A Locality Restriction on Indexical Shift: Evidence from Turkish

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1. Introduction

In English, 1st and 2nd-person pronouns, or indexical pronouns, always refer to the speaker or hearer of the utterance respectively. But in some languages, an indexical pronoun embedded under a propositional attitude verb may refer instead to the author or addressee of the proposition, as in (1), from Zazaki (Anand & Nevins 2004).

(1) Rojda ne va kε mi kes paci kεrd.
   Rojda not say that I anyone kiss did
   “Rojda; didn’t say that she kissed anyone.”

There has been much recent work on the syntax and semantics of indexical shift in various languages (Schlenker 2003, Anand & Nevins 2004, Podobryaev 2014, Shklovsky & Sudo 2014), and much of this work has come to the conclusion that there is a particular operator responsible for shifting the context on which indexical pronouns rely for their reference. However, it has generally been assumed that when an indexical pronoun finds itself in the scope of a context-shifting operator, it is obliged to pick up its reference from the context introduced by that operator, and it does so with no further restrictions. In this paper, I show that, at least for some speakers of Turkish, (a) not all pronouns in the scope of the operator must shift, and (b) the ability of a pronoun to shift can be blocked by an intervening unshifted pronoun. Such patterns are problematic for analyses of indexical shift that make use solely of context-shifting operators. I propose that at least for some speakers, indexical shift should be considered a special case of regular pronominal binding, and that intervention effects are instances of the De Re Blocking Effect in action.

The paper is organized as follows. Section 2 discusses the status of indexical shift in Turkish, and lays out the empirical contribution of this paper – the existence of violations of Shift Together, a supposedly universal principle governing the distribution of shifted

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indexicals. The data appear to show a kind of ‘intervention effect’. Section 3 provides an analysis in which indexical shift is considered pronominal binding, and the intervention effects are accounted for in terms of binding competition (Fox 2000). Section 4 provides cross-linguistic evidence for the proposal from Tsez, and Section 5 concludes.

2. Indexical shift in Turkish

Indexical shift in Turkish has previously been discussed in two works: Şener & Şener (2011) and Özyıldız (2013). They are largely compatible, although they differ in one major respect: Şener & Şener claim that only null pronouns may be shifted, while Özyıldız claims that both null and overt pronouns may be shifted, providing examples such as (2).

(2) İnan Ayşe-ye [sen-inle ben-i nere-ye ata-yacak-lar] de-miş?
“Where did İnanı say to Ayşel that they would appoint {you and me/him and her}?”

The judgments shown in the remainder of this paper come from a speaker of the most permissive variety of Turkish, with respect to indexical shift. The speaker allows shifting in finite clauses embedded under both sanmak ‘believe’ and demek ‘say’, he allows both 1st and 2nd-person pronouns to be shifted, and he allows both null and overt pronouns to be shifted.\(^1\) In the rest of this section, we see that the speaker also reports a particular set of very revealing judgments that shed light on the nature of indexical shift.

2.1 Shift Together and its violations

Anand & Nevins (2004), who investigate the behavior of indexical shift in Slave and Zazaki, propose the generalization in (3).

(3) Shift-Together Constraint

All indexicals within a speech-context domain must pick up reference from the same context.

That is, where multiple indexical expressions find themselves in the scope of a the same attitude predicate, either they all receive shifted interpretations, or none of them receive shifted interpretations. ‘Mixed’ interpretations, where clausemate indexical pronouns are interpreted according to different contexts, are ruled out by (3).

In Anand & Nevins’s analysis, Shift Together is a natural consequence of how indexical shift works, and so we should not expect to find it violated in any language. This has largely been corroborated in studies of other languages with indexical shift, including Amharic

\(^1\)There is no doubt much more variation in indexical shift in Turkish. The results of some preliminary surveys show that there is variation in terms of which predicates license shifting: speakers pattern differently in whether they allow shifting under sanmak ‘believe’, demek ‘say’, and other attitude predicates. There may also be variation in whether or not 2nd-person pronouns may be shifted.
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(Schlenker 2003), Uyghur (Shklovsky & Sudo 2014), Mishar Tatar (Podobryaev 2014) and Tsez (Polinsky 2015), all of which adhere to Shift Together.\(^2\)

Özyıldız (2013), however, presents the paradigm in (4), which shows a Shift Together violation that is grammatical in his variety of Turkish. In (4), reading (i) involves no shifting. Reading (ii) shifts both pronouns, meaning that it obeys Shift Together and so is acceptable, as predicted. Reading (iv) violates Shift Together and is, unsurprisingly, disallowed. But the interesting data point is reading (iii), which is judged acceptable despite violating Shift Together.

(4) Tunc Ayşe-'ye [**ben sen-i** nere-ye götür-eceğ-im] de-miş?
   Tunc Ayşe-DAT [you I-ACC where-DAT take-FUT-1SG] say-DUB

“Where did Tunc \(i\) say to Ayşe \(j\) that... i. I would take you?”
ii. he\(i\) would take her\(j\)?”
iii. he\(j\) would take you?”
iv. *I would take her\(j\)?”

The generalization seems to be that the lower (earlier) pronoun may shift only if the higher (later) pronoun shifts. We can show that it is not a simple asymmetry between 1\(^{st}\) and 2\(^{nd}\)-person pronouns by considering the sentence in (5), where the 1\(^{st}\) and 2\(^{nd}\)-person pronouns have been switched. Here, we see again that the lower pronoun may shift only if the higher pronoun shifts (the equivalent readings (i) and (ii) are left out, but they are both grammatical).

(5) Tunc Ayşe-'ye [**sen ben-i** nere-ye götür-eceğ-im] de-miş?
   Tunc Ayşe-DAT [you I-ACC where-DAT take-FUT-1SG] say-DUB

“Where did Tunc \(i\) say to Ayşe \(j\) that... iii. she\(j\) would take me?”
iv. *you would take him\(i\)?”

We can also show that this is not simply an asymmetry between subject and non-subject – when the direct and indirect object are both indexical pronouns, we see the same pattern as before, where the lower pronoun may shift only if the higher pronoun shifts:

(6) Tunc Ayşe-'ye [**patron ben-i sen-inle** nere-de tanış-tır-acak] de-miş?

“Where did Tunc \(i\) say to Ayşe \(j\) that the boss would introduce... i. me to you?”
ii. him\(i\) to her\(j\)?”
iii. *him\(i\) to you?”
iv. *me to her\(j\)?”

This pattern can be stated another way: an indexical pronoun may only shift if there is no unshifted pronoun intervening between the indexical pronoun and the DP serving as

\(^{2}\)It is worth noting that in Mishar Tatar, apparent Shift Together violations are possible if one pronoun is null, and therefore a member of the class of shiftable pronouns, while the other pronoun is overt, and therefore a member of the class of unshiftable pronouns. However, such examples do not undermine Anand & Nevins’s analysis as, according to Podobryaev (2014), the unshiftable pronouns in Mishar Tatar are assigned reference by a distinct mechanism.
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its referent (where ‘intervene’ may, for now, be interpreted as involving structural or linear intervention). So in (6), seninle ‘with you’ may only shift when beni ‘me’ is shifted – this ensures that there is no unshifted indexical pronoun intervening between beni ‘me’ and the DP that serves as its referent, Tunc.

It is also important to reiterate once again that these judgments are not shared by all, or even most, Turkish speakers. These are the judgments of an individual with the most permissive possible constellation of properties related to indexical shift – however, I predict that all speakers who allow Shift Together violations should find the (iii) readings of (4-6) more natural than the (iv) readings. The next section presents an analysis of the grammar that generates this pattern.

3. Analysis

In the previous section we saw that for speakers who allow Shift Together violations, an indexical pronoun may be shifted only if there is no unshifted pronoun that intervenes between the shifting pronoun and the DP serving as its referent (with ‘intervene’ yet to be refined). This pattern bears a strong resemblance to the De Re Blocking Effect (Anand 2006), indicating that indexical shift may be collapsible with regular pronominal binding.

I first compare the asymmetry found in indexical shift to the De Re Blocking effect, before moving onto how shifting and binding might be given a unified analysis.

3.1 The De Re Blocking Effect

The De Re Blocking effect (Anand 2006) states that no obligatory de se anaphor can be c-commanded by a de re counterpart. One consequence of this is the well-documented asymmetry between the 1st-person pronouns in (7), from Lakoff (1972). The only possible interpretation is the one in which the object pronoun is interpreted de re (as George), and the subject de se (as Brigitte). If the object was interpreted de se instead, then the subject would necessarily be de re, and thus we would end up with a configuration in which a de se pronoun is c-commanded by a de re pronoun – a configuration explicitly ruled out by the Blocking Effect.

(7) [George:] I dreamt I was Brigitte Bardot and I kissed me.
   a. In the dream Brigitte kisses George.
   b. # In the dream, George kisses Brigitte.

Another phenomenon that Anand argues to follow from the De Re Blocking Effect is Dahl’s puzzle (Dahl 1973). The puzzle is that of the four logically possible interpretations of the ellipsis site in (8), only three are available. This can be restated as a restriction against a pronoun construed strictly c-commanding a pronoun construed sloppily. Anand (2006), following Fox (2000), argues that reading (d) is unavailable thanks to the De Re Blocking Effect, albeit indirectly.
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(8) John said that he likes his mother. Bill did too.
   a. Bill said that John likes John’s mother.
   b. Bill said that Bill likes Bill’s mother.
   c. Bill said that Bill likes John’s mother.
   d. # Bill said that John likes Bill’s mother.

The reasoning is as follows. Fox’s Rule H (which I refer to henceforth as binding locality) states that where a pronoun could be bound by multiple possible antecedents, and the possibilities would be ‘semantically equivalent’, that pronoun must be bound by the most local possible antecedent. This means that if the pronoun *his* in (8) is construed sloppily (i.e. requires a binder), only the embedded subject pronoun *he* may serve as its binder – the matrix subject *John* is not the most local possible antecedent, and so cannot directly bind *his*. The possible and impossible binding configurations of the first sentence in (8) are shown in (9), from Anand (2007).

(9) a. * John $\lambda x$ said that he$_x \lambda y$ likes his$_x$ mother.
    b. John $\lambda x$ said that he$_x \lambda y$ likes his$_y$ mother.

The binding relations in the elided VP would then have to match those in the anteceding sentence, thanks to a condition enforcing Parallelism. This explains why reading (d) is ruled out – in order to get this interpretation, the lowest pronoun *his* would have to be bound by the matrix subject, with the strictly-construed pronoun *he* intervening between them.

Crucial to Anand’s explanation is the notion of binding locality. Anand proposes that the underlying motivation for binding locality is the same as the underlying cause of the De Re Blocking Effect – obligatory de se pronouns (of which *me* in (7) and *his* in (8) are both instances) are marked for binding by an operator, and it is this binding operation that cannot be intervened.

Phenomena that Anand also attributes to the De Re Blocking Effect include intervention of long-distance reflexives by indexical and deictic pronouns in Mandarin (Zushi 1995, Anand & Hsieh 2005), and pronoun obviation in the presence of logophoric pronouns in Yoruba (Adesola 2005). In each of these phenomena, the banned or blocked configuration is the same: an unbound, antecedentless element intervenes between a variable-like pronominal element and its binder.

The similarities between the De Re Blocking Effects outlined here and the indexical shift asymmetry in the previous section are clear: in both cases there is a relation between a pronoun and its binder or antecedent, and in both cases that relation is blocked by an intervening unbound (free) pronoun. Given that the De Re Blocking Effect is characteristic of operator-variable relations where the variable is a pronoun, this seems like good reason to attempt a unification of ‘ordinary’ pronominal binding and indexical shift. In the next section, I provide an analysis of indexical shift in (dialectal) Turkish that collapses it with ‘ordinary’ pronominal binding.
3.2 Indexical shift as binding

Following Anand (2006, 2007), I assume that there is a class of pronouns that need to be bound by an operator. For Anand, this is the class of obligatory de se pronouns – he argues that indexically-shifted pronouns acquire their referents via a different mechanism (see Anand & Nevins 2004). However, I propose that at least in some languages, pronouns that are indexically-shifted should be treated in the same way as obligatory de se pronouns.\(^3\) That is, they both must be bound by an operator.

What exactly is this operator? Following earlier work in Tyler (2015), I propose that the operator responsible for binding the shifted indexical is the \(\lambda\)-operator associated with the subject or indirect object argument of the embedding attitude predicate.\(^4\) The binding relation between a shifted indexical and its antecedent in the Turkish variety described here is schematized in (10), using English words.

\[
\text{(10) } \text{İnan } \lambda x [ I_x \ \text{clapped}] \ \text{said.}
\]

This operator-variable relationship is equally susceptible to intervention as the other binding relations Anand discusses. In (11), an unbound (and so unshifted) indexical pronoun intervenes between the bound (shifted) indexical and its antecedent, and the result is ungrammaticality. This is the configuration found in the unavailable reading (iii) in (4-6).

\[
\text{(11) } * \text{İnan } \lambda x [ \text{you } \lambda y \ [ \text{me}_y \ \text{where take } ] \ ] \ \text{said.}
\]

However, there are two apparent difficulties with simply assimilating these to other cases of the De Re Blocking Effect. Recall that the effect is a consequence of binding locality, and under binding locality, binding configurations are only ruled out (a) if there is an intervening element which could also bind the variable and (b) if having the variable bound by one potential binder would be ‘semantically equivalent’ to having it bound by the other. Adopting this explanation would mean that (12a), equivalent to (11), is ruled out because (12b) is both available, and ‘semantically equivalent’ to (12a).

\[
\text{(12) a. } * \text{İnan } \lambda x [ \text{you } \lambda y \ [ \text{me}_y \ \text{where take } ] \ ] \ \text{said.}
\]
\[
\text{b. } \text{İnan } \lambda x [ \text{you } \lambda y \ [ \text{me}_y \ \text{where take } ] \ ] \ \text{said.}
\]

To assimilate the indexical shift asymmetries to other De Re Blocking Effects would therefore require not only that you can bind I and vice versa, but also that, for the purposes of evaluating binding configurations, indexically-shifted pronouns (e.g. me in (12a)) are considered ‘semantically equivalent’ to unshifted pronouns (e.g. me in (12b)).

\(^3\)I do not claim that the mechanism proposed here should be adopted as an analysis for all indexical shift. Just as Anand proposes that there are multiple routes to de se-hood (see also Maier 2011), there may also be multiple ways to shift an indexical. See also the analysis of Tsez in Section 5.

\(^4\)In the analysis in Tyler (2015), the person-feature discrepancy between the binder and the bindee is not a problem since the bound indexical is transmitted its 1\textsuperscript{st} or 2\textsuperscript{nd}-person feature from the attitude verb. For an alternative view, in which the attitude verb itself binds shifted indexicals, see von Stechow (2003).
Taking the first problem first, Charnavel (2015) uses the following data to argue that 1st-person pronouns can indeed bind 2nd-person pronouns and vice versa. In (13a), the interpretation of the pronoun in the ellipsis site is not strict (this gives rise to reading (13b)), nor is it clearly in a sloppy relation with an antecedent (this is because the only available antecedent is the 1st-person pronoun in subject position, with which you does not share person-features). Rather, the pronoun in the ellipsis site is interpreted as relying on a “dependent interpretation of you with respect to I”.

(13) [Romeo to Juliet:] I love you.
    [Juliet to Romeo:] I do too.
    a. Juliet loves Romeo.
    b. Juliet loves herself.

Interpretation (a) of the focus construction in (14) shows a similar dependency between I and you. I follow Charnavel in taking these to be instances of binding.

(14) [Tom to Sue, in a ballroom dancing class:] Only I made you swirl.
    a. No other dancer makes his partner swirl.
    b. No other dancer makes Sue swirl.

Turning to the second problem, are shifted indexicals ‘semantically equivalent’ to their unshifted counterparts, for the purposes of evaluating binding configurations in a binding locality framework? (Anand 2006, 2007) shows that desascription is not taken into account during binding competition – this must be true in order for the dream report example in (7) to be derived via binding locality. However, Anand does maintain that in order to function as semantically equivalent, two pronouns do still need to be denotationally equivalent – that is, they must both refer to the same individual. I propose relaxing the definition of ‘semantic equivalence’ for binding competition, and allowing indexicals to be considered equivalent regardless of the individual they identify. I leave the justification and formalization of this notion to future research.

A consequence of the binding approach to indexical shift, in contrast to the approach based on context-shifting operators (Anand & Nevins 2004), is that it does not provide any explanation for Shift Together (3). While we must allow that not all speakers enforce Shift Together, we still require an explanation for why it seems so robust generally. I speculate that the route to indexical shift expounded here, in which shifting is a special case of binding and in which Shift Together is not predicted as a consequence, may co-exist alongside the route to indexical shift that involves a context-shifting operator, and in which Shift Together is predicted.

In the next section, I use Tsez data from Polinsky (2015) to provide further evidence that indexical shift may be a special case of pronominal binding, and that we may require two routes to indexical shift.

4. Shifting as binding: evidence from Tsez

Polinsky (2015) shows that Tsez has indexical shift, as in (15a), and long-distance reflexives, as in (15b).
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(15) a. **Indexical shift**

Mariyat-ä ʾarza boy-s [di magazine-y-ā-ḥor
Mariyat-ERG complain-PST [I.ABS(.11) store-OBL-LOC-VERS
y-ik´t-ān=ḥin],
II-go-FUT.DEF=QUOT]

“Mariyat, complained that I/she must go to the store.”

b. **Long-distance reflexive**

Kid-b-ä tungi [nelätow tel
girl-OBL-ERG jug.ABS.II [LD.REFL.LOC.ESS inside
zāw-ru]-zo li-d esay-s.
be.PST-PST.PTCP]-ATTR.OBL water-INS wash-PST

“The girl washed the jug with the water that was in itself.”

Polinsky also shows that long-distance reflexives may be based on 1st and 2nd-person pronouns, and that these may be bound by anteceding 3rd-person DPs. That is to say, long-distance reflexives may receive shifted interpretations (and indeed, they cannot receive unshifted interpretations in the absence of a binder that shares the same person-features):

DEM-ERG [LD.REFL.1SG forty year be.PRES=QUOT] say-PST

“He said that he/*I was 40 years old.”

If Tsez indexical shift works like it does in the Turkish variety discussed here, then this pattern is expected. Under this model, indexical shift is essentially pronominal binding. Therefore, when a pronoun is reflexive and so must be bound, if its binder is a 3rd-person DP it necessarily receives a shifted interpretation. We also predict that we should see a similar pattern of intervention to that found in Turkish: that is, it should not be possible for an unbound indexical pronoun to intervene between a bound pronoun and the operator which binds it. And, to some extent, Polinsky’s data provides some evidence of this. In (17a), we see that a non-reflexive indexical pronoun dow-ḫʾor ‘with you’ may happily co-exist in the same clause as a shifted reflexive indexical pronoun ditow ‘I-self’. In (17b), however, the non-reflexive pronoun di ‘I’ intervenes between the reflexive pronoun dowʾortow ‘with yourself’ and its binder, and the resulting sentence is degraded.

(17) a. Irbahin-ä Zarema-q-or [ditow dow-ḫʾor
Ibrahim-ERG Zarema-POSS-LAT [LD.REFL.1SG ABS you-SUPER-LAT
bixzi oq-si=ḥin] eḥi-s.
angry become-PST=QUOT] say-PST

“Ibrahim told Zarema that he was angry with hef.”

5Polinsky uses language-internal diagnostics to show that (15a) is an instance of clausal embedding rather than quotation.
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b. ? İrbahin-ä Zarema-q-or [di dowΧ’ortow
İbrahim-ERG Zarema-POSS-LAT [1SG.ABS LD.REFL.2SG.SUPER.LAT
bixzi oq-si=ξin] eξi-s.
angry become-PST=QUOT] say-PST
“Ibrahimı told Zarema that heı was angry with herı”

The degraded nature of (17b) can be blamed on the De Re Blocking Effect – an unbound pronoun intervenes between the bound (shifted) pronoun and its antecedent. However, this explanation crucially relies on the non-reflexive pronoun di ‘I’ being unbound. If di was bound, then it would not function as an intervener, and there would be nothing odd about (17b). Because di is both shifted and unbound, it then follows that there must be an alternative route to indexical shift available in Tsez. Given that Polinsky describes Tsez as exhibiting Shift Together, I assume that Tsez also makes use of context-shifting operators to shift indexicals.

5. Conclusions

We have seen that Shift Together is not a universal fact about indexical shift, and that some speakers treat certain Shift Together violations as grammatical. Crucially, the impossible Shift Together violations are always the ones where an unshifted pronoun intervenes between the shifted pronoun and its antecedent. In this way, they resemble the cases of pronoun binding that are ruled out by the De Re Blocking Effect, itself a reflex of a rule of binding locality. As such, I have proposed that speakers who allow violations of Shift Together do in fact have a route to indexical shift that involves pronoun binding.

Note that so far, I have left ambiguous the structural framing of the binding relationship that may be ‘intervened’. This is because it does not clearly involve either linear precedence or c-command: if the indirect object in (6) is scrambled over the direct object, as in (18), the original judgments remain in place. That is to say, there is a kind of local scrambling that neither feeds nor bleeds the shiftability of a pronoun:6

(18) Tunc ¸ Ayşe-’ye [patron sen-inle ben-i nere-de tanış-tr-acak] de-miş?
“Where did Tuncı say to Ayşẽ that the boss would introduce iii. ?himı to you?”
iv. *me to herı?”

This indicates that the relevant relation is computed over some abstract representation – the exact nature of this representation is a topic for future work.

6The judgments for (18) are somewhat trickier than for the other examples. This stems from the fact that there is a competing reading of (18) in which sen-inle ben-i ‘you-COM me-ACC’ is interpreted as a coordinated phrase (‘you and me’), rather than two separate arguments of the verb. Özyıldız (2013) shows that indexical pronouns in coordinated phrases must shift together, and so reading (iii) is only available under the non-coordinated interpretation.


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