

Abstract

There are two types of lexical items whose references switch under embedded context: shifty indexicals and logophors (which are called Speech Act Indexicals (SAIs) and Logophorically Anchored Elements (LAEs) respectively during the presentation). Although the two are of different kinds, the distinction is not easy because of reference switch in similar and sometimes the same environments. This presentation shows that they must be distinguished based on Japanese data and proposes the ways to differentiate them. In addition, the presentation suggests a proposal for each type. More specifically, while we basically follow a generally assumed operator binding account of logophors, we propose a novel account of shifty indexicals, which requires neither monster operators nor speech act related functional projections.

1 Introduction

The last ten years have seen a great increase of interest in shifting of indexicals. For example, there are languages where a 1st person pronoun, when embedded, must refer to the author of the embedded clause rather than the speaker of the sentence as the following Uyghur example illustrates:

- (1) Ahmet [men ket-tim] di-di.
 Ahmet 1SG leave-PAST.1SG say-PAST.3
 ‘Ahmet_i said that {*I/he_i} left.’ Shklovsky and Sudo (2014: 383)

In Japanese too, it has been argued that shifting of a similar kind exists (Kuno 1988, Oshima 2006, Sauerland and Yatsushiro 2015, and Shimamura 2018 among others). However, as Deal (2017) calls our attention, there are two kinds of elements which switch references in embedded context: indexicals and logophors, which will be called Speech Act Indexicals (SAIs) and Logophorically Anchored Elements (LAEs) respectively here. In fact, both of them exist in Japanese and are difficult to distinguish particularly because of overlapping cases under certain conditions. Oshima (2006), for example, claims that motion deictic verbs such as *ik* ‘go’ and *kur* ‘come’ (or empathy-loaded expressions in Kuno and Kaburaki (1977)) and (logophoric) *zibun* are indexicals, based on examples such as the following:

- (2) a. Watasi-ga Mary-no tokoro-ni {*ku/ik}-(r)u.
 I-NOM Mary-GEN place-at {come/go}-NONPAST
 ‘I will {come/go} to Mary.’
 b. John-ga watasi-no tokoro-ni {ku/*ik}-(r)u.
 John-NOM I-GEN place-at {come/go}-NONPAST
 ‘John will {come/go} to me.’
- (3) John_i-wa [Taro_j-ga [asita watasi-ga zibun_{i/j}-no tokoro-ni
 John-TOP Taro-NOM tomorrow I-NOM zibun-GEN place-at
 {kur/*(when *zibun* refers to Taro)ik}-u to] iw-ta to] omow-te.i-ru.
 {come/go}-NONPAST C_{to} say-PAST C_{to} think-PROG-NONPAST
 ‘John_i thinks that Taro_j said that I would {come/go} to him_{i/j} tomorrow.’

The motion deictic verb *ku(r)* ‘come’ requires the speaker (or his or her mind) to be at the destination, so it prohibits the first person pronoun from appearing in the departure (i.e. subject) position as in (2-a), whereas *ik* ‘go’ does not allow the first person pronoun to be at the destination in the matrix clause in Japanese as in (2-b). However, the first person pronoun in the subject position is possible with *ku(r)* when embedded as in (3), because the pronoun is no longer the speaker in the embedded or shifted context. The author/speaker of the innermost clause is shifted to Taro and the author/speaker

of a clause cannot be at the destination in the case of *ik* ‘go’ (cf. (2-b)), so *zibun* cannot refer to Taro. If it refers to the matrix subject (i.e. John), the sentence is fine. This fact seems to suggest that indexical shift has obligatorily applied to the deictic verb. However, we will claim below that motion deictic verbs do not concern SPEAKER OR AUTHOR and the ungrammaticality is due to an independent condition (i.e. the Participant Constraint as will be introduced below); hence, they are not indexical in nature. Similarly, there is more than one possible antecedent for *zibun* in the case of multiple subjects,¹ which suggests *zibun* is not indexical but a Logophorically Anchored Element (LAE), because, as we will see below, genuine shifty indexicals (i.e. SAIs) are obligatorily shifted and allow no multiple interpretations under *to* clauses.

Moreover, as the following example shows, the motion deictic verbs do not always shift:

- (4) Taroo-wa Ziroo-ni [tosyokan-ni {ko-i/ik-e} to] iw-ta
 Taro-TOP Jiro-DAT library-to {come-IMP/go-IMP} C_{to} say-PAST
 ‘(Lit.) Taro said to Jiro that {come/go}.IMP to the library.’ Shimamura (2018: 79)

In (4), Taro, who is the author or speaker of the embedded clause, is expected to be in the library when Jiro would be coming to the library in the case of *kur* ‘come’. However, the same predicate is also fine even when it is not Taro but the speaker of the sentence who would be waiting for Jiro in the library. Thus, the motion deictic verbs are not always affected by context shift. However, the imperative part (represented by attaching *i*, *e*, or *o* to a verb) is obligatorily shifted under *to* clauses, so that the command was directed to Ziroo (and not to the addressee of the sentence) from Taro, who is the author or speaker of the embedded clause (and not from the speaker of the sentence). In contrast, the use of *ko* ‘come’ and *ik* ‘go’ can be determined independently from the author/speaker of the embedded clause; accordingly, they are not indexicals. One may claim that shifting is optional. However, if that is the case, it is not clear why shifting is always obligatory for the imperative. This strange behaviour lead Kuno (1988) and Sauerland and Yatsushiro (2015) to conclude that context shift is limited to “clause-final verb position”, because of which only the imperative auxiliary verb is shifted. Furthermore, Sauerland and Yatsushiro (2015) assume a monster operator in a clause-final position, which triggers context shift following Schlenker (2003), Anand (2006) and Shklovsky and Sudo (2014), and only the final-verb is raised into the operator, which is why context shift is limited to clause-final verbs. This seems an ad hoc solution and is not a correct generalization, because even non-final verbs go through shifting as we will see below. Instead we argue that the imperative modal is a shifty indexical, i.e. Speech Act Indexical (henceforth, SAI), whereas empathy-loaded expressions, such as motion deictic verbs and (one type of) *zibun*, are Logophorically Anchored Elements (henceforth, LAEs).

2 Speech Act Indexicals (SAIs) vs. Logophorically Anchored Elements (LAEs)

2.1 Logophorically Anchored Elements

Interpretations of motion deictic predicates such as *kur/ik* ‘come/go’ are determined irrespective of who the speaker/author of the clause is (unless the author denoting pronoun appears in the same clause, the cases of which we will discuss below). Similarly, the referents of *zibun* are ambiguous in the case of multiple embedding (i.e. when there is more than one subject) as in (3). More specifically, *zibun* can refer to one of the higher subjects (or the speaker of the sentence), who do not necessarily coincide with the author or speaker of the clause where *zibun* appear. Thus, they are independent of context shift; hence, they are not SAIs but Logophorically Anchored Elements (LAEs).

¹This presentation discusses only long-distance construals of *zibun*, so we will not consider the cases in which it refers to the subject in the same clause (i.e. the first person pronoun in (3)). In fact, *zibun* can always refer to the speaker of the sentence (even when there is no first person pronoun). Speaker-referring *zibun* will be regarded as one type of long-distance construal, and hence, an LAE too, as we will discuss later.

Nevertheless, there are cases in which context shift affects the interpretations of LAEs as observed in (3). That is, *ik* ‘go’ is unacceptable when an Author-denoting referent appears in the destination. To explain the phenomenon above, we first assume with Sells (1987) and Kuno and Kaburaki (1977). Specifically, each clause is interpreted in terms of somebody’s perspective. We call the owner of the perspective PERSPECTIVE TAKER. Some LAEs specify the location from where the PERSPECTIVE TAKER views the event and we call it POINT-OF-VIEW. Every LAE needs to specify a PERSPECTIVE TAKER, who is determined by being bound by an operator in C, i.e. OP_{PT} following Koopman and Sportiche (1989). The operator in turn refers to one of the higher subjects or the speaker of the sentence. Accordingly, ambiguity sometimes arises as in (3) regarding *zibun*. In other words, the PERSPECTIVE TAKER of the innermost clause is one of the higher subjects (i.e. John or Taro) or the speaker of the sentence, and since *zibun* is an LAE, it refers to one of them. Moreover, LAEs such as motion deictic verbs lexically specify the location of POINT-OF-VIEW. For example, *kur* ‘come’ requires the destination to be the POINT-OF-VIEW of the clause. Therefore, in (3), the PERSPECTIVE TAKER, who can be John or Taro, would be watching the speaker coming to him from his physical position, which is the POINT-OF-VIEW of the clause.

In addition, following Kuno and Kaburaki (1977) (i.e. Speech-Act Empathy Hierarchy, p. 631), we propose a pragmatic condition of POINT-OF-VIEW, which we call the Participant Constraint and define as follows:

(5) **The Participant Constraint**

If a clause contains an argument that obligatorily refers to the AUTHOR (or ADDRESSEE) of that clause, then it must be the POINT-OF-VIEW of the clause (but the constraint is milder in the case of ADDRESSEES).

The Participant Constraint sometimes conflicts with LAEs which lexically specify the POINT-OF-VIEW. For example, in (3), when *zibun* at the destination refers to the AUTHOR of the clause, i.e. Taro, and the LAE predicate *ik* ‘go’ is employed, the sentence becomes unacceptable. This is because *ik* prohibits the destination from serving the POINT-OF-VIEW whereas the Participant Constraint requires *zibun* at the destination to be the POINT-OF-VIEW when it refers to the AUTHOR of the clause. In other words, two conflicting sources of POINT-OF-VIEW cause unacceptability. Since the Participant Constraint involves AUTHOR, its application is subject to context shift, which always changes the AUTHOR of a *to* clause. This is why LAEs have sometimes been wrongly regarded as indexicals. However, LAEs themselves are independent of AUTHOR, so they are not indexical.

It is also important to note that some LAEs do not specify POINT-OF-VIEW, in which case pragmatics seems to decide it (see Kuno and Kaburaki (1977) for details). They include subject honorifics such as *V-(r)are* (or *o-V-ni.nar*) as follows:

- (6) Ken-wa [Taro-ga [Tanaka-sensei-ga sakini kaer-are-ta to] iw-ta to]
 Ken-TOP Taro-NOM Tanaka-teacher-NOM first leave-(*r*)are-PAST C_{to} say-PAST C_{to}
 omow-te.i-ru
 think-PROG-NONPAST
 ‘Ken thinks Taro said that Mr. Tanaka left early.’

The subject honorific *(r)are* is an LAE and expresses that the PERSPECTIVE TAKER shows respect to the subject of the predicate it modifies. In (6), the PERSPECTIVE TAKER of the innermost clause is Ken, Taro, or the speaker of the sentence. Accordingly, it is ambiguous in terms of the identity of the respectful person to Mr. Tanaka. Moreover, subject honorific LAEs do not define POINT-OF-VIEW, so the PERSPECTIVE TAKER can view the event from the location of Mr. Tanaka or a neutral position in (6).

2.2 Speech Act Indexicals

We now turn to SAIs, which include not only the imperative modal element as mentioned above but also *te.simaw* ‘unfortunate/annoying for the speaker/author’ and the addressee honorifics *mas* (and

des) as follows:

- (7) John-wa [Mary-ga Susan-ni [keihoo-ga itu nar- $\{te.simaw/imasi\}$ -ta to]
 John-TOP Mary-NOM Susan-DAT alarm-NOM when start- $\{te.simaw/mas\}$ -PAST C_{to}
 iw-ta to] omottei-ru no?
 say-PAST C_{to} think-NONPAST Q
 ‘When does John think Mary told Susan [that an alarm started t_{when}]?’

(Note that (7) is a long-distance *wh*-question to avoid the direct quote interpretation.) The auxiliary *te.simaw* implies that the described event is unfortunate for the speaker or author, but due to shifting, the presupposition is that the alarm incident was unfortunate for Mary, who is the author (or speaker) of the innermost clause. Most importantly, it is the only available interpretation of *te.simaw*. In other words, the matrix subject (i.e. John) (or the speaker) could not have felt the event unfortunate unlike the deictic verbs *kur/ik* ‘come/go’ or *zibun*, the multiple interpretations of which do not depend on the author of the clause where they appear. Similarly, the addressee politeness *mas* presupposes that Mary was respectful to Susan, who are the speaker and the addressee respectively in the most deeply embedded context, and no other esteem relationship is possible. These are real shifty indexicals (or SAIs in our terms) in Japanese in that their interpretations are directly affected by the AUTHOR (and ADDRESSEE) of the clause where they appear, and they obligatorily and unambiguously shift under the *to* clause.²

Moreover, it is possible to use more than one SAI in the same clause as follows:

- (8) John_{*i*}-wa [Mary_{*j*}-ga Tanaka sensee-ni [dare-ga zibun_{*i/j/the speaker*}-no tokoro-ni
 John-TOP Mary-NOM Tanaka teacher-DAT who-NOM zibun-GEN place-at
 $\{ki/(*\text{when } zibun \text{ refers to Mary})ik\}$ -*te.simai-soo-desi*-ta to] iw-ta to] omow-ta no?
 $\{come/go\}$ -*te.simaw-soo-des*-PAST C_{to} say-PAST C_{to} think-PAST Q
 ‘Who did John_{*i*} think that Mary_{*j*} told Mr. Tanaka t_{who} was about to $\{come/go\}$ to $\{him_i/her_j/me\}$?’

Apart from *te.simaw* and the addressee honorific *des, soo* ‘the author/speaker thinks the action of V likely’ or thinks the action is about to happen’ is an SAI too, so (8) has three SAIs, and Mary, the AUTHOR/SPEAKER of the innermost clause, is involved in all their interpretations. More specifically, Mary, not John or the speaker of the sentence, thought the burning incident was unbeneficial for her (*te.simaw*), but it would be a likely result (*soo*), and reported to Mr. Tanaka while she was showing respect to him (*des*). This observation conforms to the shift together constraint, which is another characteristic of shifty indexicals according to Anand (2006). Therefore, it is not only the final verbs that go through context shift contrary to Kuno (1988) and Sauerland and Yatsushiro (2015).

Next we turn to our account of SAIs. Many proposals resort to monster operators to explain context shift, the very existence of which Kaplan (1989) denies. The current presentation accounts for the phenomenon without monster operators following Ramchand (2018).

Attempting to explain the fact that no language seems to allow placement of Tense between *vP* and VP although semantically nothing prevents it, Ramchand (2018) proposes that lexical categories are mere symbols consisting of three kinds of information, < **phonological string, syntactic features, SEMANTICS** >, and there must be another event in which the speaker of a sentence employs or utters the symbols. Such utterance event is called *d*(avidsonian) event and is assumed to be introduced at the edge of *vP* (or EvtP in her notation) as follows:

- (9) $\lambda d \lambda e [\text{UTTERANCE}(d) \wedge \text{TH}_\alpha(d)=u \wedge \text{CONVEY}(d,e)]$

In (9), *u* is a symbol of < **phonological string, syntactic features, SEMANTICS** > and its semantics represents the argument structure of a predicate, which includes *e*. The Theme of *d* is the symbol, *u*, represented as ‘ $\text{TH}_\alpha(d)=u$ ’. To describe or report a real event in the world, a speaker must use or utter symbols (i.e. lexical categories), and *d* does the job. After the introduction of *d*, tense and modal

²Except the cases in which the attitude predicate is factive or its subject refers to the speaker of the sentence.

information are added. This is why no lexical category has tense information in it while categories dominating over Tense are generally functional.

We argue that SAIs are functional in nature in that they modify *d* events. For example, *te.simaw*, *soo*, the addressee honorifics *mas/des*, and the imperative mood morphemes are defined as follows:

- (10) [[-te.simaw]] = $\lambda Q\lambda d\lambda e[Q(d,e) \ \& \ \text{the Author in } d_{\langle author, addressee, t, w \rangle} \text{ feels } e \text{ unbeneficial or annoying}]^3$
- (11) [[-soo]] = $\lambda Q\lambda d\lambda e[Q(d,e) \ \& \ \text{the Author in } d_{\langle author, addressee, t, w \rangle} \text{ thinks } e \text{ is likely or probable}]$
- (12) [[-mas/des]] = $\lambda Q\lambda d\lambda e[Q(d,e) \ \& \ \text{the Author in } d_{\langle author, addressee, t, w \rangle} \text{ shows respect towards the Addressee in } d_{\langle author, addressee, t, w \rangle}]$
- (13) [[-i/e/o (imperative)]] = $\lambda Q\lambda d\lambda e[Q(d,e) \ \& \ \text{the Author in } d_{\langle author, addressee, t, w \rangle} \text{ orders the Addressee in } d_{\langle author, addressee, t, w \rangle} \text{ to realise } e]$

Since *d* is an utterance event, the speaker and possibly the addressee values as well as its temporal and world ones must be specified, which is equivalent to the utterance context of the sentence. However, when embedded under *to* clauses, the context values of an attitude predicate must be passed on to SAIs through complementiser *to*. Thus, we also assume the following:

- (14) **The mechanism of indexical shifting**
Complementiser *to* introduces a *d* and its contextual values about <Author, (Addressee,) Time and World> must be specified by an attitude predicate which selects the CP.

For example, in (15), the ‘think’ predicate in the matrix clause can be thought of as an utterance event (that is, making an utterance to oneself in his or her mind); thus, it can provide necessary values for *to*, which in turn passes them down to SAIs inside as follows:

- (15) a. John-wa [Mary-ga nemur- $\{\text{isoo}/\text{*imasi-ta}\}$ to] $\{\text{omow}/\text{??sir}\}$ -ta.
John-TOP Mary-NOM sleep- $\{\text{soo}/\text{mas-PAST}\}$ C_{to} $\{\text{think/know}\}$ -PAST
‘John {thought/knew} that Mary {was about to fall asleep/had fallen asleep}.’
- b. *John-wa (Mary-ni) [nemur-e to] omow-ta.
John-TOP (Mary-DAT) sleep-IMP C_{to} think-PAST
‘John thought (to Mary) that she must sleep.’

In (15), the matrix predicate provides information about <Author, (Addressee,) Time and World> for *d* in C_{to} , where the AUTHOR value is John, but no ADDRESSEE value is given because thinking normally does not need an addressee. Moreover, the time of the event described by the embedded is placed after <Time> of *d* because of the PAST morpheme and allows no other interpretation, so tense is an SAI too. Accordingly, in the case of *soo*, its AUTHOR value defined in (11) is John, i.e. the matrix subject of ‘think’, which is why John felt the alarm incident which had already happened of course was unbeneficial or annoying for him. This is the account of SAIs without monster operators.

The factive ‘know’ predicate can select a *to* clause specifying the contextual values of *d* in C in the same way as ‘think’ does, but generally SAIs are unnatural inside. This is because being factive, the embedded clause must be interpreted in terms of the utterance context too. Thus, in the case of *soo*, both John and the speaker think Mary’s sleeping event is likely.

Note also that the addressee honorific *mas* or the imperative mood is disallowed in (15), which is because the attitude predicate ‘think’ does not supply an ADDRESSEE value. Hence, the ADDRESSEE value of *mas* or the imperative morpheme defined in (12) and (13) remains unspecified, so the sentences become unacceptable. However, if the matrix predicate is ‘tell’, the example is fine as in (16):

- (16) a. John-wa Tanaka-sensei-ni [Mary-ga nemur- $\{\text{te.simaw}/\text{imasi}\}$ -ta to] iw-ta.
John-TOP Tanaka-teacher-DAT Mary-NOM sleep- $\{\text{te.simaw}/\text{mas}\}$ -PAST C_{to} tell-PAST

³Since the speaker of a sentence is a kind of author, we label speaker/author simply as author for the sake of simplicity.

- ‘John told Mr. Tanaka that Mary had fallen asleep.’
- b. John-wa Mary-ni [nemur-e to] iw-ta.
 John-TOP Mary-DAT sleep-IMP C_{to} tell-PAST
 ‘John told Mary to sleep.’

In (16-a), the honorific is acceptable because ‘tell’ specifies that its subject (i.e. John) be the AUTHOR and its indirect object (i.e. Mr. Tanaka) be the ADDRESSEE of d in the *to* clause which the predicate selects. The same account applies to the use of the imperative modal element in (16-b), in which case the ADDRESSEE of d is Mary.

3 Conclusion

The present account has advantage over monster operator accounts. As Deal (2017) claims, it is generally the case that the first person pronouns shift more easily than the second person ones and that *think* and *tell* type verbs trigger context shift but *know* type (or factive) verbs do not. To account for these generalisations, Deal (2017) proposes a few kinds of monster operators (i.e. one for the first person (or AUTHOR) and another for the second person (or ADDRESSEE) and to stipulate that the *tell* type can select the largest CP which includes the operators for AUTHOR and ADDRESSEE, the *know* type selects the smallest CP, which cannot have any monster operator, and the *think* type selects CP of a size somewhere in the middle. But this solution is stipulative, because there seems to be no evidence for different sizes of CP selected by speech, thought and knowledge predicates. What is more, Japanese has another kind of indexical, which do not shift even when embedded, such as *watasi* ‘I’ and *anata* ‘you’. However, the monster (or context shift operator) accounts have no reasonable way of explaining it.

In contrast, the two generalisations and the one particular fact about Japanese above follow naturally from our account. SAIs with ADDRESSEE values do not shift as easily as SAIs with AUTHOR values alone, because not all attitude predicates provide ADDRESSEE values for complementiser *to*. Similarly, *know* type verbs do not initiate context shift because the d values of an embedded clause selected by a factive predicate must be the same as those of the utterance context, which would bring about the same effect as non-shifting. Accordingly, our account does not need any monster operator or stipulate CP of different sizes. Moreover, Japanese indexical pronouns make reference to the utterance context like the ones in English, and the context never shifts inside the entire sentence as Kaplan (1989) argued, so they never shift. In this manner, coexistence of two kinds of indexicals in one language is easily accounted for.

This account also has advantage over syntactic proposals in which a functional category such as SpeechActP is introduced inside CP (e.g. Miyagawa 2017). It is generally assumed that speech act information is expressed around the CP region, so a relevant functional category is introduced around there. However, the addressee honorifics *mas/des* are employed below TP, so well below CP. There is no evidence of the honorifics being raised to C^0 , so such a syntactic account is unmotivated. But our account does not need such a new functional category or movement. Simply, the context values of d in SAIs need to be specified by a complementiser, so SAIs such as the addressee honorifics are not strange items in our account. Moreover, SAIs are either generated outside vP or obligatorily raised above it because d is not introduced until the completion of vP , so we predict that SAIs are generally placed higher than LAEs, which seems to be the case, but relevant data is omitted here due to lack of space.

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