Specificity as Speaker Identifiability

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1. Previous Analyses
1.1 Semantic Approaches: Scope
Within the framework of the semantics approach, specificity is sometimes analyzed as a property essentially identical to scope. According to this approach, specific NPs are NPs that take widest scope possible, whereas non-specific NPs are NPs interpreted within the scope of some operator.

1. Melinda wants to buy a motorcycle.　　　(Ioup (1977:233))

2 a. She will buy it tomorrow.　　　　　　　(Ioup (1977:233))
　 b. She will buy one tomorrow.　　　　　　(Ioup (1977:233))

3 a. $\exists x$ (motorcycle (x) $\wedge$ want (Melinda, (buy (Melinda, x))))
　 b. want (Melinda, $\exists x$ (motorcycle (x) $\wedge$ (buy (Melinda, x))))

Shortcomings:

i).　The notion of specificity is redundant.
ii). The intuitively present specificity contrast in sentences like (4) cannot be accounted
　　 for:

4. A picture fell off the wall.

5. It was my favorite picture.

1.2 The Pragmatic Approach: Speaker Identifiability
Under the pragmatic approach, a specific NP is defined as an NP whose referent is identifiable to the speaker. The referent of a non-specific NP is not known to the speaker.

Groenendijk and Stokhof (1980): Epistemic pragmatics.

6. Let γ and δ be predicates and α, an individual constant. Let SPEC (x, φ, Θ, EM) be defined the following way: "in uttering φ, x refers specifically to Θ in the situation described by the epistemic model EM, where Θ may denote an individual z or set of individuals Z."

　　a. SPEC (x, $\gamma(\alpha)$, z, EM)　　　　　iff　　　F(α,x) = {z}

b. SPEC (x, ALL $\gamma(\alpha)$, Z, EM)   iff $F(\gamma,x) = \{Z\}$
c. SPEC (x, THE $\gamma(\alpha)$, z, EM)   iff $F(\gamma,x) = \{\{z\}\}$
d. SPEC (x, A $\gamma(\alpha)$, z, EM)   iff $\forall X \in F(\gamma,x), \forall y \in F(\delta,x):$
   $X \cap Y = \{z\}$
e. SPEC (x, SOME $\gamma(\alpha)$, Z, EM) iff $\forall X \in F(\gamma,x), \forall y \in F(\delta,x):$
   $X \cap Y = Z$ and $|Z| \geq 2$
f. SPEC (x, N $\gamma(\alpha)$, Z, EM)   iff $\forall X \in F(\gamma,x), \forall y \in F(\delta,x):$
   $X \cap Y = Z$ and $|Z| = n$

The definition of specificity depends on whether an NP is definite or not.
Specificity of a definite NP depends on the speaker's knowledge of the denotation of the predicate contributed by the NP. Specificity of indefinite NPs is claimed to be dependent on the speaker's knowledge of the denotation of two predicates: the one contributed by the NP in question and the one that corresponds to the predicative part of the sentence.

4. A picture fell off the wall.

Shortcomings of Groenendijk and Stokhof's approach:

i). A unifying analysis of specificity is not provided.
ii). The dependence on the denotation of the VP. Intuitively, the subject NP in (4) can be specific even if the speaker does not know which (other) objects fell off the wall and whether or not the intersection of this set and the set of pictures is a singleton.

Shortcomings of the pragmatic approach to specificity in general:

i). Ioup (1977): in Russian, the opaque / transparent (or wide / narrow scope) distinction can be lexically encoded, while the contrast in speaker identifiability cannot.

7 a. Ona xočet [vyjti zamuž] za kogo-to.
     she wants marry(inf)   to someone
     She wants to marry someone (particular).
  b. Ona xočet [vyjti zamuž] za kogo-nibud'.
     she wants marry(inf)   to someone
     She wants to marry someone (anyone).
                                          (Ioup (1977:241))

ii). A claim: The notion of speaker identifiability is too vague. It is an extra-linguistic factor which does not contribute to the interpretation of a sentence. Rather, it has to do with knowledge of the world, with people's minds and intentions, but does not constitute a part of the message that an utterance encodes.

The properties of so-called -to items in Russian, discussed below, demonstrate that the two arguments against the pragmatic approach to specificity do not hold.

2. Lexical Encoding of (the Absence of) Speaker Identifiability
2.1 *-to* Items

-to items constitute a series of lexical items with existential meaning in Russian. Morphologically, they consist of a wh- word and the suffix *-to* attached to it.

Table 1.

kto-to	who + *to*	someone
čto-to	what + *to*	something
kakoj-to	which + *to*	some
gde-to	where + *to*	somewhere
kak-to	how + *to*	somehow

2.1.1 *-to* Items and Scope

Pereltsvaig (2000): *-to* items obligatorily get wide scope readings.
Dahl (1970), Ioup (1977): *-to* items are inherently specific (under the scope approach to specificity).

Indeed, *-to* items strongly tend to take wide scope:

8 a. Dima ne   zametil kakogo-to studenta.
   Dima NEG noticed some   student
   There is a student that Dima didn't notice.
  b. Maša dolžna pogovorit' s   kakim-to studentom.
   Masha must talk   with some   student
   Masha must talk to some student.
  c. Maša xočet vyjti zamuž za kakogo-to šveda.
   Masha wants marry(inf)   to some(acc) Swede(acc)
   Masha wants to marry some Swede.
  d. Tri   učitelja vyzvali kakogo-to studenta.
   Three teachers called   some   student
  e. Vse učitelja vyzvali kakogo-to studenta.
   All teachers called some   student
  f. Esli Maša pozvonit kakomu-to studentu, ona uznajet,   gde   proxodit' seminar.
    If Masha call(fut) some   student   she know(fut) where passes   seminar
    If Masha calls some student, she will know where the seminar takes place.

However, exceptions can be found:

9. Lena dumajet, čto kakoj-to edinorog s'jel ejo cvety.
   Lena thinks   that some   unicorn ate her flowers
10. Petja každuj raz naxodit kakoje-to opravdanije.
    Petja every time finds   some   excuse

Descriptive Generalization: *-to* items tend to get wide scope readings; however, in certain environments, the narrow scope interpretation is possible as well.

2.1.2 *-to* Items and Speaker Identifiability

An NP that contains a *-to* item is obligatorily *not speaker identifiable*.

11. #Ja [vyšla zamuž] za kakogo-to šveda.
    I   married(f)   to some   Swede
    ?I have married some Swede.

12. Maša [vyšla zamuž] za kakogo-to šveda.
    Masha married(f)   to some(acc) Swede(acc)
    Masha wants to marry some Swede.

13. #Ja xorošo znaju kakogo-to šveda.
    I   well   know some(acc) Swede(acc)
    I know some Swede well.

14 a. Dima uvidel kakoje-to kol'co.
     Dima saw   some   ring
     Dima saw some ring.
   b. ?Dima uvidel kakoje-to zolotoje kol'co s   brilliantom.
      Dima saw   some   golden ring   with diamond
      ?Dima saw some golden ring with a diamond.
   c. # Dima uvidel kakoje-to zolotoje kol'co s   brilliantom, kotoroje Petja podaril
      Dima saw   some   golden   ring   with diamond   which   Petja presented
      Lene   na den' roždenija.
      Lena(dat) on day birth(gen)
      #Dima saw some golden ring with a diamond that Petja had given Lena as a
      birthday present.

The more modifiers are added to an NP, the more likely it is to be identifiable to the speaker, and the less likely a *-to* item is to be used.

2.2 Other Items that Are Sensitive to Speaker Identifiability
2.2.1 *Koje-* items in Russian

A series of lexical items with existential meaning which consist of the morpheme *koje-* followed by a wh- item.

Table 2.

koje-kto	koje + who	someone
koje-čto	koje + what	something
koje-kakoj	koje + which	some, a certain
koje-gde	koje + where	somewhere

Koje- items obligatorily take wide scope and are inherently speaker identifiable.

15 a. #Koje-kto pozvonil, no ja ne   znaju, kto eto byl.
     someone called   but I NEG know who this was
     Someone called, but I don't know who this was.

b. #Dima razrabatyvaet koje-kakoj proekt, o   kotorom ja ne   imeju ni malejshego
   Dima works-out   some   project about which   I   NEG have not slightest
      predstavlenija.
      idea
   Dima is working on some project of which I do not have the slightest idea.
c. Ivan [koje na kom] ženilsja; #ponjatija ne   imeju,   na kom imenno.
   Ivan on-someone   married idea   NEG have(1st sg) on who exactly
   Ivan has married someone; I have no idea, who exactly.

All these sentences assert that the speaker cannot identify the referent of an NP that contains a *koje-* item. This results in the infelicity of the sentences, as *koje-* items, on the opposite, contribute the information that the referent is identified by the speaker.

2.2.2 *-kin* Items in Finnish

These items include the words *jokin* (someone, something, some), *jossakin* (somewhere), *joku* (someone, some), etc. (*Joku* does not contain the suffix *-kin*, but belongs to this series by virtue of containing the root *jo-* and being characterized by similar semantic and pragmatic properties.)

-kin items can be interpreted within the scope of some operators, such as opaque verbs and conditionals. Still, wide scope readings are available for them as well. But, similarly, to *-to* items, even if *-kin* items take widest scope possible in a sentence, phrases that contain them still have to be interpreted as not identifiable to the speaker. Haspelmath (1997) classifies them as *unknown to the speaker*.

16. #Menin naimisiin jonkun kanssa.
    went(1st sg) someone(gen) with
    I have married someone.
17. #Olen jo   ennestään   tuntenut   jonkun ruotsalaisen.
    am   already for-a-long-time acquainted [some   Swede](gen)
    ?I have known some Swede for a long time.
18. #Testamentasin   jollekulle (ruotsalaiselle) koko omaisuuteni.
    bequeathed(1st sg) some(all) Swede(all)   all   my-property(gen)
    I have bequeathed all my possessions to someone / some Swede.

2.2.3 The word *eräs* in Finnish

According to Haspelmath, the Finnish word *eräs* (some) is *known to the speaker*.

19 a. ?Eräs mies soitti, mutta en   tiedä kuka se oli.
       Some man called but   NEG-1st sg know who this was
       Some man called, but I don't know who he was.
   b. Joku mies soitti, mutta en   tiedä kuka se oli.
      Some man called but   NEG-1st sg know who this was
      Some man called, but I don't know who he was

(19b) is consistently preferred over (19a). However, one of my informants suggests that (19a) is not completely unacceptable, but rather sounds as archaic and formal. This suggests that a further enquiry might be needed in order to determine the status of *eräs* with respect to speaker identifiability.

2.2.4 Other Items that Are Sensitive to Speaker Identifiability
Haspelmath (1997): in a sample of forty languages, ten languages do lexically mark the known / unknown to the speaker distinction.

20 a. Turiu kai ką (?*kaž-ką)   tiktai tau   vienai pasakyti.
     I:have INDEF what INDEF-what   only to:you alone to:say
     I've got something to say that's for your ears alone.
                              Lithuanian , (Haspelmath(1997:47))

  b. Kaž-kas   atejo.
     INDEF-who came
     Somebody came (I don't know who).
                              Lithuanian , (Haspelmath(1997:47))

  c. Raamu-vige yaavud-oo   ondu pustaka beekaagide.
     Ramu-DAT   which-INDEF one   book   want:having:is
     Ramu wants a book.
                           Kannada, (Haspelmath (1997:47))

3. Specificity as Speaker Identifiability: A Formal Representation.
3.1 Representing Beliefs of Different Discourse Participants: Gunlogson (2001)
Context set (CS) - a set of possible worlds "of which all of the propositions representing mutually held beliefs of the participants are true" (Gunlogson (2001:39)).

Gunlogson demonstrates the importance of dealing not only with shared beliefs but also with *public beliefs* of a given individual (which need not be shared by other discourse participants).

21. p is a public belief of A iff 'A believes p' is a mutual belief of A and B.
                                  (Gunlogson (2001:42))
(The definition holds for a discourse with two participants, A and B.)

Gunlogson further proposes to distinguish context sets associated with different discourse participants. Thus, for a discourse in which two individuals, A and B, participate, she distinguishes CS_A from CS_B. CS_A is a set of possible worlds in which all the propositions representing A's public beliefs are true. Thus, it is a set of possible worlds that are compatible with A's public beliefs. Similarly, CS_B is a set of possible worlds in which all the propositions representing B's public beliefs are true. In turn, the mutual context set is recoverable from $<cs_A, cs_B>$, as it constitutes the set of possible worlds in which all the mutual beliefs of A and B hold.

22. Let a discourse context $C_{\{A,B\}}$ be $<cs_A, cs_B>$, where:
    A and B are the discourse participants
    a. cs_A of $C_{\{A,B\}}$ = {w ε W: the propositions representing A's public beliefs are all true
       of w}
    b. cs_B of $C_{\{A,B\}}$ = {w ε W: the propositions representing B's public beliefs are all true
       of w}

$$\text{(Gunlogson (2001:43))}$$

3.2 Specificity as Speaker Identifiability: the Analysis
3.2.1 Speaker Identifiability

23. A singular NP that appears in a sentence S uttered by speaker A is speaker
    identifiable iff
    $\exists y \; \forall w \; [w \; \epsilon \; CS_A \rightarrow (P(y,w) \wedge Q(y,w))]$

    where P is the property contributed by the content of the NP, and Q is the other
    property ascribed to the referent of the NP in the sentence.

(If the NP in question functions as the subject of the sentence, then Q corresponds to the
property denoted by the VP. Thus, in the sentence *A picture is missing from the gallery*, P
corresponds to the property of being a picture and Q, to the property *missing from the
gallery*. In turn, in the sentence *John saw a student*, P stands for the property of being the
student and Q, the property of being an individual that John saw.)

An NP is not speaker identifiable if the condition in (23) does not hold, i.e. if the speaker
is not committed that the referent exists or is committed to its existence but cannot
identify it. The latter option is represented in (24):

24. $\forall w \; [w \; \epsilon \; CS_A \rightarrow \exists y \; (P(y,w) \wedge Q(y,w))]$

    where P is the property contributed by the content of the NP, and Q is the other
    property ascribed to the referent of the NP in the sentence.

3.2.2 Uniqueness
In addition to the condition formulated in (23), in order for an NP to be specific, there
must exist a unique individual intended by the speaker to constitute its referent.

Schwarzschild (2002): indefinite NPs are existentially quantified. However, the set that
the existential operator quantifies over may be determined not only by the content of the
NP but also by the context. The implicit information that restricts the domain of
quantification may be available to both the speaker and the hearer, or to the speaker only,
or sometimes even to a third party. In order for an NP to be specific, this information has
to be available to the speaker.

25. An NP has a unique referent (in the sense discussed above) if:
$\exists R \, \exists y \, \forall w \, [w \in CS_A \rightarrow (P(y,w) \wedge R(y,w) \wedge \forall z \, (P(z,w) \wedge R(z,w) \rightarrow z=y))]$

where P is the property contributed by the content of the NP,
and R is a property known to the speaker.

26. A singular NP that appears in a sentence S uttered by speaker A is specific iff
    a). $\exists y \, \forall w \, [w \in CS_A \rightarrow (P(y,w) \wedge Q(y,w))]$
    b). $\exists R \, \exists y \, \forall w \, [w \in CS_A \rightarrow (P(y,w) \wedge R(y,w) \wedge \forall z \, (P(z,w) \wedge R(z,w) \rightarrow z=y))]$

where P is the property contributed by the content of the NP,
Q is the other property ascribed to the referent of the NP in the sentence,
and R is a property known to the speaker.

3.3 Items Lexically Encoding (Non) Speaker Identifiability: A Formal Analysis
3.3.1 *-to* Items and *-kin* Items

27. <u>Felicity Condition Imposed by *-to* Items</u>
Let S be a sentence that is uttered by speaker A which embeds an NP containing a
-to item. Let P be the property contributed by the content of the NP, and let Q be the
other property ascribed to the referent of the NP in the sentence.
Then S is felicitous iff
$\neg \exists y \, \forall w \, [w \in CS_A \rightarrow (P(y,w) \wedge Q(y,w))]$

The referent of an NP that contains a *-to* item cannot be identified by the speaker. Thus,
one of the conditions for specificity is violated and, as a result, an NP that contains a *-to*
item is obligatorily non-specific.

The same is true for *-kin* items. Similarly to *-to* items, they mark the NP in which they
appear as not speaker identifiable:

28. <u>Felicity Condition Imposed by *-kin* Items</u>
Let S be a sentence that is uttered by speaker A which embeds an NP containing a
-kin item. Let P be the property contributed by the content of the NP, and let Q be the
other property ascribed to the referent of the NP in the sentence.
Then S is felicitous iff
$\neg \exists y \, \forall w \, [w \in CS_A \rightarrow (P(y,w) \wedge Q(y,w))]$

3.3.2 *Koje-* Items

An NP that contains a *koje-* item is obligatorily specific. This condition is formulated in (29).

29. <u>Felicity Condition Imposed by *koje-* Items</u>

Let S be a sentence that is uttered by speaker A which embeds an NP containing a *koje-* item. Let P be the property contributed by the content of the NP, and let Q be the other property ascribed to the referent of the NP in the sentence.

Then S is felicitous iff

a). $\exists y \; \forall w \; [w \; \epsilon \; CS_A \rightarrow (P(y,w) \wedge Q(y,w))]$

b). $\exists R \; \exists y \; \forall w \; [w \; \epsilon \; CS_A \rightarrow (P(y,w) \wedge R(y,w) \wedge \forall z \; (P(z,w) \wedge R(z,w) \rightarrow z=y))]$

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