Chapter 27

Reflexive constructions in Yaqui

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In Yaqui (Uto-Aztecan, Mexico), coreferential participants within the same clause can be expressed by reflexive pronouns or nonreflexive personal pronouns. Reflexive pronouns express agent-patient and agent-beneficiary coreference; when noncoreferential, the patient and the beneficiary take accusative case. Nonreflexive personal pronouns express the coreference between the agent and several other semantic roles (e.g., theme, interlocutor, recipient, source, location); when noncoreferential, these participants take oblique case. The agent-possessor coreference alternates: it is usually expressed by nonreflexive pronouns but, under certain circumstances, it is reflexive-marked. These patterns suggest that the use of reflexive pronouns in Yaqui is syntactically conditioned, i.e., reflexive pronouns cannot be combined with postpositions and cannot serve as adnominal modifiers.

1 Introduction

It is a universal tendency that languages avoid using two or more coreferential full NPs within the same clause. As a result of this tendency, coreferential NPs can be marked in two different ways: one of the coreferential NPs may be replaced by a (reflexive) pronoun, or it may be deleted; in the latter case the verb may receive a special reflexive marking (Kemmer 1993; Kazenin 2001; König & Gast 2008; Haspelmath 2023 [this volume]). There are two ways to express coreferential participants in Yaqui: by use of reflexive pronouns and by use of nonreflexive personal pronouns. Reflexive pronouns are used when the agent is coreferential with the patient (1a) or the beneficiary (1b). Nonreflexive pronouns are used when the agent is coreferential with the recipient (1c), or other semantic roles. When taking non-coreferential NPs, a'ana 'dress' takes an accusative



patient, *maka* 'give' takes an accusative beneficiary, and *bittua* 'send' takes an oblique recipient. In Yaqui, oblique core arguments are marked by postpositions.

- (1) a. Ino=ne a'ana-n.
 1SG.REFL=1SG.NOM dress-IPFV
 'I dressed myself.'
 - b. Joan-Ø u-ka toto'i-ta emo maka-k.

 John-NOM DET-ACC hen-ACC REFL give-PFV

 'John gave the hen to himself.'
 - c. Lupe-Ø supem a-u bittua-k.
 Lupe-NOM cloth.PL 3SG.OBL-DIR send-PFV

 'Lupe sent clothes to him/her/it, to herself.'

Accordingly, coreferential participants in direct (1a) and indirect (1b) reflexive constructions are marked by reflexive pronouns, whereas coreferential participants in oblique reflexives (1c) are expressed by nonreflexive personal pronouns. Strictly speaking, oblique reflexives are not reflexive constructions because there is no special form that signals the coreference (Haspelmath 2023 [this volume]). Note that nonreflexive pronouns in (1c) allow a disjoint reference interpretation. In this chapter, coreferential constructions without a special form are called nonreflexive constructions. The agent-possessor coreference is slightly more complex: it is usually expressed by nonreflexive pronouns unless the anaphoric pronoun occupies the object position, i.e., direct and indirect reflexive constructions. Based on these patterns, I propose that the use of reflexive pronouns in Yaqui is syntactically conditioned, i.e., reflexive pronouns cannot be combined with post-positions and cannot function as adnominal modifiers.

I begin this chapter by presenting some basic information about the Yaqui language, (§1.1–§1.2). In §2, I give a summary of the pronominal system, and briefly touch on reflexive coding in other Uto-Aztecan languages. In §3, I present the analysis of direct, indirect, oblique, and adpossessive reflexive domains. Then, I discuss some issues on middle voice (§4) and coreferential NPs outside simple clauses (§5). In §6, I offer some conclusions. The analysis is based on data from oral texts and data collected by the reflexive questionnaire by Janic & Haspelmath (2023 [this volume]).

1.1 Yaqui and the Uto-Aztecan family

Yaqui belongs to the Uto-Aztecan language family, one of the largest and most widespread language families in the Americas, with representative languages spoken from the western United States all the way to southern Mexico. Uto-Aztecan languages are classified into a southern branch and a northern branch. The southern branch includes Tepiman, Corachol, Nahuatl, and Taracahita languages; the last group includes Yaqui, Mayo, Guarijio and Tarahumara. Historically, Yaqui was spoken by the Yoeme people living along the Rio Yaqui, in Sonora, Mexico and, following the Mexican Revolution of 1920, a large group of Yaqui speakers settled in Arizona, United States. Today, there are fewer than 1,000 speakers in Arizona (Simons & Fennig 2017) and approximately 16,500 speakers in Sonora (Instituto Nacional de Estadística y Geografía 2010), where Yaqui is spoken in several communities spread across eight towns (Figure 1). The data analyzed in this chapter come from one of these Sonoran communities, Vicam, where Yaqui is spoken in daily life and taught in several bilingual elementary schools. By age six, most community members are bilingual speakers of Yaqui and Spanish.

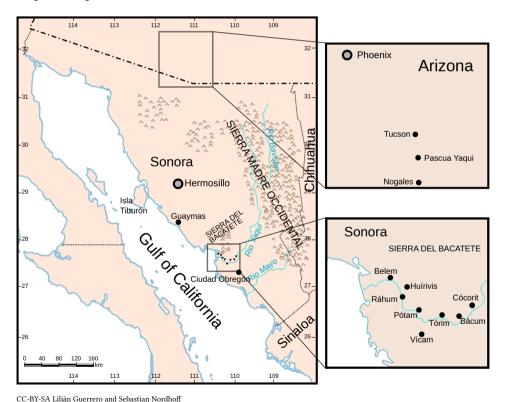


Figure 1: Yaqui communities (adapted from Estrada 2009: 18)

1.2 Basic morphosyntactic features of Yaqui

Yaqui is an agglutinating, dependent-marking, head-final, primary object language (Lindenfeld 1973; Escalante 1990; Dedrick & Casad 1999; Félix 2000; Guerrero 2006). It is the only southern Uto-Aztecan language still spoken where case marking on nominals is preserved. Yaqui distinguishes between direct core arguments (marked by nominative and accusative case) and oblique core arguments (marked by postpositions). In nominals, the nominative is morphologically unmarked, and the accusative is marked by -ta (2a-2b). There are some issues related to direct case marking that I would like to elaborate upon. First, the nominative and accusative affixes and the plural suffix -(i)m are mutually exclusive, meaning that plural arguments only take the plural suffix, as does ume o'ouim 'the men' in (2b). Second, the accusative -ta covers several grammatical functions, including the possessed noun inside the genitive phrases in (2c) and the nominal complement of some postpositions in (2d) and (3a) below.¹

- (2) a. *U-Ø* chu'u-Ø batwe-u bwite-k.

 DET-NOM dog-NOM river-DIR run.sg-PFV

 'The dog ran to the river.'
 - b. *U-me* o'ou-im u-ka chu'u-ta bicha-k.

 DET-PL man-PL DET-ACC dog-ACC see-PFV

 'The men saw the dog.'
 - c. Joan-ta juubi-Ø ne=bicha-k.
 John-ACC wife-NOM 1sG.ACC=see-PFV
 'John's wife saw me.'
 - d. Lupe-Ø bwa'a-m-ta mabeta-k u-e kobanao-ta-betana.

 Lupe-NOM eat-NMLZ-ACC receive-PFV DET-OBL government-ACC-from 'Lupe received food from the government.'

Postpositions such as the directional -u 'to', the locatives -po 'in, on' and -t 'at, on the top of, about', and a few others mark oblique core arguments. In (2d), the third participant of a three-place predicate is marked by -betana 'from'. In (3a–3b), the second argument of the two-place predicates take -u 'to' and -t 'about'. When present, determiners reflect the case marking of the head noun. Thus, they are unmarked when modifying a nominative NP (2a), take -ka when modifying

¹See Guerrero (2019a,c, 2022a) for a detailed discussion of direct and oblique core arguments, the syntactic functions of the suffix -ta, and the use of postpositions as oblique case markers. There is also a set of nouns that are always plural, e.g., supem 'clothes' (1c). In these cases, the plural suffix is not morphologically segmented.

an accusative NP (2b), -me when the NP is plural (2b) and (3a), and -e if the NP is marked by a postposition (2d) and (3a). The absence of a determiner favors an indefinite reading of the NP, as bwa'am 'food' in (2d). Clause-level word order is rigidly SOV, but other orders are possible, e.g., postverbal phrases.

- (3) a. *U-me* yoeme-m u-e jamut-ta-u jina'ateo-Ø.

 DET-NOM man-NOM DET-OBL woman-ACC-DIR complain-PRS

 'The men are complaining with the woman.'
 - b. Jaibu=ne ae-t ju'unea-Ø. already=1sg.nom 3sg.obl-loc know-prs 'I already know about it.'

Verbs in Yaqui do not inflect for person or number, though a number of verbs have suppletive stems that show number agreement, as in (2a). There are few intransitive/transitive verb pairs coded by suppletion, e.g. uba/ubba 'take a bath/bathe someone', and many verb pairs that morphologically distinguish between an intransitive form ending in -e, -te or -ke and a transitive form ending in -a, -ta or -cha (Dedrick & Casad 1999; Guerrero 2004). When the basic stem describes a change of state, the intransitive/transitive endings encode spontaneous/causative change of state distinction (4a–4b); these verbs have a stative counterpart ending in -i, -ti or -ia that encodes a result state, (4c). The examples in (4) show the three aspectual classes of the verb 'break'. When the stem denotes an active predicate, the endings merely indicate syntactic transitivity, as in tubukte/tubukta 'jump/jump something'. It is not the case, however, that all verbs ending in -e are intransitive and/or have a transitive counterpart, and vice versa, not all verbs ending in -a must be transitive and/or have an intransitive counterpart.

- (4) a. *Empo mesa-ta kok-ta-k.*2sg.nom table-Acc break-tr-PfV
 'You broke the table.'
 - b. *U-Ø* mesa-Ø kok-te-k.

 DET-NOM table-NOM break-INTR-PFV

 'The table broke.'
 - c. *U-Ø* mesa-Ø kok-ti-Ø.

 DET-NOM table-NOM break-STA-PRS

 'The table is broken.'

Previous studies on Yaqui verbs have focused on valency-changing functions, e.g. valency and transitivity (Álvarez González 2007; Estrada et al. 2015; Tubino 2017), causative (Guerrero 2008; Tubino 2011), applicative (Guerrero 2007, 2022b), and passive (Escalante 1990). These mechanisms are marked by verbal suffixes. For instance, the causative suffix -tua adds a new (agent) argument to the verb; the example in (5a) corresponds to the causative version of (4a). The suffix -wa marks passive and impersonal clauses. Compare the active clause in (4a) and the -wa clauses below. In the passive version, the accusative object serves as the nominative subject (5b), whereas in the impersonal version, the object remains the same, i.e., an accusative object (5c). In -wa clauses, the agent cannot be expressed syntactically.

- (5) a. Inepo mesa-ta enchi kok-ta-tua-k.
 1SG.NOM table-ACC 2SG.ACC break-TR-cause-PFV
 'I made you break the table.'
 - b. Mesa-Ø kok-ta-wa-k.
 table-NOM break-TR-PASS-PFV
 'The table was broken.'
 - c. *Mesa-ta kok-ta-wa-k.*table-ACC break-TR-PASS-PFV
 '(Someone) broke the table.'

The expression of reflexives, reciprocals, and middles has been largely ignored in Yaqui grammar. Unlike applicative, causative, and passive constructions, they do not use verbal affixes, but instead use pronominal forms. Before I begin the discussion of these often overlooked constructions, a few words on the Yaqui pronominal system are needed.

2 The pronominal system

2.1 Personal pronouns

The Yaqui pronominal system formally distinguishes between nominative, accusative, oblique, possessive, and self-intensifier functions (Table 1). Pronominal elements range in status from fully independent forms to clitics and affixes. Additionally, there are full and reduced pronouns. Full pronouns, such as *inepo* 'I' in (5a), behave like lexical elements in terms of their distribution, while reduced

nominative pronouns can behave like "second position" clitics, as in (6a). Occasionally, the two forms co-occur, especially for the $1^{\rm st}$ and $2^{\rm nd}$ person (6b). Nominative $3^{\rm rd}$ person pronouns are commonly omitted, and reduced accusatives (available only for $3^{\rm rd}$ person) tend to cliticize to the verb, as seen in (2c) above. There is also a set of oblique pronouns used as complements of postpositions.

	Nominative	Accusative	Oblique	Possessive	Emphatic
1sg	inepo, ne	nee, ne	ne-	in, nim	inepola, inepela
2sg	empo, 'e	enchi	e-	em	empola, empela
3sg	aapo, Ø	aapo'ik, a'a, a	a(e)-	aapo'ik, a, -wa	aapola, aapela
1PL	itepo, te	itom	ito-	itom	itepola, itopela
2 _{PL}	eme'e, 'em	enchim	emo-, eme-	em, enchim	emepola, emepela
3pl	bempo, Ø	aapo'im, am	ame-	bempo'im, bem	bempola, bempela

Table 1: Yaqui pronominal system

- (6) a. *Kuta-m ili=ne yeu=to-toja-n kaa bu-bu'u-m* wood-pl little=1sg.nom out=red-take-ipfv neg red-a.lot-pl juni'i.
 although
 - 'I took out wood, even if it was just little by little.' (Guerrero 2019b; *HVF*: 93)
 - b. Empo='e kaa 'aman wee-'ean.
 2sg.nom=2sg.nom neg there go-ought
 'You ought not go there.' (Dedrick & Casad 1999: 243)

In Yaqui, personal pronouns are necessarily referential, i.e., they cannot have a non-specific or generic interpretation. For instance, the direct object of *bwa'e* 'eat' in (7a) is *tajkaim* 'tortillas'; this NP can be substituted by the accusative pronoun *am* (e.g. 'they eat them'). In (7b) the verb takes a non-specific object marked by the prefix *ji'i-* 'thing', but *ji'i-* cannot be replaced by an accusative pronoun *a*

(e.g. 'they eat it'). Accusative and oblique pronouns are also obligatory when a core argument is extraposed to the right, as illustrated in (7c). In this context, the extraposed NP needs to be topical, as it encodes referents previously introduced in discourse, and it must also be a definite NP (Belloro & Guerrero 2010).

- (7) a. Bempo tajkaim bwa'e-∅. 3PL.NOM tortilla.PL eat-PRS 'They eat tortillas.'
 - b. Bempo ji'i-bwa'e-Ø.

 3PL.NOM thing-eat-PRS

 'They eat something.'
 - c. Aapo jiba a=bitchu-k, u-ka jamut-ta.

 3sg.nom always 3sg.acc=watch-pfv det-acc woman-acc

 'He watched her all the time, the woman.' (Silva et al. 1998 [Zorra:26])

2.2 Reflexive pronouns

As shown in Table 2, the paradigm of reflexive pronouns in Yaqui varies according to different descriptions of the language. The first column shows the paradigm proposed by Dedrick & Casad (1999: 246). Note that all persons have their own reflexive form except the 2nd and 3rd person plural, which are both coded by 'emo. The second column presents the reflexive pronouns listed by Estrada (2009: 32). In her paradigm, emo also expresses the 2nd person singular and serves as an alternative coding for the 3rd person singular. As shown in (8), reflexive pronouns behave like full pronouns, e.g., they are free forms and occupy the object position (pre-verbally). Yaqui does not allow reflexive pronouns in subject function.

- (8) a. Hunama beha 'au ko'okoi-su-ka 'au ine'e-te-k.
 there well refl get.sick-compl-ptcp refl feel-intr-pfv
 'Well, after having fallen sick, she recovered.' (Dedrick & Casad 1999: 246)
 - b. Juan-Ø batwe-u emo himaa-k.

 John-NOM river-DIR REFL throw-PFV

 'John threw himself into the river.' (Estrada 2009: 129)

The third column shows the reflexive pronouns I have found in the field. From the examples in (9a–9b), it is clear that the reflexive pronoun *emo* has extended to all grammatical persons. I also found that, for some young speakers, *emo* alternates with *omo*, as illustrated in (9c).

	Dedrick & Casad (1999)	Estrada (2009)	Field Notes (1997–)	Buelna (1890)
1sg	'ino	ino	ino, emo, omo	inone
2sg	'emp	emo	emo, omo	emore
3sg	'au	au, emo	au, emo, omo	auo
1PL	'ito	ito	ito, emo, omo	itote
2pl	'emo	emo	emo, omo	emorem
3pl	'emo	emo	emo, omo	emorim

Table 2: Yaqui reflexive pronouns

- (9) a. *Kuta-e=ne* emo beeba-k. stick-with=1sg.nom refl hit-pfv 'I hit myself with the stick.'
 - b. Empo lautia emo supe-tua-Ø.
 2SG.NOM quick REFL dress-cause-PRS
 'You get dressed yourself very quickly.'
 - c. Wa'a-Ø ili jamut-Ø si yolisia omo chichike-Ø.

 DEM-NOM little woman-NOM INT pretty REFL brush-PRS

 'That girl brushes herself very prettily.'

Therefore, the reflexive pronouns *ino*, au, and ito can be called personal reflexive pronouns since they vary according to the person of the subject. Since $emo \sim omo$ can co-refer with any person, it can be considered a general reflexive pronoun 'self'. Apparently, there are no differences in use between personal reflexive pronouns and the 'self' form. It is important to distinguish the reflexive pronoun au 'himself/herself/itself' in (8a) from the homophonous oblique a-u 'to him/her/it' in (10a). First, the reflexive au cannot be split morphologically, and thus cannot take a plural form to indicate a plural referent, though the oblique pronoun can, (10b). Second, reflexive au cannot combine with case markers and postpositions, while the oblique pronoun is the base for all postpositions. And third, several Yaqui verbs take oblique arguments marked by the directional postposition -u (Guerrero 2019a,c, 2022a). However, most of these verbs do not accept reflexive readings. In (10) the participants are non-coreferential; the intended reflexive reading for (10a) is ungrammatical because, according to my consultants, 'it does not make any sense to talk to oneself'.

- (10) a. *Peo-Ø a-u nooka-k*.

 Peter-NOM 3SG.OBL-DIR talk-PFV

 'Peter talked to him/her/it, *to himself.'
 - b. *Inepo ame-u wat-te-k*.

 1SG.NOM 3PL.OBL-DIR miss-INTR-PFV

 'I missed them.'

2.3 Historical notes on reflexive pronouns

Langacker (1977: 47) claims that "innovation, loss, and modifications of reflexive pronouns is an exceedingly complex subject in the Uto-Aztecan grammar". For Proto-Uto-Aztecan, Langacker reconstructs the reciprocal verbal prefix *na-, and the reflexive verbal prefixes *ni- 'myself', *ta- 'ourselves', *i- 'yourselves', and *mo- for all other persons. The reflexive prefixes have been lost in all northern languages; hence the reciprocal prefix indicates both senses. In some southern languages, reflexive pronouns may cover both functions.

There are no known historical documents on Yaqui that permit us to trace the evolution of its reflexive forms, though there is a grammatical sketch of Cahita (Buelna 1890), a linguistic ancestor of Yaqui and two related languages, Mayo and Tehueco (now extinct). In Buelna's sketch of Cahita, reflexive pronouns (Table 2, last column) include *inone* 'myself', *emore* 'yourself', *auo* 'him/herself/itself', *itote* 'ourselves', *emorem* 'yourselves', *emorim* 'themselves'; see the example in (11).

(11) Emore mahau-tua.
2SG.REFL scare-cause
'You make yourself scare.' (Buelna 1890: 53)

Except for their endings, Cahita and Yaqui reflexive pronouns look remarkably similar. In fact, one can see the diachronic evolution of the reflexive verb prefix *mo- in Proto-Uto-Aztecan (used for 2nd and 3rd person singular and 3rd person plural) to the reflexive pronoun *emo* ~ *omo* in Yaqui (now used for all persons). It is also worth noting that, within the Taracahita group, Yaqui is the only language that has both personal reflexive pronouns (*ino*, *au*, *ito*) and a general reflexive form (*emo* ~ *omo*). The Tarahumara languages only make use of two general reflexive pronouns, e.g. *binóipi* for singular and *abóipi* for plural (Caballero 2002). Guarijio has no distinct reflexive pronouns, but coreferential NPs are coded by anaphoric non-nominative personal pronouns (Félix 2005).

2.4 Self-intensifier pronouns

Buelna (1890) also lists two sets of emphatic pronouns in Cahita. The first group ends in *-riua* or *-e*, as in *empe* for the 2nd person singular (12a). The second group ends in *-(e)la*, as in *empola* 'you alone, by yourself'. The second pronominal set is preserved in Yaqui (fifth column, Table 1) and in (12b). Whereas Buelna (1890: 53–54) calls these forms 'semi-pronouns', Dedrick & Casad (1999: 243–244) call them "emphatic reflexive subject pronouns".

- (12) a. Empe aman sim-naque.
 2SG.EMPH there go.SG-want
 'You (by yourself) will go there.' (Buelna 1890: 53)
 - b. 'Aapela 'am kooba-k.
 3SG.EMPH 3SG.ACC win-PFV
 'He beat them all by himself.' (Dedrick & Casad 1999: 244)

These pronominal forms do not trigger a reflexive meaning, but they function as self-intensifiers (König 2001; Haspelmath 2023 [this volume]). They can occur by themselves (13a), be adjacent to the coreferential NP (13b), or co-occur with the general reflexive 'self' (13c). When translated into Spanish, these structures generally correspond to the adverbial *solo* 'alone'.

- (13) a. Inepola Potam-meu-bicha bwite-k.

 1SG.EMPH Potam.PL-DIR.PL-towards run.SG-PFV

 'I ran towards Potam by myself.'
 - b. *U-Ø* kora-Ø aapela weche-k.

 DET-NOM corral-NOM 3SG.EMPH fall.SG-PFV

 'The corral fell down by itself.'
 - c. Inepo=ne kaa enchi beba-k, empola emo beba-k. 1sg.nom=1sg.nom neg 2sg.acc hit-pfv 2sg.emph refl hit-pfv 'I didn't hit you, you hit yourself.'

3 Yaqui reflexive constructions

"Reflexive" is a cover term that has, at least, two senses: it may refer to the coreference between two participants in a minimal clause, and/or it may refer to the forms that signal coreference (Kemmer 1993; Frajzyngier & Curl 1999; König & Gast 2008; Creissels 2016). In (14a), the accusative clitic signals a disjoint-reference between the agent and the patient; in (14b) the agent and the patient

are the same person, hence there must be a reflexive pronoun in object position. In the present description, semantic roles like agent, patient, and recipient are used in a broad sense.²

- (14) a. *U-Ø maejto-Ø si Peo-ta uttia-Ø*.

 DET-NOM teacher-NOM INT Peter-ACC admire-PRS

 'The teacher admires Peter a lot.'
 - b. *U-Ø* maejto-Ø si omo uttia-Ø.

 DET-NOM teacher-NOM INT REFL admire-PRS

 'The teacher admires himself a lot'

In what follows, reflexive constructions with reciprocal meaning (§3.1), direct (§3.2), indirect (§3.3), oblique (§3.4), and adpossessive reflexive domains (§3.5) are first discussed, followed by middle voice (§4), and coreferential NPs in complex constructions (§5).

3.1 Reflexive constructions with reciprocal meanings

Yaqui reflexive pronouns allow a reciprocal reading when the antecedent (coreferential agent) is plural. The construction in (15a) is ambiguous: it can mean 'they lick themselves' or 'they lick each other'. In (15b), the combination of the reflexive and the adverbial *nau* 'together' highlights the reciprocal interpretation.³ The reciprocal meaning is not limited to the form *emo*, as confirmed by (15c) with the 1st person plural reflexive pronoun.

(15) a. *U-me ili miisi-m emo te'ebwa-Ø*.

DET-PL little cat-PL REFL lick-PRS

'The kittens are licking themselves/each other.'

²The use of semantic roles instead of terms like subject, object, and indirect object in this chapter is purposeful. While the terms subject and object may be unproblematic, the term 'indirect object' is inadequate in Yaqui grammar for two three main reasons (Guerrero 2019a,c, 2022a). (i) Even though some authors have considered -u to be a dative, indirect marker (Estrada 2009), -u is one among several postpositions marking oblique arguments (recall the examples in 3); (ii) -u can introduce several semantic roles not necessarily related to dative arguments (e.g., source); (iii) the coding of the third participant in three-place predicates varies: it can take accusative, and it can be marked by -u or by other postpositions (Guerrero & Van Valin 2004). The use of semantic roles avoids one having to use multiple syntactic terms for this function (e.g., indirect object, primary object, directional object, locative object).

³Most likely, *nau* is related to the reciprocal verbal prefix *na- reconstructed for Proto-Uto-Aztecan (Langacker 1977). However, the adverbial *nau* is not limited to reciprocal meanings in Yaqui.

- b. *U-me ili miisi-m nau emo te'ebwa-Ø.*DET-PL little cat-PL together REFL lick-PRS

 'The kittens are licking each other.'
- c. Pues nanancha te ito ania-taite-k.
 well equally 1PL.NOM 1PL.REFL help-start-PFV
 'So, both of us started to help ourselves/each other.' (Guerrero 2019b; HVF: 371)

3.2 Direct reflexive constructions

Cross-linguistically, the most common pattern of coreferential participants involves two-place predicates, with the agent as the antecedent and the patient as the anaphoric form. This coreferential pattern exemplifies the "autopathic domain" (Haspelmath 2023 [this volume]) or, more simply put, direct reflexives (Kemmer 1993: 41; Kazenin 2001: 918). In (16a), *bicha* 'see' takes a non-coreferential agent and patient, hence there is an accusative NP; in (16b) the two participants are coreferential and there is a reflexive pronoun in object position.

- (16) a. U- \emptyset ili jamut- \emptyset Peo-ta bicha-k.

 DET-NOM little woman-NOM Peter-ACC see-PFV 'The girl saw Peter.'
 - b. *U-Ø ili jamut-Ø ejpeeko-po emo bichu-k*.

 DET-NOM little woman-NOM mirror-LOC REFL see.COMPL-PFV

 'The girl saw herself in the mirror.'

Reflexive pronouns satisfy the syntactic valency of transitive verbs. Compare the intransitive-transitive verb pairs in (17). The transitive form *omta* 'hate' takes a non-coreferential NP in (17a) and a reflexive pronoun when the agent is coreferential with the patient in (17b); the intransitive counterpart *omte* disallows the occurrence of the reflexive pronoun (17c).

- (17) a. Joan-Ø Peo-ta om-ta-Ø.

 John-NOM Peter-ACC hate-TR-PRS

 'John hates Peter.'
 - b. Joan-Ø au om-ta-Ø.
 John-NOM 3SG.REFL hate-TR-PRS
 'John hates himself.'

c. * Joan-Ø au om-te-Ø.

John-NOM 3SG.REFL hate-INTR-PRS

'John hates himself.'

The suppletive transitive verb *me'a'* 'kill' takes a non-coreferential anaphoric pronoun in (18a), and a reflexive pronoun in (18b). Again, the intransitive form *muuke'* 'die' in (18c) disallows reflexive pronouns. It means that, within the autopathic domain, reflexive pronouns combine with the morphologically marked transitive verb form.

- (18) a. Joan-Ø a=me'a-k.
 John-NOM 3SG.ACC=kill.SG-PFV
 'John killed him/her/it.'
 - b. Juan-Ø omo me'a-k.
 John-NOM REFL kill.sG-PFV
 'John killed himself.'
 - c. * Juan-Ø omo muuke-k.
 John-NOM REFL die.sG-PFV
 'John killed himself.'

3.3 Indirect reflexive constructions

The expression of indirect reflexives, that is, the coreference of the agent with a participant other than the patient (recipient, goal, beneficiary) has received little focus in the literature (Kemmer 1993; Kazenin 2001: 918). There are two types of indirect reflexives in Yaqui and both involve the beneficiary. The first type includes a few three-place predicates. For example, the verb *maka* 'give' takes an accusative theme and an accusative beneficiary in (19a). When the agent is coreferential with the beneficiary as in (19b), there is a reflexive pronoun. In addition to *emo*, one of my consultants also made use of the nominative personal pronoun as a reinforcement element. In (19c), the agent and the beneficiary of *majta* 'teach' are the same person.

- (19) a. Juana-Ø mo'obei-ta Lupe-ta maka-k.

 Juana-Nom hat-ACC Lupe-ACC give-PFV

 'Juana gave Lupe a hat.'
 - b. Juana-Ø (aapo) mo'obei-ta omo maka-k.
 Juana-NOM 3sg.NOM hat-ACC REFL give-PFV
 'Juana gave a hat to herself.'

c. Aapo jiak-nok-ta emo majta-siime-Ø in pamiiliam-mak. 3sg.nom yori-talk-acc refl teach-go.sg-prs 1sg.poss family.pl-with 'She tries to teach herself Yaqui with my family.' (Buitimea 2007; pueplou: 106)

The second and most common type of indirect reflexive construction involves applicative constructions. In Yaqui, the applicative suffix *-ria* combines with stative, intransitive, and transitive verbs; when associated with transitive verbs, it adds a new (applied) argument with the role of beneficiary. Compare (20a–20b). In the non-derived clause, the beneficiary is coded as an adjunct marked by the postposition *betchi'ibo* 'for'; in the applicative counterpart, the same participant is coded as an accusative NP. In (20c–20d) the agent and the beneficiary are coreferential; in the non-derived version, the coreferential NP is coded as an oblique pronoun, while in the applicative version, the reflexive pronoun serves as the applied argument. An additional example is presented in (20e).

- (20) a. Kari-ta=ne jinu-k Maria-ta-betchi'ibo. house-ACC=1SG.NOM buy-PFV Mary-ACC-for 'I bought a house for Mary.'
 - b. *Kari-ta=ne Maria-ta jinu-ria-k.*house-ACC=1sg.Nom Mary-ACC buy-APPL-PFV
 'I bought Mary a house.'
 - c. *Empo kari-ta jinu-k e-betchi'ibo*. 2sg.nom house-Acc buy-pfv 2sg.obl-for 'You bought a house for yourself.'
 - d. *Empo kari-ta emo jinu-ria-k.* 2sg.nom house-ACC REFL buy-APPL-PFV 'You bought yourself a house.'
 - e. Komo=ne jaibu ju'unea ISSSTE-po bea=ne ino
 like=1sg.nom already know ISSSTE-loc dm=1sg.nom 1sg.refl
 nok-ria-ne.
 talk-APPL-POT
 'Since I was already familiar with ISSSTE. I could defend myself

'Since I was already familiar with ISSSTE, I could defend myself.' (Guerrero n.d. *HVL*: 201)

As pointed out by Zúñiga & Kittilä (2010: 4), while some languages ban agents from being beneficiaries in the same clause, others may use a special construction in these cases, i.e., self-benefactives. Yaqui is a good example of a language that makes use of applicative self-benefactive constructions.

3.4 Oblique nonreflexive constructions

As mentioned previously, adjuncts and oblique core arguments are marked by postpositions. When the complement of a postposition is pronominal, it must take the form of an oblique pronoun. However, reflexive pronouns do not combine with postpositions. In (20c) above, the pronominal complement of *betchi'ibo* 'for' is *e*- 'for you', instead of the reflexive form *emo*. In the examples below, the agent is coreferential with the theme (21a) and the interlocutor (21b) of speech act verbs, the recipient (21c), as well as the location (21d). In all these cases, there is an anaphoric personal pronoun. When the participant refers to the 3rd person, the construction is ambiguous; both coreferential and non-coreferential readings are possible. In (21b), the nonreferential oblique pronoun *ae* can refer to Mary, Lupe, or someone else.

- (21) a. Fermin-Ø ae-t nooka-k.
 Fermin-NOM 3SG.OBL-LOC talk-PFV
 'Fermin talked about him/her/it, about himself.'
 - b. Maria-Ø Lupe-ta-mak ae-betana etejo-k.

 Mary-Nom Lupe-ACC-with 3sg.obl-from tell-pfv

 'Mary talked with Lupe about her/him/it, about Mary, about Lupe.'
 - c. *Inepo ne-u ji'i-jioste-bae-Ø.*1SG.NOM 1SG.OBL-DIR thing-write-want-prs
 'I want to write something to myself.'
 - d. *U-Ø amureo-Ø maso-ta ae-bicha-po bicha-k.*DET-Ø hunter-NOM deer-ACC 3sg.OBL-toward-LOC see-PFV

 'The hunter saw a deer in front of him/her/it, in front of himself.'

The examples below illustrate agent-goal (22a) and agent-source (22b–22c) coreference in three-place predicates. Note that the nonreflexive personal pronoun can be implicit (22c). According to my consultants, an implicit goal or source favors a coreferential reading.

- (22) a. *U-Ø jamut-Ø mo'obei-ta ea-t yecha-k.*DET-NOM woman-NOM hat-ACC 3sg.OBL-LOC put.sg-PFV

 'The woman put a hat on her/him/it, on herself.'
 - b. *U-Ø jamut-Ø relo-ta a-u u'ura-k*.

 DET-NOM woman-NOM watch-ACC 3SG.OBL-DIR take-PFV

 'The woman took the watch off him/her/it [the arm], off herself.'

c. *U-Ø* jamut-Ø lentem u'ura-k.

DET-NOM woman-NOM glasses take-PFV

'The woman took off the glasses.'

3.5 Adpossessive nonreflexive constructions

In some languages, reflexive pronouns can combine with possessive pronouns to show agent-possessor coreference (Haspelmath 2023 [this volume]). As shown in Table 1 above, Yaqui has a set of possessive pronouns. When the agent refers to the 1st and 2nd person, the corresponding 1st and 2nd possessive forms are used; see the example in (23a). When the agent refers to the 3rd person, there are three coding options: the possessive suffix -wa (23b), the possessive pronoun a and -wa (23c), and a genitive phrase (23d). Even though the most likely reading of (23b–23c) is coreference, a disjoint-reference interpretation is also possible. The explicit use of a genitive phrase leads to a disjoint-reference reading. The same referential ambiguity prevails with an alienable possessee as in (23e). Note that possessive NPs in object position optionally take the accusative suffix -ta; genitive phrases disallow a second suffix -ta.

- (23) a. Inepo nim soa(-ta) ubba-k.

 1SG.NOM 1SG.POSS son-ACC bath.TR-PFV

 'I bathed my son.'
 - b. Lupe-Ø asoa-wa(-ta) ubba-k.

 Lupe-NOM son-POSS-ACC bath.TR-PFV

 'Lupe bathed her/his son.'
 - c. Lupe-Ø a asoa-wa(-ta) ubba-k.
 Lupe-NOM 3sG.POSS son-POSS-ACC bath.TR-PFV
 'Lupe bathed her/his son.'
 - d. Lupe-Ø Maria-ta a soa ubba-k.

 Lupe-NOM Mary-ACC 3sg.Poss son bath.TR-PFV

 'Lupe bathed Mary's son.' (lit. bathed Mary's her son)
 - e. Joan-Ø tekile-u a karro-wa-po siika.

 John-Nom work-DIR 3sg.poss car-poss-Loc go.sg.pfv

 'John went to work on his own car.'

When the possessee is a body part, the use of possessive pronouns is complex, and this is true of both coreferential and non-coreferential participants (Guerrero 2020). The clause in (24a) was rejected by two of my consultants and was

considered odd by a third one. In this context, there are two coding options: the body part is unpossessed and keeps the accusative case (24b), or it is unpossessed and is marked by locative postpositions (24c). The former results in referential ambiguity, while the latter bears a coreferential sense. With disjoint-reference, an external possessive construction is also possible (24d).

- (24) a. # Joan-Ø a koba-(ta) beba-k.

 John-NOM 3sg.poss head-Acc hit-pfv

 'John hit his head.' (=John's head or someone's else's)
 - b. *Joan-Ø koba-ta beba-k.* John-NOM head-ACC hit-PFV 'John hit his head.' (=John's head or someone's else's)
 - c. Joan-Ø koba-po beba-k.
 John-NOM head-LOC hit-PFV

 'John hit his head.' (lit. hit on head) (=John's head)
 - d. Joan-Ø koba-t enchi beba-k. John-NOM head-LOC 2SG.ACC hit-PFV 'John hit you on the head.'

The examples in (23–24) confirm that agent-possessor coreference does not use reflexive pronouns in Yaqui. The clause in (25a) is ruled out because there is a reflexive pronoun serving as a possessive pronoun; (25b) is also ruled out because there is an accusative NP and a reflexive pronoun in the same clause. The presence of an overt possessive pronoun with a reflexive form would also be ruled out, e.g., *a omo*.

- (25) a. * Joan-Ø omo koba-ta beba-k.

 John-NOM REFL head-ACC hit-PFV

 'John hit his (own) head.'
 - b. * Joan-Ø koba-ta omo beba-k.
 John-NOM head-ACC REFL hit-PFV
 'John hit himself on the head.'

Nevertheless, there are two contexts in which adpossessive coreference might be expressed by reflexive pronouns. In the first context, the possessee is coded as an oblique (locative) argument and the anaphoric reflexive pronoun occupies the object position; the reflexive counterpart of (24c) is illustrated in (26a). In the second context, the possessor is introduced as an applied argument within an applicative construction; compare (26b–26c). The first option corresponds to direct reflexives, and the second to indirect reflexives.

- (26) a. Joan-Ø koba-po omo beba-k.

 John-Nом head-Loc REFL hit-PFV

 'John hit his head.' (lit. hit himself on the head)
 - b. *U-Ø* ili jamut-Ø pujba-ta baksia-k.

 DET-NOM little woman-NOM face-ACC wash-PFV

 'The girl is washing her face.'
 - c. *U-Ø* ili jamut-Ø pujba-ta au baksia-ria-k.

 DET-NOM little woman-NOM face-ACC 3SG.REFL wash-APPL-PFV

 'The girl is washing her face.' (lit. washing herself the face)

The discussion on coreferential oblique and possessive participants suggests that it is not the semantic role but its syntactic function that determines whether or not a reflexive pronoun is used in Yaqui, i.e., reflexive pronouns cannot be complements of postpositions and cannot be associated with adnominal possession. The use of nonreflexive personal pronouns in these domains oscillates between coreference readings and disjoint interpretations. The actual interpretation depends on the linguistic context and/or discourse-pragmatic information.

4 Reflexive pronouns and middle situations

In middle situations, the agent participant is viewed as the doer of the action as well as the place on which this action is performed; the doer and the place are construed as one and the same entity (Kemmer 1993; Creissels 2006). In Yaqui, several middle situations are expressed by a reflexive + transitive verb combination, but many others are expressed by non-reflexive-marked intransitive clauses. Grooming verbs that can combine with reflexive pronouns include *baksia* 'wash', *bekta* 'shave', *a'ana* 'dress (formal ceremonies)', *supetua* 'put on clothes', and *chichike* 'comb'. These verbs can take a non-coreferential NP as well as a reflexive pronoun in object position; compare the uses of *baksia* as 'wash something' in (26a) and 'wash something on oneself' in (26b) above, and 'wash oneself' in (27a) below. The examples in (27b–27c) show *bekta* 'shave', and (27d–27e) illustrate *a'ana* 'dress'.

(27) a. Joan-Ø emo baksia-Ø. John-NOM REFL wash-PRS 'John washes himself.'

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- b. Joan-ta=ne bekta-k.
 John-ACC=1sg.NOM shave-PFV
 'I shave John.'
- c. Joan-Ø chau-t omo bekta-k.

 John-Nom beard-loc refl shave-pfv

 'John shaved his beard.' (lit. shave himself on the beard)
- d. Lupe-Ø ne a'ana-n.
 Lupe-NOM 1sg.Acc dress-IPFV
 'Lupe dressed me.'
- e. *Ino=ne* a'ana-n.

 1sg.refl=1sg.nom dress-ipfv
 'I dressed'

In opposition, grooming verbs like *baima* 'wash hands', *baju'urina* 'wash face', *uba* 'bathe', and *tajo'ote* 'dress (everyday clothing)' are not reflexive-marked. See the use of *baima* in (28a). The last two verbs have a transitive counterpart, but reflexive pronouns are banned in this context. Contrast *ubba* 'bathe someone' in (23) above, with the intransitive version *uba* 'bathe oneself' in (28b). The verb pair *tajo'ota/tajo'ote* 'dress someone/oneself' is illustrated in (28c–28d). The clause in (28e) is ruled out because *tajo'ota* combines with a reflexive pronoun.

- (28) a. *U-Ø* ili yoeme-Ø baima-Ø.

 DET-NOM little man-NOM wash_hands-PRS

 'The little boy washes hands.'
 - b. Joan-Ø batwe-po uba-Ø.

 John-NOM river-Loc bath.INTR-PRS

 'John bathes in the river.'
 - c. Maria-Ø enchi tajo'o-ta-Ø.

 Mary-NOM 2sg.ACC dress-TR-PRs

 'Mary dresses you.'
 - d. *Empo chumti tajo'o-te-Ø.*2sg.nom quickly dress-intr-prs
 'You dress quickly.'
 - e. * Empo chumti emo tajo'o-ta-Ø. 2sg.nom quickly refl dress-tr-prs 'You dress yourself quickly.'

In Yaqui, the expression of body-part actions does not necessarily differ from whole-part actions. The reflexive-marked *baksia* 'wash' can target a body-part action in (26b–26c) and (27a), but *baima* 'wash hands' and *baju'urina* 'wash face' are not reflexive-marked. Dressing verbs can be understood as whole-body activities, but *a'ana* combines with reflexive forms and *tajo'ote* does not. In addition, a few body-function action verbs can be used with a reflexive pronoun or not, depending on the degree of affectedness (Frajzyngier & Curl 1999). This is the case of *siise* 'urinate', *bwita* 'defecate', and *pocho'okunte* 'defecate (outside, in the woods)'. With the reflexive form (29a), the action is assumed to be an accident; without the reflexive (29b), a regular activity is implied. Verbs like *ko'okoi* 'be/get sick' and *ine'ete* 'recover' in (8a), *elpeiya/peiya* 'feel/get better' in (29c), *i'a* 'be/get spoiled', and *mammatte* 'understand' are also reflexive-marked.

- (29) a. *U-Ø* ili uusi-Ø emo siise-k.

 DET-NOM little child-NOM REFL urinate-PFV

 'The child urinated on himself.'
 - b. *U-Ø* ili uusi-Ø siise-k.

 DET-NOM little child-NOM urinate-PFV

 'The child urinated.'
 - c. Into=bea a waiwa-Ø jaibu ili emo

 DM=DM 3sg.poss sister-nom already little refl
 pa-p-peiya-n.
 RED-RED-get.better-IPFV

 'And then her sister was getting a little better already.' (Buitimea 2007; ili baro: 70)

Non-translational motion and body-posture verbs are mostly unmarked, e.g., yehte 'stand' in (30a) and bwalsapte 'stretch' in (30b). The exceptions I have found so far include *cha'a* 'hang' in (30a) and *yooa* 'tremble' in (30c) which are reflexive-marked.

(30) a. Au kom=cha'a-tu-k u-∅ buuru-∅ 'aman jika-t 3sg.refl down=hang-vblz-pfv det-nom donkey-nom there up-loc yehte-k.
stand.sg-pfv
'The donkey bent down and stood up.' (Johnson 1962; burro & coyote: 34)

- b. *Aapo bwalsap-te-Ø*.

 3sg.nom stretch-intr-prs
 'He is stretching.'
- c. *Mejiko-po u-Ø bwia-Ø jiba au yooa-Ø.*Mexico-loc det-nom earth-nom always 3sg.refl tremble-prs
 'In Mexico, the earth always trembles.'

Spontaneous change of state verbs are not reflexive-marked. Compare the intransitive-transitive verb pair in (31a–31b). However, there are a few verbs that combine with reflexive forms: *eta* 'close', *etapo* 'open', *esso* 'hide', *ta'aru* 'lose', *ji-ima* 'throw', *piarora* 'borrow'. Compare (31c–31d). In this context, *emo* functions as a kind of anticausative marker, i.e. it does not imply any potential agent, (31e).

- (31) a. *U-Ø* ba'am poj-te-k.

 DET-NOM water.PL boil-INTR-PFV

 'The water boiled.'
 - b. * *U-Ø* ba'am omo poj-ta-k.

 DET-NOM water.PL REFL boil-TR-PFV

 'The water boiled.'
 - c. *U-Ø jeeka-Ø u-ka pueta-ta etapo-k*.

 DET-NOM wind-NOM DET-ACC door-ACC open-PFV

 'The wind opened the door.'
 - d. *U-Ø* pueta-Ø emo etapo-k.

 DET-NOM door-NOM REFL open-PFV

 'The door opened.'
 - e. *U-Ø* tomi-Ø boosa-po kateka-me emo ta'aru-k.

 DET-NOM money-NOM purse-LOC sit.SG.PFV-NMLZ REFL lose-PFV

 'The money that was in the purse got lost.'

Two things appear to be clear at this point: (i) not all morphologically-marked transitive verbs combine with reflexive pronouns, and (ii) the use of reflexive pronouns as middle markers is unpredictable (i.e., lexically determined). The lack of productivity of Yaqui reflexive forms in middle situations contrasts not only with Romance, Germanic, and Slavic languages (see Janic 2023 [this volume] for Polish), but also with other Southern Uto-Aztecan languages. In Southern Tepehuan (García 2005), for example, the use of reflexive pronouns as middle markers is very productive; Pima Bajo (Estrada 2005) uses the 3rd person nonsubject as a middle marker; Wixárika (Ramos 2017) uses the reflexive 3rd person prefix *yu*- to signal middle functions.

5 Coreferential participants within complex clauses

Thus far, I have focused on examples of two coreferential NPs within the same clause. However, two participants can also be coreferential within complex constructions. When the main subject and the dependent subject are coreferential, the coding of the anaphoric pronoun depends on the clause linkage type (Guerrero 2006): some linkage types demand an implicit participant (32a),⁴ others require a possessive (32b) or accusative (32c) anaphoric pronoun, and a few allow anaphoric nominative pronouns (32d). The accusative and the nominative pronouns lead to referential ambiguity.

- (32) a. Nim achai-Ø_i ju'une'ea-k [loteria-ta _i yo'o-kai].

 1SG.POSS father-NOM know-PFV lottery-ACC win-CLM

 'My father knew he had won the lottery.' (=my father won the lottery)
 - b. Ne_i a-u_j wawate-n [nim_i enchi 1sg.nom 3sg.obl-dir remember-ipfv 1sg.poss 2sg.acc ji'i-beje-tua-ne-'u]_j. thing-cost-cause-pot-clm
 'I didn't remember (it) to pay you.'
 - c. $\mathit{Jorge-}\varnothing_i$ a-beas $_j$ kopte-k [taream a_i] $\mathsf{Jorge-Nom}$ 3sg.obl-about forget-pfv homework.pl 3sg.acc $\mathit{ya'a-ne-po}$] $_j$. $\mathsf{make-pot-clm}$
 - 'Jorge forgot about doing the homework.'
 - d. $Peo-O_i$ Vicam-meu siika [bweituk aapo_{i/j} kaba'i-ta
 Peter-nom Vicam.pl-dir.pl go.sg.pfv clm 3sg.nom horse-acc
 jinu-n].
 buy-ipfv

'Peter $_{i}$ went to Vicam because $he_{i/j}$ bought a horse.'

There are two mental verbs that seem to allow a reflexive pronoun when the two subjects are the same person: *-machia* 'believe' and 'ea 'think'. The examples in (33) resemble long-distance reflexives; in (33a), the presence of the reflexive seems optional, but not in (33b–33c).

(33) a. Ne (ino) tui kaba'i-ta jinu-maachia-∅. 1sg.nom 1sg.refl good horse-ACC buy-believe-prs 'I believe I would buy a good horse.'

⁴In (32a), the underscore refers to the missing argument.

- b. Aapa [lautia emo siim-bae-benasia] 'ea-Ø.

 3sg.nom early refl go.sg-want-clm think-prs

 'She; has the feeling that she; wants to go early.'
- c. Nim ae_i tuisi omo_i $ye'e-t-'ea-\varnothing$ bweta ka luturia. 1sg.poss mother good refl dance-clm-think-prs but Neg true 'My mother; thinks she; dances pretty well, but it is not true!'

6 Conclusions

As evidenced in this chapter, Yaqui reflexive pronouns signal agent-patient and agent-beneficiary coreferential participants, but they cannot express the coreference between the agent and the recipient, source, goal, theme, location, or possessor. There is a syntactic explanation for these patterns: reflexive pronouns must occupy the object position (autopathic domain) and are thus banned as complements of postpositions (oblique domain) or as adnominal modifiers (adpossessive domain). In this context, a nonreflexive personal pronoun must be used. The use of nonreflexive pronouns in the oblique and adpossessive domains alternates between coreference readings and disjoint interpretations. Personal pronouns are also preferred in clause combining. Additionally, the use of reflexive pronouns as middle markers is allowed with some but not all middle situations in Yaqui.

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Abbreviations

This chapter follows the Leipzig Glossing Rules (Comrie et al. 2008). Additional abbreviations used are:

clause linkage marker potential CLM POT directional reduplication DIR RED discourse marker stative STA DM VBLZ verbalizer емрн emphatic intensifier INT

All uncited data are taken from my field notes; examples from oral texts include the story title and page number of the digital manuscript. The examples are presented using a practical orthography accepted by the Yaqui community except for data quoted from grammatical studies, in which case the original orthography has been preserved (except accents) but the morphological glossing has been amplified or adjusted.

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