On the tightrope between infinitives and action nouns

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On the tightrope between infinitives and action nouns:
The case of Otomi nominalizations

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Abstract

In this paper, I study the distribution of two nominalization structures in two closely related Amerindian languages of Mexico (Eastern Otomi and Northern Otomi). The structures involve intransitive nominalizations depicting a customary activity performed by humans ('hunting', 'sowing', etc.) as they appear in a complementation frame. I address the question of whether these nominalization structures in Otomi are morphologically non-finite forms or are just nouns. I show how a cognate structure in two close languages can be found in the two opposing ends of a nominalization scale: in Eastern Otomi, the structure is inflectional and should be analyzed as an intransitive infinitive, while its equivalent in Northern Otomi should be seen as an action deverbal noun.

1 Introduction: Establishing a common ground

In this paper, I study the distribution and properties of two nominalization structures in two closely related Otomi languages of Mexico: Eastern Otomi (from the linguistic variety of Huehuetla, in the state of Hidalgo, also known as Highlands Otomi) and Northern Otomi (especially from the variety of San Ildefonso Tultepec, in the state of Querétaro). The structures in question appear in a special complementation construction that involves a nominalized form of a verb as a non-finite predicate. Such a complementation construction is special in that it requires the nominalization to be intransitive and depict a customary activity performed typically by humans, such as 'hunting', 'sowing', or 'having a bath', so that it is embedded in a complementation frame such as *I'm going off hunting, you finished sowing, the child started having a bath*, and the like. An example of such a construction is given in (1) from Mezquital Otomi, a variety of Northern Otomi that is the most widely spoken in the family.[1]

(1) mände   bi=mfa'yo   ra   Xuwa
MEZ yesterday 3.CPL=herd.sheep SG   John
     nu   mí=ma   [**ra 'beni**]   rá   nänä
     when 3.IMPF=SS/go SG   doing.laundry SG.3POSS   mother
     'John herded sheep yesterday as his mother was leaving to do the laundry.'
                                        (Hernández Cruz et al. 2004)

I address the question of whether nominalization structures in Otomi such as *'beni* 'doing the laundry' in a frame like (1) are morphologically non-finite forms of verbs or are just nouns. In this respect, I propose that the equivalent structure to (1) in Eastern Otomi is of a verbal non-finite form, which is inflectional and could be analyzed as an intransitive infinitive, whereas the actual structure in Northern Otomi in (1) should perhaps be seen as

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[1] Orthography: *f* /pʰ/; *j* /kʰ/; *'* /ʔ/; *ñ* /ɲ/; *tx* /t͡ʃ/; *r* /ɾ/; *s* /t͡s/ or /t͡sʰ/ (in Eastern Otomi); *x* /ʃ/; *y* /j/; the vowels are *a* /ɔ/ [ɒ]; *e* /ɛ/; *o* /ə/; *u* /ɨ/; the ¨ indicates a nasal vowel.

instantiating an action deverbal noun. In order to argue for this in the rest of the paper, in this section I first make a brief excursion into the concept of nominalization that I use here to approach the Otomi data. This excursion is intended to sketch a differentiation between infinitives and action nouns, which although well known in the literature is very rarely spelled out.

The term "nominalization" is used in more than one sense. From a morphological perspective concerned with word-formation, it means in essence "turning something into a noun" (Comrie and Thompson 2007:334), so that nouns such as CONSTRUCTION_N, CONSTRUCTING_N, or CONSTRUCT_N /ˈkɒnstɾəkt/ are both possible and existing nominalizations of the verbal lexeme CONSTRUCT_V 'build, construct'. In this sense, nominalization can apply to verbs in the same way as to any other word class, providing the result is a noun: REDNESS is also a nominalization of RED, LENGTH of LONG, and so on. From a syntactic perspective, nominalization is used to refer to "constructions that have properties of noun phrases, but are headed by an element that is to some extent verbal" (Muysken 1999:248). The syntactic perspective is concerned with the study of the syntactic properties of nominalized forms of verbs in specific grammatical contexts; one of these properties is finiteness.

Finiteness as a concept has in turn been approached from different perspectives. From a syntactic perspective, finiteness is a property of the clause (Givon this volume, Nikolaeva 2007, etc.), while from a morphological perspective it is a morphological property of verbal forms. From the latter perspective, for example, non-finite forms have reduced inflectional properties; in this respect one of the most common non-finite forms of verbs in European languages are infinitives. This has consequences for lesser-known languages, as treating and glossing a given verbal form as an infinitive creates a number of expectations about the behavior of such a form. These expectations are naturally based on a consensual knowledge of how infinitives typically behave in the European languages.

Following this common knowledge, I take an infinitive to be an inflected form of a verb that has been recategorized as a noun to occur in non-finite syntactic contexts. For an infinitival form to be inflectional implies (i) that the form in question is part of the inflectional paradigm of the verbal lexeme (i.e., it is a form of the lexeme made up by productive rules, and is thus accessible for all speakers), and (ii) that it is required for the lexeme by the syntax of specific grammatical contexts, those that typically revolve around the syntax of clausal complementation and clausal adjunction – such as the infinitive in Spanish as illustrated in (2a-b), where it realizes the lexeme SALIR 'go out' just like the finite form in (2c), but in a different syntactic context.

(2) a. quier-o   [sali-r]
         want-1SG.PRS.IND   go.out-INF
         'I want to go out.'

     b. lo=vi   [a-l   sali-r]
         3SG.M.OBJ=see.1SG.PST.IND   at-DEF.M.SG go.out-INF
         'I saw him when I was going out.'

     c. sal-í
         go.out-1SG.PST.IND
         'I went out.'

On the other hand, when recategorized as a noun an infinitival form may have access to (all or some of) the grammatical properties associated with nouns in the language (gender, case, number, definiteness, possession, etc.), so that it is readily available to take part in typical NP syntax. As a consequence of this recategorization, the nominal form of the verb will commonly fail in some way or another to realize the whole array of morphosyntactic

feature values that characterize the inflection of other forms of the same verbal lexeme. In other words, it will display inflectional restrictions, and can thus be characterized as being non-finite from the morphological perspective.

Nevertheless, despite realizing the same lexeme, the recategorization into a noun allows us to talk about the state of affairs referred to by the verbal lexeme in a holistic way, for example *el reí-r de los niñ-o-s* [DEF.M.SG laugh-INF of DEF.M.PL child-M-PL] 'the laughing of the children'. Once the verbal lexeme is used as a noun, its semantics may evolve independently by acquiring a new meaning that may in turn evolve into a new lexeme, as in CANTAR$_V$ 'sing' → *cantar*$_{INF}$ 'to sing' > CANTAR$_N$ 'lyric or epic song' (e.g. *el cantar de los cantares* 'the song of songs'); DEBER$_V$ 'must' → *deber*$_{INF}$ 'must' > DEBER$_N$ 'duty' (e.g. *el deber del ciudadano* 'the citizen's duty'); or SABER$_V$ 'know' → *saber*$_{INF}$ 'to know' > SABER$_N$ 'knowledge, learning' (e.g. *una persona de gran saber* 'a person of great learning').

Independent nouns in Spanish from infinitival forms such as CANTAR$_N$, DEBER$_N$ and SABER$_N$ are few and hard to find. This is because the language has other more common word-formation ways to produce similar deverbal nouns. In this light, a deverbal noun, in contrast to an infinitive, semantically profiles some aspects of the state of affairs referred to by the verbal lexeme, and it does this as an independent lexical unit. It may refer to the agent (e.g. *cantante* 'singer'), the instrument (e.g. *secador* 'dryer'), the location (e.g. *consultorio* 'medical office'), and so on, or to aspects of the action itself, profiling its outcome product or rendering the action as a whole. The so-called "action nouns" are the type of deverbal nouns that typically serve this purpose cross-linguistically; they commonly develop a wide range of meanings (e.g. *escritura* 'writing, spelling, art of writing', *enseñanza* 'teaching, education'). Deverbal nouns are further subject to restrictions on the productivity of certain derivational rules in a given language, and are prone to have lexical gaps.

The morphological properties of the nominalization in question, whether inflectional (e.g. the infinitival type) or derivational (e.g. deverbal action nouns) have a bearing on the syntactic behavior of these elements. According to the finiteness scale in (3) from Givón (this volume), the more inflectional a certain morphological nominalization is, the more finite properties it will display (e.g. the *-ing* forms in English in (3b)), while if it is subject to derivational restrictions, it will be found on the non-finite end of the scale (e.g. the *-tion* forms or others in English found in (3a))

(3)   most non-finite (nominalized)
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a.   [Her good *knowledge* of math] surely helped
b.   [Her *knowing* math well] surely helped
c.   [For her *to know* math so well] surely helped
d.   She wanted [*to know* math well]
e.   [*Knowing* math well], she then...
f.   [*Having known* math well since high school], she...
g.   [that she *knew* math well] was a great help
h.   She *knew* math well
==
most finite

In this paper, I study a case of nominalization in Otomi to be found in the grammatical space of Givón's finiteness scale between (a) and (e). The continuum in (3) is designed to accommodate the range of possibilities existing in English. This range is wide because English has three distinct forms in competition (deverbal nouns such as *knowledge* and two other morphologically non-finite forms *knowing* and (*to*) *know*). In the Otomi languages, verbs can only have one nominalized form to be used equivalently. This significantly reduces the topological space of possibilities available for the finiteness scale in Otomi. However, I

show in the paper that for some Otomi languages like Eastern Otomi, the same form can be a deverbal noun or an infinitive depending on the grammatical context, whereas in Northern Otomi their equivalent forms are deverbal nouns in all contexts.

The paper is structured as follows. In the next section, I give a brief introduction to Otomi as a linguistic family and present some basic grammatical notions that are useful for understanding what follows, namely the properties of finite verbs and some basics about NP structure. In Section 3, I present the construction that involves a nominalized complement. This construction, found in all the Otomi languages, is the specific grammatical context from which Eastern Otomi has developed an infinitive. In Section 4, I elaborate on the differences of the two constructions of Eastern and Northern Otomi, and show that in Northern Otomi the nominalizations are deverbal nouns rather than syntactic nominalizations. The paper concludes in Section 5 with a summary of the argument.

2 Otomi

Otomi is a small, shallow language family of Mexico that belongs to the Oto-Pamean branch of Oto-Manguean. The number of languages in the family is still an open question. The National Institute for the Indigenous Languages of Mexico (INALI) acknowledges nine different linguistic varieties in the CLIN (2008).[2] INALI's linguistic varieties are treated as genuine languages for official – that is, potential educational, administrative, judicial, and information – purposes. However, the dialectal decisions behind the CLIN are not based on a rigorous dialectological survey and they place much emphasis on sociolinguistic criteria. From a purely linguistic point of view, based on the data of Lastra (2001), on the available descriptive materials, and on my own field notes, I argue that the Otomi family consists of six languages spoken in four main dialectal areas. From this position, I consider the existing varieties spoken nowadays in different villages to be dialects of one of these six languages:

- Northern Otomi (comprising the varieties of Mezquital, San Ildefonso Chantepec, San Ildefonso Tultepec, Toliman, Santiago Mexquititlán, Guanajuato, Acambay, and also most probably the variety of Ixhuatlán de Madero in the east)
- Eastern Otomi (comprising the varieties of Huehuetla, Tenango, Tulancingo, Texcatepec, Santa Ana Hueytlalpan, and San Pablito)
- Western Otomi (comprising the varieties of Temoaya, San Felipe Santiago, San Andrés Cuexcontitlán, and most probably the Otomi spoken in Huixquilucan)
- three other Southern languages: Acazulco-Atlapulco Otomi and Tilapa Otomi to the southwest and Ixtenco Otomi to the southeast.

I study here the distribution of a similar nominalization construction in both Northern and Eastern Otomi. The two languages serve as good examples of the two opposing ends of a continuum of inflectional conservatism in the family. In this respect, Northern Otomi and Western Otomi display a large degree of simplification of the morphological complexities in the inflectional system of Colonial Otomi, as described in the sixteenth-century grammar written by Pedro de Cárceres (1580 [1907]).[3] For example, of the three conjugation classes

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[2] A linguistic variety is defined in CLIN (2008:37): "La variante lingüística... se define como una forma de habla que: a) presenta diferencias estructurales y léxicas en comparación con otras variantes de la misma agrupación lingüística; y b) implica para sus usuarios una determinada identidad sociolingüística, que se diferencia de la identidad sociolingüística de los usuarios de otras variantes." ["A variety of speech that (i) has structural and lexical differences in comparison with other varieties within the same linguistic group, and (ii) has a distinct sociolinguistic mark of identity for its users, different from the sociolinguistic identity borne by speakers of other varieties" (my translation).]

[3] Colonial Otomi is the Northern dialect of Old Otomi, which was the common language spoken until the beginning of the 18th century, just before the dialectal spread that gave rise to the family.

that we can reconstruct for the old system (Palancar 2011), only one survives in these two languages. In contrast, both Eastern Otomi and all Southern languages have managed to preserve a great deal of the old inflectional contrasts. For example, the three conjugations have survived in all of them, although with some degree of leveling. Because of this, we might treat Eastern Otomi as inflectionally conservative. Nevertheless, for the particular phenomenon I study here, the rise of the infinitive in this language is an innovative feature, as discussed in Section 4.1.

In Otomi languages, verbs are commonly inflected for TAM by means of complex sets of markers that precede the stem. The number of tenses varies across languages, with conservative languages having more distinctions than innovative ones. The markers in question often cross-reference the subject too. Example (4) illustrates the paradigm of the present realis in the Northern Otomi variety of San Ildefonso Tultepec (SIT).

(4) a. **dí**=xóf-o
SIT   1.INCPL.R=harvest.maize-F
         'I harvest.'

     b. **gí**=xóf-o
         2.INCPL.R=harvest.maize-F
         'You (SG) harvest.'

     c. xóf-o
         [3.INCPL.R]harvest.maize-F
         'He/she/they harvest.'

The inflectional markers in (4) behave like affixes for morphological purposes, but they are not typical affixes in two other senses. Phonologically, despite being unstressed by default, they can become stressed in dubitative speech, as shown in (5) where the suspension points '...' represent a prosodic pause. Syntactically, the markers are hosted on preceding functional words, as shown in (6). For these two reasons, I treat these markers as simple clitics rather than just prefixes (Textual examples are indicated as 'Text').

(5) ja   **bi...**   ja   bi=h‹y›ant='ú
SIT   LOC.ACT   3.CPL   LOC.ACT   3.CPL=‹SS›see[3OBJ]=3PL
         'And he saw them over there.' (Txt)

(6) hín=**dí**   né=gá='ú
SIT   NEG=3.PRS.R   want[3OBJ]=1SG=3PL
         'I don't want them.' (Txt)

On the other hand, most verbs in Otomi consist of a morphological root and a stem formative (marked with +) (e.g. HUE 'yá+i 'carry water', ts'u̱+gi 'get thin', 'á̱+ts'i 'catch, fish'). The finite forms of these verbs may surface in two phonological shapes (in the sense used by Zwicky 1990), namely a "free" and a "bound" shape. The occurrence of these shapes responds to a number of prosodic and syntactic conditions.

For example, a free shape (F) is required at a clausal boundary, as shown in (7). In contrast, the verb occurs in a bound (B) shape when it occurs intraclausally, that is, when the finite verbal form is followed by an NP or other constituents within its own clause, as illustrated in (8). A verbal form in the bound shape is phonologically dependent and behaves like a clitic hosted on the first free word of the next syntactic constituent. In (8), the host of the verb is the definite determiner *no* and carries the main stress of the complex phonological word /bi.ˌmũ.ʃa.ˈno.r/ (the verb stem receives a secondary stress).

(7)   [pá   bi=müts-**i**]
SIT   PURP   3.CPL=pile.up.AS[3OBJ]-**F**
    'To pile it up.' (Txt)

(8)   [pa   bi=müx-**a**=[nŏ=r   hǎi]_{NP}]
SIT   PURP   3.CPL=pile.up.AS[3OBJ]-**B**=DEF.SG=SG   soil
    'To pile up the soil.' (Txt)

The determiner cluster *no=r* in example (8) serves in turn to illustrate that nouns co-occur with number determiners (singular vs. plural) as well as definiteness determiners (definite vs. indefinite).[4] More examples are given in (9).

(9)   a. [nu='**a**   **ra**   Teo]_{NP}   di=ho^hk-a=[**nd'a**   **ra**   'yü]_{NP}
HUE   INTRO=DEF.SG SG   Teo   3.INCPL.IRR=make[3OBJ]-B=INDF.SG SG   path
    'Teo will be making a path.' (E&V 2007:4)

    b. ndí=thöt'-a=thó   kó   ['**na**=**r**   du^htu]_{NP}
SIT   1.IMPF=tie[3OBJ]-B=DEL   with   INDF.SG=SG   cloth
    'I used to tie it up with a cloth.' (Txt)

In the next section, I introduce a very specific constructional frame with the typical syntax of complementation in which one finds many of the verbal nominalizations in Otomi. I will refer to such a frame as the "nominalized complement construction." I first introduce the frame with some emphasis on the similarities between Eastern and Northern Otomi. In later sections I elaborate further on the interesting ways in which they differ.

3 The nominalized complement construction

All Otomi languages have a complement construction in which a complement-taking verb selects a verbal nominalization of the action noun type as its complement. I call this the nominalized complement construction (henceforth NCC). Examples of the NCC appear in (10) and (11). Example (10) is from Eastern Otomi, while the examples in (11) come from two different varieties of Northern Otomi (San Ildefonso Tultepec Otomi and Mezquital Otomi, respectively). In these examples, matrix verbs and NP complements with the nominalization are in boldface.

(10)   di=**tho^hk**-a=[**ra**   **nxadi**]   ma   ts'unt'u
HUE   3.INCPL.IRR=keep[3OBJ]-B=SG   learning   1.POSS   boy
    'My son will keep on studying.' (E&V 2007:352)

(11)   a. pa   da=**ma**[=**r**   **sú**]
SIT   PURP   3.INCPL.IRR=SS/go=SG   firewood.making
    'So that he'd go to make some firewood.' (Txt)

    b. xtä=**gwa**[=**rä**   **ndoni**]   yä   za...
MEZ   3.PRF.IRR=SS/stop[3OBJ]=SG   blossoming   PL   plant
    'When the flowers stop blossoming...' (Salinas Pedraza 1983:194)

In (10), the complement-taking verb is THO^HKI 'keep doing sth.' and its complement, the verb XADI (intr.) 'learn' appears in a nominalized form, such as *nxadi* 'learning'. In (11), the

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matrix verbs PA 'go to do sth.' and JWADI 'stop/finish doing sth.' require their complement verbs XU (intr.) 'make firewood' and DONI (intr.) 'blossom' to appear in their nominalized forms *sY* and *ndqni*, respectively. A question remains about the status of these complements: are they syntactically nominalized forms of verbs as suggested by the way I have presented the data, or do they represent independent deverbal lexemes?

One of the interesting characteristics of the NCC is that the nominalized verb must co-occur with the singular determiner; this I take to be an indication of their nominal nature (compare for example (9b) with (11b)). But in Section 4.3 we will see that in Eastern Otomi there is an infinitive marker that takes the same syntactic position as the singular determiner. An example is given in (12). I argue that this is because the infinitive marker has evolved historically from an old form of the singular determiner we observe in (10).

(12)   i=päh=[**na**   mp_e_fi]   yo   ts'_u_nt'_u_
HUE   3.INCPL.R=know[3OBJ].AS=INF working   PL   boy
       'The boys know how to work.' (E&V 2007b:167)

The NCCs of all the Otomi languages have at least three characteristics in common: (i) in the default case, the nominalization in the complement slot depicts actions performed customarily by humans (but there are exceptions, as in (11b)); (ii) the nominalization is of the action noun type; and (iii) the nominalization in question is syntactically intransitive. I elaborate on each of these characteristics in the next subsections.

3.1 Semantics of the nominalized complement in the NCC
In the default case, the nominal complement in the NCC refers to a customary activity performed by a human being. Examples of these customary actions are given in Table 1 from Northern Otomi. (A similar list could be provided for Eastern Otomi, as it could easily be retrieved from the data in the following subsection.)

Table 1. Customary action nouns from SIT Otomi occurring in the NCC

Grooming/body function:	*njo̱de* 'dressing'; *mo̱ge* 'undressing'; *mpit'i* 'pissing'; etc.
Food/drink consumption:	*ts'ithe* 'having a drink'; *ñhüni* 'having a meal'; etc.
Food processing:	*ju̱ni* 'corn grinding'; *t'aphi* 'mead extracting'; *ntho̱'ts'e* 'cooking'; etc.
Farming/household jobs:	*mpo̱hmi* 'plowing'; *'bot'i* 'sowing'; *sofo* 'maize harvesting'; *'ba̱mboi* 'cattle tending'; *nju̱hwö* 'fishing'; *'be̱jwa* 'hunting'; *t'e̱di* 'sewing'; *njoʰki* 'sweeping'; etc.
Other activities:	*nt'opho* 'writing'; *sa̱di* 'praying'; *m'a̱* 'selling'; etc.
Work in general:	*'be̱fi* 'working'; etc.

In this regard, while example (13) is a typical instance of the NCC, (14) is unacceptable because the nominalization in question does not comply with this semantic requirement. In other words, *ntsa̱gi* 'jumping' depicts an action that is not conventionally regarded as customary by the linguistic community of Northern Otomi, and hence it cannot be used in this frame.[5]

(13)   nú='m_u_   bi=gwá [=r   **t'_é_di**]
SIT   INTRO=when   3.CPL=SS/finish[3OBJ]=SG   sewing
       'When she finished sewing' (Txt)

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[5]   In this connection, as the nominal *ntsCgi* cannot be used in the frame, its common meaning is not of an action noun; instead it is most commonly used to encode the action's result, i.e. 'jump'.

(14) *nú='mu̱   bi=gwá [=r   **ntsági**]
SIT   INTRO=when 3.CPL=SS/finish[3OBJ]=SG jumping
         Intended reading: 'When she finished jumping'

To express the intended meaning in (14), language users revert to another complement construction. This other construction consists of a finite subordinated clause that is syntactically juxtaposed to the matrix predicate, as in (15).[6] This construction, involving a juxtaposed dependent clause, is very common in the languages of this family for the encoding of notions typical of syntactic complementation, as for example in (16a). The same structure is also used to encode purposive semantics, as in (16b).

(15)   nú='mu̱   bi=gwád-i   [**bi=n   tsá̱g-i**]
SIT   INTRO=when   3.CPL=SS/finish[3OBJ]-F 3.CPL=INFL   jump-F
         'When she finished jumping'
         (Lit. 'When she finished it, she jumped.')

(16) a. hing=i=n   nde   [**da='‹y›o̱t'-e**]
HUE   NEG=3.INCPL.R=INFL want[3OBJ]   3.INCPL.IRR=‹SS›do[3OBJ]-F
         'He doesn't want to do it.' (V&E 2007:269)
         (Lit. 'He doesn't want it, he'll do it.')

    b. ja   bi=h‹ñ›ǔh=pu̱=thó   [**bi=m-pa**]   'něhe
SIT   LOC.ACT   3.CPL=‹SS›sit.AS=there=DEL   3.CPL=ANTIP-sell   also
         'And he sat there to sell.' (Txt)
         (Lit. 'And he sat there, he sold also.')

Although the customary activity required by the NCC is in the default case performed by a human being, we also find examples referring to higher-ranking animals and even other spontaneous events involving plants, such as the blossoming of flowers, as in example (11b) above, or inanimate participants such as the fermenting of an alcoholic drink. What appears to be crucial for the construction is that the subject performs the action depicted in the nominalization as a customary activity, whatever its type.

3.2 The complement nominalization is an action noun
Nominalizations in Otomi languages are produced by conversion from verbal stems. In this respect, verbs can have up to four different stems for inflectional purposes. These stems may then be later used for derivational purposes through conversion. Examples are given in (17). The primary stem is the lexical representation of the lexeme (in the sense used by Aronoff 1994). Both the secondary and the impersonal stems derive from the primary stem. A fourth stem, which I refer to as the "stative stem," is in turn derived from the impersonal stem by means of a nasal prefix.

(17)   HUE   PU̱TI   HONI   'OT'I
                         'peck'   'look for' 'write'
       Primary stem   pú̱t-   hon-   'ot'-
       Secondary stem   mbú̱t-   hyon-   'yot'-
       Impersonal stem   'bú̱t-   thon-   t'ot'-
       Stative stem   m-'bú̱t-   n-thon-   n-t'ot'-

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6   For a full account of why such juxtaposed clauses instantiate subordination rather coordination, see Palancar (2012).

Not all verbs have these four stems. For example, derived verbs by a middle or antipassive prefix can only have a primary stem, so nominalizations from those verbs naturally come from this stem only. But if a verb has more than one stem, it is often the case that the morphological nominalizations of these verbs come from stems other than the primary one. The secondary stem is mainly involved in the production of agent nouns, while the impersonal and the stative stems yield other types of noun: action nouns, instrument nouns, result nouns, and so on. In (18), I give some examples of actual nominalizations of the verb P<u>U</u> 'grind sugar cane' in Eastern Otomi.

(18) HUE   v.   n.
                                  P<u>U</u>
                                  'grind cane'
      Primary stem   p<u>u</u>   >   __
      Secondary stem   mb<u>u</u>   >   MB<u>U</u>   'sugar cane grinder'   agent n.
      Impersonal stem   'b<u> u</u>   →   'b<u>u</u>   'sugar cane grinding'   action n.
                                         >   'B<u>U</u>$_1$ 'sugar mill'   instrument n.
      Stative stem   m-'b<u>u</u>   >   M'B<u>U</u>$_1$ 'ground sugar cane'   product n.
                                             M'B<u>U</u>$_2$ 'sugar cane grinding season' time n.

In general, the resulting noun is an independent lexical item from the verbal lexeme, except for the action noun in Eastern Otomi. The action noun in this language could be taken as a (syntactic) nominalization of the lexeme for the context of the NCC; in this regard it still realizes the same verbal lexeme. The subtle differentiation between inflection and derivation in this context is represented by the use of the arrow → rather than the greater-than sign >. A different situation applies in Northern Otomi, in which action nouns behave like deverbal nouns.

However, conversion rules appear to be unproductive in the Otomi languages. This means that all deverbal nouns existing in the lexicon are the outcome of past operations effected when the rules were still productive. Today, Otomi speakers often rely on loanwords from Spanish for new concepts.

Most nominalizations of the action noun type are conversions of the impersonal or the stative stems. As these are the types of nominalization we find in the NCC in the two languages, it is worth having a look at the rules involved in the building of these stems in more detail. In Table 2, I have spelled them out for Eastern Otomi, the situation being very similar for Northern Otomi. The sign > in Table 2 now indicates morphophonological derivation.

Table 2. Building rules for the impersonal and stative stems in Eastern Otomi

v. tr.		Primary st.			Imper. st.		Stative st.
HONI	'look for'	**honi**	>	t-	**t**-honi	>	**n**-t^{h}oni
HWÁHNI	'choose'	**h^{w}á^{h}n̥i**	>		**t**-há^{h}n̥i	>	**n**-t^{h}á^{h}n̥i
'Ű́DI	'show'	**ʔűdi**	>		**t**-ʔűdi	>	**n**-t'űdi
'W<u>Ĕ</u>TI	'sew'	**'wɛ̆^{h}ti**	>		**t**-'ɛ̆^{h}ti	>	**n**-t'ɛ̆^{h}ti
MÁʔT'I	'guard'	**máʔt'i**	>	h-	**h**-máʔt'i	>	**m**-^{h}m̥áʔt'i
MBAʔT'I	'shout at'	**m^{b}aʔt'i**	>		**h**-m^{b}aʔt'i	>	**m**-^{h}m̥^{b}aʔt'i
NŬ	'see'	**nŭ**	>		**h**-nŭ	>	**n**-^{h}n̥ŭ
ND<u>Ŏ</u>NI	'affect'	**n^{d}ŏni**	>		**h**-n^{d}ŏni	>	**n**-^{h}n̥^{d}ŏni
YO<u>O</u>T'E	'knock over'	**jəʔt'e**	>		**h**-jəʔt'e	>	**n**-^{h}jəʔt'e
PË	'steal'	**pɛ̃**	>		p‹**h**›ɛ̃	>	**m**-p^{h}ɛ̃
K<u>Ó</u>DE	'wear (below waist)'	**kə́de**	>		k‹**h**›ə́de	>	**n**-k^{h}ə́de

TŬTS'I	'haul'	tŭts'i	>	ʔ-	t⟨ʔ⟩ŭts'i	>	n-t'ŭts'i
TSA	'eat/bite'	tsa	>		ts⟨ʔ⟩a	>	n-ts'a
BENT'I	'grasp'	bɛnt'i	>	HARDENING	pʰɛnt'i	>	m-pʰɛnt'i
XÁ'TS'I	'rinse'	ʃáʔts'i	>		tsʰáʔts'i	>	n-tsʰáʔts'i
ZÓFO	'speak to'	zópʰo	>		ts'ópʰo	>	n-ts'ópʰo
PÉ'MI	'slap'	pɛ́'mi	>		'bɛ́'mi	>	m-'bɛ́'mi
FĚI	'whip'	pʰɛ̆i	>		'bɛ̆i	>	m-'bɛ̆i
TÓHNI	'push'	tə́ʰni	>		'də́ʰn̥i	>	n-'də́ʰn̥i
FÏDI	'use as a mattress'	pʰĩdi	>	n-	m-pʰĩdi		
THUTI	'burn/sear'	tʰɨ̀ʰti	>		n-tʰɨ̀ʰti		
JÜT'I	'close'	kʰũt'i	>		n-kʰũt'i		

An impersonal stem is available for the inflection of all transitive verbs, so the building rules in Table 2 are productive for inflectional purposes. The different affixes used to form the impersonal stem are conditioned by the phonology of the primary stem. If the stem has a glottal in onset, a *t-* prefix is used; if it has an aspirated consonant, a nasal prefix is used (with some lexical exceptions). For all other cases, the rules either involve a glottal affix (such as a stop or a fricative), which is infixed with onset stops, or they involve consonant mutation of the onset resulting into a hardening outcome. This mutation is the historical reflex of the affixation of the same glottal prefix that we still observe in other verbs.

The action nominalizations occurring in the NCC are commonly from active intransitive verbs. As the default for these verbs is to use an impersonal stem, this suggests that such a stem is also available to them, at least for derivational purposes. A few examples of the default rule are given in (19). Northern Otomi behaves in this respect like Eastern Otomi, but for this language the process is derivational and has lexical gaps, and a sign > should be employed instead.[7]

(19) HUE   v.intr.   nom. from impersonal stem

ZÓNI	→	ts'oni	'weeping'
PU	→	'bu	'grinding cane'
HI	→	thi	'bathing'
KÚNI	→	júni	'grinding'
XÚ	→	sú	'making firewood'
WǍHI	→	hwǎhi	'cleaning a cornfield'
YÄ	→	hyä	'talking'
PE+'BIDA	→	'be'bida	'music playing'
THÜ+DETHÄ	→	nthüdethä	'maize sowing'
etc.			

A few intransitive verbs, mainly those activity verbs derived by the suffix *-te*, produce their nominalization from their stative stem, as shown in (20). The verb MAYA 'go for a stroll' is a lexical exception.

(20) HUE   v. intr.   nom. from stative stem
      a.   HÁ-TE   →   nthate   'acting as a swindler'
            ZE-TE   →   nzete   'working as a day laborer'
      b.   MAYA   →   mhmaya   'going for a stroll'

Other nominalizations occurring in the NCC come from intransitive verbs that cannot have an impersonal stem; these come instead from their primary stem. This is, for example, the case of antipassive verbs marked with the prefix *n-*, as shown in (21a). There are also a few exceptional but common nominalizations from the primary stem, which are given in (21b).

(21) HUE   v. intr.   nom. from primary stem
      a.   M-PEFI   →   mpefi   'working'
            N-KÚN+YÄ   →   nkunyä   'diving'
            N-DÚ+THÄ   →   ndú-thä   'bringing maize'
            N-XÁHA   →   nxáha   'swimming'
            N-XADI   →   nxadi   'learning'
      b.   'YO   →   'yo   'going for a walk'
            'YO +DÄPO   →   'yodäpo   'camping'
            'YÁI   →   'yai   'carrying water'

3.3 Intransitive nominalizations
The nominalizations of the few transitive verbs that occur in the NCC are intransitive. For instance, the nominalization *hwähi* of the transitive verb *wähi* 'clean (the cornfield)' is used in the NCC in (22) to refer to the activity of cleaning cornfields in general. If a patient participant were to be included, the juxtaposed complement clause we saw in (15) above must be used instead, as shown in (23).

(22) ga=thuh=ma   jwai
HUE   1.INCPL.IRR=sharpen.B[3OBJ]=1POSS   knife
      ngetho   ga=mba   nixudi   **na**   **hwähi**
      because   1.INCPL.IRR=SS/go tomorrow INF   cornfield.cleaning
      'I'm going to sharpen my machete because I'm going cornfield-cleaning tomorrow.'
                                                          (E&V 2007:196)

(23) dá=du'm-i   [**dá=wä'-a=n'da**   **ma**   **hwähi**]
HUE   1.CPL=start[3OBJ]-F   1.CPL=clean(cornfield).AS[3OBJ]-B=INDF.SG   1POSS   cornfield
      'I started to clean one cornfield of mine.' (E&V 2007:84)
      (Lit. 'I started it, I cleaned one cornfield of mine.')

In their vast dictionary of Eastern Otomi, Echegoyen and Voigtlander (2007) include 3,000 sentential examples to illustrate the usage of the different entries. However, there is only one example (24) whose translation can mislead us into believing we are witnessing a transitive nominalization. The structure in question is not an instance of the NCC, but of a dative external possessor construction.

(24)   ga=hon-b-a=[**rá**   **thai**]NP   [**ra**   **'yomm-a-n'i**]NP
HUE   1.INCPL.IRR=search.DTR-3DAT-B=SG.3POSS purchasing SG get.dry-B-chilli.pepper
         'I'll get money to buy dry chili peppers.' (E&V 2007:495)
         (Lit. 'I'll get its purchasing to the dry-chilli pepper.')

Nominalizations in Eastern Otomi can also work as independent action nouns outside the NCC, and their subject can be encoded as a possessor. In Otomi languages, possession is marked on the head. The possessed noun is marked as possessed by means of a high tone that (commonly) lands on the number determiner, as shown in (25). The NP encoding the possessor is simply juxtaposed. Compare for this purpose (25) with (26), where the possessed noun is the deverbal noun of the verb P<u>E</u>FI 'work'.

(25) ra   mbidi, di=ja   [**rá**   **t'uhni**^{POSSD} [a   ra   xitsu]^{POSSR}]
HUE SG   fright [3.INCPL.R]INFL=exist SG.3POSS child   DEF.SG SG woman
      'A fright is what the child of the woman has.' (E&V 2007:14)
      (Lit. '...her child the woman')

(26) [nu=**rá**   **'befi**^{POSSD} [y<u>o</u> x<u>a</u>di-t'<u>u</u>hni]^{POSSR}]
HUE INTRO=SG.3POSS work   PL   learn-child
      di=n-x<u>a</u>h=y<u>o</u>   t'<u>o</u>hni
      [3.INCPL.R]INFL=MIDDLE-learn.B=PL letter
      'The job of students is to learn the letters.' (E&V 2007:33)

     In the NCC, however, the subject of the nominalization is always controlled by the matrix clause, as shown in (27). In other words, one of the arguments of the matrix predicate has to be co-referential with the subject of the nominalization (Stiebels 2007). As a consequence of this, the controlled argument is never expressed in the complement and is thus never encoded as a possessor. Example (27b) shows the neutral word order VOS in Eastern Otomi.

(27) a. bi_i=ben-i   bi_i=mba   [ra   **nx<u>a</u>di**   ____i]
HUE   3.CPL=think[3OBJ]-F 3.CPL=SS/go SG   learning
      'He thought of going to school.' (V&E 1979 [1985]:305)
      (Lit. 'He thought of it, he went studying.')

     b. bi_i=jwah-te   [**na ts'ithe**   ____i] ra fani_i
HUE   3.CPL=finish.AS-ANTIP INF water.drinking   SG mule
      'The mule finished drinking water.' (V&E 1979 [1985]:235)
      (Lit. 'It finished water-drinking the mule.')

The intransitivity of nominalizations in Otomi is a property found in other unrelated language families in the Mesoamerican linguistic area, with the same function of expressing subject-oriented activities. It is reported, for example, in Mayan languages, such as in K'ichee (Can Pixabaj 2009), Tzutujil (Dayley 1985), Mam (England 1983), Chol (Vázquez 2013), and Tseltal (Polian 2013), but also in Classical Náhuatl (Uto-Aztecan, Carochi [1645] 1983) and Ayutla Mixe (Mixe-Zoquean, Romero 2013).

     In this section, I have presented a set of properties of the two NCCs of Eastern and Northern Otomi that are common to both of them. I have shown, for example, that the nominalization occurring in the frame is of the action noun type, that it commonly comes from intransitive verbs, and that it depicts actions performed customarily by humans. In the next section, I explore the differences between the two constructions.

4 Exploring the differences between the two NCCs

Despite their structural similarities, the NCC of Eastern Otomi differs greatly in its distribution from the NCC of Northern Otomi. I argue that the Eastern construction allows for a nominalization of the inflectional type, whereas its Northern counterpart has lexical restrictions that suggest the frame is working as a moribund syntactic structure: that is, it is almost idiomatic, and can only hold deverbal action nouns in the nominalization slot.

To show this, I first examine the lexical behavior of both matrix verbs and nominalizations in the NCCs of both languages. I show that there are no lexical restrictions in Eastern Otomi, which is not the case in Northern Otomi. Then I show that the nominalization in the Eastern Otomi construction is preceded by a marker that works as an infinitival marker, whereas in Northern Otomi only the singular determiner is possible. This can be taken as morphosyntactic evidence that the nominalization in Eastern Otomi is inflectional, a characteristic further supported by the common use of the construction in discourse.

4.1 The matrix verbs in the NCC

The NCC in Eastern Otomi allows for about twenty matrix verbs of the ones typically found in complementation structures typologically (Cristofaro 2003). The verbs in question are given in Table 3.

Table 3. Matrix verbs in the NCCs of Eastern and Northern Otomi

Control predicates		HUE	SIT
purposive motion	'go to do sth.'	*pa*	*pa*
desiderative	'want to do sth.'	*ndé*	—
liking	'like to do sth.'	*hǒ*	—
experiential knowledge	'know how to do sth.'	*pǎdi*	—
	'learn to do sth.'	*xa̱di*	—
modal	'try to do sth.'	*tsa̱*	—
	'help to do sth.'	*fa̱ts'i*	*fa̱ts'i*
other	'achieve having done sth.'	*hwe̱gi*	
Phasal and causative			
phasal	'stop/finish doing sth.'	*jwádi*	*jwádi*
		jwáhte	
	'stop doing sth.'	*he̱gi*	—
	'start doing sth.'	*ju̱di*	—
	'begin doing sth.'	*dú̱'mi*	—
	'keep on doing sth.'	*thógi*	—
causative	'let sb. do sth.'	*he̱gi*	—
	'take sb. to do sth.'	*tsíxte*	
	'put sb. to do sth.'	*'ĕi*	—
	'tell sb. to do sth.'	*xifi*	—
	'order sb. to do sth.'	*'be̱pi*	—

Table 3 shows that the NCC of Northern Otomi only allows three verbs: the verb *pa* 'go' used as a purposive motion matrix verb with the meaning 'go elsewhere to do an action'; the modal verb *fa̱ts'i* 'help to do an action' and the phasal *jwadi* 'finish doing an action'. Of the three, the motion verb is by far the most common one in usage, and by itself it accounts for more than ninety percent of the tokens of the construction in Northern Otomi. This language allows a roughly similar number of matrix verbs as Eastern Otomi, but they are used in other complementation structures, mainly the juxtaposed complement construction we saw in Section 3.1. This means that when a speaker of Eastern Otomi uses the NCC, to render its

closest semantic equivalent a speaker of Northern Otomi must use an alternative construction (see Section 4.3. for a discussion).

4.2 Lexical gaps in the nominalization slot of the NCC
As I pointed out in Section 3.1 above, the NCC is used for a customary activity typically performed by a human being or by other higher-ranking animals. In Eastern Otomi, all possible verbs that conform to this semantic profile have a nominalization readily available to be used in the frame of the NCC. The same is apparently not possible for Northern Otomi. Table 4 contains a list of nominalizations that can occur in the NCC in the San Ildefonso Tultepec variety of Northern Otomi. Crucially, the list in Table 4 can be considered exhaustive.

Table 4. Exhaustive list of action nouns in the NCC in Northern Otomi

SIT	v.			action nouns	
grooming/body function:	KÓDE	tr.	>	NJODE	'dressing'
	MÓGE	intr.	>	MOGE	'undressing'
	MPÍT'I	intr.	>	MPIT'I	'pissing'
	'E+ÑÖ	intr.	>	Ñ'EÑÖ	'combing'
food/drink consumption:	TSĬ+DÉHE	intr.	>	TS'IDEHE	'having a drink'
	ÑÚNI	intr.	>	ÑHÜNI	'having a meal'
food processing:	Ñ'ÚSPI	intr.	>	Ñ'ÜSPI	'making a fire'
	KÚNI	intr.	>	JUNI	'grinding'
	KÚNI+Ñ'Ĭ	intr.	>	JUNIÑ'I	'chili-grinding'
	HÓ'TS'E	tr.	>	NTHO'TS'E	'cooking'
farming/household jobs:	MPOHMI	intr.	>	MPOHMI	'plowing'
	PÓT'I	tr.	>	'BOT'I	'sowing'
	XÓFO	intr.	>	SOFO	'harvesting'
	'AFI	intr.	>	T'AFI	'extracting maguey-mead'
	JO+JŬ	intr.	>	NJOJU	'collecting beans'
	HONI+K'ANI	intr.	>	THONGAK'ANI	'searching for greens'
	TÚ^HKI+LÓLÓ	intr.	>	THU^HKLOLO	'plucking fruits'
	TÚ^HKI+'RÁXT'Ö	intr.	>	THU^HKA'RAXT'Ö	'plucking prickly pear fruit'
	TÚ^HKI+KŐHÖ	intr.	>	THU^HKAKÖHÖ	'plucking prickly pear leaf'
	FÁDI+BÓI	intr.	>	'BAMBOI	'looking after cattle'
	HO+TS'ÚDI	intr.	>	THO^HPTS'UDI	'killing of the pig'
	HO+BÓI	intr.	>	THOBOI	'killing of cattle'
	HO+KÓDO	intr.	>	THO^HKDO	'killing of turkey'
	JU+HWŎ	intr.	>	NJUHWÖ	'fishing'
	PÉ+JWA	intr.	>	'BEJWA	'(rabbit) hunting'
	XÚ	intr.	>	SU	'gathering firewood'
	'WÉDI	intr.	>	T'EDI	'sewing'
	NJO^HKI	intr.	>	NJO^HKI	'sweeping'
other activities:	'OFO	intr.	>	NT'OFO	'writing'
	JÜTS'I+JÖDO	intr.	>	NJÜXJÖDO	'fencing'
	XÁDI	tr.	>	SADI	'praying'
	PĚ^HTI	tr.	>	'BE^HTI	'begging'

	PË	tr.	>	MFË	'stealing'
	P<u>Ǎ</u>	tr.	>	M'<u>A</u>	'selling'
	Ñ'<u>Á</u>DI	intr.	>	Ñ'<u>A</u>DI	'asking for information'
work in general:	P<u>E</u>FI	tr.	>	'B<u>E</u>FI	'working'

The exhaustiveness of Table 4 has an important consequence for the NCC: it reveals that the lexicon allows for certain action nouns to occur in the structure, but not others, and it suggests that lexical selection in the NCC of this language pertains to the realm of derivation. As the existing corpus material would not render sufficient information, the list was gathered from extensive elicitation sessions with two fluent speakers.

In this respect, variation in the number of items allowed for each individual speaker is expected, but the speakers consistently refused a set of nominalizations in the frame. For example, the verbs in (28) have the right semantic profile to be allowed in the construction (i.e., they depict customary actions) and the cognates of such verbs occur freely in the constructional counterpart in Eastern Otomi. Such verbs have deverbal nouns in the lexicon that in principle (if the nominalizing rules were more transparent semantically) could be used in the NCC with an action meaning. In reality, they cannot because such a meaning is unavailable.

(28)	SIT	v.		deverbal noun		potential action noun meaning
	POHO	intr.	>	FOHO	'excrement'	*'defecating'
	'ŐHÖ	intr.	>	T'ÖHÖ	'sleep'	*'sleeping'
	'WǏ	intr.	>	T'Ï	'dream'	*'dreaming'
	NTSĬM+X<u>U</u>DI	intr.	>	NZIMX<u>U</u>DI	'luncheon'	*'lunching'
	P<u>U</u>́	intr.	>	'B<u>U</u>	'cane'	*'grinding cane'
	WŐHI	intr.	>	HWÖHI	'cornfield'	*'plowing'
	HĚNI+ZÁ	intr.	>	TH<u>E</u>NZA	'wood'	*'cutting wood'
	ÑÖ	intr.	>	HÑÖ	'word, speech'	*'talking'
	NĚI	intr.	>	HNËI	'dance'	*'dancing'
	P<u>É</u>̌+'BÍDA	intr.	>	'B<u>E</u>'BIDA	'music, violin'	*'playing music'
	BĚNI	intr.	>	MFËNI	'thought'	*'thinking'
	ZÓNI	intr.	>	TS'ONI	'cry'	*'crying'
	NTH<u>U</u>'TS'I	intr.	>	NTH<u>U</u>'TS'I	'kiss'	*'kissing'
	H<u>Á</u>ᴴTE	intr.	>	NTH<u>A</u>ᴴTE	'fraud'	*'being fraudulent'

The examples in (28) show that actual nominalizations of verbs, which could in principle occur in the NCC, cannot do so because they lack an action noun meaning. I take this restriction as a piece of evidence that the lexical items occurring in the nominalization slot of the NCC in Table 4 are now independent lexical items from the verbal lexemes from which they were once produced as morphological nominalizations. But when the conversion rules ceased to be productive such nouns lost their semantic connection with their source. In other words, the nouns occurring in the NCC of Northern Otomi are synchronically deverbal action nouns, and no longer represent inflectional non-finite forms of their respective verbal lexemes. Further evidence that this analysis is correct is the fact that some other verbal lexemes whose actions could be equally construed as customary have no nominalizations available at all, as for example the verbs in (29), whereas their cognates can be used in Eastern Otomi.

(29) SIT   PENI   >   *MBENI[8]   'doing the laundry'
             KAT'A+HME   >   *JAT'AHME   'making tortillas'
             XÁHA   >   *NTXAHA   'bathing, swimming'
             'YO   >   *Ñ'O   'going for a walk'

4.3 The use of the NCC with respect to other structures
The NCC competes with its finite counterpart, the juxtaposed subordinated clause, for the expression of the semantics of customary activities. Examples (30) and (31) come from Eastern Otomi and encode a very similar situation, namely the domestic, daily grinding of the maize carried out by women for the preparation of food. Example (30) is an instance of the NCC; the form *juni* is the intransitive nominalization of the transitive verb KUNI 'grind (maize)'. Example (31) is an instance of a finite clause with the intransitive verb *kuni*.

(30) i=hu'=a   rá   'were a   ra   xitsü
HUE   3.INCPL.R=hug.B[3OBJ]=DEF.SG   SG.3POSS   baby   DEF.SG SG   woman
      'bu   xo=jwahte   [na   juni]
      when 3.PRF.R=finish.doing.an.activity   INF   grinding
      'The woman hugged her baby when she finished grinding.' (E&V 2007:161)

(31) 'bu   mí=gwa='a
HUE   when   3.IMPF=SS/finish[3OBJ]=3SG
      [bi=n   kun]='a   rá   mbe,
      3.CPL=INFL   grind.B=DEF.SG   SG.3POSS   mother
      bi=zi='a   rá   t'uhni
      3.CPL=SS/take.out[3OBJ]=DEF.SG   3POSS.SG   child
      xi='‹y›ër=bu   ja   ra   hwada
      3.PPRF=‹SS›place.AS=there   LOC.P SG   cradle
      'When her mother finished grinding, she lifted her baby whom she had placed in the cradle.' (E&V 2007:384)

In this conflict, the NCC, being vibrant in Eastern Otomi, wins over the juxtaposed clause and becomes the default choice to express such meanings. This is possible because the number of matrix verbs allowed in the construction is not restrained, and there are no lexical gaps for the complement verb in its nominalized form. In contrast, Northern Otomi prefers the juxtaposed clause. The NCC is used with a few matrix verbs (only three in the variety of San Ildefonso Tultepec; there may be more or fewer in other varieties of the language). This reduces the space of functional overlap between the two structures, making the juxtaposed clause serve as the default option in comparison.

However, under the same circumstances in a canonical situation the NCC could in principle be used just as much as the juxtaposed clause – that is, with the same matrix verbs and when there is an existing action noun for the complement in question. However, in reality this is not the case. In 25 hours of an annotated corpus, the construction was not only used quite rarely, but when it was used, only the four following tokens were found repeatedly: *'befi* 'working' as well as 'work', *su* 'making firewood', *ñhüni* 'having a meal' as well as 'meal', and *'bot'i* 'sowing'. The rest of the examples in Table 4 had to be obtained through elicitation.

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[8] Variation is expected across the different dialectal areas of Northern Otomi. Mezquital Otomi has the action noun *'beni* 'doing the laundry' as illustrated in (1) above, while in San Ildefonso Tultepec Otomi such a noun does not exist, apparently.

4.3 The emergence of an intransitive infinitive marker in Eastern Otomi

In Northern Otomi, the deverbal noun always occurs with the singular determiner (the enclitic *=r* in San Ildefonso Tultepec, *rä* in Mezquital, etc.). In Eastern Otomi, there are also examples of the NCC in which the nominal complement also co-occurs with the number determiner *ra*, as in (10) and (27a) above. Such examples are instances of action nouns, as in Northern Otomi.

However, the default marker preceding the nominalization in the NCC of Eastern Otomi is *na*, as shown in (32). Following Voigtlander and Echegoyen (1979 [1985], 2007), I analyze this marker as an infinitive marker, and more concretely as an "intransitive infinitive."

(32) a. 'b<u>u</u>   má=mba   b<u>u</u>   däthe [**na**   thi]...
HUE   when   1.IMPF.BELOW=SS/go   P.LOC   river   INF.INTR bathing
'When I used to go down to the river to bathe...' (E&V 2007:122)

   b. bi=z<u>a</u>-pi   [**na**   z<u>e</u>te]
      3.PST=SS/try-3DAT   INF.INTR working.for.others
      'He tried working for others.' (V&E 1979 [1985]:232)

The infinitival construction is interpreted by clausal syntax as an NP. This can be seen, for example, in both the word order and in how the verb reacts to it morphophonologically. As an illustration, consider example (33) with VOS order, where the structure *na 'be'bida* 'playing music' occurs in the position of the object.[9] Notice as well that the matrix verb occurs in bound shape.

(33) nu='b<u>u</u>   bi=mb<u>u</u>h=[**na**   'be'bida]_{OBJ}[='<u>u</u>   zí   mina]_{SUB}...
HUE   INTRO=when   3.PST=start.B[3OBJ]=INF.INTR   music.playing=DEF.PL   DIM   squirrel
      'When the little squirrels started playing music...' (V&E 1979 [1985]:26)

In the light of these data, analyzing *na* as an intransitive infinitive marker is comparable to saying that it has an inflectional function. In other words, I take it to encode the productively nominalized form of the complement verb as a non-finite form. For example, when the verb has more than one morphological nominalization, the form co-occurring with *na* refers unequivocally to the action of the verb; that is, it realizes the verbal lexeme. This is shown in (34). Other nominal forms of the verb with other meanings naturally co-occur with the singular determiner, but never with *na*. In other words, the *na* marker in Eastern Otomi is an infinitival marker similar to English *to* in forms such as *to grind*, *to sleep*. The Otomi non-finite structure '*na* + NOM' would be roughly equivalent to made-up forms in English that would look like **to grinding* or **to sleeping* for the syntactic contexts where just *to grind* or *to sleep* would typically be used.

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[9] I want to thank an anonymous referee for making me aware that this does not account for the position of the infinitival phrase in (32a). For this structure, the infinitival phrase appears to function as an adjunct purpose clause, and should thus perhaps be considered as an instantiation of typical extensions that infinitives have in better-known languages.

(34)

			INF.INTR			deverbal	
TĂI	'buy'	→	na th<u>a</u>i	'buying'	>	ra THĂI	'purchase'
P<u>U</u>	'grind cane'	→	na 'b<u>u</u>	'grinding cane'	>	ra 'B<u>U</u>	'sugar mill'
					>	ra M'B<u>U</u>	'ground sugar can
'ÁHÄ	'sleep'	→	na t'ähä	'sleeping'	>	ra T'ÁHÄ	'sleep'
PË	'steal'	→	na mfë	'stealing'	>	ra MFË	'theft'
PI	'relieve oneself'	→	na 'bi	'relieving oneself'	>	ra 'BĬ	'excrement'
					>	ra MPĬ	'restroom'
HI	'bathe'	→	na thi	'bathing'	>	ra NTHĬ	'bathroom'
					>		'bath utensils'

At times, the nominalization in question can be used independently as a proper action noun and thus receive the determiner singular too. When this happens, both forms can be used in the NCC, as in the instances in (35).

(35)

			INF.INTR			deverbal	
'ÁTS'I	'fish'	→	na nt'<u>a</u>ts'i	'fishing'	>	ra NT'<u>A</u>TS'I	'fishing'
					>		'net'
X<u>A</u>DI	'learn'	→	na nx<u>a</u>di	'learning'	>	ra NX<u>A</u>DI	'learning'
					>		'classroom'
X<u>Ú</u>	'gather firewood'	→	na s<u>u</u>	'gathering firewood'	>	ra S<u>U</u>	'gathering firewood'

There is another piece of evidence in favor of treating *na* as an infinitival marker. In Eastern Otomi, there is a transitive infinitival counterpart marker *dí*. Transitive infinitives are typically used when the complement clause functions as the subject of unaccusative matrix verbs, as for example in (36).

(36) a. x<u>ó</u>=n-hëi   [**dí**   t<u>a</u>i   ra   d<u>e</u>thä]
HUE   PRF.ST=ST-be.difficult[3OBJ]   INF.TR buy   SG   maize
     'It's difficult to buy maize.' (V&E 1979 [1985]:234)

   b. bi=z<u>a</u>   [**dí**   p<u>e</u>t'i   ra   hme]
     CPL=SS/be.possible[3OBJ] INF.TR make.tortillas   SG   tortilla
     'It was possible to make tortillas.' (V&E 1979 [1985]:170)

The forms *t<u>a</u>i* in (36a) and *p<u>e</u>t'i* (36b) are in turn nominalized forms of the transitive verbs TĂI 'buy' and P<u>E</u>T'I 'make tortillas' and are produced by the primary stem of such verbs. One piece of evidence that these are indeed non-finite forms comes from the fact that they cannot appear in bound shape, unlike other finite forms of verbs. This is illustrated in the contrast between (37a) and (37b), from Voigtlander and Echegoyen (1979 [1985]:233).

(37) a. bi=manda   [dí   **'w<u>e</u>ti**   rá   'b<u>o</u>'t'e]
HUE   3.CPL=command[3OBJ]   INF.TR   sew   SG.3POSS   skirt
     'She had her skirt sewn.'
     (Lit. 'She commanded to sew her skirt.')

   b. bi=manda   [da=**'w<u>e</u>t**=rá   'b<u>o</u>'t'e]
     3.CPL=command[3OBJ]   3.INCPL.IRR=sew[3OBJ]=SG.3POSS   skirt
     'She told them to sew her skirt.'
     (Lit. 'She commanded they'd sew her skirt.')

As the transitive infinitive is built from the primary stem of a verb, younger speakers of Eastern Otomi occasionally also use the primary stem of a verb for the intransitive infinitive. As a result, speakers often have a free choice between two forms for the same function, as for example in (38).

(38)   HUE
    p<u>e</u>fi   'work'   →   *na p<u>e</u>fi*   ~ *na 'b<u>e</u>fi*   'to work'
    zóni   'cry'   →   *na zoni*   ~ *na ts'oni*   'to cry'
    peni   'wash'   →   *na peni*   ~ *na 'beni*   'to wash'
    mbŏnni 'go for a walk' →   *na mbonni* ~ *na hmbonni* 'to go for a walk'

A number of questions come to mind: Where does the *na* marker of Eastern Otomi come from? Has Northern Otomi lost it? Witnessing the decay of the NCC in Northern Otomi, one could be easily tempted to think that the language has naturally lost the infinitival marker and now has only the equivalent construction with deverbal action nouns. However, the history of the forms tells a different story.

The intransitive infinitive marker *na* of Eastern Otomi is the reflex of the determiner *na* of Old Otomi, which was a singular determiner occurring with nominalizations. Pedro de Cárceres (1580 [1907]:46) characterizes the nouns co-occurring with *na* as 'abstracts', as *na* precedes derived nouns of the type of *nãnttãxi* (*na nt'axi*) 'whiteness' or *nãphati* (*na foti*) 'blackness', but in reality it also occurs with concrete nouns (possibly morphologically derived from unknown sources) like *naδete* (*na 'rete*) 'ladder', or *naδœttʒœ* (*na 'rots'e*) 'tailbone'. Old Otomi also had the singular determiner *no*, which co-occurred with verbal nominalizations to profile the action as a whole, such as *nothũhũ* (*no thühü*) or *nottogui* (*no t'ogi*) 'sowing' (Sp. 'sembrada') (Urbano 1605:382v). In contrast to *no*, *na* was used to profile the action of the verb as an activity, as in *nathũhũ* (*na thühü*) or *nat'ogui* (*na t'ogi*), which are translated into Spanish as 'sembradura'. For basic nouns, Old Otomi used the determiners *o* and *an*. The determiner *o* was a deprecative and was lost in all modern languages. The default determiner was *an*, which gave rise to the singular determiners *ra* and *=r* in Eastern and Northern Otomi.[10]

The alveolar nasal in both determiners *na* and *an*, appearing in unstressed syllables, was rhoticized in the modern languages from the eighteenth century onward, possibly after having been weakened to an apical alveolar [ḍ] at a previous stage. In the Southern languages, the modern reflexes of Old Otomi *na* and *an* are *ra* and *ar*, respectively. In the Northern language, however, both reflexes merged into one with different outcomes depending on the variety (San Ildefonso Tultepec Otomi has *ar* or simply *=r*, whereas Mezquital Otomi has *rä*).

In Tilapa Otomi, the most conservative language of the family, the two singular determiners *ra* and *ar*, as reflexes of historical *na* and *an*, have a distribution very similar to Old Otomi. The determiner *ra* lexically co-occurs with most nouns derived from the default conjugation class (e.g. *ra tshógi* 'key' from XÓGI (intr.) 'open'). But with nouns of the third conjugation, Tilapa has *dí*, which is a cognate of the transitive infinitive marker in Eastern Otomi (e.g. *dí x<u>a</u>di* 'prayer' from X<u>A</u>DI (intr.) 'pray'). Otherwise, the default singular determiner is *ar*, which is now used both with basic nouns and with derived ones (e.g. *ar h<u>ǎ</u>* 'soil', but also *ar 'ĭ* 'food, chili' from 'ĭ (intr.) 'be spicy'). As expected, in the NCC of Tilapa Otomi both *ra* and *dí* are used with the verbal nominalization, but not *ar*. This is shown in (39).

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[10] Ixtenco Otomi also has the marker *ni* with nominalizations. A cognate of such a marker is also found in Tilapa Otomi as *r<u>u</u>* which nowadays occurs in complementary distribution with *ar*, mainly with loanwords and as landing site for the suprasegmental marker of the third person possessor.

(39) t_rá=ndé   [ra   hněi]   /   [dí   ʰpe̠fi]
TIL   1_INCPL.R=want[3OBJ]   NOM.SG dancing   /   NOM.SG   working
      'I want to dance/to work.'

What happened then in Eastern Otomi? In this language, the old *na*, the determiner that occurred with nominalizations in Old Otomi both inside and outside the NCC, escaped the rhotization of [n > ḍ > ɾ] inside the NCC. This is because the old determiner *na* had been reanalyzed by speakers as carrying a specific grammatical function in the construction, which was regarded as distinct from its other determiner uses outside the construction. The old determiner thus became an infinitive marker. In all other cases, just like in Mezquital Otomi, Eastern Otomi merged the old determiner *na* (outside the NCC) and *an* in favor of an outcome such as *ra*, possibly through intermediate stages with alternants *ra* and *ar,* as in Tilapa Otomi. This is why we find *ra* for all other nouns outside the construction, whether basic or derived.

The old function of *na* as a determiner co-occurring with nominalizations outside the NCC has left a few traces in Eastern Otomi in a few nouns derived from stative verbs such as *na n'ǐ* 'spiciness' along with *ra n'ǐ* 'chili' from 'Ǐ (intr.) 'be spicy hot', *na nhǒ* 'goodness' along with *ra nhǒ* '(the) good' from Hǒ (intr.) 'be good', or *nxïdi* 'width' from XÏDI 'be wide'. Besides these nouns, it also occurs in a handful of idiomatic expressions, such as the ones in (40).

(40) a. i=tü   **na**   mpa/ntse̠
HUE   3.INCPL.R=die SG.NOM heat/cold
          'He's hot/cold.' (V&E 1979 [1985]:236)
          (Lit. 'He dies (of) heat/cold.')

      b. i='o̠h=**na**   hyä
          3.INCPL.R=hear.B[3OBJ]=SG.NOM   word
          'He understands.' (V&E 1979 [1985]:236)
          (Lit. 'He hears word.')

      c. di=hax=**na**   ts'oni
          [3.INCPL.R]INFL=dawn.B=SG.NOM cry
          'He spends the night crying.' (V&E 1979 [1985]:235)
          (Lit. 'He dawns cry.')

The nouns *mpa* 'heat' and *ntse̠* 'cold' in (40a) occur only in this expression; otherwise, they are used as *pa* and *tse̠* and take the determiner *ra*. The deverbal nouns *hyä* 'word' in (40b) and *ts'oni* 'cry' in (40c) come from the verbs YÄ (intr.) 'speak' and ZONI (intr.) 'cry', respectively. Outside these expressions, they must take *ra*.

Finally, there are other examples of the type in (41), which should not be taken to be a trace of the old function of *na* as a determiner co-occurring with nominalizations, like (40). Example (41) is an instance of an infinitival form of a verb being used within the syntax of an NP as subject. However, examples like (41) are problematic because a nominalized form of a verb, recategorized as a noun, should not in principle appear as a finite verb in bound shape when it is an NP. The fact that is does does is quite puzzling, and should ideally be addressed in future research.

(41) nu[=**'a**   **ná**   **ntih=ra**   **fani**],
HUE INTRO=DEF.SG INF.INTR   running.B=SG   mule
     ge='a   í=dä='a
     FOC=3SG   3.INCPL.R.ADV=SS/fall.AS=3SG

'The running of the mule is the cause of its falling.' (V&E 1979 [1985]:234)
(Lit. 'The running of the mule, it is that what she fell from.')

5 Conclusions

In this paper, I have studied the many ways in which a very similar grammatical construction involving a verbal nominalization can vary in two very closely related languages of Mexico, namely Eastern and Northern Otomi. The construction at issue is a special complementation construction requiring a nominalized complement that expresses a customary activity, such as 'dancing', 'cleaning', or 'harvesting'. The NCCs of these two languages illustrate possibilities in the grammatical space that exists between a highly nominal structure of the type 'I finished the dance' and another of the non-finite type 'I finished dancing'. A summary of the properties proposed for the two NCCs is given in Table 5.

Table 5. Comparison of the two NCCs

	Eastern Otomi	Northern Otomi
The nominalization refers to a customary action	Yes	Yes
The nominalization in the NCC is intransitive	Yes	Yes
The nominalization in the NCC is of the action noun type	Yes	Yes
Number of matrix verbs allowed in the NCC (in relation to the ones requiring a juxtaposed clause)	All (20/20)	Very few (3/22)
The nominalization slot in the NCC has lexical gaps	No	Yes
An infinitive marker is to be used in the NCC	Yes	No
The language has other non-finite markers	Yes	No
Frequency of usage in relation to the juxtaposed clause	Frequent	Very infrequent

In the paper, I have shown that the nominalization of Eastern Otomi is a typical case of syntactic nominalization in a non-finite environment. In other words, it is morphologically inflectional in that the nominalized form of a verb is one of the available forms in the paradigm of the verb, as required by the syntax of the NCC. The nominal form of a verb is also available to all speakers. The fact that the nominalization is of the inflectional type, and that the language has developed a unique intransitive infinitival marker to be used in the NCC, makes this complement construction functionally vibrant. However, the nominalization processes in this language have the selection restrictions typical of derivation, in that the only type of verbs required to have a nominalized form are the ones that conform to the semantic profile of the NCC.

In contrast to Eastern Otomi, the nominalization of Northern Otomi should be accounted for as an instance of word-formation. This means that the nominalized form of a verb is not required in its paradigm when the verb is to occur in the syntactic frame of the NCC. As derivational rules in Otomi languages are no longer productive, if the action noun of a given verb exists it can be used in the NCC, by virtue of the lexicon. But as speakers do not share the same lexicon, there is much variation in both the use and the acceptability of the nominalizations in the construction. In reality, a very few action nouns account for most of the tokens used.

As the nominalization in Northern Otomi is derivational in character, and as derivational rules are no longer productive, the functional load of the NCC is very low. The common items found in the construction are probably learned as idiomatic expressions. However, as there still exist a substantial number of lexemes that can occur in the construction, making it feasible for the construction to exist in the first place, the distribution shows some of the regularities expected of inflection. Heuristically, the NCC is a very useful

descriptive tool for the linguist to find all the infrequent action nouns in the lexicon that otherwise do not occur in natural discourse.

Abbreviations
ANTIP: antipassive
ADV: adverbial inflection
AS: adjusted stem
B: bound shape
CONT: continuous
CPL: completive
DAT: dative
DEF: definite
DIM: diminutive
DTR: ditransitive
E&V: Echegoyen and Voigtlander (see references)
F: free shape
FOC: focus
HUE: Huehuetla Otomi
IMPF: imperfect
INCPL: incompletive
IND: indicative
INDF: indefinite
INF: infinitive
INFL: inflectional marker
INTR: intransitive
INTRO: introducer
IRR: irrealis
LOC.ACT: locative actualizer
LOC.P: locative preposition
M: masculine
MEZ: Mezquital Otomi
NEG: negative
NOM: nominalization
OBJ: object
PRF: perfect
PL: plural
POSS: possessive
POSSD: possessed
POSSR: possessor
PPRF: plu-perfect
PURP: purposive
R: realis
SG: singular
SIT: San Ildefonso Tultepec Otomi
SS: secondary stem
ST: stative
TIL: Tilapa Otomi
TR: transitive
V&E: Voigtlander and Echegoyen (see references).

Acknowledgments

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