(Rigidity and) Person-marking in Tlacotenco Nahuatl Proper Names

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1.Intro

In Tlacotenco Nahuatl (or TN), a central dialect of the Nahuatl language (Uto-Aztecan), proper personal nouns may bear person inflection, a morphological trait that, as far as we know, has not been reported in crosslinguistic descriptions of proper personal nouns (see, for instance, Caro Reina & Helmbrecht, 2022).

For instance, in (1) the proper name *Rafael* does not show person morphology, while in (2) the first person singular prefix *ni-* attaches to the proper name Hilarion.

(1) rafael   o-ki-walikak   tamaltin
     Rafael   PST-O.3-bring   tamale.PL
     'Rafael brought tamales.'

(2) **ni**-ilaɾion   o-**ni**-k-walikak   in   tamaltin
     1SG-Hilarion   PST-1SG-O.3-bring   DET   tamale.PL
     'I Hilarion brought the tamales.

In this talk, we explore the contrast between person-marked and non-person-marked proper names in argument position in TN.

We argue that non-person-marked proper names are ordinary definite descriptions, but person-marked ones are interpreted as directly referential terms.

Furthermore, if person-marked proper names were directly referential terms we could explain why these only allow for rigid readings.

Our analysis considers that in TN, both proper names and common nouns are predicates. To back our claims, we provide fieldwork data gathered by conducting translation and acceptability tasks.

Before proceeding, we should note that, for the purposes of this presentation, we will not be concerned directly with the nature of person agreement in the nominal domain. We are aware of Baker's (2008) claim about NPs only agreeing in person under a special configuration known as SCOPA. TN person-marked nouns may pose a challenge to Baker's theory. However, we currently do not have a full-fledged account of person marking in TN nouns. For this reason, we leave this topic for further research.

1.1 Structure of this talk

In section 2, we present some of the basic syntactic facts of the language, focusing on the nominal and pronominal domains. Section 3, then, consists of a minimal overview of some proposals for the semantics and syntax of proper names. In section 4 we discuss the main data, on one hand, showing that in TN proper names behave in the same way as common nouns with respect to person marking across several contexts; and on the other hand, that only person-marked proper names seem to be interpreted as rigid expressions. Finally, we conclude in section 5 with a summary and a discussion of one of many open questions at this point.

2. Tlacotenco Nahuatl general data

TN is a central dialect of the Nahuatl language spoken in Central Mexico.
Nahuan languages belong to the Uto-Aztecan family.
TN is a pro-drop nominative-accusative language and its unmarked word order is SVO.

2.1 Verbal person marking
In TN verbs display the person and number features of both subject and object.
For instance, in (3) the prefix *ti-* marks the subject of the clause *teʔwan* 'we', while the prefix *k-* marks the object in Pedro 'Peter'.
Note also that subject prefixes appear before object prefixes.

(3) teʔwan   o-**ti-k**-iʔtaʔ-ke   in   Pedɾo
     1PL   PST-S.1PL-O.3-ver-PST.PL   DET   Pedro
     'We saw Peter'

In Table 1 we register the subject and object prefixes that attach to the verb.

Table 1: Verbal person prefixes		
Features	Subject	Object
1SG	n(i)-	netʃ͡-
2SG	t(i)-	mits-
1PL	t(i)-	titʃ͡-
2PL	nem-	nenmits-
3	∅−	k(i)-

2.2 Nominal person marking
In addition to verbs, nominals may also display person marking.
To show this, note that in (4) the noun *teopiʃke* 'priest' bears a second person prefix *ti-*, while in (5) the noun *temachtiʔke* 'teachers' displays the first person prefix *ti-*.
Nominal person markers are the same as the verbal subject prefixes in Table 1.

(4) teʔwatl͡   o-ti-jeja   (**ti**)-teopiʃke
     2SG   PST-S.2SG-be.IMPF   2SG-priest
     'You were a priest.'

(5) **ti**-temachtiʔ-ke   o-ti-k-walikaʔ-ke   tamaltin
     1PL-teacher-PL   PST-S.1PL-O.3-bring-PST.PL   tamale.PL
     'We the teachers brought tamales'

2.3 Independent pronouns
Regarding independent pronouns, in TN there are at least three series, as shown in Table 2.

Table 2: TN independent pronouns			
1SG	ne	newa	neʔwat͡ɬ
2SG	te	tewa	teʔwat͡ɬ
3SG	je	jewa	jeʔwat͡ɬ
1PL	tewa	teʔwan	
2PL	amewa	ameʔwan	
3PL	jeʔwan	jewantin	jeʔwuntin

2.3 Determiners
Finally, in (6) we register the particle *in*, which has been analyzed as a definite determiner in other central dialects of Nahuatl.

(6) kochia   **in**   pipiltun
     sleep.PST.IMPERF   DET   boy.DIM
     'The boy was sleeping'

3. Semantics and syntax of proper names.

There are two main approaches to the semantics of proper names: the referentialist and the predicativist.

The referentialist view considers names rigid designators (Kripke, 1972): names are units referring to the same object in all possible worlds.

Predicativism, on the other hand, considers that names designate properties of individuals (Geurts, 1997; Matushansky, 2008, 2015; Fara, 2015).

Under this approach, referential proper names are descriptions: Bare names would be covert definite descriptions for some languages (7a) and overt ones for others (8).

(7) a. John drank a lot of beer last night.
     b. The Donald will be impeached next week.

(8) I   Katina ine edho
     the Katina is   here
     'Katina is here' (Sophia, A., & Marmaridou, S., 1989)

Support for a predicativist approach comes from the almost identical distribution of proper names and regular nouns in contexts like the following:

(9) a. A Mike came asking for you.   (10) a. A man came asking for you.
     b. Every Mike is ugly.   b. Every man is ugly.
     c. Mikes are intransigent.   c. Men are intransigent.
     d. The elegant Mike gave a speech.   d. The elegant man gave a speech.
     e. Seven Mikes were playing outside.   e. Seven men were playing outside.
     (Jambrović, 2021)

The semantics of proper names under this view usually denotes an individual that bears the proper name, often referring to the phonological chain through different mechanisms.
The 'rigid' interpretation of names in (7–8) stems from this definition picking up a unique contextually salient individual bearing the name in question.

(11) $[[Aarón]]^w$: λx_e. x bears /ar'on/ in w

Examples (7–8) could lead us to think that the syntactic source of rigidity is then a (null) article (12). However, the contrast between (29) and (30) below will be one argument to claim that there is more involved in a proper name than just D.

(12) [S [DP Ø [NP John]] [VP slept]]

Other proposals address the issue differently. While still considering names as predicates, they argue that what makes a noun proper is a feature [name] of a nominalizing head (Ghomeshi & Massam, 2009; Jambrović, 2021) (13).

(13)
a. Name predicate
b. Noun predicate

3

4

This, among other things, accounts for how proper names are still interpreted as names in non-argument positions, such as naming constructions.

However, (13a) only explains how a root gets to be treated as a name, but cannot account for the observation in TN that proper names distribute with common nouns and can receive 'count' readings in the same contexts.

4. Main data

In this section, we present two pieces of evidence that suggest that:

1) (non-person-marked) proper names are predicates and therefore they have descriptive content, and
2) Person-marked nouns are NPs that are referentially rigid.

First, we show that in TN proper names behave in the same way as common nouns concerning person marking across several contexts.

This points to a semantic uniform treatment of both types of nouns.

In other words, if TN proper names behave in the same way as common nouns, it must be because proper names are predicates in TN, just as is commonly assumed for common nouns.

Second, we show that the reference of person-marked proper names cannot scope under operators that induce referential variability, while non-person-marked proper names can.

Therefore, person-marked proper names seem to be interpreted as rigid expressions.

On the other hand, non-person-marked proper names allow for both a rigid and a non-rigid interpretation.

To account for these facts, for now, we are assuming that the rigidity of person-marked proper names stems from the indexical content of person features.

In contrast, non-person-marked proper names behave just as normal descriptions do, that is, just as definite NP.

4.1 Proper names as predicates

To show that in TN person marking behaves in the same way both on common nouns and on proper names, consider first the examples (14). Note that, in predicate position, a proper name such as *Rafael* (14) and a common noun such as *teopiʃke* 'priest' (15) may be marked for person.

(14)   ne   (**ni**)-rafael
       1SG   1SG-Rafael
       'I am (named) Rafael.'

(15)   tewatɬ   o-ti-jeja   (**ti**)-teopiʃke
       2SG   PST-S.2SG-be.IMPF   2SG-priest
       'You were a priest.'

In TN naming constructions person marking on proper names is barred, as shown in (16), in which the presence of the second-person prefix *ti-* is disallowed.

(16)   notataʔwan   o-mits-tokajotiʔ-ke   (**ti-*)**xose**
       our.parents   PST-O.2SG-name-S.PL   S.2SG-Joseph
       'Our parents named you Joseph.'

Naming verbs are usually given the same analysis as change of state verbs. Briefly, both take small clause complements.

In the naming construction, the named entity acts as the subject of the small clause predication, and the proper name as the predicate, whereas in the change-of-state construction, the entity that undergoes the change is the subject of the small clause, and the state attained by this entity corresponds to the predicate (Matushansky, 2008).

In TN the proper name of a naming construction behaves in the same way that the predicate of a change-of-state construction.

Crucially, both disallow the presence of person marking, as shown in (16–17). In (17) *tʃitʃi* 'dog', the noun denoting the state attained by the subject of the small clause, cannot bear the first-person prefix *ni-*.

(17)   in   tetɬatʃiwe   o-nitʃ-kwep   (**ni-*)**tʃitʃi**
       DET   sorcerer   PST-O.1SG-turn   1SG-dog
       'The sorcerer turned me into a dog.'

Besides this, proper names in naming constructions and the predicate of a change-of-state small clause share other properties.

For instance, both types of nouns may be incorporated into the verb, as in (18–19).

In (18) the common noun *tʃitʃi* 'dog' incorporates into the verb *kʷep* 'to turn into'.

Likewise, in (19) the proper name Rafael incorporates into the verb *tukajotiʔ* 'to name'.

(18)   in   tetɬatʃiwe   o-nitʃ-**tʃitʃi**-kʷep
       DET   sorcerer   PST-O.1SG-dog-turn
       'The sorcerer turned me into a dog (lit. dog-turned me).'

(19)   notaʔtsitsiwan   o-nitʃ-**rafael**-tukajotiʔ-ke
       my.dear.parents   PST-O.1SG-Rafael-name-S.PL
       'My dear parents named me Rafael (lit. Rafael-named me).'

In addition, proper names and common nouns may agree in number with their subject in naming or change-of-state constructions.

In (20–21), the proper name Rafael and the common noun t͡ʃit͡ʃi 'dog' agree in plural number with the subject *tonawan* 'both of us'.

(20) **rafael-tin**   to-tukajotia   tonawan
     Rafael-PL   REFL.1PL-name   both.of.us
     'Both of us are named Rafael'

(21) tonawan   to-kwepa   **t͡ʃit͡ʃi-me**
     both.of.us   REFL.1PL-turn   dog-PL
     'Both of us turn into a dog (lit. into dogs).'

In argument position too proper names and common nouns display the same behavior. In (22–23), for instance, the proper name *Hilarion* and the common noun *t͡ɬakat͡ɬ* 'man' allow the overt expression of person whether they appear alongside a personal pronoun or not (*neʔwat͡ɬ* in 22–23).

(22) (neʔwat͡ɬ)   **(ni)-ilarion**   o-ni-k-walikak   in   tamaltin
     1SG   1SG-Hilarion   PST-1SG-O.3-bring   DET   tamale.PL
     'I Hilarion brought the tamales.'

(23) (neʔwat͡ɬ)   **(ni)-t͡ɬaka-t͡ɬ**   ni-tekiti   ipan   kwent͡ɬa
     1SG   1SG-man-GN   S.1SG-work   on.it   furrows.LOC
     'I man work in the fields.'

When argumental, proper names and common nouns may be preceded by the definite article, as shown in (24–25) for the proper name *Joseph* and the common noun *t͡ɬakat͡ɬ* 'man'.

(24) **(in)**   xose   o-nit͡ʃ-tamalmakak
     DET   Joseph   PST-O.1SG-give.tamale
     'Joseph gave me a tamale.'

(25) **(in)**   **t͡ɬaka-t͡ɬ**   tekiti   ipan   kwent͡ɬa
     DET   1SG-man-GN   work   on.it furrows.LOC
     'The man works in the fields.'

However, when preceded by the definite determiner *in*, neither a proper name (26) nor a common noun (27), can inflect for person.

(26) **in*   **ni-rafael**   o-ni-k-mo-t͡ɬakwili-li   inin
     DET   1SG-Rafael   PST-S.1SG-O.3-REFL.2/3-give.away-APL   this
     t͡ʃit͡ʃiki?tun   tositsin
     little.basket   our.dear.grandmother
     'I Rafael gave away this little basket to our dear grandmother.'

(27) **in*   **ni-t͡ɬaka-t͡ɬ**   ni-tekiti   ipan   kwent͡ɬa
     DET   1SG-man-GN   S.1SG-work   on.it furrows.LOC
     'I man work in the fields.'

In fact, the definite determiner *in* cannot appear before a personal pronoun (28).

(28) **in*   neʔwat͡ɬ   o-ni-k-walikak   in   tamaltin
     DET   1SG   PST-S.1PL-bring   DET   tamale.PL

Since the behavior of person morphology on proper names parallels that of common nouns, we suggest that both types of expressions should be treated as the same. In particular, we propose that in TN proper names are common nouns. It follows that proper names are predicates which, in turn, supports a predicativist approach to the semantics of TN proper names (Frege, 1960; Russell, 1956).
Thus, in TN a proper name such as Joseph describes every individual that bears such a name (Matushansky, 2008).

4.2 Rigidity

Quantifiers bind definite descriptions, but generally not bare proper names, as in (29a–b). Covariation becomes more accessible if the name appears with a definite article (29c).

(29)   a. In every party, Brad plays the guitar and annoys everybody.
       b. In every party, the musician plays the guitar and annoys everybody.
       c. In every party, the Brad plays the guitar and annoys everybody.

However, in Greek, the obligatory presence of the definite article in (30a) still doesn't allow the name to covary: (30a) is understood as the same individual winning all the competitions, whereas in (30b), the musician can be either the same individual or a different one in every competition.

(30)   a.   Se   káthe diagonismó,   i   Eléni kerdízei   tin   ypotrofía.
            in   every competition the.F Eleni wins   the.F scholarship
            'In every competition, Eleni wins the scholarship.'
       b.   Se   káthe diagonismó, i   musikós   kerdízei tin   ypotrofía.
            in   every competition the.F musician wins   the.F scholarship
            'In every competition, the musician wins the scholarship.'   (Jambrović, 2022)

Crucially, now we will show that TN doesn't behave neither like English nor Greek regarding scope/covariation.
In TN both bare and definite proper names may scope under a quantifier (31). As a result, the referent of a proper name may covary with the quantifier.
In (31), note that the proper name Joseph scope above the quantifier *seʔse* 'each', which explains why in this reading there is only one Joseph.

(31)   Context: There is only one Joseph that hid a pot of coins in several places.
       ipan   **seʔse** tlapankal-li **(in)** **xose** o-ki-tlatik   melio xoktli
       on.it each   cave-GN   DET   Joseph PST-O.3-hide coin pot.GN
       'In each cave Joseph hid a pot of coins.'

However, in (32) the proper name John scopes under *seʔse*, which accounts for the reading in which there is one Joseph for each one of the houses.

(32)   Context: There are two different Johns, each of whom live in a different house.
       ipan   **seʔse** kalli   tʃanti **(in)** **xuan**
       on.it each   house.GN   live   DET   John
       Afterthought: (in)   xuan   enrike iwan   (in)   xuan   waʔwakis
                    DET   John   Henry and   DET   John   dry.out.FUT
       'In each house lives a John. John Henry and John the skinny.'

The same applies to common nouns such as *teopiʃke* 'priest' in (33).
In (33), *teopiʃke* has narrow scope with respect to *seʔse*. This explains why the reference of *teopiʃke* covary.

(33)   Context: There are several priests, one per town.
       ipan   **seʔse** altepetl̄   **(in)** **teopiʃke**   k-in-kwaatekia
       on.it each   town.GN   DET   priest   O.3-O.pl-baptize
       kukone
       child.PL
       'In each town the priest baptizes the children.'

In contrast, in (34) *teopiʃke* has wide scope with respect to *seʔse*. This explains why *teopiʃke* is interpreted rigidly.

(34)   Context: There is only one priest, who goes from town to town.
       ipan   **seʔse** altepetl̄   **(in)** **teopiʃke**   o-k-inkwaatekia-ja
       on.it each   town.GN   DET   priest   PST-O.3-O.pl-baptize-IMPERF
       kukone
       child.PL
       'In each town the priest baptized the children.'

Note also that in (31-34) both bare and definite nouns, either proper or not, allow for **wide and narrow scope** readings. In other words, the reference of non-person-marked nouns may be rigid or not, whether they are definite or bare.
On the contrary, names with overt expression of person do not allow bound readings (35–37).
For instance, examples (35–37) are acceptable only under a reading in which the same person, the same Joseph or the same man live in each of the houses, respectively.

In other words, sentences (35–37) are not acceptable in contexts where for each house there is a different person, a different Joseph, or a different man.

(35)   ipan   **seʔse** kalli   tʃanti **jewatl̄**
       on.it each   house.GN   live   he
       'He lives in each house.'

(36)   ipan   **seʔse** kalli   tʃanti **jewatl̄ xose**
       on.it each   house.GN   live   he   Joseph
       'This Joseph lives in each house.'

(37)   ipan   **seʔse** kalli   tʃanti **jewatl̄ tl̄akatl̄**
       on.it each   house.GN   live   he   man.GN
       'This man lives in each house.'

To account for the data in (31–37), for now we suggest that the rigidity of person-marked proper names results from the indexicality of person. Indexicals are usually assumed to refer directly, that is, expressions whose reference is fixed for all possible circumstances (Kaplan, 1989).

5 Conclusions

Summing up, we have presented data from the behavior of TN proper and common nouns and shown that they distribute alike syntactically and may receive both rigid and non rigid interpretations in crucial contexts, such as under the scope of a quantifier. This, is accountable for with a predicativist approach to proper names, under which they designate properties of individuals and are definite descriptions when appearing bare or with an overt article. However, When cooccurring with an overt mark of person, proper names receive and exclusively rigid reading.

Challenges:
Where is rigidity coming from in TN?

*   Either bare or with a definite article, non-person-marked proper names allow both a rigid and a 'count' reading.
*   Person-marked names are only interpreted rigidly.

One hypothesis we're considering is that it is the indexical nature of pronouns (Kaplan 1989) that is responsible for the "rigidity" that person-marked proper names display, not the names themselves…

This, of course, raises the question about why a name and an article are not enough to do the trick in TN, a behavior that's not considered by the literature.

Furthermore, if person-marked proper names were proven to actually not be DPs (for example, if they were covert copulas), TN proper names would not have exclusively 'rigid' readings in any context, unlike what has been attested crosslinguistically.

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Abbreviations

ANT = antecessive, APL = aplicative, ASERT = assertion, DET = determiner, DIR = directional, DISTR = distribution, F = feminine, FUT = future, GN = general number, IMPERF = imperfect, INT = intensifier, O = object, PL = plural, POSR = possessor, PST = past, REFL = reflexive, S = subject, SG = singular, 1 = first person, 2 = second person, 3 = third person