitous.

We now turn to the degraded (78b), repeated here:

(94) #Ornette Coleman played the same tune as this one.

The derivation proceeds exactly as the derivation for (78a) above, resulting in a tree similar to (88) – the only difference being IDENT appearing in place of NOT-IDENT. This again gives the following candidates for H and P:

- (95) a. H = [z | tune(z)]
 b. P = [u | this(u), one(u)]

However, in this case the presupposition is not satisfied, since H is identical to P – that is, they both denote the same tune. This violates the requirement for appropriate contrast. As we saw above, this is a general fact about *same* – it must raise higher than the local containing DP, to the level of the containing TP, giving the following structure:

(96) [TOO [Ornette Coleman played z]]

In this case, H = [Ornette Coleman played z]. There is no P in context that would appropriately contrast with H; there is no TP-sized P that is available to satisfy the presupposition hosted by H.

The contrast between (78b) and (78a), we propose, is due to the lack of a binder for an TP-sized presupposition. In other words, these are unreduced phrasal comparatives in the terms of Bhatt and Takahashi (2011). There is no underlying clausal source. Instead the standard is just a DP. This is sufficient for *different* which allows for a DP-sized presupposition and hence (78a) is well-formed.²⁷

We end this section with a brief discussion of our analysis as it relates to Bhatt and Takahashi’s (2011) influential analysis of English (and Hindi) comparative constructions. The unreduced phrasal comparatives in (78) are noteworthy because Bhatt and Takahashi (2011:586–590) argue that English does not have unreduced phrasal comparatives. At first the two proposals thus seem to be at odds with each other, but we suggest that in fact the data above lends indirect support to Bhatt and Takahashi’s (2011) argument. The key observation is that Bhatt and Takahashi’s (2011) claim is based on the nature of the degree head in English and the comparatives in (78) do not involve degrees. Rather, they involve comparison of individuals, what Heim (1985:22) calls “identity comparisons”; see also Charnavel (2015:138). Since Bhatt and Takahashi (2011) attribute the unavailability of unreduced comparatives to the nature of the degree head (a 2-place degree head, as opposed to a 3-place degree head), there is no expectation that it extends to non-degree comparatives like the ones in (78). In fact, one could argue that the contrasting behavior of degree and non-degree comparatives favors Bhatt and Takahashi’s (2011) proposal over an alternative that posits a general ban on unreduced comparatives in English. We conclude that the comparatives in (78) are unreduced phrasal comparatives and that this conclusion is consistent with Bhatt and Takahashi’s (2011) analysis of degree comparatives.

²⁷To the best of our knowledge, Heim’s observation has not been addressed in subsequent literature. Jessica Rett (p.c.) suggests an alternative analysis of the infelicity of (78b) in term of the Maxim of Manner, specifically the “Be brief or be succinct” submaxim. On this view the key observation is that (78b) is more prolix than (ix) and that they convey the same thing. Thus using (78b) violates “Be brief or be succinct”.

(ix) Ornette Coleman played this tune.

We find this unconvincing. Maxim violations, including violations of the Maxim of Manner and the “Be brief or be succinct” submaxim, typically result in implications that give rise to special interpretations (Rett, 2020). Contrast that with (78b), which doesn’t give rise to a special interpretation distinct from (ix), but to infelicity.

6 Related work

In this section we discuss four aspects of our analysis as they relate to prior work on *same* and *different*. The first aspect is what we call uniformity - that a single analysis accounts for all three uses of *same* and *different*: external, internal and comparatives. Second we discuss scope-taking for *same* and *different*, which is an important idea in much of the literature. Third, we examine lexical decomposition of *same* and *different*, and finally, we consider presupposition as it has arisen in previous work.

6.1 Uniformity

We have considered *same* and *different* as found in the following three environments:

- (97) Hien read *War and Peace*. Bao read a different/the same book. [external]
- (98) Hien read a different/the same book than/as Bao (did). [comparative]
- (99) Every student read a different/the same book. [internal]

In our account, a single lexical entry for each of *same* and *different* derives their external, internal and comparative uses. The differences between the readings come down to how the additive presupposition is satisfied. In external readings the additive presupposition is bound by preceding material (*Hien read War and Peace* in example (97)). In comparative readings the presupposition is bound by the material in the *as*-clause (*as Bao did*). Finally, in internal readings, the presupposition is accommodated.

Most earlier work focuses on a subset of these three readings. For instance, Carlson (1987) and Barker (2007) focus on internal readings. In fact, Barker goes as far as to argue against unifying the analysis of external uses (his ‘deictic’ use) and internal uses of *same* (p. 413ff). Sun (2021), focuses on internal and comparative readings, while leaving the external readings aside. Brasoveanu (2011) analyzes both internal and external readings but does not discuss comparative readings, and his account focuses almost entirely on *different*.

Heim (1985) focuses on internal readings; however, her analysis, which applies to comparatives and superlatives as well as *same* and *different*, also provides for external readings, in the following way: the general analysis applies a comparison operator to two entities on a dimension f – that is, $OP < a, b > f$. The second entity b is typically provided by a *than*-clause or *of*-clause. However, Heim notes, in an example like “Daiwen sang the loudest”, the comparison set “needs to be supplied pragmatically”, which is represented as follows:

- (100) -est<he, ...> $\lambda x \iota y$. [x sang y-loudly].

In general, Heim allows the comparison element to be supplied pragmatically, which is simply indicated by This allows for external readings for *same* and *different*, as well as for superlatives and comparatives.

In unpublished work, Matushansky (2011) argues for a uniform account of *same* and *different* in the three environments we are considering. Her argument for this is similar to ours in that it defines *same* as IDENT and *different* as NOT-IDENT. However, her account does not involve the presuppositional and additive nature of *same* and *different*, which is essential to our account. Because of this, Matushansky’s account does not explain the many differences between *same* and *different*, such as the parallelism effects (section 3.2) and Heim’s observation concerning comparatives (section 5). Finally, Charnavel (2015) presents a uniform account for *same* and *different* as well as other terms of similarity and difference. This account relies on the postulation of a variety of silent structures. For example, Charnavel considers the following external use of *different* (her 6’):

- (101) Lucie watched Frida yesterday. As for me, I watched a different movie. (from X)

Here, Charnavel postulates a silent *from* X, where X is a pronoun. Then the pronoun is resolved in the normal way – in this case, selecting the antecedent *Frida*. Charnavel also considers internal occurrences of *different* (her 12’):

- (102) Each critic watched a different movie. (than X)

Here the silent material is *than X*, where *X* can be interpreted as a reciprocal, which, Charnavel argues, gives rise to the desired internal reading. Our approach does not require this extensive postulation of silent structures; also, Charnavel’s account does not address most of the central phenomena addressed here, including parallelism effects and the analogies with *too*. Charnavel (2015) conducts a survey of eighteen languages, finding that the same word is almost always used for internal, external, and comparative readings of *same*.²⁸ This strong cross-linguistic tendency for internal, external, and comparative readings to be expressed identically supports the kind of uniform approach we have proposed here.

6.2 Scope

The claim that *same* and *different* can take scope plays a key role in our proposed account; it also figures prominently in prior literature on *same* and *different*. Heim (1985, p.25) notes that “For the comparison operators *same* and *different* . . . their scopes obey the same constraints as wh-movement”. Similarly, Carlson (1987, p. 534), in his consideration of internal readings, argues that “the licensing NP must appear within the same ‘scope domain’ as the dependent expression [i.e., *same* or *different*] . . . the two NP positions must be relatable by Move Alpha, in a GB framework”. These claims are taken for granted in much subsequent work: as mentioned above, Barker (2007) argues that *same* must take scope in internal readings; Hardt et al. (2012, p. 341) argue that “*same* must take scope over a containing event-denoting expression . . . the scope-taking of *same* is subject to standard island constraints”.

While the idea that *same* and *different* can take scope is a quite familiar one, our proposal is novel in the following way: for us, what the scope determines is the particular presuppositions generated by the TOO operator. In addition, our account generates novel predictions concerning island constraints for external readings, as described in section 4.5.

6.3 Decomposition

It is a central feature of our proposal that it is compositional – we decompose *same* into IDENT and TOO and *different* into NOT-IDENT and *TOO*. In this, we follow Sun (2021) who decomposes *same* into IDENT and an equative head EQTV. Similarly, Heim (1985:23) decomposes *same* and *different* into a comparison operator and a ‘predicate remainder’ – “y-JENIG(x)” or “y-ARTIG(x)”. In each of these accounts, the decomposition results in a scope-taking element that moves at LF, and another element that remains in place. In both Sun’s and Heim’s accounts, decomposition for *same* and *different* is motivated by the analogy with comparatives. In the case of comparatives, the scope-taking operator, *-er*, is morphologically identifiable. This is not the case for *same* and *different*; here, the decomposition in Sun’s and Heim’s accounts has an air of redundancy. Consider Heim’s analysis of *same*, which is decomposed into an operator, which is essentially simple identity, and a predicate remainder, y-JENIG(x). As Heim (1985:23) herself points out, “y-JENIG(x) is plainly the identity relation $x = y$ ”. Similarly, Sun (2018) decomposes *same* into IDENT and an equative head EQTV, both of which amount to identity relations. By contrast, on our account, *same* is decomposed into an identity relation IDENT, which remains in-situ, and a scope-taking element TOO which plays a quite distinct semantic role. As we have shown, this is what makes it possible to capture the presuppositional semantics of *same* and *different*. Our proposal also raises the question whether there are languages in which a morpheme meaning *too* is part of the expression of *same*. At present, we do not know of any such languages, but the possibility remains.

6.4 Presupposition

A core contribution of our proposal involves the presuppositional nature of *same* and *different*. In Hardt et al. (2012), it is claimed that *same* is presuppositional, on an analogy with *TOO*. However, there is no suggestion related to *different*; also, the proposal is limited to external readings. Hardt and Mikkelsen (2020) expands on this, proposing that both *same* and *different* are presuppositional, and showing how internal and external readings correspond to the accommodation and binding of presuppositions. The current account

²⁸Charnavel finds three languages with multiple words for *same*; however, in these cases, the distinctions between these multiple words for *same* do not align with internal, external and comparative constructions, but rather, with independent distinctions such as type vs. token (Charnavel 2015:163).

builds directly on this proposal, expanding on it in important ways. A crucial difference is that we propose a specific decomposition of *same* and *different* into (NOT-)IDENT and TOO. This makes it possible to provide explicit syntactic derivations which illustrate the different scope-taking possibilities of TOO, something that is completely absent from the account in Hardt and Mikkelsen (2020). This allows us to account for the parallelism effects of Hardt and Mikkelsen (2015) in a way that, we argue, is more theoretically economical than that of Hardt and Mikkelsen (2020). Furthermore, we show that a range of other empirical consequences follow from our proposal, including the complementary distribution with *too*, as well as contrasts between *same* and *different* in certain comparative constructions.

7 Conclusions

It has been widely accepted, at least since Carlson (1987), that *same* and *different* involve scope-taking in some form. We have argued that the point of this movement is to establish a particular additive presupposition, and we have shown that this provides a novel, uniform account of internal, external and comparative uses. In particular, the distinction between external and internal readings emerges as the familiar distinction between presupposition binding and accommodation. We have shown that, by attending to the details of the binding or accommodation of the relevant presuppositions, it is possible to account for the phenomena of internal, external and comparative readings of *same* and *different*, without positing any additional mechanisms.

At a more general level, this paper has shown that additive presuppositions are not restricted to particles like *too*, *also*, and *as well*, but also arise with other syntactic forms, specifically adjectives. Left unexplained, however, is *why* additive presuppositions arise with these particular lexical items; we suspect that cross-linguistic investigation might shed some light on this.

Authors are requested to disclose interests that are directly or indirectly related to the work submitted for publication. Interests within the last 3 years of beginning the work (conducting the research and preparing the work for submission) should be reported. Interests outside the 3-year time frame must be disclosed if they could reasonably be perceived as influencing the submitted work. Disclosure of interests provides a complete and transparent process and helps readers form their own judgments of potential bias. This is not meant to imply that a financial relationship with an organization that sponsored the research or compensation received for consultancy work is inappropriate.

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