Intensifiers in German and Dutch Anaphor Resolution

Elsi Kaiser and Jeffrey T. Runner
University of Southern California and University of Rochester

1. Introduction

This paper investigates the factors that guide the interpretation of different anaphoric forms in picture noun phrases (PNPs, e.g. *picture of her/herself*) in Dutch and German. The two experiments presented here have two main aims: to test whether existing findings from English on the effects of semantic[1] information extend to other languages, and to further our understanding of the source/nature of these effects. The structure of this paper is as follows. In Section 1, we review existing work on the effects of structural and non-structural factors on the interpretation of pronouns and reflexives in PNPs, including our previous research on English (Kaiser, Runner, Sussman & Tanenhaus 2007, 2008). Section 2 presents Experiment 1, which investigates pronouns, reflexives and emphatic reflexives in German. Section 3 presents Experiment 2, on pronouns, reflexives and emphatic pronouns in Dutch. Conclusions and directions for future work are discussed in Section 4.

1.1. Effects of structural and non-structural information

In many structural environments, pronouns and reflexives are in (nearly) complementary distribution, as illustrated in (1). Here, the pronoun *him* cannot be interpreted as coreferential with the local subject *Cookie Monster,* but can refer to the non-local subject *Kermit*. In contrast, the reflexive *himself* must be coreferential with the local subject and cannot be interpreted as referring to another entity.

(1) $Kermit_i$ thought that Cookie $Monster_j$ tickled $him_{i/*j}$/$himself_{*i/j}$.

Principles A and B of traditional Binding Theory (e.g., Chomsky 1981) provide a structural account of this complementarity. According to Principle A, a reflexive must be bound by a c-commanding antecedent in its local domain. Thus, in (1), the reflexive *himself* can only refer to the subject of the same clause, namely *Cookie Monster*. Principle B, conversely, states that a pronoun must be free in a local domain, i.e., it cannot be bound by a local c-commanding antecedent. Thus, in (1), *him* cannot be bound by the local subject, *Cookie Monster*, but can corefer with the non-local antecedent *Kermit*.

However, it was noted early on that this complementarity breaks down in certain environments, including picture NPs (PNPs), as illustrated in ex.(2) (e.g. Jackendoff 1972, Chomsky 1986, Williams

---

[1] When discussing the effects of non-structural factors on pronouns and reflexives, we will refer to them as 'semantic factors' for ease of exposition. However, we leave open the question of whether the source/perceiver manipulation (explained below) is best regarded as a semantic, thematic role manipulation or a discourse-level/pragmatic manipulation (e.g. having to do with perspective-taking).

1987, Reinhart & Reuland 1993, Tenny 2004). Here, both *her* and *herself* can be interpreted as referring to the subject *Miss Piggy.*

(2) Miss Piggy$_i$ found a picture of her$_i$/herself$_i$.

Reflexives in PNPs have been argued to be sensitive to factors such as the potential antecedents' point of view, degree of awareness and semantic role (e.g. Cantrall 1974, Chomsky 1986, Kuno 1987, Zribi-Hertz 1989, Pollard & Sag 1992, Reinhart & Reuland 1993, Tenny 1996, Tenny 2003). In this paper, we focus on the notion of 'source of information', which is based on Kuno's (1987) observation that in a sentence like (3a), the reflexive *herself* can be interpreted as referring to Mary because she is the source from whom John receives the information. This contrasts with (3b), where Mary is not the source of information. On the basis of Kuno's observation, the hypothesis in (4) can be formulated. Our use of the term 'source' draws on Sells (1987)'s definition of source as the one who is the intentional agent of the communication.

(3a) John heard from Mary$_i$ about a damaging rumor about herself$_i$ that was going around. (Kuno 1987:175)
(3b) John told Mary$_i$ about a damaging rumor about $^{??}$herself$_i$ that was going around.

(4) *Source hypothesis:* Reflexives in PNPs prefer antecedents that are sources-of-information.

For pronouns, an interesting complementary observation has been made: Tenny (2003, 2004) notes that pronouns, which she claims are sensitive to point of view, prefer antecedents that are perceivers of information. Tenny notes that "verbs that provide a sentient, perceiving antecedent are especially conducive to SDPs" (Tenny 2003:14),[2] where SDP stands for 'short-distance pronouns', i.e., pronouns that, contrary to the requirements of standard Binding Theory, have antecedents in the local domain. The effect of perceiver status is illustrated by (5a,b). Example (5a), where Max is the perceiver of information, is judged to sound better than (5b), where Max is the source of information.[3] So, for pronouns, the hypothesis in (6) can be formulated.[4]

(5a) Max$_j$ heard the story about him$_j$. (from Reinhart & Reuland 1993)
(5b) *Max$_j$ told the story about him$_j$. (from Reinhart & Reuland 1993)

(6) *Perceiver hypothesis*: Pronouns in PNPs prefer antecedents that are perceivers-of-information.

1.2. Our previous work on English

In our previous research on English, we tested whether data from off-line and on-line tasks provide support for the source and perceiver hypotheses in (4) and (6). We investigated participants' interpretation of pronouns and reflexives in PNPs in sentences like (7). By manipulating the verb (*tell*

---

[2] Tenny proposes point-of-view/sentience-based binding domains and argues that pronouns must be free in their local point-of-view domains (Tenny 2003).

[3] Chomsky (1986:167) also points out that verb semantics affects the referential properties of pronouns in PNPs:
(a) *They$_i$ told stories about them$_i$. (b) They$_i$ heard stories about them$_i$. (Chomsky 1986:166-167)
Chomsky notes that a sentence like 'They told stories about them' usually means that the stories 'belong to' those telling them. In his opinion, telling your own stories about yourself is more likely than you telling someone else's stories about you. In contrast, *hear* does not require that the stories be your own (see also Bhatt & Pancheva 2006). Chomsky uses this difference, combined with the claim that there is a null subject (PRO) in the PNP, to derive the grammaticality difference between (a) and (b).

[4] In related work, Keller and Asudeh (2001) argue that pronouns cannot refer to the subjects of accomplishment [+existence] verbs such as *take* (e.g. *Lisa$_i$ took a picture of her$_i$). They argue that expressions like *take a picture* form complex predicates, such that the expression *take a picture* is essentially acting as a complex verb, in this case with *Lisa* as the subject and *of her* as the object (see also Runner 2002). In the experiments reported here, we do not use these kinds of verbs, and thus we do not pursue this explanation further.

vs. *hear*), we were able to investigate effects of source vs. perceiver status, since with *tell*, the subject is the source and the object is the perceiver and with *hear*, the subject is the perceiver and the object is the source.

(7) Peter {told/heard from} Andrew about the picture of {him/himself} on the wall.

With these kinds of sentences, we can investigate what happens in a situation where structural constraints do not decide between two possible referents for a particular anaphoric form: In such a situation, what factors influence comprehenders' preferences for one antecedent over the other? There are at least two ways in which structural constraints could fail to choose between two potential antecedents. One possibility is that both antecedents are licensed by the structural configuration, i.e., Binding Theory allows either the subject or the object to be the antecedent. The other possibility is that PNPs are a logophoric environment exempt from Binding Theory, i.e., Binding Theoretic constraints do not apply to referential forms in PNPs (e.g. Pollard & Sag 1992, Reinhart & Reuland 1993). In what follows we do not choose between these possibilities. What is important to us is that we have found a syntactic environment in which purely structural conditions (e.g., the Binding Theory) do not decide between multiple possible antecedents for reflexives and pronouns, thus allowing us to examine what additional factors come into play to finally determine the reference resolution.[5]

Given that judgments concerning antecedent preferences in PNPs can be rather murky, we conducted experiments in order to test the validity of the hypotheses in (4) and (6). We used off-line picture choice and scene verification tasks, as well as an on-line eye-tracking study in which participants were shown pictures like Figure 1 and asked to click on the picture mentioned in the (auditorily-presented) sentence.
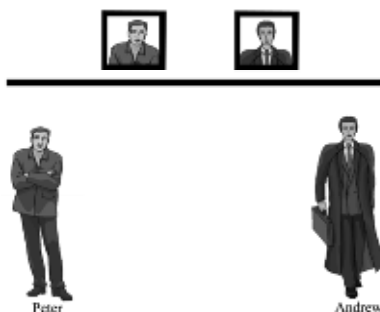

Figure 1. Sample picture for ex(7) from Kaiser et al. (2007, 2008)

The results of our experiments on English revealed that the interpretation of reflexives in PNPs is guided by a strong structural subject preference and also by a weaker but nevertheless significant semantic source-of-information preference. For pronouns, the results reveal a structural object preference and a semantic perceiver-of-information preference. Crucially, the semantic

---

[5] One might wonder whether the presence of the preposition with *hear* and its absence with *tell* has any consequences. In particular, does the presence of the preposition render the object of *hear from* so deeply embedded that it is incapable of binding the reflexive inside the PNP? According to Pollard and Sag (1992) and Jackendoff (1990), the answer is no. They argue that the presence/absence of the preposition has no effect on the object's ability to bind a reflexive, and show that objects inside prepositional phrase arguments of verbs like *hear* have the same binding abilities as direct objects of verbs like *tell* (see also Runner 1998). Furthermore, our results (see below) also indicate that the preposition is not relevant. This is because our finding that the object of *hear from* is a better antecedent for a PNP reflexive than the object of *tell* is precisely the opposite of what should happen if the preposition were obstructing the object's binding abilities. Thus, the structural difference between *hear from* and *tell* cannot explain our results, and is not problematic for our claims.

source/perceiver effects are robust both in off-line data and on-line processing, and emerge early on (Kaiser et al. 2007, 2008).

The finding that reflexives have a subject preference (as well as a source preference) whereas pronouns have an object preference (as well as a perceiver preference) showed that although structural information may not be sufficient to explain the referential properties of pronouns and reflexives in PNPs, it is nevertheless necessary. However, the relative importance of structural vs. semantic constraints does not seem to be the same for pronouns and reflexives, as our results indicate that pronouns are more sensitive to the semantic source/perceiver manipulation than reflexives. This asymmetry can be captured by the form-specific multiple constraints hypothesis (Kaiser & Trueswell 2008). In contrast, analyses which treat PNPs as an exempt environment in which Binding Theoretic constraints do not apply, and analyses which treat the subject and object as equally licensed antecedents, cannot straightforwardly capture the syntactic and semantic biases that emerged in these experiments.

Our previous work on English still leaves several important questions open. First, to what extent are the source and perceiver preferences found in English PNPs a language-particular property of English anaphora resolution? And second, can these preferences be derived from other semantic or pragmatic properties of the sentences containing these anaphora? We attempt to start answering these questions in this paper.

1.3. Aims of this paper

The experiments presented in this paper (Experiment 1 on German and Experiment 2 on Dutch) have two main aims: (i) to test whether the source/perceiver effects extend to reflexives and pronouns in other languages (see also Kaiser, Runner, Sussman & Tanenhaus 2005, Kaiser & Runner 2008 on Finnish) and (ii) to further our understanding of the source/nature of these effects. By testing the interpretation of pronouns, reflexives and emphatics in PNPs in German and Dutch, we aim to shed light on two aspects of the source preference in particular. First, can the source preference be attributed to intensifiers? Second, can the source preference be derived from a general prominence bias? These questions are addressed in Experiments 1 and 2 respectively.

2. Experiment 1 on German: Role of intensifiers

In English, emphatic intensifiers, illustrated in (8a), have the same form as proper syntactic reflexives (8b).

(8a) The king <u>himself</u> opened the doors.
(8b) The king congratulated <u>himself</u>.

This ambiguity has consequences for our view of reflexives in PNPs when we combine it with the observation that, in English, object pronouns cannot co-occur with an intensifying reflexive, as shown in (9b), in contrast to subject pronouns which can be combined with an intensifier (e.g. *he himself*).

(9a) I saw the king himself.
(9b) *I saw him himself.

In light of the ungrammaticality of (9b), it has been suggested (e.g. de Vries 1999, cf. Bergeton 2004 for related discussion) that, at least in English, intensified object pronouns surface as reflexives. If this claim is on the right track, it would mean that reflexives in PNPs could either be proper reflexives or, underlyingly, intensified pronouns. Existing work has shown that the use of intensifiers is guided by a number of semantic/pragmatic considerations, such as occupying a position higher on a hierarchy than another entity or being the perspectival center (e.g. Koenig & Siemund 2000:45, Koenig & Gast 2006:230). It has also been claimed that sources occupy a higher position than goals/perceivers on the accessibility hierarchy (e.g. Arnold 2001). If this hierarchy is relevant to the use of

intensifiers, we are faced with the possibility that the source effects observed for reflexives in PNPs in English could be due to the reflexive actually being an intensified pronoun. If the source effects for PNP reflexives can be attributed to intensification, it might be possible to maintain the claim that proper reflexives are only sensitive to syntactic constraints.

Due to its morphological properties, German can be used to investigate the role of intensification, because German emphatic intensifiers (*selbst*) are distinct from reflexives (*sich*). If source effects are due to intensification, the prediction is that they will only arise when the PNP contains the combined form reflexive + intensifier (*sich selbst*), but not when the PNP contains a plain reflexive (*sich*).

2.1. Design, participants, procedure

In this experiment, we crossed verb type (*tell / hear*) and anaphoric form (*pronoun / reflexive / emphatic reflexive*), creating six conditions, as shown in (10). We used a questionnaire task with 24 target items and 36 fillers. Native German speakers (n=30) read sentences like (10) and were asked who was shown in the picture. [6] There were four possible answer choices: (i) subject, (ii) object, (iii) either one is possible, or (iv) a third person who is not mentioned in the sentence. The answer choices were presented to the participants by using the names of characters in each sentence, in order to avoid making reference to notions such as subject and object. For example, the choices for (10) were: (i) Tobias, (ii) Peter, (iii) it could be either Tobias or Peter, or (iv) someone else. The study was conducted over the internet.

(10) Tobias {erzählte/hörte von} Peter von dem Bild von {ihm / sich / sich selbst}.
      Tobias {told/heard from} Peter about the picture of {pronoun / reflexive / emphatic reflexive}.

2.2. Results and discussion

As Figure 2 (on the next page) illustrates, participants' responses show that the reflexive and emphatic reflexive conditions pattern alike: Both exhibited a clear subject preference, modulated by a source preference. In other words, participants were significantly more likely to interpret a reflexive (*sich*) or an emphatic reflexive (*sich selbst*) as referring to the subject than the object, and significantly more likely to do so when the verb was *tell* (subject = source) than *hear* (subject = perceiver) (p's<.05). This outcome replicates the source bias that was found for English PNP reflexives in our earlier work, and shows that it extends beyond English. Crucially, the finding that in German even plain reflexives have a source preference shows that a source preference can arise without any intensification. In other words, semantic factors must be acknowledged even for plain reflexives.

The pronoun conditions triggered more object choices than subject choices (Figure 2). Moreover, the pronoun conditions also exhibited a significant perceiver preference. Participants were significantly more likely to interpret a pronoun (*ihm/ihr*) as referring to the object when the verb was *tell* (object = perceiver) than when the verb was *hear* (object = source) (p<.05). The pronoun results resemble the findings for English PNP pronouns, showing that the perceiver preference is not restricted to English.

In sum, the results of Experiment 1 show that (i) the perceiver preference for pronouns and the source preference for reflexives extend beyond English and that (ii) the source preference is present even with plain reflexives that do not contain a 'hidden' intensifier. With English, it was not clear whether the source effects with reflexives could possibly be due to intensification, but the morphological distinction between reflexives and intensifiers in German allows us to test this, and the

---

[6] Some German-speaking linguistics colleagues have mentioned a concern that examples like (10) contain multiple instances of the preposition *von*, which can sound repetitive. However, other German speaking colleagues have indicated that they do not find this to be problematic. It is also worth noting that participants had the opportunity to fill out a comment box after completing the questionnaire and their comments did not mention the multiple occurrences of *von*. And finally, typically colleagues agreed that a potential alternative way of forming (10), using the preposition *über* (e.g. *X {erzählte/hörte von} Y über das Bild...*), was dispreferred or even ungrammatical. For these reasons we maintained the forms in (10).

results indicate that the source preference observed in Experiment 1 does not stem from the presence of intensification.
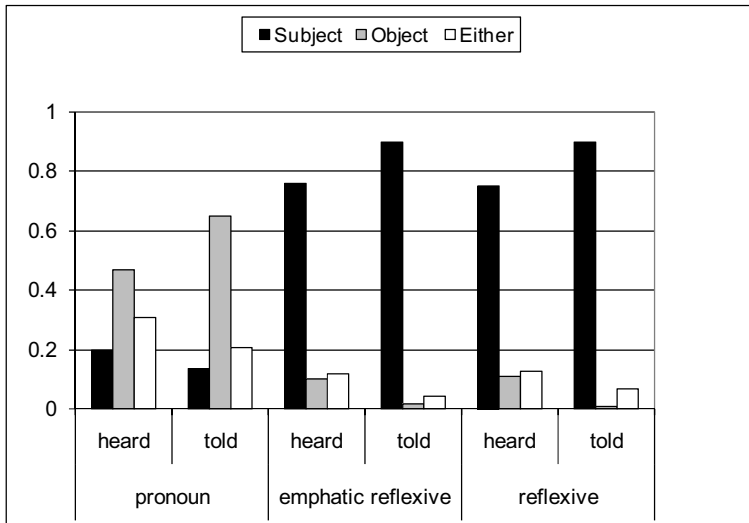

Figure 2. Results of Experiment 1 (German), showing the proportion of subject choices, object choices and 'either one is possible' choices in each of the six conditions.

3. Experiment 2 on Dutch: Role of prominence

Our research on English and German revealed that pronouns in PNPs have a perceiver preference whereas reflexives have a source preference. However, so far we have not tackled the question of *why* this should be: why should pronouns, rather than reflexives, prefer perceivers? Why should reflexives, rather than pronouns, prefer sources?

One possibility is that these biases are connected to the fundamental distinction between pronouns and reflexives (anaphors). According to this view, forms which are pronominal (non-reflexive) by definition have a perceiver preference, whereas forms which are reflexive (anaphoric) prefer sources. In other words, the biases stem from complementary distribution on the semantic level.

However, another possibility is that the source preference we observed for reflexives in PNPs is not inherently linked to the linguistic property of being reflexive/anaphoric, but instead is part of a general preference that reflexives have for *prominent antecedents*. It is commonly accepted that reflexives have a preference (or requirement, according to some theories) for structurally prominent antecedents, in particular subjects. Could it be that the source preference exhibited by reflexives results from a preference for thematic prominence? A full definition of thematic prominence is beyond the scope of this paper, but in light of the widely-accepted claim that agents occupy the highest position on the thematic hierarchy, it seems reasonable to assume that agentive entities are thematically prominent. In sentences such as (7), the source could arguably be regarded as agentive, because the person who is the source is the one communicating the information. This suggests that the source preference could derive from a preference for thematically prominent antecedents.[7]

If this hypothesis is correct, it predicts that referential forms that prefer prominent antecedents should prefer sources, independently of pronoun/reflexive status. Dutch emphatic pronouns allow us to test this. Dutch emphatic pronouns consist of a pronoun and the intensifier *zelf* (e.g. *hijzelf* 'he-NOM + self', *hemzelf* 'he-ACC + self'). These forms are syntactically pronominal – they cannot be bound by a local antecedent, see de Vries (1999), ex.(35) – and prefer antecedents that are prominent at that point in the discourse (see de Vries 1999). If the source preference that we observed for reflexives in English and German is part of a general prominent antecedent preference, the prediction is that Dutch emphatic

---

[7] We leave for future work the question of how the idea that reflexives have a general preference for prominent antecedents relates to claims that logophoric expressions refer to entities at the perspectival/point-of-view center.

pronouns will prefer sources. However, if pronoun/reflexive status is what determines source/perceiver preference, the prediction is that Dutch emphatic pronouns will prefer perceivers.

3.1. Design, participants, procedure

This experiment crossed verb type (*tell / hear*) and anaphoric form (*pronoun / reflexive / emphatic pronoun*). This created six conditions, as shown in (11).[8]

(11) Arne {vertelde/hoorde van} Hans over de foto van {hem / zichzelf / hemzelf}.
　　Arne {told/heard from} Hans about the picture of {pronoun / reflexive / emphatic pronoun}

As in Experiment 1, we used a questionnaire task (24 target items, 36 fillers) conducted over the internet. Native Dutch speakers (n=36) read sentences like (11) and were asked who was shown in the picture. The answer choices were presented as in Experiment 1: (i) Arne (coded as subject), (ii) Hans (object), (iii) it could be either Arne or Hans, or (iv) someone else.

3.2. Results and discussion

As can be seen in Figure 3, reflexives show a significant subject preference, modulated by a source preference: Participants chose the subject significantly more often with *hear+reflexive* than *tell+reflexive* ($p<.05$). Like reflexives, emphatic pronouns show a significant preference for subjects over objects ($p<.05$), as well as a source preference. However, the subject preference is weaker with emphatic pronouns than with reflexives.
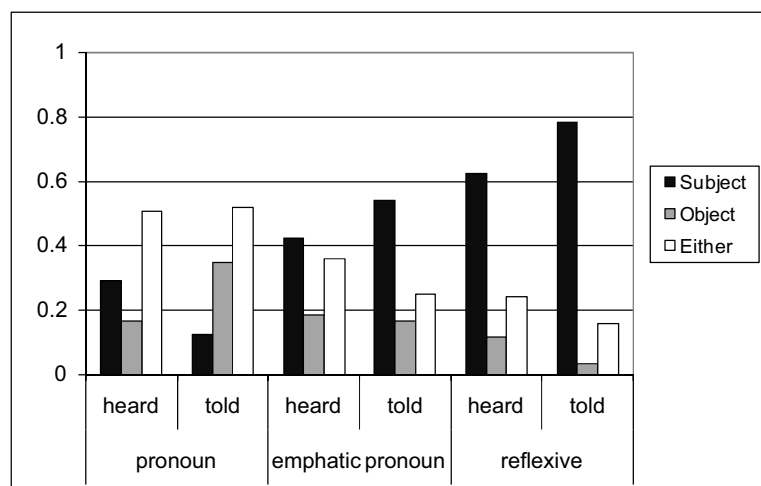

Figure 3. Results of Experiment 2 (Dutch), showing the proportion of subject choices, object choices and 'either one is possible' choices in each of the six conditions.

---

[8] We used the reflexive *zichzelf*, rather than *zich*, because *zich* is not grammatical in PNPs in Dutch. It is also worth noting that although *zichzelf* could be regarded as having emphatic properties in certain contexts, in the PNP construction it is the only available reflexive form. Thus, in the PNP construction we treat it as a non-emphatic reflexive. When investigating Dutch anaphora, it is also important to acknowledge the existence of regional variation (e.g. Barbiers & Bennis 2003). Since our participants completed the questionnaire on the web, it is unlikely that they were all from any one particular region. A range of regional backgrounds can in fact be an advantage, because it would suggest that the results are not limited to a particular regional dialect and that any patterns observed in the data are robust enough that they emerge even in the presence of potential dialectal variation. However, we acknowledge the importance of conducting future research into potential dialectal differences, in particular concerning the use of *hemzelf/haarzelf*.

In the pronoun conditions, the numerically most common response – regardless of verb – was 'either one is possible', i.e., participants felt that both the subject and the object were possible antecedents for the pronoun. However, responses in the pronoun conditions also reveal a perceiver preference: there were significantly more object choices with *tell* than with *hear*, and significantly more subject choices with *hear* than with *tell* (p's<.05).

In sum, emphatic pronouns appear to pattern more like reflexives than like pronouns, in preferring the subject over the object and the source over the perceiver. The finding that 'regular' pronouns and emphatic pronouns do not pattern as a unified class suggests that source/perceiver preferences are independent of pronoun/reflexive status, and is compatible with the hypothesis that the source preference is part of a general prominence preference.

4. Conclusions

The starting point for the research presented in this paper was the question of what happens when structural constraints do not fully determine choice of antecedent, i.e., when they fail to choose between two possible referents for a particular anaphoric form. Building on our previous work on English (Kaiser et al. 2007, 2008), we investigated what factors guide reference resolution in German and Dutch in such situations. By looking at German and Dutch, we were able to (i) test whether the source/perceiver effects we found for English extend to other languages (see also Kaiser et al. 2005, Kaiser & Runner 2008 on Finnish) and to (ii) learn more about the nature of these semantic effects.

Let us first summarize our results for regular (non-emphatic) pronouns and reflexives in Experiments 1 and 2. Our results indicate that reflexives in Dutch and German PNPs, similar to English reflexives, show a strong subject preference modulated by a source preference. Pronouns, on the other hand, show a preference for perceivers in all three languages. Thus, we conclude that the semantic patterns extend beyond English. Furthermore, the asymmetrical behavior of pronouns and reflexives that we observed for English also arises in Dutch and German: the results suggest that the relative weights of structural and semantic constraints are different for pronouns and reflexives, with reflexives being relatively more sensitive to structural information and pronouns showing a greater susceptibility to the semantic manipulation. This type of situation is easily captured by a reference resolution model that incorporates (weighted) syntactic and semantic constraints (see Kaiser & Trueswell's (2008) form-specific multiple-constraints approach)

The results for emphatic reflexives in German and emphatic pronouns in Dutch help us to further understand the nature of the source/perceiver effects. The finding that the results for German 'plain' reflexives and emphatic reflexives are very similar indicates that a source preference arises with reflexives regardless of whether an intensifier is present or not. This suggests that source effects cannot be 'blamed' on intensification and must be allowed even for regular reflexives. The Dutch data indicate that regular pronouns and emphatic pronouns do not pattern as a unified class, suggesting that source/perceiver patterns can be separated from the reflexive/pronoun distinction and that the source preference may stem from a more general preference for prominent antecedents.

In sum, the results presented here contribute to our understanding of anaphor resolution in PNPs by showing that the source/perceiver effects found in English PNPs extend to other languages, and by clarifying that source effects are not tied solely to reflexive forms or the potential presence of intensifiers. These findings also highlight an important question for future work concerning the level(s) of representation on which the source and perceiver effects are encoded in the grammar. Are they part of the semantic/thematic representation, with the source/perceiver distinction best regarded as a semantic/thematic role manipulation, or are they part of the discourse/pragmatics representation, having to do with point-of-view and information flow or other features of discourse? The answers to these questions will be important as we try to further understand how anaphor resolution is guided by the interactions between structural influences (syntactic structure, grammatical function) and source/perceiver influences. It is our hope that we have begun to contribute to this understanding.

References

Arnold, Jennifer. (2001). The effect of thematic roles on pronoun use and frequency of reference continuation. *Discourse Processes 31*, 137-162.

Barbiers, Sjef. & Bennis, Hans. (2003). Reflexives in Dialects of Dutch. In Jan Koster and Henk van Riemsdijk (eds.) *Germania et alia. A Linguistic Webschrift for Hans den Besten*. Electronic publication, University of Groningen, Groningen. <http://odur.let.rug.nl/koster/DenBesten/contents.htm>

Bergeton, Uffe. (2004). *The independence of binding and intensification.* Dissertation, University of Southern California, Los Angeles.

Bhatt, Rajesh. & Pancheva, Roumyana. (2006). Implicit Arguments. In *The Blackwell Companion to Syntax*, v. II, 554-584. Oxford, UK: Blackwell Publishers.

Cantrall, William. (1974) *Viewpoint, Reflexives, and the Nature of Noun Phrases*. The Hague: Mouton.

Chomsky, Noam. (1981). *Lectures on Government and Binding.* Dordrecht: Foris.

Chomsky, Noam. (1986). *Barriers*. Cambridge, MA: MIT Press.

de Vries, Mark. (1999). Het schemergebied tussen pronomina en anaforen. *Nederlandse Taalkunde* 4, 125-160.

Jackendoff, Ray. (1972). *Semantic interpretation in generative grammar.* Cambridge, MA: MIT Press.

Jackendoff, Ray. (1990). On Larson's treatment of the double object construction. *Linguistic Inquiry*, 21, 427-456.

Kaiser, Elsi & Runner, Jeffrey T. (2008). *Pronouns, reflexives and something in-between: A cross-linguistic investigation of reference resolution in Finnish, German and Dutch.* Talk presented at the Third Workshop on Quantitative Investigations in Theoretical Linguistics (QITL), Helsinki, Finland.

Kaiser, Elsi, Runner, Jeffrey T., Sussman, Rachel S. & Tanenhaus, Michael K. (2005). *Reference resolution for reflexives and pronouns in Finnish.* Poster presented at 18th Annual CUNY Conference on Human Sentence Processing, University of Arizona.

Kaiser, Elsi, Runner, Jeffrey T., Sussman, Rachel S. & Tanenhaus, Michael K. (2007). *The real-time interpretation of pronouns and reflexives: Structural and non-structural information.* Talk presented at the 20th Annual CUNY Conference on Human Sentence Processing. University of California-San Diego.

Kaiser, Elsi, Runner, Jeffrey T., Sussman, Rachel S. & Tanenhaus, Michael K. (2008). The real-time interpretation of pronouns and reflexives: Structural and semantic information. In Emily Efner & Martin Walkow (eds), *Proceedings of 37th Annual Meeting of the North East Linguistics Society.* GLSA, UMass.

Kaiser, Elsi & Trueswell, John C. (2008) Interpreting pronouns and demonstratives in Finnish: Evidence for a form-specific approach to reference resolution. *Language and Cognitive Processes 23(5):* 709 - 748

Keller, Frank & Asudeh, Ash. (2001). Constraints on linguistic coreference: Structural vs. pragmatic factors. In J. Moore & K. Stenning (Eds.), *Proceedings of 23rd Annual Conference of the Cognitive Science Society* (pp. 483-488). Mahwah, NJ: L. Erlbaum.

Koenig, Ekkehard. & Gast, Volker. (2006). Focused assertion of identity. *Linguistic Typology* 10.

Koenig, Ekkehard & Peter Siemund (2000) 'Intensifiers and reflexives: A typological perspective'. In Z. Frajzyngier & T. S. Curl (eds.) *Reflexives. Forms and Functions*. Amsterdam: Benjamins, 41-74.

Kuno, Susumu. 1987. *Functional Syntax. .* Chicago: University of Chicago Press.

Pollard, Carl & Sag, Ivan. (1992). Anaphors in English and the scope of Binding Theory, *Linguistic Inquiry,* 23, 261-303.

Reinhart, Tanya. & Reuland, Eric. (1993). Reflexivity, *Linguistic Inquiry,* 24, 657-720.

Runner, Jeffrey T. (2002). When Minimalism isn't Enough: an Argument for Argument Structure. *Linguistic Inquiry*, 33(1), 172-182.

Sells, Peter. (1987). Aspects of Logophoricity, *Linguistic Inquiry,* 18(3), 445-479.

Tenny, Carol. (1996). *Short distance pronouns and locational deixis*. LinguistList on-line conference.

Tenny, Carol. (2003). *Short Distance Pronouns in Representational Noun Phrases and a Grammar of Sentience.* Ms. <http://www.linguist.org/Wiltschko-pronouns.pdf>

Tenny, Carol. (2004). *Pronoun Binding and the Grammar of Sentience.* Talk presented at the Workshop on Semantic Approaches to Binding Theory, 16th European Summer School in Logic, Language and Information, Nancy, France.

Williams, Edwin. (1987). Implicit arguments, the binding theory and control. *Natural Language and Linguistic Theory,* 5, 151-180.

Zribi-Hertz, Anne. (1989). Anaphor Binding and Narrative Point of View English Reflexive Pronouns in Sentence and Discourse, *Language,* 65(4), 695-727.

Proceedings of the 27th West Coast Conference on Formal Linguistics

edited by Natasha Abner and Jason Bishop

Cascadilla Proceedings Project   Somerville, MA   2008

Copyright information

Ordering information

Orders for the library binding edition are handled by Cascadilla Press.
To place an order, go to www.lingref.com or contact:

Cascadilla Press, P.O. Box 440355, Somerville, MA 02144, USA
phone: 1-617-776-2370, fax: 1-617-776-2271, e-mail: sales@cascadilla.com

Web access and citation information

This entire proceedings can also be viewed on the web at www.lingref.com. Each paper has a unique document # which can be added to citations to facilitate access. The document # should not replace the full citation.

This paper can be cited as:

Kaiser, Elsi and Jeffrey T. Runner. 2008. Intensifiers in German and Dutch Anaphor Resolution. In *Proceedings of the 27th West Coast Conference on Formal Linguistics*, ed. Natasha Abner and Jason Bishop, 265-273. Somerville, MA: Cascadilla Proceedings Project.

or:

Kaiser, Elsi and Jeffrey T. Runner. 2008. Intensifiers in German and Dutch Anaphor Resolution. In *Proceedings of the 27th West Coast Conference on Formal Linguistics*, ed. Natasha Abner and Jason Bishop, 265-273. Somerville, MA: Cascadilla Proceedings Project. www.lingref.com, document #1840.