

# SPECIFICITY AND IMPLICATURES<sup>1</sup>

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In this paper we argue for a unified treatment of the effects of specificity in the Russian pronominal system and in the case of differential object marking in Romanian. Based on a model of semantic underspecification and pragmatic reasoning, we claim that different readings of indefinites can be traced back to the different binding properties of an implicit argument (the referential anchor) which we postulate for specificity markers, and additional pragmatic restrictions on binding arising from conventional implicatures.

## 1. Introduction

It is well known in the literature that indefinites tend to be ambiguous between so-called specific and non-specific readings. Under the label of “specificity” a whole number of different contrasts have been discussed, including epistemic, scopal and relative specificity (cf. Farkas 1995, von Heusinger 2007). While in many languages there seem to be unmarked indefinites which tend to reflect the whole amount of specificity-related ambiguities, languages may also overtly mark different types of specificity by different means such as indefinite pronouns (German, Russian, etc.) or differential object marking (Turkish, Romanian, etc.). In this paper, we claim that much of the difficulty in giving precise semantic values for markers of particular types of specificity can be traced back to semantic underspecification relating to pragmatic enrichment and inference. In particular we will present a semantic model for indefinites based on the notion of referential anchoring and show how pragmatic interactions account for scope and epistemic effects in the Russian pronominal system and in the development of differential object marking and clitic doubling in Romanian.

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## 2. Effects of Specificity in Russian and Romanian

In the following, we will present the key data of our inquiry. In the first step, we show one example for the phenomenon investigated; and in the second step, we give an overview of the readings arising in the interaction with intensional and extensional operators, on the one hand, and the epistemic status of the indefinite with regard to the identifiability of its referent by the speaker, on the other hand.

### 2.1. Russian Data

Indefinite noun phrases in Russian can be accompanied by indefinite pronouns such as *kakoj-to/koe-kakoj/nibud'*, as shown in (1), cf. Dahl (1970).

- (1) *Igor' hochet zhenit'sja na kakoj-to/koe-kakoj/kto-nibud' studentke.*  
 Igor wants marry wh-to/ koe-wh/wh-nibud' student  
 'Igor wants to marry some student.'

These pronouns serve as indefinite determiners and disambiguate different readings with respect to the features summarized in Table 1:

Table 1: Available readings for indefinites marked with indef. pronouns in Russian

Interaction with...	<i>koe-wh</i>	<i>wh-to</i>	<i>wh-nibud'</i>
extensional quantifiers	wide scope	wide scope preferred	narrow scope
intensional operators	wide scope	wide scope	narrow scope
Identifiability of the referent by the speaker	yes	no	no

While *koe* and *to* induce wide scope readings in most contexts, wide scope readings are excluded for indefinites with *nibud'*. Narrow scope readings in which the referent of the indefinite strictly depends on some referents in the sentence as in (2) are not available for *nibud'* but are acceptable for *to* under narrow scope.

- (2) *Kazhdyj muzh zabyl kakuju\*-nibud'/-to datu, a imenno den' rozhdenija svoej zheny*  
 Each man forgot wh-nibud'/to date namely birthday of his wife  
 'Each husband has forgotten a certain date – his wife's birthday.'

### 2.2. Romanian Data

Romanian exhibits differential object marking with the case marker *pe*, depending on referentiality and animacy, such that some animate indefinite direct objects may be marked by *pe*. If a direct object is *pe*-marked, usually clitic doubling also occurs. It is, however, possible for *pe*-marked indefinite direct objects to occur without clitic

doubling as well. We distinguish the following structures:

- (3) *Ion a văzut -o pe o secretară.* **+CL +PE**  
 John has seen CL PE a secretary  
 ‚John saw a specific secretary’
- (4) *Ion a văzut pe o secretară.* **-CL +PE**  
 John has seen PE a secretary  
 ‚John saw a specific secretary’
- (5) *Ion a văzut o secretară.* **-CL -PE**  
 John has seen a secretary  
 ‚John saw a secretary’

While in present-day Romanian a semantic contrast between the type +CL +PE and type -CL +PE is not very clear any more, in the first half of the 20<sup>th</sup> century, such a contrast is observable in the statistic distribution of these types in contexts involving different kinds of specificity, cf. von Heusinger & Onea (to appear). The semantic effects observed are listed in Table 2:

Table 2: Readings for indefinite direct objects in Romanian (first half 20<sup>th</sup> century)

Interaction with	+CL +PE	-CL +PE	-CL -PE
extensional quantifier	wide scope	wide scope	preferred narrow scope
intensional operators	wide scope	wide scope	wide or narrow scope
Identifiability of the referent by the speaker	yes	not preferred	no

### 3. Semantic Analysis

In order to account for the data we will present a model of semantic underspecification for indefinite NPs. Hereby we will use the notion of referential anchoring (von Heusinger 2007) which we will model as parameterized choice functions (Kratzer 1998) involving an implicit *e*-type argument.

#### 3.1. Referential Anchoring

In the discussion about indefinites, examples in which narrow scope indefinites strictly co-vary with the quantifier phrase, as shown in the English translation of (2) where the dates are strictly dependent on the individual husbands, have been widely discussed. Based on Kratzer (1998), we assume that this dependency can best be accounted for as shown in (6):

$$(6) \quad \forall x(\text{husband}(x) \rightarrow \text{had forgotten}(x, f_x(\text{date})))$$

In the formalism,  $f$  is a free function variable, representing a contextually salient partial function from individuals into choice functions. The subscripted  $x$  is an implicit argument of the indefinite and is of type  $e$ .  $f_x$  is a partial choice function that takes some set as an argument and returns an individual member of this set. In our example, the implicit argument is bound by the universal quantifier and therefore  $f_x$  maps the set of dates to particular dates depending on each husband. In other words, the dates are referentially anchored to each husband. Note that if the implicit argument was not anchored to husbands but, say, to the speaker, a wide scope reading would also be possible.

We assume that argumental indefinites can generally be modelled as parameterized choice functions in this way; indefinites always introduce discourse referents referentially anchored to some (possibly non-established) individual. The major advantage of this view is that the referential anchor, modelled as an implicit argument, allows for interaction both with quantifier expressions and discourse participants.

### 3.2. Binding Constraints on the Implicit Argument

The basic idea of this section is that indefinites are underspecified with regard to effects of specificity, but lexical or functional markers may fix different specific readings by imposing constraints on the binding of the implicit argument. Accordingly, the contrasts from table 1 and 2 can be captured by constraints on the implicit argument. For the sake of simplicity we assume that in Russian *koe/to/nibud'* take  $\langle e, t \rangle$  type arguments and ignore the meaning of the *wh*-pronoun. For Romanian we assume that *pe* is an overt case marker licensed by specific readings of indefinites. Hence, for *pe* only licensing conditions apply instead of lexical entries:

Table 3: *Lexical entries / licensing conditions for specificity markers*

	<i>koe-</i>	<i>-to</i>	<i>-nibud'</i>	<i>pe</i>	CL
lexical entry	$\lambda P f_x(P)$ $x=\text{speaker}$	$\lambda P f_x(P)$	$\lambda P \exists x f_x(P)$	licensed if the referential anchor of the indefinite is bound as a pronoun	marks familiarity to the speaker
scope	wide	–	narrow	wide	–

As shown in Table 3, the only difference between the lexical entries of specificity markers concerns the binding properties of the implicit argument. While for Russian *to*, no constraints are postulated, and hence any scope properties are allowed, we assume that the implicit argument of *koe-* must be bound by the speaker yielding necessary wide scope and identifiability by the speaker. The implicit argument of the non-specificity marker *nibud'* is existentially closed at the lexical level yielding narrow

scope. The Romanian differential object marker *pe* can only mark indefinites which have referential anchors bound outside their clause like pronouns bound according to Principle B of Binding-Theory (Chomsky 1981) giving rise to wide scope (cf. Table 2).

#### 4. Pragmatic Enrichment

As one can observe, not all aspects of Table 1 and 2 have been accounted for in the semantic analysis. Indefinites with *to* exhibit a strong preference for wide scope over extensional quantifiers and always take wide scope over intensional operators, but according to Table 3 their scope properties are lexically underspecified. We will account for these aspects pragmatically by means of conventionalised implicatures.

As shown in von Heusinger & Onea (to appear), in Romanian, clitic doubling and differential object marking interact giving birth to pragmatic effects. The key argument is as follows: It is hypothesised that clitic pronouns signal discourse familiarity of their referents. Since indefinites are discourse new, they cannot be discourse familiar. Therefore the semantic import of clitic doubling gets re-interpreted as signalling familiarity to the speaker. *Pe*, on the other hand, marks indefinite direct objects only if their implicit argument gets bound outside the clause. If a clitic doubling co-occurs with *pe*-marking, clitic doubling marks familiarity to the speaker and hence turns the speaker into a very salient binder for the implicit argument of the *pe*-marked indefinite. Thus, the speaker becomes the referential anchor of the indefinite. If, however, *pe*-marking is used without clitic doubling, pragmatic reasoning yields that the indefinite is not referentially anchored to the speaker, since otherwise clitic doubling could have been used. Some preference of unmarked indefinite direct objects (-CL -PE) for narrow scope under extensional operators can be derived.

The same pattern can be applied to the case of *to* in Russian. For *to* two pragmatic contrasts apply. On the one hand, *to* contrasts with *koe*. Both can occur in any logical environment and since *koe* lexically signals that the speaker is the referential anchor, we consider *koe* to be more informative. Therefore, if *to* is used, the hearer can infer that the conditions for *koe*, namely speaker anchoring, are not met. From here we derive the rather strange reading of *to* as marking non-identifiability of the referent by the speaker. This conventional implicature can be cancelled or reinforced as in (7).

- (7) *Igor videl kakuju-to zhenshchinu ok Ja dejstvitel'no ne znaju kto eto byl.*  
 Igor saw wh-to woman I really don't know who it was.  
 'Igor saw some woman. I really don't know who it was.'

On the other hand, *to* contrasts with *nibud'*. Again, *nibud'* has restrictions on the implicit argument, existentially binding it at the lexical level, which makes it more infor-

mative. *To* has no such restrictions. Pragmatic reasoning now applies in different ways for intensional and extensional contexts: in intensional contexts, only wide and narrow scope come into consideration. *Nibud'* signals narrow scope and therefore the implicature arises that *to* signals wide scope. In extensional contexts, on the other hand, an additional reading in which the referent of the indefinite co-varies with some other referent as shown in (2) must be considered. Since in this case wide scope is not the only alternative to the semantics of *nibud'*, the implicature arises that the implicit argument of *to* is not narrow scoped, i.e. it is either bound by the extensional quantifier or out-scopes it. The latter is of course a more typical possibility.

## 5. Conclusion

In this paper, we have argued for an underspecified uniform semantics for indefinites involving an implicit argument and choice functions. The implicit argument interacts with quantifiers and the discourse context fixing an appropriate referential anchor for the indefinite. We further argued that lexical and functional markers of different specificity types impose restrictions on the binding of the implicit argument. Using these assumptions we have accounted for a range of scope and epistemic properties of indefinites in Russian and Romanian. The remaining properties of specificity markers in Romanian and Russian have been derived by pragmatic reasoning arising from contrasts to other available markers.

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