

Fake indexicals in Dutch

A challenge for Kratzer (2009)¹

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Abstract: We argue that Dutch does not behave according to Kratzer's theory of fake indexicality. The crucial observation is that Dutch allows English-style sloppy readings in non-agreeing *only* complements, but has a rich, German-style verbal and pronominal inflectional morphology.

1 Fake indexicals as minimal pronouns

There is an ongoing discussion about the syntax and semantics of apparently bound uses of indexicals, commonly referred to as fake indexicals. Much of this discussion has focussed on sloppy readings of first and second person pronouns under focus-sensitive construction involving *only*:

- (1) a. I'm the only one around here who will admit that I could be wrong
[Partee 1989]
b. Only I got a question that I understood [Heim 1991]
c. Only I considered the question whether I should leave before I got bored
[Kratzer 1998]

Kratzer (2009) proposed a detailed analysis of fake indexicality in terms of minimal pronouns, motivated by new German data showing some striking restrictions on fake indexicality. In this squib, we briefly recap Kratzer's analysis of German and English, and then argue that it does not extend to Dutch.

1.1 Minimal pronouns in German

In German, the first person plural indexical allows strict and sloppy interpretations in *be the only one who* constructions, as in English, while in the singular the sloppy reading is out:²

- (2) a. Wir sind die Einzigen, die unseren Sohn versorgen [strict/sloppy; p.191]
we are the only ones who our.1.pl son take care of.1/3.pl
'We are the only ones who take care of our son'
b. Ich bin der Einzige, der meinen Sohn versorgt [strict/*sloppy; p.191]
I am the only one who my.1.sg son take care of.3.sg

¹We thank Hotze Rullmann and the audiences and reviewers of GLOW32 (2009 Nancy) and the TiNdag (2009 Utrecht) for valuable feedback. We also thank the reviewers and editors of *Linguistic Inquiry: Squibs & Discussions* (although they couldn't accept the paper in the end). Comments are very welcome!

²Bare page references refer to pages of Kratzer (2009).

In other words, for (2b), we don't get the reading paraphrasable (in German and English alike) with an (unstressed) third person possessive: *I am the only one who is taking care of his son.*

Considering the entire paradigm, Kratzer observes a link between the inflections of the possessive and the verb in the relative clause: the sloppy reading is blocked precisely when there is a clear mismatch between the φ -features of the verb and those of the possessive. In (2a) both verb and possessive are compatible with the feature set [1.pl], while in (2b) we have a [1.sg] possessive vs. a [3.sg] verb.

The ingredients of Kratzer's analysis of this pattern in her German data include: (i) a two-way division of pronouns (based on Kratzer 1998) into referential pronouns and minimal pronouns (so-called as they are generated and interpreted without features); (ii) three principles of feature transmission to give minimal pronouns their visible features; (iii) a more complicated notion of syntactic binding of a pronoun as mediated by a local little v , rather than by some DP antecedent; (iv) perspectival v 's, born with uninterpretable φ -features; and (v) a competition-based phonological spell-out mechanism to choose the best matching pronoun or verb ending given a set of possibly conflicting features accumulated by transmissions.

To derive the sloppy reading of (2a), for instance, we start with a minimal pronoun representing the possessive and the relative pronoun. The minimal possessive is bound by a little v , which eventually yields a bound, sloppy, reading at LF. To get the right phonological spell-out, Kratzer has to assume that v is born with (uninterpretable) local person features, say [1.pl]. In addition to this internal perspective, the subordinate clause inherits a third person, or rather a gender feature, say [m.pl], from the main clause (*wir sind die Einzigen*). These two feature sets are transmitted and unified according to the transmission principles, eventually ending up on the relative pronoun, the verb and the possessive as [m.1.pl]. Finally, these feature bundles are spelled out according to best match with language specific vocabulary insertion rules, presented in (3) for German possessives and regular verbs:

(3)	poss-		verb-	
	1.sg	↔ mein	1.sg	↔ -e
	2.sg	↔ dein	2.sg	↔ -st
	m/n.sg	↔ sein	f/m/n.sg	↔ -t
	1	↔ unser	2.pl	↔ -t
	2	↔ euer	elsewhere	↔ -en
	elsewhere	↔ ihr		

In the possessive paradigm there is only one insertion rule whose feature specification is a subset of [m.1.pl], viz. '1↔unser', so it's spelled out accordingly. For verbs, [m.1.pl] falls in the 'elsewhere' category, so we get *versorg-en*. To derive the strict reading of the same sentence we simply let the possessive start out with [1.pl] features, which can be spelled out at LF and PF immediately.

Now consider the singular variant with *meinen* ('my') in (2b). To derive a sloppy reading here we need to assume the possessive is a minimal pronoun bound by v . Without assuming a built in perspective, the [m.sg] from the matrix clause would spread over the subordinate clause, leading to a non-indexical, third person spell-out: ... *der seinen Sohn versorgt* ('who takes care of his son'). To get the fake indexical

possessive we must start with a perspectival, first person v , leading to [m.1.sg] feature bundles. Now there are two spell-out candidates for the possessive that match equally well (*mein/sein*), and similarly for the verb (*versorge/versorgt*). These spell-out conflicts crash the derivation. We can conclude that there is no way to get a sloppy LF with fake indexical *mein* in PF with this type of construction. This explains why (2b) and similar non-agreeing indexicals under *only one who* do not have a sloppy reading.

1.2 Resolving spell-out conflicts in English

English behaves somewhat differently from German with respect to sloppy readings under *only*. In particular, the literal English translation of (2b), or Kratzer's analogous example (4), allows both strict and sloppy interpretations:

(4) I am the only one who has brushed my teeth [strict/sloppy, p.202]

Even though the embedded verb does not agree with the possessive, the sloppy reading (others didn't brush their teeth) is available, according to Kratzer's and our own native informants.

Kratzer seeks an explanation in the different, much poorer verbal inflectional morphology of English compared to German:

(5)	poss-		regular verb-
	1.sg	↔ my	f/m/n.sg ↔ -s
	2	↔ your	elsewhere ↔ ∅
	m.sg	↔ his	
	f.sg	↔ her	
	n.sg	↔ its	
	1	↔ our	
		elsewhere ↔ their	

Let's try and construct the sloppy reading for (4). The matrix clause contributes a third person feature, say [m.sg], and v contributes a first person perspective, [1.sg]. Transmission blends these together so we have [m.1.sg] bundles to spell out. Now, contrary to the German case, the verb does not lead to a spell-out conflict: *have-[m.1.sg] ⇒ has*. But the possessive still does (*poss-[m.1.sg] ⇒ my/his*), so why doesn't the derivation crash? According to Kratzer, English, but not German, has a way to resolve this type of spell-out conflict, viz. by means of a markedness principle:

(6) Nominal gender features are marked in English

On the basis of (6), [m.sg] (↔*his*) is more marked than [1.sg] (↔*my*) so that *my* is the optimal spell-out candidate in the end. This concludes the derivation of the sloppy/fake indexical reading of (4). Since it relies crucially on (6), it is important to consider its justification. Kratzer gives two arguments to support (6): (i) most English nouns are neuter, and (ii) English tends to avoid putting gender on pronouns bound by quantifiers by resorting to plural forms, as in (7).

(7) {Nobody/Everybody} lost their job

Now consider the copula, which makes a crucial extra distinction in its inflection. Again, according to Kratzer's and our informants, we get a sloppy reading:

- (8) I am the only one who is brushing my teeth [strict/sloppy, p.208]

The same derivations as before apply, so what we have to spell out are [m.1.sg] bundles. The morphology is as follows:

- (9)
$$\begin{array}{l} be \\ \hline 1.sg \quad \leftrightarrow \quad am \\ m/f/n.sg \leftrightarrow is \\ elsewhere \leftrightarrow are \end{array}$$

We get two conflicts: $be-[m.1.sg] \Rightarrow am/is$, and $poss-[m.1.sg] \Rightarrow my/his$. To resolve the latter we rely on the earlier markedness principle, (6). For the new, verbal conflict Kratzer introduces a new principle:

- (10) Verbal person features are marked in English

The sole argument for this principle is that the copula is a "quirk" (p.211) in the English paradigm: it is the only English verb whose inflection targets number features.

Summing up, to capture the unexpected English sloppiness, Kratzer introduces two very language particular principles that serve to resolve spell-out conflicts that, in German, effectively blocked analogous sloppy readings.

2 Between German and English: Dutch

We show that Dutch allows English-style sloppy readings in *only* complements, but has a rich, German-style verbal and pronominal inflectional morphology. Moreover, there is no basis for assuming that verbal person or pronominal gender or marked in Dutch.

2.1 Sloppiness in rich morphology

The crucial judgment is the acceptability of sentences like (11), which by virtue of the inherently reflexive nature of the predicate means that the possessive is to be read sloppily (other didn't do their best):³

- (11) Ik ben de enige die m'n best gedaan heeft
I am the only one who my best done has

In the next section we'll discuss some empirical support we gathered for this judgment. For now, let's see why it poses a problem for Kratzer.

As in the English (4) and (8), we have here a sloppy reading where the possessive ($m'n.1.sg$) does not agree with the embedded verb (*heeft.3.sg*). Kratzer's analysis of the parallel English cases crucially depends on the markedness of nominal gender,

³Based on Rullman p.c. to Kratzer, p.192

(6), and verbal person, (10). We argue that these markedness principles do not hold for Dutch, thus blocking Kratzer’s potential explanation of the sloppiness of (11).

Consider the derivation of (the sloppy reading of) (11). As before, we assume a bound fake indexical possessive, a perspectival [1.sg] *v*, and [m.sg] inherited from the matrix clause. This leads to [m.1.sg] features, which, given the insertion schemas in (12), creates spell-out conflicts for both verb and possessive:⁴

(12)	poss-		<i>be, have</i>
	1.sg	↔	m’n (mijn) 1.sg ↔ heb
	2.sg	↔	je (jouw) 2.sg ↔ hebt
	m/n.sg	↔	z’n (zijn) m/f/n.sg ↔ heeft
	f.sg	↔	d’r (haar) elsewhere ↔ hebben
	1	↔	ons
	2	↔	jullie
	elsewhere	↔	hun
	a.		poss-[m.1.sg] ⇒ m’n/z’n
	b.		have-[m.1.sg] ⇒ heb/heeft

We’re in a similar situation as with the quirky English copula in section 1.2, so we need to appeal to both markedness principles, (6) and (10). Take (6), the markedness of nominal gender in English. Kratzer’s first argument is that almost all English nouns are neuter. This is not true in Dutch, which marks all nouns for gender (though it’s mostly m or n). The second argument involves the gender escape mechanism of using plurals in certain quantifier constructions. This also doesn’t extend to Dutch:

(13)	{Niemand/Iedereen} heeft {z’n/*hun} baan verloren	[cf. (7)]
	<i>{Nobody/Everybody} has his/their job lost</i>	

The motivation for (10), the markedness of verbal person, was that there is only one English verb that targets person features. In Dutch on the other hand, most singular verb inflections crucially depend on one or more person features, though it doesn’t distinguish all three persons throughout, like German. Apart from the rich *hebben* (‘have’) paradigm above (shared only by *zijn* (‘be’)), we find the following for regular verbs:⁵

(14)	regular verb
	1.sg ↔ -∅
	2.sg ↔ -t (-∅)
	m/f/n.sg ↔ -t
	elsewhere ↔ -en

⁴Dutch pronouns have weak and strong forms (e.g. *m’n* = weak ‘my’; *mijn* = strong ‘my’). The strong form is used when the possessive requires stress. Since (the stress on) the strong form seems to strongly favor a strict reading, we restrict attention to the unmarked weak forms.

⁵Dutch simple past inflections make no person distinctions while modal auxiliaries show lots of variation in this respect. Some auxiliaries seem to be gradually moving toward the poorer, English-style paradigm, i.e. losing the 1.sg vs. 2.sg distinction.

For regular verbs in the present tense, [2.sg] is spelled out as *-t*, except when the verb precedes the subject, then it's \emptyset . Note that even if we ignore this inversion effect we still cannot lump 2nd and 3rd person together into a single person-free rule, 'sg \leftrightarrow -t', because that would incorrectly generate *ik ben de enige die m'n huiswerk doe* ('I am the only one who do.1sg my.1sg homework'), on the basis of [m.1.sg] bundles after transmission.⁶ In short, verbal person features play a role in the most common verbal inflections, which undercuts Kratzer's motivation for assuming that verbal person is marked.

To sum up, there appears to be no reason to assume that either Dutch nominal gender or verbal person are in any way marked. Hence there is no way to resolve the spell-out conflicts (12a) and (12b). Kratzer's system thus predicts that our Dutch sentence (11) can have no sloppy interpretation and hence should be infelicitous. In the next section we outline a survey experiment showing that this type of construction is entirely felicitous in Dutch.

2.2 Experimental support

To support the crucial judgment in (11) we first turned to Google. This turned up the following natural occurrence of a sloppy first person possessive:

- (15) Ben ik de enige die mijn examens niet zelf durft na te kijken?
am I the only.one who my.1sg exams not self dares.3sg check
 'Am I the only one who is afraid to check his exams himself?'

Next, we set up a survey experiment to test the acceptability of sloppy readings of (fake) indexicals in *the only one who*-constructions in Dutch. 48 participants (Dutch undergraduates in Linguistics and Artificial Intelligence) were instructed to give grammaticality judgments on a five-point Likert scale ranging from 1 ("ungrammatical") to 5 ("completely grammatical"). Four types of items were distributed over six different lists. Each list contained 2 test items, 11 fillers, and 8 controls. For each of the controls and the test items we varied the reflexive predicate: (*z'n best doen* 'to do one's best', *z'n belangstelling tonen* 'to show one's interest' and *z'n fouten toegeven* 'to admit one's mistakes').

The test items contained fake indexicals in constructions where they should not occur according to Kratzer's analysis. We constructed the following variants of (11) and (15):

- (16) a. Ben ik de enige die m'n {best doet / belangstelling toont / fouten toegeeft}?
am I the only one who my {best does / interest shows / mistakes admits}?
 Am I the only one who {does my best/shows my interest/admits my mistakes}?
- b. Helaas ben ik de enige die m'n ...
unfortunately I'm the only one who ... my ...
- c. Ik ben de enige die m'n ...
I'm the only one who ... my ...
- d. Jij bent de enige die je ...
you're the only one who ... your ...

⁶The same holds for a system with 'pl \leftrightarrow -en / elsewhere \leftrightarrow -t'.

For comparison we used two types of controls. Positive controls are the uncontroversial agreeing variants that we would expect on Kratzer’s view, i.e. sloppy *only one* constructions that involve no spell-out conflicts due to (i) syncretism in the plural (*we’re the only ones who did our best*), or (ii) the use of a non-indexical third person possessive (*I’m the only one who did his best*). Negative controls are the (presumably) infelicitous variants in which the possessive agreed with neither the matrix subject, nor the embedded verb (*I am the only one who did your best*). In other words, the negative controls force a nonsensical strict interpretation onto an inherently reflexive predicate.

The results are as follows:

item category	mean acceptability
positive controls	3.7
negative controls	2.3
test items (16a)	4.3
test items (16b)	3.8
test items (16c)	3.6
test items (16d)	3.0

Without going into statistical details per parameter, we conclude that Dutch non-agreeing, sloppy indexicals are as acceptable as third person paraphrases and conflict-free plural variants, and certainly much better than variants that require a strict reading of the reflexive predicate. Separating the results per test item, it seems that second person, as in (16d), is harder than first, while a question, as in (16a), somehow make the relevant construction better.

3 Discussion

Dutch and English allow sloppy readings more freely than we should expect on the minimal pronouns analysis reconstructed in section 1.1. It is worth noting then that in other domains, unexpected sloppy readings also pop up. Kratzer herself already discusses apparent ‘long-distance’ binding of indexicals in German:

- (17) Du bist der Einzige, der glaubt daß jemand deinen Aufsatz versteht
you are the only one who believes that someone your.2sg paper understands.3sg
[strict/sloppy; p.212]

As she points out, this constitutes a complication for her analysis of fake indexicality through local binding. She saves the analysis by proposing an additional mechanism to account for these types of fake indexicals. The sloppy indexical *deinen* (‘your’) in (17) is then not a bound minimal pronoun, like the sloppy pronouns considered thus far, but a true referential indexical, semantically bound by a context-shifting operator.

Bound proper names would pose another problem for Kratzer. As Roeper (2006) observes, names under *only* allow sloppy readings. In fact, 14 out of 18 of his undergrads showed a preference for the sloppy interpretation by completing the discourse fragment (18) as in (18a) (Roeper 2006:355):

- (18) Only Mary looks like Mary. The others...
 a. ... don't look like themselves b. ... don't look like Mary

Using a similar fill-in-the-blank item as a filler for our German survey (section 3), we found that participants chose strict and sloppy readings equally.

Adding these findings to the Dutch and English data leads us to suspect that the restrictions on sloppy interpretation that Kratzer observes in German are the exception rather than the rule. Note that, if not for a few cases like (2b), a much simpler analysis presents itself: it is the semantics of *only* that generates sloppy readings whenever an element in its scope corefers with the focus (e.g. along the lines of Pulman 1997).

Because some native colleagues accepted the German counterparts of our Dutch counterexamples, we conducted a German survey experiment based on the Dutch one above.⁷ This did not yield comparable results. The most acceptable non-agreeing, reflexive sloppy test item, (19), got a mean score of 2.5, which was considerably lower than the positive controls:

- (19) Bin ich denn der Einzige, der meine Hausaufgaben selbst gemacht hat?
am I then the only one who my homework self done has?
 'Am I then the only one who did my homework by myself?'

Google likewise hasn't turned up non-agreeing, sloppy fake possessives. We did, however, find a few unexpected sloppy reflexives (which presumably would be treated similarly, as minimal pronouns, on Kratzer's analysis):

- (20) Natürlich bin ich nicht der Einzige, der mich darüber aufregt
of course am I not the only one who 1sg.refl about that is annoyed.3sg
 'Of course I'm not the only one who is annoyed about that'

On the basis of our limited empirical testing, we tentatively conclude that Kratzer's intuitions are correct. As a result, any semantic/pragmatic account that derives sloppy readings on the basis of coreference under focus constructions will require an additional explanation for the lack of sloppiness in examples like (2b).

4 Conclusions

The goal of this paper was to show that the predictions of Kratzer's account of fake indexicals does not extend to Dutch. To achieve this goal, we started in section 1 by introducing the basic notions of Kratzer's framework, including locally bound minimal pronouns, perspectival *v*'s, feature transmission, and a competition-based spell-out model. We saw how Kratzer further complicated the system to accommodate English data in section 1.2. In section 2 we then established that Dutch shows crucial characteristics of both English and German and provides a counterexample to the theory. To substantiate our claims we verified the crucial intuitions in a small survey experiment.

⁷20 native German psychology undergraduates at the University of Groningen participated in our online survey.

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