Pronominal Typology & the *de se/de re* distinction
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1. Introduction

This paper investigates how regular pronominal typology interfaces with *de se* and *de re* interpretations, and highlights a correlation between strong pronouns (descriptively speaking) and *de re* interpretations, and weak pronouns and *de se* interpretations. In order to illustrate this correlation, I contrast different pronominal forms within a single language, null vs. overt pronouns in Kutchi Gujarati, and clitic vs. full pronouns in Austrian Bavarian. I argue that the data presented here provide cross-linguistic comparative support for the idea of a dedicated *de se* LF as argued for by Percus & Sauerland. The empirical findings in this paper reveal a new observation regarding pronominal typology, namely that stronger pronouns resist a *de se* construal. Contrastively, the "weaker" a pronoun is (in comparison to other pronouns in the same language), the more likely it is to be interpreted *de se*. To analyse this, I propose that pronominal strength correlates with structural complexity (in terms of Cardinaletti & Starke 1999), i.e. overt pronouns have more syntactic structure than null pronouns; similarly, non-clitic pronouns have more structure than clitic pronouns. The correlation between *de se* readings and weakness follows from an analysis in the spirit of Percus & Sauerland (2003a,b), which assumes that *de se* pronouns are uninterpreted and merely serve to trigger predicate abstraction. Stronger pronouns, which have more structure, can be taken to simply resist being uninterpreted, given that the null hypothesis is that the additional structure has some effect or other on the semantics of the pronoun. Conversely, the observation that weak pronouns exhibit a preference for a *de se* reading can be argued to follow in the pragmatics from their competition with strong pronouns; since strong pronouns cannot be read *de se,* they will be identified as the prototypical *de re* pronouns, whereas weak pronouns, which can be read *de se*, will be dispreferred in a *de re* use.

2. The overarching debate: how to analyse *de se* vs. *de re* pronouns
2.1 Introducing *de se* vs. *de re* pronouns

Pronouns under attitude verbs (e.g. *believe*, Percus & Sauerland 2003a, and *dream*, Percus & Sauerland 2003b), which are referentially connected to the attitude holder (i.e. the *dreamer* or *believer*) allow for two readings (e.g. Lewis 1979, Perry 1979), as shown in (1). (1a) illustrates the *de se* reading, which conveys a self-directed belief; contrastively, (1b) shows the *de re*

reading, which conveys an 'unaware' belief directed towards the believer in the actual world. The crucial aspect of the *de re* reading is the lack of self-awareness, i.e. in (1b), John does not have a belief that he could describe by using a first person pronoun.

(1)   a. *de se context:* John looks at himself in the mirror and thinks: "I am tall."

            John believes that **he$_{de\ se}$** is tall.

    b. *de re context:* John watches a video of himself playing soccer, not recognizing himself and thinks: "That man in the video is tall."

            John believes that **he$_{de\ re}$** is tall.

At various points in the literature, it has been argued that the distinction between *de se* and *de re* has grammatical implications; for instance, there are special elements such as the *PRO* of control constructions (e.g. Chierchia 1989), and so called logophoric pronouns (e.g. Schlenker 2003), which have been claimed to only allow for *de se* readings, which seems to be a grammatical property of such elements. The aim of this paper is to shed new light on the nature of the referential dependencies in (1a) and (1b), i.e. on the syntax and semantics that gives rise to *de se* and *de re* readings.

2.2   Introducing the debate

There are currently two prominent approaches that aim to explain the distribution of *de re* and *de se* pronouns − both of which focus on highly specialized forms of *de se* pronouns, such as logophors (see Schlenker 2003, Pearson 2012).

     The first type of analysis claims that the *de se* reading is derived from a *de re* construal; see Reinhart (1990), Maier (2009) and Santorio (2014). To see how this works, it is worth briefly introducing the current standard account of *de re* pronouns. (I present this in a simplified version, since the derivation of *de re* readings is not the main focus of the paper.) The standard approach holds that *de re* pronouns involve some sort of acquaintance relation between the attitude holder and the referent in the actual world (following Kaplan 1968; see Santorio 2014 for a recent discussion); informally speaking, the pronoun *he* in (1b) refers to John in the actual world, but to derive the intuitive truth conditions of (1b), *he* has to be mapped to an individual who satisfies the property of being the man that John as the attitude holder is watching in the video. In other words, the *de re* readings requires an acquaintance relation to hold between John (as the referent

of *John*) and John (as the referent of *he*), which amounts to the relation $R(x,y) = x$ *is the individual that y is watching in the video*. Therefore, what (1b) conveys is the following: (i.) John is related to himself by means of an acquaintance relation R (here: John himself being the individual that John is watching in the video), and (ii.) John believes that the individual who is related to him via that acquaintance relation R (i.e. the man who he is watching in the video) is tall. See Percus & Sauerland (2003a) and Santorio (2014) for formal implementations of such a view. Approaches that derive *de se* readings from *de re* readings assume that *de se* readings simply involve a special type of 'self' acquaintance relation, which we could state (simplified, as above) as the relation $R(x,y) = x$ *is the individual that y identifies with*. (1a) would thus convey the following: (i.) John is related to himself by means of the 'self' acquaintance relation R (here: John being the individual that John identifies with), and (ii.) John believes that the individual who is related to him via the 'self' acquaintance relation R (i.e. the individual who he identifies with) is tall.

The alternative view on how to derive *de se* and *de re* readings argues in favour of a dedicated *de se* LF, see Percus & Sauerland (2003b); the core difference for our purposes concerns the interpretation of *de se* construals in such a view. Percus & Sauerland (2003b) argue that an embedded *de se* pronoun is an uninterpreted pronoun, which must move to the clausal periphery, triggering lambda abstraction, to turn the embedded clause into a property-denoting expression. In line with Percus & Sauerland (2003b), I simplify the interpretation of *de re* pronouns, glossing over *concept generators* (cf. Percus & Sauerland 2003a, Pearson 2012, Santorio 2014), which are generally assumed to formalize the acquaintance relations discussed above; this is orthogonal to the core question under investigation. Percus & Sauerland (2003b) posit the lexical entry in (2) for an attitude predicate like *dream*; here, the complement clause of *dream* denotes a property, and *dream* quantifies over so-called centered worlds, i.e. pairs of an individual variable *y* and a world *w'* such that if <y, w'> are part of the 'dream worlds' of the matrix subject *x*, then, for any dream world *w'*, *y* is the individual that *x* identifies with in *w'*, i.e. the *dream self*. Correspondingly, *dream* asserts that every pair <y, w'> has the property denoted by the complement clause. The derivation in (4) shows how *de se* readings are derived.

(2) $[[\text{dream}]]^g = \lambda P_{<e,<s,t>>} . \lambda x . \lambda w$. For all <y, w'> in $\text{DREAM}_{x,w}$, $P(y)(w') = 1$

     where DREAM$_{x,w}$ stands for the set of pairs <y, w'> such that w' is a world compatible
     with x's dream in w, and y is the individual in w' who x, in w, identifies as himself.

    (Percus & Sauerland 2003b)

First, observe that different attitude predicates are modeled in parallel, i.e. (3) would be the *believe* variant of (2) (see also Pearson 2012:9).

(3) $[[believe]]^g = \lambda P_{<e,<s,t>>} . \lambda x . \lambda w$. For all $<y, w'>$ in $DOX_{x,w}$, $P(y)(w') = 1$

   where $DOX_{x,w}$ stands for the set of pairs $<y, w'>$ such that w' is a world compatible
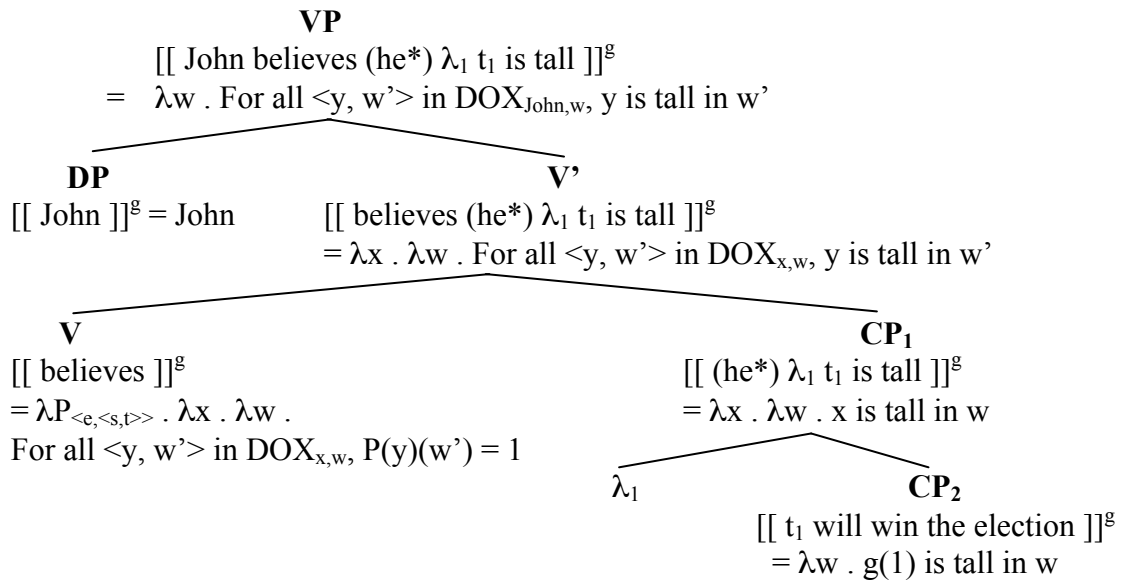   *with x's beliefs in w, and y is the individual in w' who x, in w, identifies as himself.*
   (based on Percus & Sauerland's 2003b entry for *dream*)

In words, the *de se* LF in (4) involves the following components. The embedded *de se* pronoun *he* is uninterpreted (as marked by the asterisk) and moves to the left periphery of the embedded clause. There, the *de se* pronoun triggers predicate abstraction over the argument slot that is associated with it; as a consequence, this argument slot thus ends up being identified with the center of the worlds compatible with John's beliefs (in the case of *believe*), i.e. with John's 'belief self' (or 'dream self' in the case of *dream*).

(4)   *Percus & Sauerland (2003b) style de se LF*

   a.   **John** believes/dreams (that) **he**~de se~ is tall.

   b.   *de se LF*:   **John** believes/dreams (that) **he* λ_1 [t$_1$ is tall]**.

   VP
   $[[John \; believes \; (he^*) \; \lambda_1 \; t_1 \; is \; tall]]^g$
   $= \lambda w$. For all $<y, w'>$ in $DOX_{John,w}$, y is tall in w'

   DP
   $[[John]]^g = John$

   V'
   $[[believes \; (he^*) \; \lambda_1 \; t_1 \; is \; tall]]^g$
   $= \lambda x . \lambda w$. For all $<y, w'>$ in $DOX_{x,w}$, y is tall in w'

   V
   $[[believes]]^g$
   $= \lambda P_{<e,<s,t>>} . \lambda x . \lambda w$.
   For all $<y, w'>$ in $DOX_{x,w}$, $P(y)(w') = 1$

   CP$_1$
   $[[(he^*) \; \lambda_1 \; t_1 \; is \; tall]]^g$
   $= \lambda x . \lambda w . x$ is tall in w

   λ_1

   CP$_2$
   $[[t_1 \; will \; win \; the \; election]]^g$
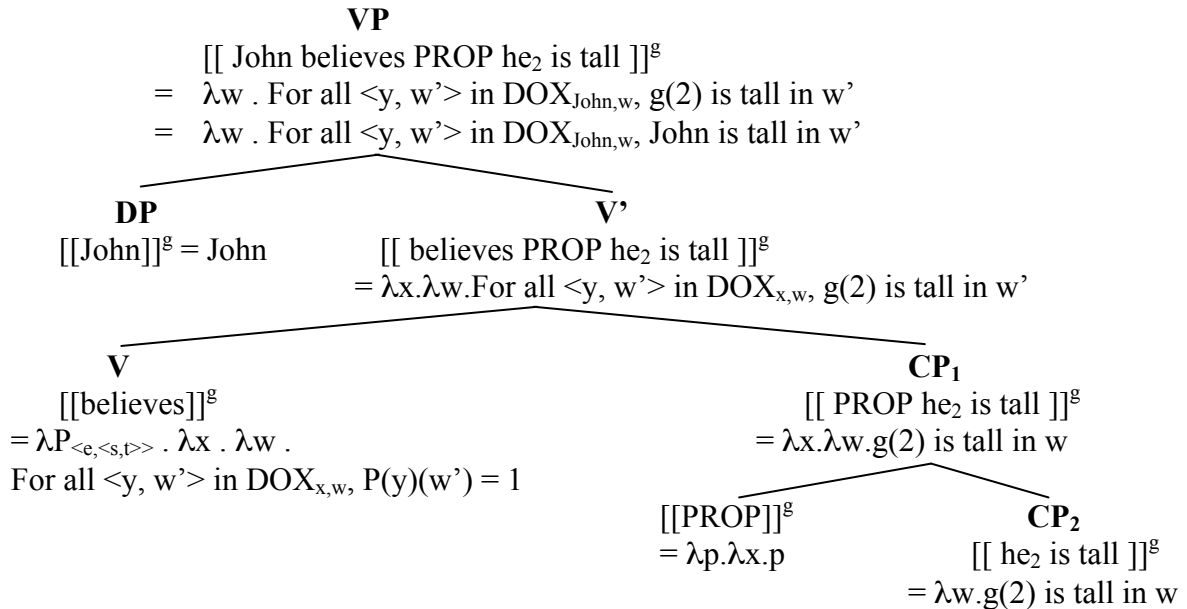 $= \lambda w . g(1)$ is tall in w

The aspect of the *de se* vs. *de re* distinction that is most important for our present purposes, is the idea that *de re LFs* lack pronoun movement, since there is no embedded element that ends up being identified with the 'belief self' or 'dream self'. A simplified *de re LF* is given in (5). This LF (based on Percus & Sauerland 2003a,b) contains two crude simplifications. First, *de re*

pronouns are assumed to be directly referential (cf. Percus & Sauerland 2003a, Pearson 2012, Santorio 2014, amongst others, for a discussion of formalising acquaintance relations by means of so-called *concept generators*). Second, in order to maintain a single lexical entry for *believe* in *de se* LFs and *believe* in *de re* LFs, I follow Percus & Sauerland (2003b) and assume a type-shifting operator PROP, which introduces a vacuous individual argument position. PROP thus vacuously turns the embedded proposition (of type $<s,t>$) into a property (of type $<e,<s,t>>$).

(5)   *Percus & Sauerland (2003b) style de re LF*

    a. **John** believes/dreams (that) **he**$_{de\ re}$ is tall.

    b. *de re LF (simplified)*:   **John** thinks PROP **he$_2$** is tall.   *where* $g = [2 \rightarrow John]$

$$\textbf{VP}$$
$$[[\ \text{John believes PROP he}_2\text{ is tall }]]^g$$
$$= \ \lambda w \ . \ \text{For all} <y, w'> \text{ in DOX}_{John,w},\ g(2)\text{ is tall in w'}$$
$$= \ \lambda w \ . \ \text{For all} <y, w'> \text{ in DOX}_{John,w},\ \text{John is tall in w'}$$

DP
$[[John]]^g = John$

V'
$[[\text{ believes PROP he}_2\text{ is tall }]]^g$
$= \lambda x.\lambda w.\text{For all} <y, w'> \text{ in DOX}_{x,w},\ g(2)\text{ is tall in w'}$

V
$[[believes]]^g$
$= \lambda P_{<e,<s,t>>} \ . \ \lambda x \ . \ \lambda w \ .$
For all $<y, w'>$ in DOX$_{x,w}$, $P(y)(w') = 1$

CP$_1$
$[[\text{ PROP he}_2\text{ is tall }]]^g$
$= \lambda x.\lambda w.g(2)\text{ is tall in w}$

$[[PROP]]^g$
$= \lambda p.\lambda x.p$

CP$_2$
$[[\text{ he}_2\text{ is tall }]]^g$
$= \lambda w.g(2)\text{ is tall in w}$

To recapitulate, from the perspective of Percus & Sauerland (2003a,b), *de se LFs* contain a semantically uninterpreted pronoun (marked by an asterisk), which moves to the left periphery of the clause and triggers predicate abstraction. By contrast, *de re LFs* do not contain such semantically uninterpreted pronouns and lack such pronoun movement. Alternatively, Reinhart (1990), Maier (2009) and Santorio (2014) argue that designated *de se* LFs are not required: specifically, *de se* interpretations are derived as a special type of *de re* interpretations. The question at this point is how to tease apart the two approaches. I review two arguments from the literature in sections 2.3 and 2.4.

2.3 Support for designated *de se* LFs

Pearson & Dery (2014) experimentally test the following core prediction from Percus & Sauerland (2003b): if *de se* LFs involve the movement of an uninterpreted *de se* pronoun, then such movement cannot cross an interpreted *de re* pronoun due to superiority. Therefore, only three out of four logically possible readings are attested. Consider the example in (6), involving a dream report in which the *dreamer* dreams to be someone else; for dream reports of this type, an intriguing set of facts arises. The *de se reading* of a pronoun in such dream reports is (somewhat counterintuitively) the reading where the pronoun refers to whoever the dreamer dreams to be. For instance, if Pooh the bear dreams that he is Piglet, then a *de se* reading for *he/his* in (6b) is a reading where *he/his* refers to Piglet, (6c). If a pronoun in such a dream report refers to the actual dreamer (rather than to the individual in the dream), then we are dealing with a *de re* reading, as in (6d). This is derived from the semantics of *dream* as repeated in (7).

(6) a. Last night Pooh dreamed that he was Piglet.
    b. **Pooh** dreamed that **he** was stealing **his** honey.
    c. *de se referent* = 'the dream-self' = Piglet
    d. *de re referent* = 'the dreamer' = Pooh
       (adapted from Pearson & Dery 2014)

In (7), the center *y* of the attitude holder's dream worlds *w'* is the individual that the dreamer identifies with in her/his dreams (rather than the dreamer herself/himself).

(7) $[[\text{dream}]]^g = \lambda P_{<e,<s,t>>} . \lambda x . \lambda w$. For all $<y, w'>$ in $\text{DREAM}_{x,w}$, $P(y)(w') = 1$

    where $\text{DREAM}_{x,w}$ stands for the set of pairs $<y, w'>$ such that w' is a world compatible
    with x's dream in w, and y is the individual in w' who x, in w, identifies as himself.
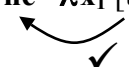
    (Percus & Sauerland 2003b)

Dery & Pearson (2014) outline the four logically possible readings for a sentence like (8b), as given in (8c-f); (8c) would be the reading where both pronouns are read *de se*, (8d) would be the reading where the first pronoun is read *de re* and the second pronoun *de se*, and so forth. Percus & Sauerland (2003b) argue that the *de re* + *de se* reading in (8d) is unavailable, while the readings in (8c), (8e) and (8f) are available. Dery & Pearson (2014) test this experimentally and confirm the claim from Percus & Sauerland, i.e. that (8d) is unacceptable.

(8) a. Last night Pooh dreamed that he was Piglet.

b. **Pooh** dreamed that **he** was stealing **his** honey.

c. **Pooh** dreamed that **Piglet**(=*de se*) was stealing **Piglet's**(=*de se*) honey.　　*de se + de se*

d.# **Pooh** dreamed that **Pooh**(=*de re*) was stealing **Piglet's**(=*de se*) honey.　　*de re + de se*

e. **Pooh** dreamed that **Piglet**(=*de se*) was stealing **Pooh's**(=*de re*) honey.　　*de se + de re*

f. **Pooh** dreamed that **Pooh**(=*de re*) was stealing **Pooh's**(=*de re*) honey.　　*de re + de re*

(adapted from Pearson & Dery 2014)

In the Percus & Sauerland system, this follows from syntactic constraints on movement. Specifically, they posit a *superiority* constraint, which amounts to the following: a pronoun that is construed *de se* cannot be c-commanded by a *de re* pronoun associated with the same attitude holder. This is shown by the examples in (9) and (10), where superiority is met in (9), but violated in (10), thus excluding the *de re + de se* reading.

(9)　*de-se + de-re reading*

　a.　^{OK} Pooh dreamed that **he**$_{de\text{-}se}$ (= Piglet) was stealing [**his**$_{de\text{-}re}$ (= Pooh's) honey].

　b.　LF:　Pooh dreamed [$_{CP}$ **he*** λx_1 [t_1 was stealing **his**$_{de\text{-}re}$ honey]].

(10)　*de-re + de-se reading*

　a.　* Pooh dreamed that **he**$_{de\text{-}re}$ (= Pooh) was stealing [**his**$_{de\text{-}se}$ (= Piglet's) honey].

　b.　LF:　Pooh dreamed [$_{CP}$ **his*** λx_1 [**he**$_{de\text{-}re}$ was stealing t_1 honey]].

2.4　Arguments against designated *de se* LFs

Having seen an argument in favour of designated *de se* LFs, one of the arguments against designated *de se* LFs that Santorio (2014) discusses stems from binding theory; he presents the following scenario (from Sharvit 2011). The puzzling observation is the following. In the scenario in (11), (12a) is acceptable, whereas (12b) is unacceptable. From the perspective of Percus & Sauerland (2003a,b), this seems to give rise to paradoxical conclusions, as we will see momentarily. To see this, consider example (13), which is an adaptation of (12) that is parallel to the examples that we discussed above.

(11) Sarah Palin, who is running for president, wakes up from a coma and suffers from severe memory loss … McCain visits her in the hospital, and she says to him: 'I don't know who to vote for'. While the two of them look at a picture of her in the newspaper, he says to her:

'You must vote for this woman.' Palin, who does not recognize herself in the picture, says: 'You are right; I will vote for this woman. She seems reliable.'

(Sharvit 2011:56, as quoted in Santorio 2014)

To mirror (12a-b), and reflect the context in (11), *she* in (13a-b) must be read *de se*, while *herself/her* must be read *de re*. This is indicated by a subscripted *de-se* / *de-re*. Given that the judgments in (12) carry over to (13), the example in (13a) is acceptable (on a par with (12a)) and (13b) is unacceptable (on a par with (12b)). (It is worth pointing out that both (12a) and (13a) are *de se + de re* configurations and should thus satisfy superiority.)

(12) a. McCain convinced Palin to vote for herself.
       b.* McCain convinced Palin to vote for her.
          (quoted from Santorio 2014)

(13) a.   **Palin** believes that **she$_{de-se}$** should vote for **herself$_{de-re}$**.
       b.(#) **Palin** believes that **she$_{de-se}$** should vote for **her$_{de-re}$**.

The problem can be stated as follows. The standard interpretation of binding theory (cf. Büring 2005 for an overview) is that reflexive pronouns (*herself*) must have a local antecedent that they are referentially dependent on, whereas non-reflexive pronouns (*her*) must not have a local antecedent. Example (14b) shows that there does not seem to be a meaningful way in which *herself* could be referentially dependent on *she* in (14a) if we assume the Percus & Sauerland (2003b) analysis. First of all, *she* and *herself* cannot be coindexed since *she* would be an uninterpreted pronoun (as indicated by the asterisk) whereas *herself* would receive a *de re* construal; moreover, if *herself* were coindexed with the trace of the uninterpreted pronoun *she*, then both pronouns would be construed *de se*, which is not the intended reading; in other words, *herself* cannot be locally bound by *she*. The criticism is thus that a Percus & Sauerland (2003a,b) analysis predicts (13b) to be grammatical and (13a) to be ungrammatical (since *her/herself* would not be locally bound by *she*); this is the opposite of what we find. This criticism targets Percus & Sauerland's approach in English.

(14) *de-se + de-re reading*
   a. ^{OK} Palin believes that **she$_{de-se}$** (= Palin) should vote for [**herself$_{de-re}$** (= the woman on the picture, who happens to be Palin)].

8

b. LF: Palin$_2$ believes [$_{CP}$ **she*** λ**x$_1$** [**t$_1$** should vote for **herself$_{2(de\text{-}re)}$**]].

In section 3, I show that languages with strong/weak distinctions in their pronominal paradigm actually pattern on a par with the predictions of Percus & Sauerland, i.e. whenever we have a combination of a *de se* pronoun and a *de re* pronoun, we get two non-reflexive pronouns, (13b). We only find a reflexive pronoun, (13a), when a *de se* + *de se* reading or a *de re* + *de re* reading is intended, which is exactly what we would expect from a Percus & Sauerland (2003a,b) style approach.

3. *de se* vs. *de re* interpretations: the view from pronominal classes

In this section, I revisit the *de se* vs. *de re* distinction in languages which have richer pronominal paradigms than English. In section 3.1, I present my take on anaphora, where I argue that different languages that contain a richer pronominal inventory make parallel binary distinctions between 'stronger' pronouns and 'weaker' pronouns. In section 3.2, I focus on Kutchi Gujarati and Bavarian, and show how such distinctions interact with the *de se* vs. *de re* distinction.

3.1 My take on anaphora

Many languages (other than English) have several pronominal classes, e.g. null vs. overt pronouns or clitic vs. non-clitic pronouns (cf. Cardinaletti & Starke 1999, Dechaine & Wiltschko 2002). It can be shown that these classes appear to share a *strength hierarchy*, illustrated in (15). (Note that this strength hierarchy does not reflect the analysis of Cardinaletti & Starke 1999, who assume that personal pronouns and demonstrative pronouns belong to different categories.)

(15) *pronominal strength hierarchy (simplified)*
       null pronoun < clitic personal pronoun < strong personal pronoun < demonstrative pronoun

Evidence for (15) is provided in Patel-Grosz & Grosz (2010), who argue that different languages 'slice the hierarchy' in different ways, giving rise to similar effects. For example, Bosch et al. (2003) and Bosch & Umbach (2007) observe that German demonstrative pronouns (like *der* 'he, that one') cannot refer to the current aboutness topic, as shown in (16a) (see also Reinhart 1995). What we observe is that many languages (e.g. Portuguese, French, Hebrew) exhibit the same effect, as shown in (16b), where the Portuguese demonstrative pronoun *esta* patterns like the German demonstrative pronoun *der,* and the Portuguese personal pronoun *ela* patterns like the German personal pronoun *er*.
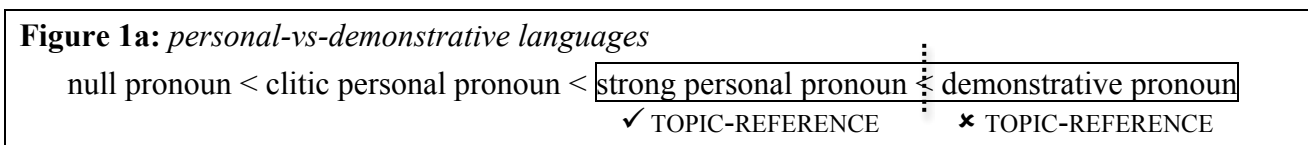
(16)a. *(Standard) German*
      Hans₁ wollte mit **Paul₂** joggen, aber {**er**$_{1/2}$ / **der**$_{2/*1}$} war krank.
      Hans wanted with Paul jog but he   DEM was sick
      'Hans wanted to go running with Paul, but he was sick.' (cf. Bosch et al. 2003)

    b. *(Brazilian) Portuguese*
      A Maria₁ quer ir correr com a **Su₂**, mas {**ela**$_{1/?2}$ / **esta**$_{2/*1}$} está doente.
      the Maria wanted to.go to.run with the Sue but she   DEM was sick
      'Maria wanted to go running with Sue, but she was sick.'

Assuming the strength hierarchy in (15), we can capture the pattern in (16a-b) by the schema in Figure 1a. (The illustrated pronoun classes are contained in boxes.)

Figure 1a: *personal-vs-demonstrative languages*

    null pronoun < clitic personal pronoun < [strong personal pronoun < demonstrative pronoun]
                         ✓ TOPIC-REFERENCE   ✗ TOPIC-REFERENCE

Surprisingly, other languages slice the hierarchy differently, while generating the same effect; here, the relevant contrast is between null and overt (personal *and* demonstrative) pronouns, as shown in (17a) and (17b). The data from Kutchi Gujarati and Czech show that only the null pronoun can refer to the current aboutness topic. Furthermore, the Czech data in (17b) show that even where there is a choice between a demonstrative pronoun and an overt personal pronoun, only the weakest possible pronoun can refer to the aboutness topic, namely the null one.
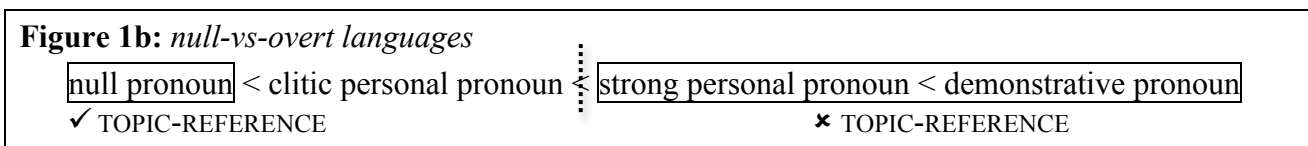
(17)a. *Kutchi Gujarati*
      John₁-ne **Paul₂** saathe dhorva javu thu, pun {***pro***$_{1/\#2}$ / **i**$_{2/*1}$} thandithi aavi thi.
      John-DAT Paul with run.INF go AUX but pro he cold came AUX
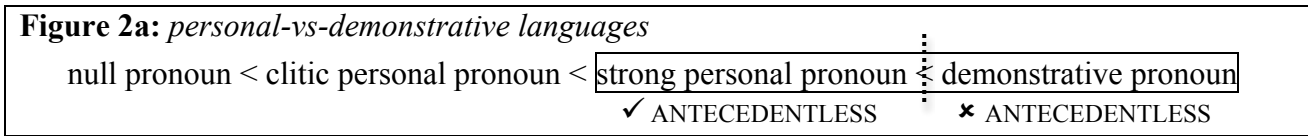   'John wanted to go running with Paul. But he had a cold.'

    b. *Czech*
      Věra₁ chtěla jít běhat s **Marií₂**, ale {***pro***$_{1/?2}$ /**ona**$_{2/*1}$ / **ta**$_{2/*1}$} byla nemocná.
      Vera wanted go:inf run:inf with Marie but pro she   DEM was sick
      'Vera wanted to go jogging with Marie, but she was sick.'

The observations in (17a-b) thus give rise to the generalization in Figure 1b. While there are *personal-vs-demonstrative languages* (Figure 1a), there are also *null-vs-overt languages*.
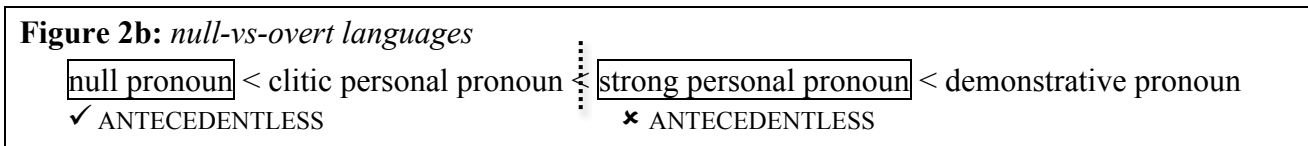

Figure 1b: *null-vs-overt languages*

    [null pronoun] < clitic personal pronoun < [strong personal pronoun < demonstrative pronoun]
    ✓ TOPIC-REFERENCE   ✗ TOPIC-REFERENCE

In brief, we have seen that Kutchi Gujarati and Czech make a similar binary distinction as German and Portuguese, dividing pronouns into 'weaker' pronouns that can refer to the current aboutness topic, and 'stronger' pronouns that cannot. However, the two types of languages seem to slice the 'strength hierarchy' at different points. Focusing on Standard German, (16a) and Kutchi Gujarati, (17a), I now proceed to show that the anti-topicality constraint in Figure 1a and Figure 1b correlates with other constraints that correspond to the same binary distinctions on the strength hierarchy.

First, Patel-Grosz & Grosz (2010) observe a parallel concerning the ability of pronouns to occur without an explicit antecedent. I provide German and Kutchi Gujarati examples in (18) and (19), but analogous effects arise in other languages. The data in (18) and (19) show that in the absence of an overt antecdent, the weaker pronouns, the personal pronoun *er* 'he' in German and the null pronoun in Kutchi Gujarati are required. The stronger pronouns, namely the demonstrative *der* 'he, that one' in German and the personal pronoun *i* 'he' in Kutchi Gujarati are unacceptable in such environments. As shown in Figure 2a and Figure 2b, the observed distinction between strong vs. weak pronouns is parallel to the one that we saw in Figure 1a and Figure 1b (i.e. the cut in the hierarchy is at the same point in a given language).

Figure 2a: *personal-vs-demonstrative languages*

null pronoun < clitic personal pronoun < strong personal pronoun ⋮ demonstrative pronoun
                                               ✓ ANTECEDENTLESS   ✗ ANTECEDENTLESS

(18) *(Standard) German*
Wenn ich schwanger werde, werde ich { **es** / * **das** } auf jeden Fall behalten.
if I pregnant become will I it DEM on every case keep
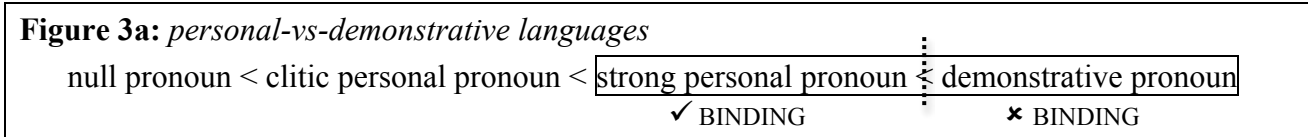'If I get pregnant, I will definitely keep **it** (= the baby).' (cf. Roelofsen 2008:92)

Figure 2b: *null-vs-overt languages*

null pronoun < clitic personal pronoun ⋮ strong personal pronoun < demonstrative pronoun
✓ ANTECEDENTLESS   ✗ ANTECEDENTLESS

(19) *Kutchi Gujarati*
ji penelo manas gare aave, tho i { *pro* / * **ene**} bak bharave.
if married man home comes then he pro her hug makes
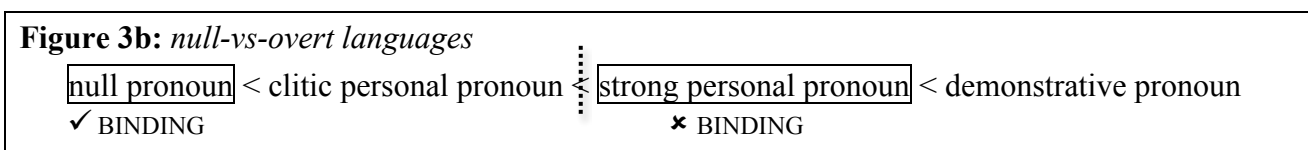'If a married man comes home, he hugs **her** (= his wife).'

We can also observe a parallel concerning the ability of pronouns to be bound by a subject quantifier. Once again, paralleling the observations in Figures 1a, 1b, 2a and 2b, we find the following. In quantifier-variable-binding configurations, only the weaker pronouns are possible,

i.e. the personal pronoun in Standard German, and the null pronoun in Kutchi Gujarati, as shown by the examples in (20) and (21).

Figure 3a: *personal-vs-demonstrative languages*

null pronoun < clitic personal pronoun < strong personal pronoun ⫶ demonstrative pronoun

✓ BINDING ✗ BINDING

(20) *(Standard) German*
Jeder Mann₁ behauptet, dass { **er₁** / * **der₁**} intelligent ist.
every man claims that he DEM intelligent is
'Every man claims that he is intelligent.' (cf. Wiltschko 1998:144)

Figure 3b: *null-vs-overt languages*

null pronoun < clitic personal pronoun ⫶ strong personal pronoun < demonstrative pronoun

✓ BINDING ✗ BINDING
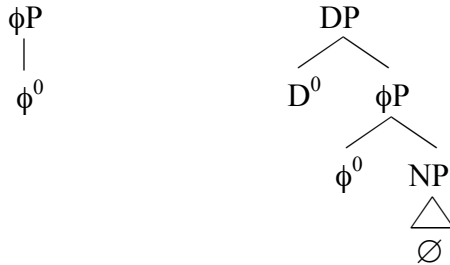
(21) *Kutchi Gujarati*
Batha manas₁ kidhu ke { ***pro₁*** / * **i₁**} hosiyar che.
every man said that pro he intelligent is
'Every man said that he was intelligent.'

The above data form a descriptive generalization, which is that pronouns that are higher on the strength hierarchy, and thus qualify as 'stronger', pattern together in ways that set them apart from 'weaker' ones. One of the most prominent analyses that captures this generalization is that strong pronouns have more structure than weaker pronouns; cf. Wiltschko (1998), Cardinaletti & Starke (1999) Dechaine & Wiltschko (2002), and Patel-Grosz & Grosz (2010).

One possible rendering of this analysis, as proposed in Dechaine & Wiltschko (2002), based on Wiltschko (1998), is given in (22) for the contrast between demonstrative pronouns and personal pronouns. In this view, demonstrative pronouns have the structure of full DPs (Wiltschko 1998:149), as shown by (22b), whereas (weak) personal pronouns spell out ϕPs (Dechaine & Wiltschko 2002:439), (22a). It is orthogonal to the present discussion whether personal pronouns contain a null NP; Wiltschko (1998:149) argues that they do not, but Dechaine & Wiltschko (2002:439) suggest that personal pronouns may allow for both options: ones that contain an NP and ones that do not. Either way, Wiltschko (1998:165) argues that her analysis derives the binding asymmetry in (20), since demonstrative pronouns are full DPs and thus subject to Condition C. Furthermore, Wiltschko (1998:163-164) argues that this analysis captures the fact that strong (here: demonstrative) pronouns require a suitable antecedent more rigidly than weak pronouns, since strong pronouns necessarily involve NP deletion, which must be

structurally licensed, whereas weak pronouns may lack a null NP and thus be contextually licensed (see also Patel-Grosz & Grosz 2010).

(22) a. weak pronoun   b. strong pronoun

$$
\begin{array}{cc}
\phi P & DP \\
| & \wedge \\
\phi^0 & D^0 \quad \phi P \\
& \qquad \wedge \\
& \phi^0 \quad NP \\
& \qquad \triangle \\
& \qquad \varnothing
\end{array}
$$

There is a question as to whether the analysis in (22a) vs. (22b) would carry over to weak vs. strong pronouns in null-vs-overt languages such as Kutchi Gujarati. For an alternative perspective, see Patel-Grosz & Grosz (2014), who argue for a more nuanced view; their idea is that all pronouns contain null NPs and some sort of lower definite determiner, but pronouns vary in terms of the amount of extended functional structure that they contain. An illustration of this model for the entire strength hierarchy in (15) is sketched in (23). Here, D_{det} corresponds to the definite determiner (using the label from Ihsane & Puskás 2001 and Laenzlinger 2005); ϕ encodes the purely formal, grammatical ϕ-features of a pronoun (e.g. masculine in the case of a German pronoun referring to a *Löffel* 'spoon', or feminine when it refers to a *Gabel* 'fork'); Σ encodes prosodic features that are needed for a pronoun to form an independent prosodic word (Cardinaletti & Starke 1999); and, finally, D_{deix} is a higher D head (again, following Ihsane & Puskás 2001 and Laenzlinger 2005), which is responsible for an increased anaphoricity that is perceived to hold with demonstrative pronouns.

(23) a. null pro   b. clitic pronoun   c. personal pron.   d. demonstrative pron.

13
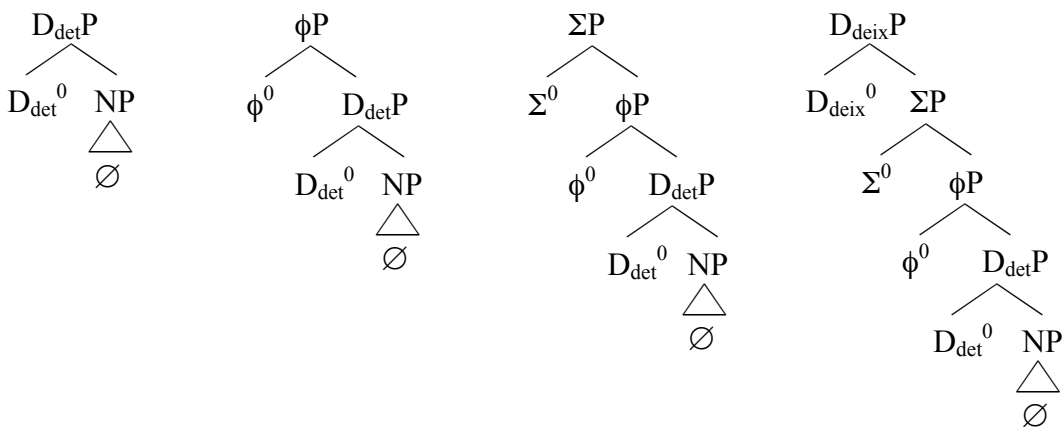
From the perspective of Patel-Grosz & Grosz (2014), the observation that stronger pronouns cannot refer to the current aboutness topic, (16)-(17), and the observation that they cannot be bound by a subject quantifier, (20)-(21), can be derived via pragmatic economy constraints and independent communicative principles, which require speakers to use the most minimal form of a pronoun unless the less minimal form is independently licensed. (See Hinterwimmer t.a. for an alternative view). Similarly, in (18) and (19), the unacceptability of using a stronger pronoun to refer to an implicit antecedent, is tied to the idea that German demonstrative pronouns (and plausibly also the overt pronouns in Kutchi Gujarati) contain a higher D_{deix} head, which turns them into more rigidly anaphoric expressions.

The goal of this paper is not to evaluate the above proposal, but rather to adopt the foundational aspects, and to argue that pronouns with less structure are more likely to be construed *de se*. One thing that is evident from (16)-(21), if we assume the analysis in (23) is the following: all of the binary distinctions among weaker and stronger pronouns seem to derive from the fact that stronger pronouns have more syntactic structure than weaker pronouns, i.e. stronger pronouns (German demonstrative pronouns and Kutchi Gujarati overt pronouns) appear to be 'penalized' for containing surplus structure, in line with structural minimization constraints (Chomsky 1981:65, Cardinaletti & Starke 1999:198, Schlenker 2005:391, Patel-Grosz & Grosz 2014). Reconsidering the Percus & Sauerland (2003a, 2003b) approach to dedicated *de se* LFs, this raises very clear expectations. In the Percus & Sauerland view, the following asymmetry arises: pronouns with a *de se* construal (e.g. *he**) are actually uninterpreted (i.e. semantically vacuous); their movement alone gives rise to predicate abstraction (similar to relative pronouns in the analysis of Heim & Kratzer 1998). In contrast, pronouns with a *de re* construal (e.g. *he*), have a 'normal' interpretation, e.g. as individual variables in the traditional view. Since additional structure (as in (23)) presumably gives rise to semantic effects, this means that the weakest pronoun of a language should be the pronoun that is most suitable for remaining uninterpreted, i.e. the weakest pronoun should be the most suitable *de se* pronoun; the idea is that a stronger pronoun would contain too much structure to remain uninterpreted. In section 3.2, I show that this prediction is bourne out. In Kutchi Gujarati, we find a clear asymmetry between null pronouns (which typically have to be read *de se*) and overt pronouns (which cannot be read

de se); I then turn to Bavarian[1], and show that the same asymmetry can be observed for clitic pronouns (which prefer a *de se* interpretation) and non-clitic personal pronouns (which prefer a *de re* interpretation). These observations shed new light on the debate concerning the *de se* vs. *de re* distinction that I outlined in section 2, in that they support a view that differentiates between designated *de se* LFs (containing uninterpreted *de se* pronouns) and *de re* LFs (containing semantically interpreted *de re* pronouns).

3.2   Pronominal classes and the *de se* vs. *de re* distinction: first observations

3.2.1   Kutchi Gujarati part I: overt pronouns cannot be read *de se*

The Percus & Sauerland (2003a, 2003b) analysis predicts that only the weakest pronouns (those that lack additional syntactic nodes which typically have a semantic effect) are construed *de se*, since *de se* pronouns must be uninterpreted in their view. The diagnostics in this section test for *de se* construals and confirm this prediction. To argue for *de se* LFs, Percus & Sauerland (2003a, 2003b) originally construct contexts with attitude predicates, in which the salient attitude holders are quantified over; specifically, they use sentences that contain the exclusive focus particle *only* (Santorio 2014 thus calls this "the argument from only"). In (24) and (25), Percus & Sauerland (2003a, 2003b) construct a pair of context and test sentence, where the test sentence, (25), is false under any sensible *de re* reading (without self-ascription), but true under a specialized *de se* reading (with self-ascription). In other words, the expectation is that in the context given in (24), the example in (25) is true with a *de se* construal of *he*, whereas it is false with a *de re* construal of the pronoun. This follows from the facts, summarized in (26), where the only person with a self-attributed *de se* belief (i.e. "I will win") is *Valji*, (26c). If we were looking at beliefs that are not *de se*, *Valji* is not the only one who believes in his own victory, (26b), and he is not the only one who believes that *Valji* will win, (26a).

(24)   Context: Drunk election candidates are watching campaign speeches on TV, and do not recognize themselves in the broadcast. <u>Valji, the only confident one, thinks "I'll win,"</u> but does not recognize himself in the broadcast. Khimji and Raj, both depressive, think "I'll lose" but are impressed by the speeches that happen to be their own and are sure "that candidate" will win. Lalji, also depressive, happens to be impressed not by his own speech but by Valji's.   (adapted from Percus & Sauerland 2003a)

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(25)　"Only Valji believes that he will win."

(26)　*Summary of facts in* (24)*:*
　　　a.　people who believe that *Valji* will win = {Valji, Lalji}
　　　b.　people who believe (*de se* or *de re*) that *they themselves* will win = {Valji, Khimji, Raj}
　　　c.　people who believe *de se* that *they themselves* will win = {Valji}

Percus & Sauerland claim that (25) in English is judged to be true in the context in (24), i.e. a *de se* reading that picks out the set in (26c) must be available. In Kutchi Gujarati, both the translation with an overt pronoun *i* 'he' in (27) and the translation with a null pronoun in (28) are grammatical (contrasting with (21) above, where we did not consider the possibility of a *de re* construal; (21) may be rendered acceptable, too, if a *de re* construal is salient). However, (27) is judged to be false in the context in (24), whereas (28) is judged to be true. The data are suggestive of the fact that in Kutchi Gujarati, null pronouns can have a *de se* reading, whereas overt pronouns cannot.

(27)　Khali　**Valji**　maan-e　　　　　　ke　**i**　jeet-se.
　　　only　　Valji　believe-3.SG.PRES　that　he　win-FUT.3.SG
　　　(GRAMMATICAL AND <u>FALSE</u>)　　　　　　　　⇒ overt pronoun <u>cannot</u> have a *de se* LF

(28)　Khali　**Valji**　maan-e　　　　　　ke　**(*pro*)**　jeet-se.
　　　only　　Valji　believe-3.SG.PRES　that　pro　win-FUT.3.SG
　　　(GRAMMATICAL AND <u>TRUE</u>)　　　　　　　　⇒ null *pro* <u>can</u> have a *de se* LF

3.2.2　Kutchi Gujarati part II: null pronouns must be read *de se*

I now proceed to show that null pronouns also seem to require a *de se* reading. It is possible to construct a similar context-sentence pair, in which only the *de re* reading would be true, and the *de se* reading would be false. This is given in (29) and (30). In (29), the sentence in (30) would clearly be false in a *de se* reading (since not every man consciously has a *de se* belief about himself), cf. (31b). Nevertheless, (30) would be true in a reading without ('*de se*') *self*-attribution (since every man has a belief about himself, even if Khimji and Raj do not know it), cf. (31a).

(29)　Context: A group of drunk election candidates watching campaign speeches on television do not recognize themselves in the broadcast. Valji and Lalji, the two confident ones, think "I'll win," but do not recognize themselves in the broadcast. Khimji and Raj, both depressive, think "I'll lose" but are impressed by the speeches that happen to be their own and are sure "that candidate" will win.

(30)　"Every man believes that he will win."

(31)　*Summary of facts in* (29*):*
　　a.　people who believe that they themselves will win = {Valji, Lalji, Khimji, Raj}
　　b.　people who believe *de se* that they themselves will win = {Valji, Lalji}

In the parallel Kutchi Gujarati example, we observe that (32) (with the overt pronoun *i* 'he') is judged to be true. By contrast, (33) (with the null pronoun) is judged to be false, indicating that null pronouns in such contexts must have a *de se* LF, whereas overt pronouns have a *de re* LF. Based on the Kutchi Gujarati data in (27)-(28) and (32)-(33), we can tentatively conclude that null *pro* must have a *de se* construal (which follows from (28) and (33)), while overt pronouns cannot (which follows from (27) and (32)). The Kutchi Gujarati data seem to confirm the prediction outlined above that *de se* pronouns must be weak; this is summarized in Figure 4, using the same template as above. The generalization that strong pronouns cannot be interpreted *de se* derives straight forwardly, if *de se* pronouns must be uninterpreted, and thus cannot contain the 'surplus' structure that stronger pronouns contain. If, on the other hand, *de se* were a special case of *de re*, it would be unclear how this pattern could be derived.

(32)　**Harek　manas**　maan-e　　　　　　ke　**i**　jeet-se.
　　　every　man　　　believe-3.SG.PRES　that　he　win-FUT.3.SG
　　　(GRAMMATICAL AND <u>TRUE</u>)　　　　　　　⇒ *i* allows for non-*de se* belief about oneself

(33)　**Harek　manas**　maan-e　　　　　　ke　(***pro***)　jeet-se.
　　　every　man　　　believe-3.SG.PRES　that　pro　　win-FUT.3.SG
　　　(GRAMMATICAL AND <u>FALSE</u>)　　　　　　　⇒ null *pro* must be construed *de se*

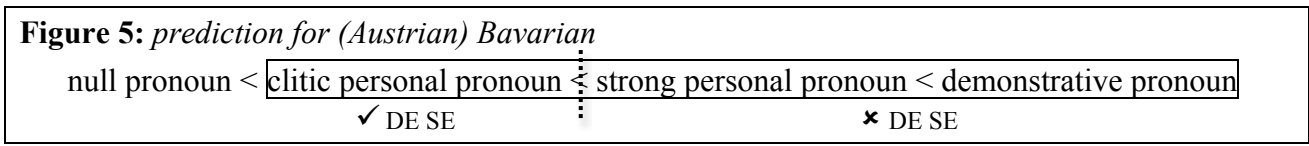**Figure 4:** *null-vs-overt languages (prediction, confirmed)*
　null pronoun < clitic personal pronoun ⋛ strong personal pronoun < demonstrative pronoun
　✓ DE SE　　　　　　　　　　　　　　　　　✘ DE SE

Since Kutchi Gujarati does not have demonstrative pronouns of the German/Portuguese type, or clitic pronouns, it is not self-evident how much structure a null pronoun contains, and how it contrasts with an overt pronoun; however, we can at least conclude that overt pronouns must contain some additional material that null pronouns lack, in the spirit of (23). I will come back to this issue when discussing the analysis of Bavarian clitic and non-clitic pronouns.

3.3. Pronominal classes and the *de se* vs. *de re* distinction: a contrastive investigation

In this section I provide additional data from Austrian Bavarian, which further support the above generalization. Recall the core idea, that pronouns that have less structure are more likely to be construed *de se*. The Austrian Bavarian[2] examples in (34) differentiate between clitic personal, strong personal and demonstrative for pronominal paradigms in Bavarian for pronominal paradigms in Bavarian pronouns (ignoring partial pro-drop, which is a limited phenomenon); cf. Weiß (1998) for similar data in Bavarian. If *de se* correlates with the weakest possible form, we make the prediction that *de se* pronouns should be recruited from the class of clitic pronouns. This prediction is illustrated in Figure 5.

(34)   a.   *clitic personal*   b.   *strong personal*   c.   *demonstrative*
             das'**a**   kummt.   das **ea** kummt.   das **dea** kummt.
             that=he$_{CL}$ comes   that he comes   that DEM comes
             'that he comes'   'that he comes'   'that he comes'

Figure 5: *prediction for (Austrian) Bavarian*

null pronoun < clitic personal pronoun < strong personal pronoun < demonstrative pronoun
                        ✓ DE SE   ✗ DE SE

Using the Percus & Sauerland (2003a,b) context from above, we initially observe that the judgments are not as clear-cut as in Kutchi Gujarati. Recall that, given the context in (35), the sentence in (36) should be true in the *de se* reading, but false in a non-*de se* reading. We can disregard demonstrative pronouns from now on, since in (36), *dea* is simply ungrammatical (with reference to Sepp). Looking at personal pronouns, the intuition is that (36) is judged true with the clitic pronoun *a* 'he', as predicted. However, (36) is also judged true with the strong pronoun *ea* 'he', which is not what we predicted. It is unclear at this point why this is the case, but this is a larger question that requires an in-depth understanding of the pronominal system in Bavarian. What I show below is that we still observe a correlation of *de se* vs. *de re* interpretation with the choice between clitic vs. non-clitic pronouns, i.e. for contexts that are less complex than (35), the prediction in Figure 5 can be confirmed.

(35)   Context: Drunk election candidates are watching campaign speeches on TV, and do not recognize themselves in the broadcast. Sepp, the only confident one, thinks "I'll win," but

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[2] The data in this section were translated by a speaker of an Austrian German variety of Bavarian, and verified with several other speakers. Judgments were shared by speakers from different regions of Austria, including Burgenland, Salzburg, and Vienna.

does not recognize himself in the broadcast. Hias and Rudi, both depressive, think "I'll lose" but are impressed by the speeches that happen to be their own and are sure "that candidate" will win. Peter, also depressive, happens to be impressed not by his own speech but by Sepp's.   (adapted from Percus & Sauerland 2003a)

(36) Nua **da Sepp** glaubt, { das'**a** / das **ea** / * das **dea**} gwöht wiad.
      only the Sepp believes that=he$_{CL}$ that he   that DEM elected is
      'Only **Sepp** believes that **he** will be elected.'

In what follows, I focus on dream reports (instead of belief reports), since these require a less involved context than (35), which may bring out contrasts more clearly. (See also Pearson & Dery 2014.) Setting up contexts such as the context with Pooh the bear that I discussed above (see example (6)), it turns out that Bavarian also exhibits a preference to use the clitic form for *de se* readings and the strong form for non-*de se* readings.

Let us start with first person pronouns, for which the relevant forms are given in (37) (cf. Weiß 1998:87).

(37)   NOM ('I')   DAT ('to me')   ACC ('me')
    a. full (strong) forms: *i* [iː]   *mia* [miːɐ]   *mi* [miː]
    b. clitic forms: *e* [ə]   *ma* [mɐ]   *me* [mə]

Turning to dream reports, the clitic form can be shown to prefer a *de se* reading, (39a), whereas the full form prefers a *de re* reading, (39b). Recall, as given in (38), that the *de se* referent of a dream report is the individual inside the dream that the dreamer identifies with, (38c), and not the actual dreamer; by contrast, the actual dreamer serves as the *de re* referent, (38d). The preferred readings of (39a) and (39b) are indicated. It is plausible, given (36), that the tendencies that I report reflect preferences rather than rigid constraints.

(38) a. Last night, I dreamed that I was my neighbour.
      b. And I dreamed that **I** was rich.
      c. *de se referent* = 'the dream-self' = the speaker's neighbour
      d. *de re referent* = 'the dreamer' = the speaker

(39) a. *clitic pronoun (preference for de se reading)*
          I håb traamt, das i mei Nåchba bin und [das'**e**   reich bin].
          I have dreamed that I my neighbour am and   that=I$_{CL}$ rich am
          'I dreamed that I am my neighbour and that **I$_{CL}$(= my neighbour$_{de se}$)** am rich.'

b. *strong pronoun (preference for <u>de re</u> reading)*

I håb traamt, das i mei Nåchba bin und [das **i** reich bin].
I have dreamed that I my neighbour am and that I$_{FULL}$ rich am
'I dreamed that I am my neighbour and that **I$_{FULL}$(= actual speaker$_{de re}$)** am rich.'

However, what is crucial is that exactly the same pattern arises for Kutchi Gujarati null vs. overt pronouns, as given in (40), indicating that the pattern in (39) is a more robust cross-linguistic observation, rather than a Bavarian oddity.
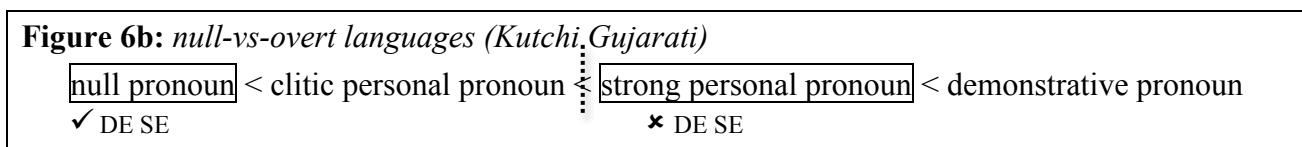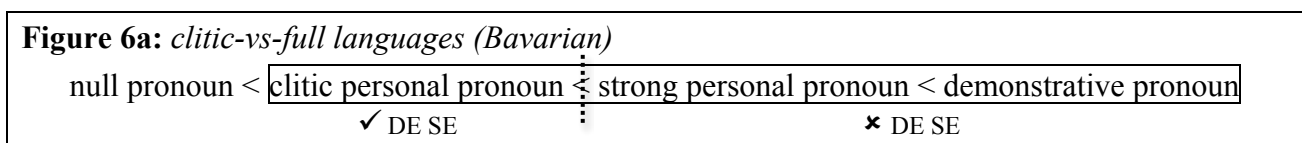
(40) a. *null pronoun (preference for <u>de se</u> reading)*

Mane sapnu aavyu ke hu maro parosi chu
1.sg.dat dream came.pfv.n.sg that 1.sg.nom my.m.sg neighbour is.1.sg.pres

ane ***pro*** paisadar manas chu.
and wealthy man is.1.sg.pres
'I dreamed that I am my neighbour and that **I$_{NULL}$(= my neighbour$_{de se}$)** am rich.'

b. *overt pronoun (preference for <u>de re</u> reading)*

Mane sapnu aavyu ke hu maro parosi chu
1.sg.dat dream came.pfv.n.sg that 1.sg.nom my.m.sg neighbour is.1.sg.pres

ane **hu** paisadar manas chu.
and 1.sg wealthy man is.1.sg.pres
'I dreamed that I am my neighbour and that **I$_{OVERT}$(= actual speaker$_{de re}$)** am rich.'

We can thus summarize the pattern in (39) as in Figure 6a (repeated from Figure 5), though the reader should bear in mind that we are speaking of preferences, and not of rigid constraints. Similarly, the pattern in (40) further supports the generalization in Figure 6b (repeated from Figure 4).

Figure 6a: *clitic-vs-full languages (Bavarian)*
null pronoun < clitic personal pronoun < strong personal pronoun < demonstrative pronoun
✓ DE SE ✗ DE SE

Figure 6b: *null-vs-overt languages (Kutchi Gujarati)*
null pronoun < clitic personal pronoun < strong personal pronoun < demonstrative pronoun
✓ DE SE ✗ DE SE

The generalizations in Figure 6a and Figure 6b are exactly what we would expect from a Percus & Sauerland (2003a,b) perspective. Their prediction is that *de se* pronouns must remain uninterpreted. Naturally, the most minimal pronoun is the most likely pronoun to be

uninterpreted, since it lacks surplus structure that has a semantic effect. In the next section, I focus on dream reports that contain two embedded pronouns, to revisit the empirical observations from the literature, discussed in sections 2.3 and 2.4. I show that the Bavarian and Kutchi Gujarati counterparts further corroborate a view where there are distinct *de se* LFs in the spirit of Percus & Sauerland (2003a,b).

3.4. The *de se* vs. *de re* distinction with transitive predicates: the basics

First of all, the observation that Bavarian clitic pronouns have a *de se* preference while non-clitic pronouns have a *de re* preference extends to transitive predicates with a nominative and a dative argument. Consider first the *de se + de re* case (using the labels from Pearson & Dery 2014 introduced above), given in (41b). As expected, if the subject is a clitic pronoun (*e* 'I') and the object is a full pronoun (*mia* 'me'), then the subject is interpreted *de se* and the object is interpreted *de re*. This reproduces the pattern in section 3.3, i.e. the clitic/full contrast correlates with a *de se/de re* contrast.

(41) a. I håb traamt, das i da   Batman   bin.
        I have dreamed that I the Batman   am
        'I dreamed that I was Batman.'   [*de se* ↝ Batman, *de re* ↝ actual speaker]
     b. Und i håb traamt,   das'**e** **mia**   ghuifn håb.   [*de se subject / de re object*]
        and I have dreamed   that=I_{CL} me_{FULL} helped have
        'And I dreamed that **I_{CL}(= Batman$_{de se}$)** helped **me_{FULL}(= actual speaker$_{de re}$)**.'

Interestingly, if (in the same context) the subject is a full pronoun (*i* 'I') and the object is a clitic pronoun (*ma* 'me'), as in (42), we also find that the clitic object pronoun prefers a *de se* construal, whereas the non-clitic subject pronoun prefers a *de re* reading. This may strike us as surprising at first, since this corresponds to the *de re + de se* reading that has been claimed to be unacceptable, see (8d) above. However, it follows naturally from an explanation in terms of Percus & Sauerland (2003a,b): in their system, the *de re + de se* reading is blocked for reasons of supriority, i.e. a *de se* pronoun cannot be c-commanded by a *de re* pronoun. The unmarked word order in (42) is one where the clitic *ma* 'me' has moved across the non-clitic *i* 'I' to a position adjacent to the complementizer, thus reversing the c-command relationship between the *de se* pronoun *ma* 'me' and the *de re* pronoun *i* 'I'. Given that superiority is assumed to be a syntactic constraint, it follows that (42) should obviate superiority (as long as clitic movement is a

syntactic operation as well, cf. Cardinaletti & Starke 1999; if clitic movement in a language such as Bavarian were a PF operation, a different explanation for (42) may be needed).

(42) Und i håb traamt, das'**ma** **i** ghuifn håb. [*de re subject / de se object*]
　　 and I have dreamed that=me$_{CL}$ I$_{FULL}$ helped have
　　 'And I dreamed that **I$_{FULL}$(= actual speaker$_{de\ re}$)** helped **me$_{CL}$(= Batman$_{de\ se}$).**'

Interestingly, if the clitic pronoun cliticizes to the non-clitic pronoun, as in (43), which is an alternative word order in Austrian German, speakers report that the intended *de re + de se* reading becomes less acceptable, and the sentence becomes deviant. Since (43) was an example with much interspeaker variation, I mark its limited acceptability with '%'.

(43)% Und i håb traamt, das **i'ma** ghuifn håb. [*de re subject / de se object*]
　　 and I have dreamed that I$_{FULL}$=me$_{CL}$ helped have
　　 'And I dreamed that **I$_{FULL}$(= actual speaker$_{de\ re}$)** helped **me$_{CL}$(= Batman$_{de\ se}$).**'

Notably, the exact same patterns arise for Kutchi Gujarati null vs. overt pronouns. Example (44) is parallel to (41) and gives rise to the *de se + de re* reading. As indicated, the null pronoun is construed *de se*, whereas the overt pronoun is construed *de re*.

(44) a. Mane sapnu aavyu ke hu Batman hathi.
　　　 1.sg.dat dream.n.sg come.pfv.n.sg that 1.sg.nom Batman was
　　　 'I dreamed that I was Batman.' [*de se* ⤳ Batman, *de re* ⤳ actual speaker]

　　 b. Ane mara sapna-ma ***pro* mane** madath kari [*de se subject / de re object*]
　　　 and 1.sg.gen dream-in 1.sg-acc help do.pfv.f.sg
　　　 'And I dreamed that **I$_{NULL}$(= Batman$_{de\ se}$)** helped **me$_{OVERT}$(= actual speaker$_{de\ re}$).**'

Similarly, (45) is parallel to the Bavarian example (42), giving rise to the *de re + de se* reading. The observation that (45) does not violate superiority indicates that null pronouns, on a par with clitic pronouns, must move to a position above the overt pronouns, thus reversing the c-command relation between them.

(45) a. Mane sapnu aavyu ke hu Batman hathi.
　　　 1.sg.dat dream.n.sg come.pfv.n.sg that 1.sg.nom Batman was
　　　 'I dreamed that I was Batman.' [*de se* ⤳ Batman, *de re* ⤳ actual speaker]

　　 b. Ane mara sapna-ma **i** ***pro*** madath kari [*de re subject / de se object*]
　　　 and 1.sg.gen dream-in 1.sg.nom help do.pfv.f.sg
　　　 'And I dreamed that **I$_{OVERT}$(= actual speaker$_{de\ re}$)** helped **me$_{NULL}$(= Batman$_{de\ se}$)**'

Furthermore, if two identical pronouns co-occur in Bavarian, the resulting reading is typically reflexive. (Bavarian, like Standard German, does not have designated 1st or 2nd person reflexives, i.e. *ma/mia* are ambiguous between 'me' and 'myself'). However, again, the class of pronoun determins whether reference is *de se*, (46b), or *de re*, (48c).

(46) a. I håb traamt, das i da Batman bin.
I have dreamed that I the Batman am
'I dreamed that I was Batman.'   [*de se* ⇝ Batman, *de re* ⇝ actual speaker]

b. Und i håb traamt, das'e'**ma** ghuifn håb.   [*de se subject / de se object*]
and I have dreamed that=I_{CL}=me_{CL} helped have
'And I dreamed that **I(= Batman$_{de\ se}$)** helped **myself(= Batman$_{de\ se}$).**'

c. Und i håb traamt, das **i mia** ghuifn håb.   [*de re subject / de re object*]
and I have dreamed that I_{FULL} me_{FULL} helped have
'And I dreamed that **I(= actual speaker$_{de\ re}$)** helped **myself(= actual speaker$_{de\ re}$).**'

The same holds for Kutchi Gujarati (where first person and second person reflexives can also occur without reflexive marking, though they allow for reflexive marking to indicate emphasis), as shown in (47).

(47) a. Mane sapnu aavyu ke hu Batman hathi.
1.sg-dat dream.n.sg come.pfv.n.sg that 1.sg.nom Batman was
'I dreamed that I was Batman.'   [*de se* ⇝ Batman, *de re* ⇝ actual speaker]

b. Ane mara sapna-ma ***pro pro*** madath kari   [*de se subject / de se object*]
and 1.sg.gen dream-in help do.pfv.f.sg
'And I dreamed that **I (= Batman$_{de\ se}$)** helped **myself (= Batman$_{de\ se}$).**'

c. Ane mara sapna-ma **hu mane** madath kari [*de re subject / de re object*]
and 1.sg.gen dream-in 1.sg.nom 1.sg-acc help do.pfv.f.sg
'And I dreamed that **I (= actual speaker$_{de\ re}$)** helped **myself(= actual speaker$_{de\ re}$).**'

Having shown that such judgments hold for the 1st person, we can also observe that parallel judgments hold for the 3rd person (here, the variants that are parallel to (46b-c) and (47b-c) are deviant, since a reflexive is required; I come back to this in the next section). Example (48) shows that the clitic pronoun prefers a *de se* reading, whereas the full pronoun prefers a *de re* reading.

(48) a. Da Joker håt traamt, das'a da Batman is.
the joker has dreamed that=he_{CL} the Batman am
'The Joker dreamed that he was Batman.'   [*de se* ⇝ Batman, *de re* ⇝ the Joker]

b. Und ea håt traamt, das'**a** **eam** übafåin håt. [*de se subject / de re object*]
   and he has dreamed that=I_CL me_FULL ambushed has
   'And he dreamed that **he_CL(= Batman_de se)** ambushed **him_FULL(= the Joker_de re)** .'

c. Und ea håt traamt, das'**n** **ea** übafåin håt. [*de re subject / de se object*]
   and he has dreamed that=him_CL he_FULL ambushed has
   'And he dreamed that **he_FULL(= the Joker_de re)** ambushed **him_CL(= Batman_de se)** .'

Once again, the exact same judgments hold in Kutchi Gujarati, as shown in (49).

(49)a. Joker-ne sapnu aavyu ke i batman hatho
   Joker-dat dream.n.sg come.pfv.n.sg that 3.sg batman was.m.sg
   'The Joker dreamed that he was Batman.' [*de se* ↝ Batman, *de re* ↝ the Joker]

b. ane ena sapna-ma ***pro* ene** mari nakhyo [*de se subject / de re object*]
   and 3.sg.gen dream-in 3.sg-acc hit put.pfv.m.sg
   'And he dreamed that **he_NULL(= Batman_de se)** ambushed **him_FULL(= the Joker_de re)**.'

c. ane ena sapna-ma **i** ***pro*** mari nakhyo [*de re subject / de se object*]
   and 3.sg.gen dream-in 3.sg.nom hit put.pfv.m.sg
   'And he dreamed that **he_FULL(= the Joker_de re)** ambushed **him_NULL(= Batman_de se)** .'

To sum up the results of this section, we have seen that the correlation between clitic/full pronouns and *de se/de re* preference in Austrian Bavarian, and the parallel correlation between null/overt pronouns and *de se/de re* preference in Kutchi Gujarati carries over to transitive examples with two pronouns.

3.5. Interpretation of the data

First, the fact that strong pronouns exhibit a *de re* preference and weak pronouns exhibit a *de se* preference fits the idea that *de se* pronouns are uninterpreted. If strong pronouns contain more structure than weak pronouns, this structure presumably needs to be interpreted. This strongly supports a view such as Percus & Sauerland (2003a,b) over a view that treats *de se* readings as a special type of *de re* interpretation (e.g. Reinhart 1990 and Maier 2009). The Reinhart/Maier view does not predict any correlation between pronominal weakness and *de se* preference. I have also shown that Bavarian and Kutchi Gujarati lack superiority effects, and I have argued that this actually follows from a Percus & Sauerland style pronoun movement analysis, since clitic pronouns (and presumably null pronouns) must move to a position in which they c-command full pronouns in the clause (which I take to be a syntactic movement operation; cf. Cardinaletti &

Starke 1999). As a result, *de se* pronouns will always c-command *de re* pronouns prior to their movement to the clausal left periphery.

I now proceed to present additional data in favour of a pronoun movement approach to *de se* interpretations. Specifically, I show that data from Bavarian confirm the predictions from Percus & Sauerland (2003a,b) concerning binding theory (as was already foreshadowed in the preceding section). Reconsider the intuitions from Heim (1994), Sharvit (2011) and Santorio (2014), given in (50) and (51). The idea is that a sentence reporting (50) should involve a reflexive *de re* pronoun, as in (51a), even though there is no suitable local antecedent, assuming that *de re* pronouns cannot be referentially dependent on *de se* pronouns (see the discussion around (14)).

(50) Sarah Palin, who is running for president, wakes up from a coma and suffers from severe memory loss … McCain visits her in the hospital, and she says to him: 'I don't know who to vote for'. While the two of them look at a picture of her in the newspaper, he says to her: 'You must vote for this woman.' Palin, who does not recognize herself in the picture, says: 'You are right; I will vote for this woman. She seems reliable.'
(Sharvit 2011:56, as quoted in Santorio 2014)

(51) a.   **Palin** believes that **she**_{de-se} should vote for **herself**_{de-re}.
      b.(#) **Palin** believes that **she**_{de-se} should vote for **her**_{de-re}.

Crucially, we have already seen in section 3.3 that the pattern in (51), which forms part of the motivation of Santorio's (2014) analysis, is not the pattern that we find in Kutchi Gujarati and Bavarian: as shown in (48) for Bavarian and in (49) for Kutchi Gujarati, both pronouns must be non-reflexive in the *de se + de re* reading and in the *de re + de se* reading. The Bavarian example is repeated in (52). In particular, the acceptable example in (52a), is parallel to the unacceptable English example in (51b).

(52) a. Da   Joker håt   traamt, das'a   da   Batman   is.
         the   joker has   dreamed that=he_{CL} the   Batman   am
         'The Joker dreamed that he was Batman.'   [*de se* ⇝ Batman, *de re* ⇝ the Joker]

      b. Und ea   håt   traamt,   das'**a**   **eam**   übafåin   håt. [*de se subject / de re object*]
         and he   has   dreamed   that=I_{CL} me_{FULL} ambushed has
         'And he dreamed that **he**_{CL}(= **Batman**_{de se}) ambushed **him**_{FULL}(= **the Joker**_{de re}) .'

c. Und ea håt traamt, das'**n**   **ea**   übafåin   håt.   [*de re subject / de se object*]
and he has dreamed that=him$_{CL}$ he$_{FULL}$ ambushed has
'And he dreamed that **he$_{FULL}$(= the Joker$_{de\ re}$) ambushed him$_{CL}$(= Batman$_{de\ se}$) .**'

By contrast, reflexive pronouns invariably seem to give rise to a reflexive *de se + de se* or *de re + de re* interpretation, in (53a) and (53b), which are both somewhat deviant for pragmatic reasons in the context in (53a), since it is unlikely that someone would ambush himself. The fact that examples with reflexives, such as (53a-b), require *de se + de se* or *de re + de re* readings is striking, since the configuration is parallel to (51a) in English.

(53) a. Da Joker håt traamt, das'a   da   Batman   is.
the joker has dreamed that=he$_{CL}$ the   Batman   am
'The Joker dreamed that he was Batman.'   [*de se* ↝ Batman, *de re* ↝ the Joker]

    b.?? Und ea håt traamt,   das'**a**   **si**   übafåin   håt.   [*de se subject / de se object*]
and he has dreamed that=I$_{CL}$ self ambushed has
'And he dreamed that **he$_{CL}$(= Batman$_{de\ se}$) ambushed himself(= the Batman$_{de\ se}$) .**'

    c. ?? Und ea håt traamt,   das **ea**   **si**   übafåin   håt.   [*de re subject / de re object*]
and he has dreamed that he$_{FULL}$ self ambushed has
'And he dreamed that **he$_{FULL}$(= the Joker$_{de\ re}$) ambushed himself(= the Joker$_{de\ re}$) .**'

From the perspective of Percus & Sauerland (2003a,b), the Bavarian patterns (and the corresponding Kutchi Gujarati patterns, which are identical), are exactly what we predict, as discussed in section 2.4 (see example (14)). These data thus clearly support a view in which distinct *de se* LFs are generated by movement of an uninterpreted pronoun.
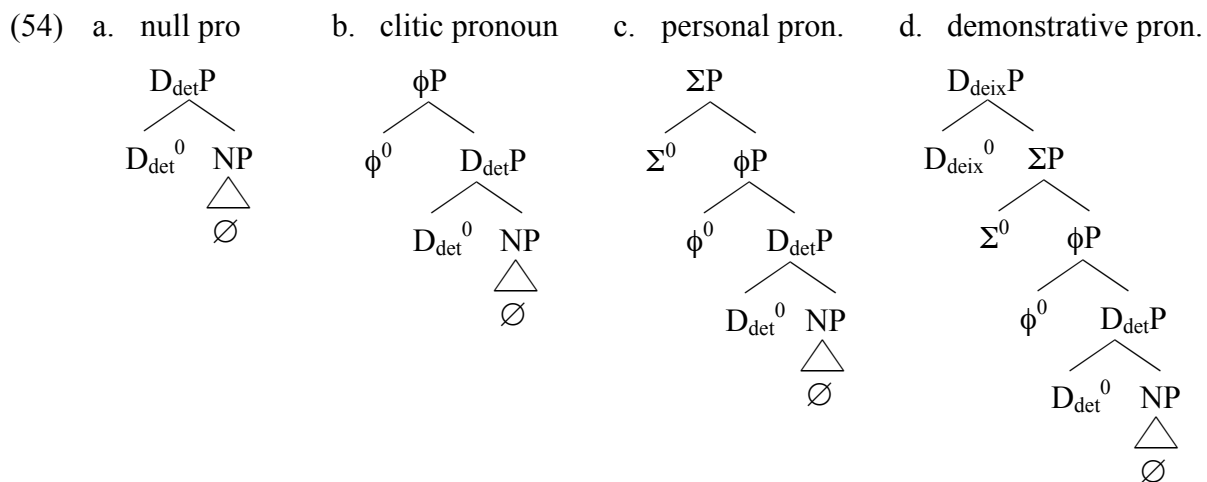
    Of course, the insights from Bavarian and Kutchi Gujarati do not shed light on the question of why the English intuitions in (51a-b) come about to begin with; this issue goes beyond the scope of this paper, but it is worth pointing out that we may be forced to conclude that there are different routes to *de se*, and English simply chooses one that is different from the Bavarian / Kutchi Gujarati one. (Such an idea has been corroborated by the results of Pearson & Dery 2014 within English, who find that Percus & Sauerland's predictions only follow through with *dream*, but not with *believe*).

    In section 4, I revisit the nature of pronominal typology in light of the constraints on *de se* and *de re* interpretation.

4. Towards an explanation of constraints on *de se* and *de re* interpretations

I have shown that the Bavarian and Kutchi Gujarati favour the Percus & Sauerland view, where *de se* pronouns must be uninterpreted and undergo movement to the clausal left periphery. This raises two questions, first, why do strong pronouns have to be (or at least prefer to be) interpreted *de re*? Put differently, why is it the case that strong pronouns cannot receive a *de se* interpretation? Second, why must weak pronouns obligatorily be interpreted *de se*?

First, let me discuss the question of why strong pronouns cannot be interpreted *de se*. If Percus & Sauerland (2003a,b) are correct, then *de se* pronouns must, themselves, be uninterpreted, i.e. semantically vacuous; they only serve to trigger predicate abstraction at the left periphery of the clause. The intuition that I outlined above is that strong pronouns contain additional morpho-syntactic structure that weak pronouns lack, and this additional structure presumably needs to be interpreted at LF. Correspondingly, their inability to be intepreted *de se* follows from structural complexity. How can this be made more precise? In section 3, I have sketched the following typology of pronouns, based on Patel-Grosz & Grosz (2014) (repeated from (23)).

(54)　a.　null pro　　　b.　clitic pronoun　　c.　personal pron.　　d.　demonstrative pron.

$$D_{det}P$$
$$D_{det}{}^0 \quad NP$$
$$\varnothing$$

$$\phi P$$
$$\phi^0 \quad D_{det}P$$
$$D_{det}{}^0 \quad NP$$
$$\varnothing$$

$$\Sigma P$$
$$\Sigma^0 \quad \phi P$$
$$\phi^0 \quad D_{det}P$$
$$D_{det}{}^0 \quad NP$$
$$\varnothing$$

$$D_{deix}P$$
$$D_{deix}{}^0 \quad \Sigma P$$
$$\Sigma^0 \quad \phi P$$
$$\phi^0 \quad D_{det}P$$
$$D_{det}{}^0 \quad NP$$
$$\varnothing$$

While Patel-Grosz & Grosz (2014) argue, based on grammatical gender features on clitics, that pronouns may uniformly contain a null NP, they leave open the possibility that pronouns may also lack a null NP in some cases. Therefore, it is, in principle, compatible with such a view that certain pronouns also come in an NP-less variant. Moreover, there may also be pronouns that spell out non-projecting heads (e.g. clitic pronouns may be mere ϕ heads, as speculated by Dechaine & Wiltschko 2002:439,(80c)). This is compatible with the core idea of Patel-Grosz &

Grosz (2014) that the main factor in pronominal strength is the amount of overall structure that a pronoun contains. The question for our purposes is: if a pronoun is to be uninterpreted in the semantic component, is it more likely to have the syntactic structure in (54a), (54b), (54c) or (54d)? I propose that (54a) (or an even more reduced structure, such as a mere ϕ head) is simply the most suitable syntax to be mapped onto a semantically vacuous element in the LF, given that various functional elements presumably have a semantic effect. This semantic effect may come about either because the functional elements are interpreted themselves (e.g. D_{deix}), or because they trigger semantic effects in other ways: for instance, while a prosodic Σ head may well be uninterpreted itself, it is likely to have an impact on the information structural properties of the pronoun that contains it. From the perspective that I propose here, the reason that stronger pronouns cannot be interpreted *de se* would simply derive from the idea that they resist being uninterpreted.

This leaves us with the complementary question of why weak pronouns prefer to be interpreted *de se*. I propose that the preference for weak pronouns to be interpreted *de se* is a simply a reflection of competition with the strong pronouns. We have established that strong pronouns exhibit a restriction against being interpreted *de se*, due to their additional functional structure; by contrast, weak pronouns can be interpreted *de se* (though, in principle, weak pronouns may also be interpreted *de re*). The idea that I pursue (inspired by Chomsky 1981:65) is that it is the very competition between (55a) and (55b) that pragmatically blocks a *de re* use of weak pronouns.

(55) a. strong pronoun: ^{OK}*de re* / *de se
     b. weak pronoun: ^{OK}*de re* / ^{OK}*de se*

The pragmatic rationale that I pursue is as follows (much in the spirit of how scalar implicatures are derived): if we assume (as I have argued above) that strong pronouns generally cannot be read *de se* in contexts that allow for the *de se* vs. *de re* distinction, as schematically given in (55a), strong pronouns will be read as unambiguously *de re* in such contexts. (This glosses over the differences that we have found concerning *de se* readings of strong pronouns, cf. (36).) On the level of pragmatics, a speaker thus has a choice between an ambiguous weak pronoun, (55b), and an unambiguously *de re* strong pronoun, (55a). Using a strong pronoun would be more informative, given that it would resolve the *de se* / *de re* ambiguity. We thus expect that it is

28

inferred at the level of implicature that a *de se* reading is intended for the weak pronoun, (55b), simply because the speaker has chosen not to use the strong pronoun.

At this point we can come back to the question of what the core properties are that contribute towards creating a *de se* expression from the angle of pronominal typology. My findings in this paper bear on two central questions: (i) what determines whether something can be interpreted *de se*? and (ii) what determines whether something must be read *de se*? I proposed above that pronouns with more syntactic structure cannot be interpreted *de se* and thus need to receive a *de re* reading. I also provided evidence for the following generalization: the less syntactic structure a pronoun has, the stronger the preference for the pronoun to be interpreted *de se*. I have argued that this is plausibly a pragmatic effect that arises from the competition between the weaker pronoun (which is ambiguous between a *de se* reading and a *de re* reading) and the stronger pronoun (which disambiguates towards a *de re* reading). Notably, we could imagine that both generalizations may be violable. The generalization that weaker pronouns have to be read *de se* is clearly violable, since it is derived in the pragmatics. However, even when it comes to the generalization that stronger pronouns cannot be read *de se* and must be read *de re*, it is far from clear to what extend we expect this to be a rigid generalization. In fact, we have already seen in (36) that non-clitic personal pronouns (*ea* 'he') in Bavarian can be read *de se* in the Percus & Sauerland (2003a,b) scenario, even though in dream reports they prefer a *de re* interpretation. The target sentence is repeated in (56) (see (35) for the *de se* context). Notably, the (in)ability of a pronoun to be read *de se* seems to be graded, i.e. even though *ea* 'he' is accepted in a *de se* reading in (56), the demonstrative pronoun *dea* 'he' cannot be.

(56) Nua **da Sepp** glaubt, { das'**a** / das **ea** / * das **dea**} gwöht wiad.
      only the Sepp believes that=he$_{CL}$ that he that DEM elected is
      'Only **Sepp** believes that **he** will be elected.' (*in a de se context*)

A possible explanation would be that the constraint against *de se* readings arises differently in *ea* as opposed to *dea* even though both are strong, compared to a clitic pronoun *a*. For instance, considering (57), Patel-Grosz & Grosz (2014) argue that the D_{deix} head in (57c) contains an anaphoric index, i.e. it would, by itself, have a semantic contribution. By contrast, following Cardinaletti & Starke (1999), the main difference between non-clitic personal pronouns, (57b), and clitic personal pronouns, (57a), would be of a prosodic nature, which is modeled by means of a purely formal (and semantically uninterpreted) Σ in (57b). In other words, a semantic effect that

is connected to the presence of Σ would have to arise indirectly, e.g. by means of the interactions of the pronoun with information structure. The expectation is that (57b) is more likely to be mapped to a semantically vacuous expression (and be read *de se*) than (57c), and this is exactly what we seem to observe in (56).

(57) a. clitic pronoun   b. personal pron.   c. demonstrative pron.
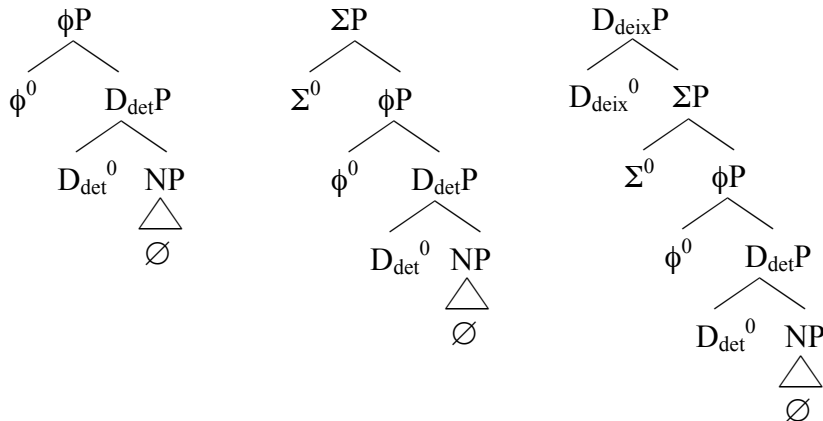
5. Further implications: testing for possible *de se* LFs

One question that remains largely unanswered concerns the range of attitude predicates that select *de se* LFs, and how this selection is implemented. Specifically, we have seen that *believe* takes a clausal complement that denotes a property, repeated in (58), i.e. it quantifies over world/individual pairs, so-called *centered worlds*; in other words, *believe* comes equipped with the necessary semantics in order to combine with a complement clause that contains a *de se* pronoun. By contrast, it has been argued in Percus & Sauerland (2003a) and Pearson (2012) that there is also a non-*de-se* variant of *believe* that only combines with *de re* LFs (i.e. *believe* may be ambiguous between *believe$_{de\ se}$* and *believe$_{de\ re}$*).

(58) $[[believe]]^g = \lambda P_{<e,<s,t>>} . \lambda x . \lambda w$. For all $<y, w'>$ in $DOX_{x,w}$, $P(y)(w') = 1$

where $DOX_{x,w}$ stands for the set of pairs $<y, w'>$ such that w' is a world compatible
with x's beliefs in w, and y is the individual in w' who x, in w, identifies as himself.
(based on Percus & Sauerland's 2003b entry for *dream*)

In this regard, Pearson & Dery (2014) suggest that there may be a difference between *dream* and *believe* in terms of whether they select designated *de se* LFs or not. Their experiments indicate that, in English, *dream* selects dedicated *de se* LFs, whereas *believe* does not. They conclude that

there may be two routes to *de se*: in the case of English *believe*, *de se* readings come about as a special type of *de re* reading (see section 2.2); in the case of English *dream*, *de se* readings are due to designated *de se* LFs. The generalization from Kutchi Gujarati can now be used to test for *de se* LFs in the language. Consider the following example. Patel-Grosz (2012) argues that epithets are anti-*de-se* pronouns, i.e. a type of pronominal element that cannot be construed *de se*. A puzzling observation in this respect is the contrast between (59a) and (59b); an epithet that refers to the current attitude holder is unacceptable in the complement of *knows*, (59a), but acceptable in the complement of *doesn't know*, (59b). These data seem to indicate that a complement clause of *knows* must have a *de se* LF, (60a), whereas the complement clause of *doesn't know* must have a *de re* LF, (60b).

(59) a. * **Nero₁** knows that **the damn traitor₁** should invite Sarkozy to the peace talks.
      b.$^{?OK}$ **Nero₁** doesn't know that **the damn traitor₁** should invite Sarkozy to the peace talks.

(60) a. **Nero₁** knows   [$_{de se LF}$ that **the damn traitor₁** should invite Sarkozy].   * *epithet*
      b. **Nero₁** doesn't know [$_{de re LF}$ that **the damn traitor₁** should invite Sarkozy]. ^{OK} *epithet*

This contrast indicates that the ability of a predicate to select a *de se* LF may interact compositionally with phenomena such as, say, clausal negation – an interaction that is not yet fully understood. However, if this reflects a more general fact about complements of *know* vs. *not know*, then we expect to find the following in Kutchi Gujarati.

We have established for Kutchi Gujarati that null *pro* correlates with a *de se* construal, whereas overt *i* 'he' correlates with a *de re* construal. We can use this generalization as a diagnostic for whether a given predicate selects a *de se* LF or not. Consider the data in (61). In (61a), the null *pro* must refer to Valji and it is construed *de se*, whereas an overt *i* 'he' must refer to someone else (unless a *de re* context is construed, which is rather difficult in this case); contrastively, in (61b), overt *i* 'he' can refer to Valji and null *pro* seems to be ungrammatical. If overt *i* 'he' has to be read *de re*, this indicates that a self-directed (i.e. *de se*) lack of knowledge in (61b) cannot be due to a dedicated *de se* LF; (61b) must be a case where *de se* arises as a special case of *de re*.

(61) a. **Valji₁**-ne khabare ke {***pro₁*** / i*₁}   kotu   karyu.
          Valji-DAT knows   that pro   he   wrong did
          '**Valji** knows that **he** did wrong.'

31

b. **Valji₁**-ne khabar nathi ke {**i₁** / *pro} kotu karyu.
Valji-DAT know not.is that he pro wrong did
'**Valji** does not know that **he** did wrong.'

The generalization that emerges is summarized schematically in (62). As shown in (62a), *khabare* 'knows' seems to require a complement clause with a *de se* LF. By contrast, *khabar nathi* 'does not know' in (62b) fails to select for a complement clause with a *de se* LF. Presumably, (62b) then involves a *de re* LF that emulates a *de se* reading. The question arises why (62a) does not allow for such a *de re* LF, i.e. why is a route of deriving *de se* as a special use of *de re* blocked in (62a)?

(62) a. **Valji₁**-ne khabare [**de se LF** / *de re LF] ke **pro₁** kotu karyu]. *only null pro*
Valji-DAT knows that pro wrong did
b. **Valji₁**-ne khabar nathi [*de se LF / **de re LF** ke **i₁** kotu karyu]. *only overt pronoun*
Valji-DAT know not.is that he wrong did

In the spirit of Schlenker's (2005) we can argue that (62b) lacks a *de se* LF to begin with, but in (62a) both a *de se* LF and a *de re* LF are possible. Subsequently, the *de re* LF in (62a) is blocked due to Schlenker's constraint *Prefer De Se!*, as quoted in (63).

(63) *Prefer De Se!* (Schlenker 2005:292)

Whenever this is compatible with the situation which is reported, prefer a De Se over a De Re Logical Form.

Of course, the discussion of (61) assumes that there is a one-to-one correspondence between null pronouns under attitude predicates and dedicated *de se* LFs (and between overt pronouns and a *de re* construal). This is plausibly a simplification, given the discussion in section 4. However, I hope to have shown that the Kutchi Gujarati data indicate that *know* selects for a *de se* LF, whereas *not know* does not seem to select for a *de se* LF. It is still an open question how to account for this contrast, but a possible approach could be built on the idea that *knowing* and *not knowing* clearly differ in what they entail; for instance, if *know* selects a *de se* LF, this indicates that the attitude holder has a justified true belief that is consciously self-directed. What would it mean for *not know* to select a *de se* LF? This would plausibly mean that the attitude holder *lacks* a justified true belief that is consciously self-directed. One explanation for the lack of a *de se* LF

under *not know* may be that such a configuration is simply conceptually deviant. Future research needs to determine whether there is independent support for such an idea.

6. Conclusion

In this paper, I raised the question of how the *de se / de re* distinction interfaces with the syntax. The focus was on evidence from Kutchi Gujarati and (Austrian) Bavarian that corroborates a pronoun movement analysis. In these languages, 'weakness' of pronominal form (which I assume to reflect a lack of internal structure) correlates with the possibility (or even necessity) of a *de se* reading. This follows naturally if *de se* pronouns are uninterpreted, triggering predicate abstraction. It does not follow as straightforwardly if *de se* pronouns and non-*de se* pronouns were equivalent in their semantic interpretation. This yields support for a view in which there are distinct LFs for *de se* vs. *de re* interpretations.

7. References

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