

# On Disjoint Reference Effects in Short Passives

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## 1. Introduction

The literature on passives disagrees on how the Implicit External Argument (*IEA*) of short passives is realized. While some authors take it to be projected in syntax as a covert pronominal element,<sup>1</sup> others take it to be represented only semantically as an existentially bound variable in argument structure.<sup>2</sup> Binding-theoretical phenomena have been argued to be decisive for this question. If Binding Theory applies in syntax (Chomsky 1981), and if the IEA is subject to Binding Theory, then the IEA is syntactically represented. To this end, we discuss Disjoint Reference Effects (*DREs*) in short passives and argue that they should not be derived from Binding Principles B or C. Furthermore, we compare IEAs with impersonal pronouns (*IMPs*) as both sometimes allow the DREs to be overcome: In sentential complementation structures, IMPs and IEAs in the subject position of matrix and embedded clause do not have to be disjoint from each other. Despite these and many further parallels between IEAs and IMPs, we point out some clear differences between IEAs and IMPs. Most importantly, only IMPs can bind and be bound. This suggests that IEAs are not covert versions of IMPs ( $\text{pro}_{\text{IMP}}$ ) (pace e.g. Borer 1998, 2020, Collins 2018, Roberts 2019) and that only IMPs but not IEAs are projected in syntax (cf. Legate et al. 2020). Co-valuation between two IEAs or between an IEA and an IMP is not established via binding but results from processes of pragmatic accommodation (cf. Chierchia 1995, Koenig & Mauner 2000).

## 2. Two Disjoint Reference Effects (DREs) in short passives

Short passives feature two disjoint reference effects (cf. Bhatt & Pancheva 2006). DRE-1, as illustrated in (1a), reflects that *the IEA cannot be bound from a matrix clause*, i.e. (1a) cannot express what (1b) with co-indexed by-phrase means. DRE-1 is usually derived from the assumption that the IEA is existentially quantified over and, thus, subject to Principle C of Binding Theory (e.g. Williams 1987).

- (1) a. Every journalist<sub>1</sub>/John<sub>1</sub> wants Kylie to be IEA\*<sub>1/2</sub> interviewed.  
b. Every journalist<sub>1</sub>/John<sub>1</sub> wants Kylie to be interviewed by him<sub>1</sub>.

DRE-2, as illustrated in (2a), reflects that *the IEA cannot be co-indexed with an internal argument of the passivized verb*, i.e. (2a) cannot have the reflexive interpretation of (2b). DRE-2 is also often subsumed under Principle C along the lines of (2c) (e.g. Landau 2010, Bruening 2013:fn. 8, Müller 2016, or some technical variant thereof, cf. Baker et al. 1989).

- (2) a. The boy\*<sub>1/2</sub> was being IEA<sub>1</sub> washed.  
b. The boy<sub>1</sub> washed himself<sub>1</sub>.  
c. [TP ... was being [<sub>VP</sub> IEA<sub>1</sub> [<sub>VP</sub> washed the boy\*<sub>1/2</sub> ]]]

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<sup>1</sup> e.g. Baker et al. 1989, Borer 1998, 2020, Collins 2005, 2018, Landau 2010, Roberts 2019.

<sup>2</sup> e.g. Bruening 2013, Legate 2014, Alexiadou et al. 2015, Spathas et al. 2015, Schäfer 2017, Legate et al. 2020.



up the IEA of the passive matrix clause. Given that co-indexation, (8a) basically conveys the same meaning as (8b), where the IEA controls the PRO subject of the infinitival complement.<sup>5</sup>

- (7) Der Rebellenpriester wurde IEA<sub>1</sub> tagelang gefoltert.  
 the rebel.priest was for.days tortured  
 Man<sub>1</sub> wollte, dass er preisgibt, wo sich die Aufständischen verstecken.  
 IMP wanted that he reveals where REFL the insurgents hide.out  
 'The rebel priest IEA<sub>1</sub> was tortured for days. They<sub>1</sub> wanted him to reveal where the insurgents were hiding out.'
- (8) a. Es wurde IEA<sub>1</sub> behauptet [ dass man<sub>1/2</sub> den Prinzen ermordet habe].  
 it was claimed that IMP the prince murdered have.CONJ  
 b. Es wurde IEA<sub>1</sub> behauptet [ PRO<sub>1/\*2</sub> den Prinzen ermordet zu haben].  
 it was claimed PRO the prince murdered to have.INF  
 'It was claimed that they murdered the prince/to have murdered the prince.'

To conclude, IEAs and IMPs behave very similarly. Both must be disjoint from definite NPs and pronouns within and across sentences, but they can be co-valued with each other (cf. fn. 4). DRE-2 is not correctly characterized by Principles B/C. Rather, co-valuation between the IEA and a definite NP or pronoun cannot be established to start with, not even in contexts where Binding Theory would not prohibit this. This raises an urgent question: How should we analyze the well-formed co-indexation in (8a)? Is this an instance of binding, or is there an alternative mechanism at work? Before we turn to this question in section 5, we first re-evaluate DRE-1 under the light of our findings on DRE-2.

#### 4. DRE-1 is not a canonical Principle C effect

Since DRE-2 is not a genuine Principle C effect and since IEAs can be taken up by IMPs, we should reconsider DRE-1 repeated with German examples in (9a, b). If DRE-1 in (9a, b) was a Principle C effect due to existential quantification over the IEA, IMP should not be able to antecede the IEA in (10a). But if DRE-1 in (9a, b) is a version of DRE-2 (co-valuation between IEA and an NP or pronoun cannot be established, but IEA and IMP can be co-valued), then IMP is predicted to be able to antecede the IEA in (10a). The same is expected to hold for an IEA as the potential antecedent of an IEA as in (10b).

- (9) a. Jeder Journalist<sub>1</sub> will, [dass die Präsidentin IEA\*<sub>1/2</sub> interviewt wird].  
 every journalist wants that the president.fem interviewed is  
 'Every journalist wants the president to be interviewed.' (cannot mean "by him")  
 b. Er<sub>1</sub> will, [dass Maria IEA\*<sub>1/2</sub> gesehen wird].  
 he wants that Mary seen is  
 'He wants Mary to be seen.' (cannot mean "He wants to see Mary.")
- (10) a. Man<sub>1</sub> behauptete [ dass der Prinz IEA? ermordet worden sei].  
 IMP claimed that the prince murdered been is.CONJ  
 'They claimed that the prince was murdered.'  
 b. Es wurde IEA<sub>1</sub> behauptet [ dass der Prinz IEA? ermordet worden sei].  
 it was claimed that the prince murdered been is.CONJ  
 'It was claimed that the prince was murdered.'

It turns out that the external argument of the matrix verb in (10a, b) (IMP or IEA) does not have to be disjoint from the IEA of the embedded verb. Thus, DRE-1 seems to behave like DRE-2 in that it is not driven by Binding Principle C. However, this might be an illusion. It could be that co-indexation cannot formally be established (due to Principle C), but that the sets respectively picked up by IEA and

<sup>5</sup> That IEAs can obligatorily control is often taken as an argument for their syntactic projection, though semantic mechanisms of control are, in principle, conceivable and have been proposed. See van Urk 2013, Landau 2013, Pitteroff & Schäfer 2019 for empirical data suggesting that this is indeed obligatory control. See Reed 2020 for empirical data pointing to non-obligatory control.



## 5. On the representation of IMP and IEA

The last section has shown that the external argument of a matrix clause and the external argument of a finite complement clause do not have to be interpreted as disjoint if they are both realized as IMP or IEA. The facts are repeated in (16). This raises the question of how co-indexation is formally established in such examples. Is there always binding involved, or can there be a different mechanism at work?

- (16) a. Man<sub>1</sub> behauptete [dass man<sub>1/2</sub> den Prinzen ermordet habe].  
 IMP claimed that IMP the prince murdered have.<sub>CONJ</sub>  
 b. Es wurde IEA<sub>1</sub> behauptet [dass man<sub>1/2</sub> den Prinzen ermordet habe].  
 it was claimed that IMP the prince murdered have.<sub>CONJ</sub>  
 c. Man<sub>1</sub> behauptete [dass der Prinz IEA<sub>1/2</sub> ermordet worden sei].  
 IMP claimed that the prince murdered been is.<sub>CONJ</sub>  
 d. Es wurde IEA<sub>1</sub> behauptet [dass der Prinz IEA<sub>1/2</sub> ermordet worden sei].  
 it was claimed that the prince murdered been is.<sub>CONJ</sub>  
 'They claimed/it was claimed that they killed the prince/that the prince was killed.'

If IMP and IEA are both syntactically projected as pronominal elements with a rather similar set of features characterizing their 'indefiniteness' (e.g. Borer 1998, 2020, Collins 2018, Roberts 2019), then it is expected that they can bind instances of themselves and of each other. The DREs between definite pronouns/R-expressions and IMP/IEA discussed in sections 2-4 could follow from an incompatibility of the features characterizing the former and the latter. If, however, only IMPs are syntactically projected while IEAs are not, pronominal binding is an option only in (15a/16a) but not in (15b-d/16b-d).

Recall that we have already seen one set of data where binding is definitely not an option: IMPs and IEAs can take up each other across sentence boundaries (cf. (7) and fn. 4). Chierchia (1995) as well as Koenig & Mauner (2000) propose that such examples of cross-sentential anaphora taking up IMP or IEA are also not instantiating coreference but that they result from pragmatic inferences driving accommodation. If these processes of accommodation not only apply across sentence borders but also between matrix and complement clause as in (15) and (16), this opens the possibility that only IMPs are syntactically projected, while IEAs are present at a semantic level only.

Koenig & Mauner (2000) discuss two triggers for pragmatic accommodation. In (17), we see examples of 'accommodation via Bridging Definites'. An IMP or IEA can normally not be taken up by a definite NP in a subsequent sentence. Thus, the presupposition associated with the definite NP *die Männer* ('the men') remains unresolved (cf. the #-key). However, the lexical content of the NP *die Terroristen* ('the terrorists') triggers the inference that the presupposition associated with this definite NP is bound to the agent of the preceding sentence which expresses a killing event. In (18) we see an example of 'accommodation via Factoring/discourse coherence'. Note that the second sentence of the German example starts with the impersonal pronoun *man*, while the English translation taken from Koenig & Mauner starts the second sentence with the indefinite use of *they* and these indefinite pronouns are understood as taking up the IEA of the first sentence. Here Koenig & Mauner (2000: 228f.) propose that "... the inference results from a hearer's drive to make the speaker's discourse coherent. ... satisfying this maxim of interpretation requires (at least) establishing coherence or rhetorical relations between the eventualities described by discourse segments and reducing the number of entities involved in the model for a stretch of discourse, what Hobbs et al. (1993) call 'factoring'."

- (17) a. Man<sub>1</sub> hat den Präsidenten ermordet. Die Terroristen<sub>1</sub>/#Die Männer\*<sub>1</sub> waren gnadenlos.  
 IMP has the president killed the terrorists / the men were merciless  
 b. Der Präsident IEA<sub>1</sub> wurde ermordet. Die Terroristen<sub>1</sub>/#Die Männer\*<sub>1</sub> waren gnadenlos.  
 the president was killed the terrorists / the men were merciless

- (18) Der Rebellenpriester wurde IEA<sub>1</sub> tagelang gefoltert.  
 the rebel.priest was for.days tortured  
 Man<sub>1</sub> wollte, dass er sagt, wo sich die Aufständischen versteckten.  
 IMP wanted that he says where REFL the insurgents hide.out  
 'The rebel priest was tortured for days. They wanted him to reveal where the insurgents were hiding.'

We argue that 'accommodation via Factoring/discourse coherence' is not only possible across sentence borders but also sentence internally. Particular lexical and contextual triggers let the hearer infer that the discourse participant introduced by the IEA in the complement clause of (15b-d)/(16b-d) might be identified with the discourse participant introduced by IMP or IEA in the matrix clause. In (16), the relevant trigger making this inference conceivable is the matrix speech act verb. And the lexical-conceptual semantics of the inherent subject control verb in (15) make this inference obligatory.

We provide here one piece of evidence that 'accommodation via Factoring/discourse coherence' can, indeed, apply sentence-internally. Consider the examples in (19). While (19a, b) allow co-indexation between matrix and embedded subject, this is not possible in (19c) where the embedded subject is realized by the definite pronoun *sie* ('they'). At first sight, one might conclude that the disjointness in (19c) results from a feature mismatch between the definite pronoun and the IEA, and this, in turn, could be taken as an argument that we face pronominal binding in (19a, b). However, additional contextual triggers change the judgment for (19c). This is shown in (20). The co-indexation in (20) can hardly be analyzed as binding. It is a pragmatic inference of the type in (18) which pushes the definite pronoun *sie* ('they') into its impersonal use which, in turn, can be co-valued with the IEA in the matrix clause.<sup>7</sup>

- (19) a. Es wurde IEA<sub>1</sub> behauptet, [dass man<sub>1/2</sub> alles richtig gemacht hat].  
 it was claimed that IMP all correctly done has  
 b. Es wurde IEA<sub>1</sub> behauptet, [dass IEA<sub>1/2</sub> alles richtig gemacht wurde].  
 it was claimed that all correctly done was  
 c. Es wurde IEA<sub>1</sub> behauptet, [das **sie**<sub>\*1/2</sub> alles richtig gemacht haben].  
 it was claimed that they all correctly done have  
 'They claimed/it was claimed that they did everything correctly/everything was done correctly.'

- (20) In der Regierung wurde IEA<sub>1</sub> natürlich behauptet, [dass **sie**<sub>1/2</sub> mal wieder  
 in the government was of.course claimed that they once again  
 alles richtig gemacht haben].  
 all correctly made have  
 'In the government it was claimed of course that they once again did everything right.'

We conclude that 'factoring' can apply sentence-internally. Further, we propose that 'factoring' is the only way in which co-valuation with an IEA can be established. That is, we assume that IEAs cannot bind and cannot be bound because they are not syntactically projected. They are existentially bound variables in argument structure as proposed for example in Bruening (2013), Spathas et al. (2015), Schäfer (2017), or Legate et al. (2020). IMPs, on the other hand, are syntactically projected pronouns. As such, they can bind and they can be bound, i.e. two instances of IMP can stand in a binding relation (e.g. Roberts 2019 and the many references to earlier work there). In the next section we turn to empirical evidence that supports this characterization of the difference between IMPs and IEAs.

### 5.1. To bind and to be bound

In this section, we discuss a number of further parallels and differences between IMPs and IEAs. While this discussion is by far not exhaustive, it suffices to show that the two entities are indeed represented differently in grammar. We start with one parallel. Both IMPs and IEAs can have a so-called quasi-existential interpretation in episodic contexts (cf. 21a, b) and a quasi-universal interpretation in generic contexts (cf. 22a, b) (Cinque 1988).<sup>8</sup>

- (21) a. Gestern hat man die Uni angezündet. (quasi-existential)  
 yesterday has IMP the uni set-on-fire

<sup>7</sup> This context triggers the so-called 'corporate' variant of the quasi-existential reading (see Cabredo Hofherr (2003), Creissels (2008) or Sigurðsson & Egerland (2009) for further subtypes of the quasi-existential reading). Grammatically, the 'corporate' variant behaves like the vague or the specific reading of existentially interpreted IMPs, in particular with respect to binding discussed below. (20) would equally work if IEA and *sie* ('they') would be interchanged or if IEA was replaced by IMP *man*.

<sup>8</sup> The two interpretations both show DRE-1 and DRE-2 with definite pronouns and R-expressions.

- b. Gestern wurde IEA die Uni angezündet.  
 yesterday was the uni set-on-fire  
 'Yesterday, someone set the university on fire.'

- (22) a. Man sollte die Alten respektieren. (quasi-universal)<sup>9</sup>  
 IMP should the elderly respect  
 b. Die Alten sollten IEA respektiert werden.  
 The elderly should respected be  
 'One should respect the elderly.'

Despite this semantic parallel, there are also a number of semantic differences which suggest that IMPs and IEAs are very different grammatical entities. First, while IMPs are necessarily [+human], IEAs in personal passives can be [-human]. Their interpretation is only restricted by the conceptual meaning of the vP whose external argument they express. To be sure, it is often claimed that the IEA of impersonal passives must be [+human], and this has been taken as evidence that impersonal passives are actually impersonal structures in disguise (Abraham & Leiss 2006). However, while there are clear restrictions on the IEA of impersonal passives, they neither have to be [+human] nor [+animate] (Primus 2010).

Second, while IMPs (German *man*, French *on*) cannot bind a possessive pronoun under their quasi-existential construal (23a), they can bind possessive pronouns in their quasi-universal construal (24a, 25a, 26a) (Zifonun 2000, Creissels 2008, Cabredo Hofherr 2010).<sup>10</sup> By contrast, IEAs cannot antecede possessive pronouns under any interpretative construal, no matter whether the passivized verb is transitive (23b, 24b), unergative (25b) or unaccusative (26b).<sup>11</sup>

- (23) a. Heute morgen hat man<sub>1</sub> seine\*<sub>1/2</sub> Adresse für dich hinterlassen. (quasi-existential)  
 today morning has IMP his address for you left  
 b. Heute morgen wurde IEA<sub>1</sub> seine\*<sub>1/2</sub> Adresse für dich hinterlassen.  
 today morning was his address for you left  
 'This morning someone left his address for you.'
- (24) a. In diesem Kasten kann man<sub>1</sub> seine<sub>1/2</sub> Adresse hinterlassen. (quasi-universal)  
 in this box can IMP his address leave  
 b. In diesem Kasten kann IEA<sub>1</sub> seine\*<sub>1/2</sub> Adresse hinterlassen werden.  
 in this box can his address left become  
 'In this box one can leave an/one's address.'
- (25) a. An Silvester darf man<sub>1</sub> auf seinem<sub>1/2</sub> Tisch tanzen.  
 At New.Year's.Eve may IMP at his table dance  
 b. An Silvester darf IEA<sub>1</sub> auf seinem\*<sub>1/2</sub> Tisch getanzt werden.  
 At New.Year's.Eve may at his Table danced be  
 'At New Year's Eve, one may dance on one's table.'
- (26) a. In diesen Slapstickfilmen fällt man<sub>1</sub> dann immer in seine<sub>1/2</sub> Mülltonne.  
 in these slapstick.movies falls IMP then always in his trash.can

<sup>9</sup> We have nothing to say about how exactly the passive can receive this interpretation. Chierchia (1995:123) suggests that the quasi-universal reading can be derived from an existentially bound agent slot in the scope of a generic operator binding the event (GN s[C(s)] [∃x verb (s, x)]).

<sup>10</sup> The possessive pronoun must have the features '3p., sg., masc.'; these are typically assumed to be default features. Note that IMP (*man*) behaves exactly as the IEA in examples like (4b), i.e. it cannot antecede any personal pronoun.

<sup>11</sup> Similarly, while IMPs productively license local anaphors, IEAs do not (e.g. Schäfer 2012 on German, Bianchi 2015 on Italian, Legate et al. 2020 on Turkish and Lithuanian). Given that the judgments in (4b) equally hold for English, we should question that examples as in (i) (Collins 2018) are to be analysed as involving canonical local binding by an IEA in the sense of Principle A.

- (i) a. I cannot receive emails sent to **myself** from Outlook though they appear in Webmail.  
 b. Some things are better kept to **yourself**.  
 c. I would really appreciate it if any negative feelings you have toward teen mothers were kept to **yourselves**.

- b. In diesen Slapstickfilmen wird IEA<sub>1</sub> dann immer in seine\*<sub>1/2</sub> Mülltonne gefallen.  
 in these slapstick.movies is then always in his trash.bin fallen  
 'In these slapstick movies, one always falls into one's trash can.'

Finally, IMPs like German *man* show the so-called Lebeaux Effect, while IEAs do not.<sup>12/13</sup> Lebeaux (1984) shows that arbitrary PRO is subject to the rule in (27). This is exemplified in (28a, b) from Borer (2020). These examples were designed to *favor* a distinct construal for the silent subjects, and yet, such a distinct construal is not possible. (29) shows the effect in German. Contrary to our world knowledge, the sentence expresses that everyone who buys baby formula also drinks this baby formula himself. Lebeaux proposes that the two PROs are bound by a covert A'-operator adjoined at top of the structure.<sup>14</sup>

(27) Within an appropriately defined local domain, all occurrences of uncontrolled silent subject need to have a universal interpretation (=PRO-*arb*), and are hence identified (Lebeaux 1984).

- (28) a. [OP<sub>1</sub> [PRO<sub>1</sub> to organize the labour force] entails/is [PRO<sub>1/\*2</sub> to fire workers] ].  
 b. [OP<sub>1</sub> [PRO<sub>1</sub> to organize the labour force] entails/means [PRO<sub>1/\*2</sub> firing workers] ].

(29) [OP<sub>1</sub> [PRO<sub>1</sub> Babymilch zu kaufen] bedeutet [PRO<sub>1/\*2</sub> Babymilch zu trinken].  
 baby.milk to buy means baby.milk to drink  
 'To buy baby formula means to drink baby formula.'

The literature has often pointed out the semantic closeness of arbitrary PRO and IMPs. And indeed, two instances of IMP behave like PRO in such and related contexts (30) (Chierchia 1995 proposes that IMP can undergo existential disclosure in the scope of generic operators). We interpret this such that IMP can be bound, in principle, and must be bound by a covert operator in this particular context.

- (30) Dass man<sub>1</sub> Babymilch kauft, bedeutet dass man<sub>1/\*2</sub> Babymilch trinkt.  
 that IMP baby.milk buys means that IMP baby.milk drinks  
 'That they buy baby milk means that they drink baby milk.'

If we replace IMP with IEA, however, the interpretation changes. The two instances of IEA in (31) do not have to be identified (the same holds for combinations of IMP and IEA), and world knowledge in fact favors an interpretation involving disjoint reference. We interpret this such that IEA cannot be bound; otherwise, the binding effect should become obligatory as observed with IMPs in (30).

- (31) Dass Babymilch IEA<sub>1</sub> gekauft wird, bedeutet dass Babymilch IEA<sub>1/2</sub> getrunken wird.  
 that babymilk bought is means that baby.milk drunken is  
 'That baby milk is bought means that baby milk is drunken.'

Below we show that the difference between IMP and IEA with respect to the Lebeaux Effect equally holds with unergative (32) and unaccusative (33) predicates (we change to conditional clauses just to illustrate a further way to apply the test; nothing hinges on this empirically). This suggests that both, passives of unergatives (32a', b') as well as passives of unaccusatives (33a', b') are real passives in German, not 'impersonals in disguise' (pace Abraham & Leiss 2006, Blevins 2003, Roberts 2019).<sup>15</sup>

<sup>12</sup>Other languages show the same distinction. French *on* and Norwegian *man* behave like German *man* and French and Norwegian periphrastic and *se/s*-passives behave like the German passive (p.c. Fabienne Martin, Terje Lohndal).

<sup>13</sup>We have recently realized that this difference was explicitly noticed already in Roberts (2019). Roberts assumes that the IEA is a PRO<sub>IMP</sub> in Spec,VP which is bound by ASP and, thereby, shielded from being bound by any higher operator. For reasons of space we can mention here only some problematic points: i) the (non-)human distinction is not implemented in his system. ii) His proposal does not predict any differences between IMPs and IEAs with respect to binding of possessors and reflexive pronouns (cf. fn. 11). iii) He wrongly predicts German passives of unaccusatives to show the Lebeaux Effect because his system forces him to analyze them as impersonals in disguise.

<sup>14</sup>Landau (2013: 237) argues that these non-finite structures do not involve PRO at all but two open properties are equaled. This might be correct but it does not have any effect on the following comparison of IMP and IEA.

<sup>15</sup>However, Legate et al. (2020) provide evidence that what looks morphologically like passives of unaccusative verbs in Turkish are indeed impersonal structures in disguise.

- (32) a. Wenn man<sub>1</sub> lacht, schläft man<sub>1/\*2</sub>.      a'. Wenn IEA<sub>1</sub> gelacht wird, wird IEA<sub>1/2</sub> geschlafen.  
 when IMP laughs sleeps IMP      when laughed is is slept  
 'If X laughs X/Y sleeps.'  
 b. Wenn man<sub>1</sub> tanzt, lacht man<sub>1/\*2</sub>.      b'. Wenn IEA<sub>1</sub> getanzt wird, wird IEA<sub>1/2</sub> gelacht.  
 when IMP dances sleeps IMP      when danced is is laughed  
 'If X dances X/Y laughs.'
- (33) a. Wenn man<sub>1</sub> schießt, stirbt man<sub>1/\*2</sub>.      a'. Wenn IEA<sub>1</sub> geschossen wird, wird IEA<sub>1/2</sub> gestorben.  
 when IMP shoots dies IMP      when shot is is died  
 'If X shoots X/Y dies.'  
 b. Wenn man<sub>1</sub> fällt, stirbt man<sub>1/\*2</sub> auch b'. Wenn IEA<sub>1</sub> gefallen wird, wird auch IEA<sub>1/2</sub> gestorben.  
 when IMP falls dies IMP also      when fallen is is also died  
 'If X falls X/Y also dies.'

## 6. A remaining question

We have argued that while IMP and IEA cannot enter into a binding relation with each other, they can be co-valued via pragmatic accommodation. This raises the question as to why there is no reflexive reading available in short passives such as (34). Since accommodation should, in principle, be available here, does this show that IEA nevertheless triggers a Principle B violation on IMP?

A number of authors have argued for a pragmatic explanation of the absence of a reflexive reading in short passives. Williams (2015:283:fn. 7) discusses the examples in (35a, b) and proposes for (35a) that "the antireflexive message is just a common pragmatic enrichment, signaled by choosing not to make the stronger reflexive statement" in (35b). Similarly, McIntyre (2014:28) proposes that passives such as (36a) "trigger an implicature that this *someone* is not *John*, since nothing fulfills the need of natural languages to signal the reflexive interpretation". He goes on to observe that "like other implicatures, disjoint reference implicatures can be cancelled, for instance by adding *namely himself* after *someone* [in (36b)] or by the explicitly reflexive by-phrase [in (36c)]." Similarly, Bruening (2014) points out that some verbal passive sentences allow continuations that disambiguate a reflexive construal as in (37). In this context, we observe that this works much more naturally with IEAs than with IMPs (38a, b).

- (34) Abends wurde IEA<sub>1</sub> man<sub>1/2</sub> gewaschen.      (35) a. Mo was soundly criticized.  
 in.the.evening was IMP washed      b. Mo was soundly criticized by herself.  
 'In the evening, one was washed.'
- (36) a. John was being dressed up.  
 b. John was dressing up someone. / Someone was dressing up John.  
 c. Marmaduke was admired by every stamp club member, including himself.
- (37) a. The children are being sorted. They're doing it themselves.  
 b. The children are being divided into groups. They're doing it themselves.
- (38) a. Natürlich wurde Peter gewaschen.      Er hat es selbst gemacht.  
 of.course was Peter washed      he has it self done  
 b. Natürlich hat man Peter gewaschen.      ??Er hat es selbst gemacht.  
 of.course has IMP Peter washed      he has it self done  
 'Of course, X washed Peter. He did it himself.'

## 7. Conclusions

We have argued that the well-known Disjoint Reference Effects in short passives do not derive from Binding Principles B/C. Consequently, these effects do not argue in favor of syntactically projected IEAs. We have shown that both DREs disappear if the IEA is co-valued with an impersonal pronoun or a second instance of an IEA. We have proposed that such co-valuation is not derived via binding but results from inferences of pragmatic accommodation which are available within as well as across sentences. A

comparison of the binding behavior of IMPs and IEAs has supported this claim: While IMPs can act as binders and bindees, IEAs cannot. This follows if IMPs are syntactically projected while IEAs are not.

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