A typological comparison of Seri with nearby Southern Uto-Aztecan languages:
The use of posture verbs in locative descriptions

Carolyn O'MEARA & Lilián GUERRERO

Instituto de Investigaciones Filológicas, Universidad Nacional Autónoma de México
omeara.ck@gmail.com & lilianguerrero@yahoo.com

1. Introduction

It has been reported that the Seri people, or *Comcaac*, were in close contact with both the Yaqui and O'odham peoples during the last few centuries, although, there appears to have been considerably less contact in the last few decades (Marlett ms.). While Seri is categorized as a language isolate, Yaqui and O'odham belong to the Uto-Aztecan family. As part of an attempt to better understand the level of contact between the Seri, a semi-nomadic hunter-gatherer group, and the neighboring indigenous communities that are sedentary agriculturalists, Beals (1961) compared the Seri kinship system with the kinship systems of four Uto-Aztecan language communities –Tarahumara, Huichol, Cora and the Cahita languages.[1] His work shows many similarities between these systems, including, for instance, the fact that all of the groups consolidate cousins with siblings (Beals 1961: 133) and that the Seri kinship system shows many similar distinctions as the Cahita one, for example in the distinctions of the siblings of the father and mother. Within the Uto-Aztecan systems studied,

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[1] The term Cahita was first used in Buelna's (1890) manuscript to refer to Yaqui, Mayo and Tehueco, an extinct language; Opata (also extinct) is occasionally included in this group. There has been some discussion as to whether Yaqui and Mayo are one or two languages since their speakers maintain 90% intelligibility with each other (see the discussion in López & Moctezuma 1994: 221).

there are many lexical similarities apparent. Not surprisingly, once the Seri data are added into the mix the lexical similarities disappear, but structural or classificatory similarities are observable when comparing the more basic properties of the kinship systems. These similarities suggest a possible deeper connection between Seri and some of the southern Uto-Aztecan languages (following Marlett ms.).

Of particular interest and in contrast with many Uto-Aztecan languages, Seri is a language with a relatively low number of loanwords, but many of the loanwords that do exist are from neighboring Uto-Aztecan languages or from Spanish via these Uto-Aztecan languages. The comparisons of kinship systems, loanwords, as well as creation myths and other culturally significant characters in tales (Marlett ms.) seem to reiterate the likelihood that Seri speakers have been in contact over a long period of time with speakers of Uto-Aztecan languages. To go one step further, in this paper we present a comparison of the use of posture verbs in locative descriptions in Seri in comparison with Yaqui and other Uto-Aztecan languages spoken nearby, contributing the first step to a comparison of the semantic categorization between Seri and Southern Uto-Aztecan languages.

The types of expressions that are of interest in this paper are locative descriptions that are potential answers to *Where*-questions. As discussed in Levinson (2003: 65), there are different possible ways to answer this type of question, in other words, there are different possible linguistic strategies that one can use to locate an entity. Languages like English and Spanish make use of a simple copula, e.g. 'the cup is on the table', while many other languages have a set of alternative verbs or verbal affixes that describe the position or collocation of that entity, such as verbs like 'sit', 'stand', 'lie', 'hang', among others (Newman 2002; Ameka & Levinson 2007). The type of classification that occurs when speakers locate non-human entities in constructions involving posture verbs results interesting, especially with respect to the relevant information that determines the use of a particular posture verb with a particular referent.

2. Locative descriptions from a cross-linguistic perspective

By locative descriptions, we mean utterances which describe a static array consisting of a figure object as it is located with respect to a ground object (following Talmy 1983). Locative constructions are basically intransitive, occurring with locative complements. The use of posture verbs in constructions that locate human figure objects correspond with the actual posture of the person being located (e.g. *the woman is sitting, standing or lying down on the porch)*, though some languages distinguish between the action of entering into a posture

and the state resulting from that action, i.e. inchoative vs. state meanings. With animate entities such as chickens, cats, dogs, cows, sheep, who may change their posture and location, these verbs can describe the typical or most natural position associated with it, e.g. *the chicken is sitting, the cow is standing*. When describing the location of insects, reptiles, plants, and inanimate entities, languages vary.

According to Ameka & Levinson's typology of locative predicates (2007: 852), certain languages do not make use of any verbal form in locative constructions (type 0, e.g. Saliba, Turkish), others make use of some sort of locative verb or a copulative-like verb (type 1, e.g. English, German, Tamil, Japanese), and many others make use of a small set of positional and posture verbs (type 3, e.g. Guugu Yimithirr, Rossel, Arrernte); indeed, some other languages have a large and unlimited inventory of posture verbs to describe non-human entities, which have been called dispositional predicates (type 2, e.g. Lipke, Tseltal, Yucatec Maya). Seri and the Sonoran languages can best be categorized as type 3 languages since they make use of a limited set of posture verbs to describe the posture states of animate and inanimate entities.

Following Newman's (2002) typological study of posture semantics, verbs like 'sit, stand and lie' all describe the locative position or collocation of an entity as it can be located at rest. Sitting is generally associated with comfort and thus, is a posture we can maintain during a long period of time. Standing is less comfortable and humans are not inclined to stay in that position for an extended period of time, though it is a position with advantages for seeing at a distance, exerting force against others, and so on; it is also the natural position for horses, cows and other four-legged mammals. Lying is the position associated, par excellence, with sleep, sickness, death, etc. When the location and orientation of non-human entities is described, these posture verbs can be used as locational or existential verbs or particles, in which case they function like classifiers, i.e. non-postural verb uses. Another major direction of extension of posture verbs is their evolution into verbal auxiliaries with a temporal or aspectual meaning, most commonly a progressive or habitual aspectual meaning. Additionally, the postural distinction between sitting, standing and lying may also manifest itself in demonstratives or articles appearing within the noun phrase, e.g. Euchee's three-way 'gender' system (Newman 2002: 11) or the definite articles in Seri which are described in more detail below.

Semantically, posture verbs describe states or changes of state; syntactically, these verbs can be associated with different morpho-syntactic features in a language. For instance, in Manam (Austronesian), 'stand' is distinguished from 'sit', 'stand' and 'lie' with respect to aspectual coding, i.e. it combines with

'active' like temporal-aspectual markers. With respect to locative extensions, it was found that languages differ in the degree to which posture verbs can be extended to non-human referents, as well as certain constraints on object selection according to the typical associations between a given posture verb and some physical or geometrical properties of that object. For instance, in Manam, 'sit' is used with subjects whose referents are taller animals and boats at sea, while 'lie' is used elsewhere (Newman 2002: 10).

As is typical of classificatory systems, some members of a semantic category are clearly related to the central meaning of the morpheme which is used to mark membership in that category, while other members are not. At the same time, languages may differ with respect to which entities fall into one semantic category or another. Thus, the extensions of 'stand' and 'lie' verbs in locational uses are largely motivated by figures with a verticality and horizontality prominent feature, respectively, but 'sit' can behave differently (Newman 2002: 7-8). On the one hand, 'sit' may be neutral with respect to axis orientation and as such, co-occurrence selection involves other types of restrictions. For instance, in English 'sit' can be used with more ease with animals that can assume a position where some parts of the body are lowered, touching, or are close to the ground; this applies to the resting position of tadpoles with legs already formed, dogs and cats in a sitting position; it can also combine with some concrete objects (e.g. *the computer, printer, telephone, photo frame, lamp sits on a desk*) except when the entity can be conceived of as having 'legs' (e.g. *a table is standing /*sitting in the corner*) or when the horizontal or vertical extension of that entity is prominent (e.g. *the mattress is lying /*sitting on the floor*). On the other hand, 'sit' can be better described in terms of 'containment' and 'contact'; while in some languages 'sit' describes the location of inanimate entities such as pots, cups, bottles, buildings and balls, in others only 'stand' and 'lie' can be used with these figure nominals.

In the next sections, we place particular attention on the locational expressions or constructions where there is an extension of the central meanings of the posture predicates to non-human referents. We identify the types of geometric properties that are relevant to the selection of the posture verbs, as well as force dynamic properties that seem to play a role in verb selection (following Newman 2002).

3. Background information on Seri and nearby Uto-Aztecan languages

The Seri people or *Comcaac*, as they refer to themselves, reside in two small coastal villages along the Gulf of California in Sonora, Mexico. As of 2007, there were approximately 900 Seri people[2] living in the two small coastal villages (Lewis 2009), *Socaaix* (Punta Chueca) and *Haxöl Iihom* (El Desemboque del Río San Ignacio) that serve as the primary places of residence for the Seri. The majority of the residents of these two villages speak the Seri language, exceptions being non-Seri residents.

The Seri language, or *cmiique iitom* (lit. 'what a Seri person speaks'), is considered to be a language isolate. It has been suggested that Seri is part of the putative Hokan stock, which includes the Pomo languages of California, the Yuman languages of Baja California and the southwestern United States and Oaxaca Chontal (Tequistlatec), among other languages. However, Seri's status as part of the Hokan stock has proven difficult to confirm or disconfirm definitively (Marlett 2007). As a result of the lack of evidence, some linguists have decided to not consider the Hokan hypothesis at all (Campbell 1997; Marlett 2008).

The Uto-Aztecan family can be divided into a Northern and a Southern branch. The Northern branch consists of four subgroups (spoken in the United States), while the Southern branch (mainly spoken in Mexico and Central America) consists of up to six subgroups. Although the internal organization of the Southern branch is still under discussion (Miller 1984; Cortina-Borja &Valiñas 1989; Campbell 1997), five major groups are generally recognized: i) Tepiman (Southern and Northern Tepehuan, Mountain and Lower Pima, O'odham); ii) Taracahitan (Tarahumara varieties, Guarijio, Yaqui, Mayo), iii) Tubar (extinct), iv) Corachol (Cora, Huichol), and v) Nahuatl varieties (including Classic Nahuatl and Pipil). The Taracahita and Tepiman languages are commonly termed the Sonoran languages. The comparative analysis presented here focuses mainly on Yaqui data. This language was traditionally spoken by the Yoeme people living along the Rio Yaqui in Sonora, Mexico. After the Mexican Revolution in 1920, a large group of speakers settled in Arizona. Today, there are approximately 15,000 speakers in Sonora and an estimated 6,000 in Arizona.

The location of Seri with respect to the closer Sonoran languages, that is, Yaqui, Mayo, and O'odham can be seen in Map 1 below. While the Seri territory is located on the coast of the Gulf of California, Yaqui and Mayo villages are located

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[2] This figure is higher than the 2000 census. It more closely reflects the opinions of Seri government officials (Marlett ms. 39, footnote 33).

in the valley of Sonora and Sinaloa; O'odham communities and the other Tepiman communities are located in the mountainous zone of Sonora, Arizona and Chihuahua.
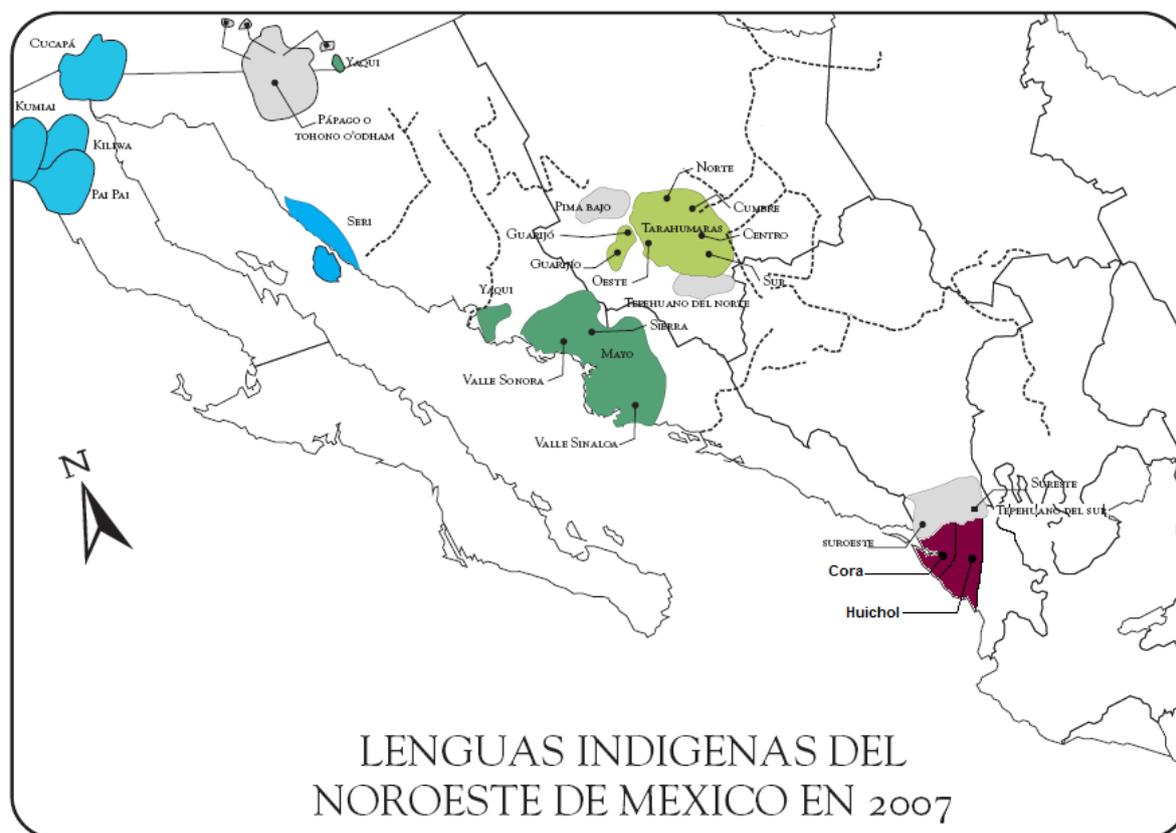
Map 1. Indigenous languages in Northwestern Mexico (Moctezuma, 2012)

4. Methodology

Some of the Seri data presented in this paper are drawn from data collected with the Topological Relations Picture Series, also known as BowPed (Bowerman & Pederson 1993; see also Levinson & Wilkins 2006: 570-575) and the Picture Series for Positional Verbs (Ameka *et al.* 1999), as well as from fieldwork conducted with Seri speakers in El Desemboque. If an example was elicited with one of the stimuli, the name of the stimulus and the number of the picture in the picture series is indicated after the free translation. As for Yaqui, the data also include observations from the BowPed picture series, descriptions obtained through a series of photos designed to collect data of inanimate entities holding different positions (Gutierrez 2011), data from the Yaqui-Spanish dictionary (Estrada *et al.* 2004) and from fieldwork conducted with Yaqui speakers in Estación Vicam.

For a preliminary comparative analysis, we also explore data from other Sonoran languages as they appear in the *Archivo de Lenguas Indígenas de México*, which include the volume for Seri (Moser 1996), for Yaqui (Estrada Fernández

2009), for Mayo (Freeze 1989), for Lower Pima (Estrada Fernández 1998), and for Guarijio (Miller 1993); we also include some observations about Southern Uto-Aztecan cognates involving posture verbs (Dakin, ms; Stubbs 2008).

5. Posture verbs in locative descriptions

5.1. Seri

Seri is, for the most part, a head-final language (Marlett 2005: 54). This can be illustrated by the fact that main clauses follow dependent clauses; verbs follow their complements; adpositions are postpositions, i.e., follow their complements; possessed noun phrases follow possessor noun phrases; etc. Seri exhibits many properties of a head-marking language (Marlett 2005: 62) and has no case marking. Finite verbs are marked for person and number of the subject and direct object and for the person of the oblique when applicable.

The construction that is primarily used in locative descriptions in Seri follows the language's basic word order of SV involving a noun phrase that refers to the figure object, a postpositional phrase which contains a noun phrase that refers to the ground object and a verbal head, in this order. Posture verb roots play an important role in Seri locative constructions. The posture verb roots that act as the base for some of the definite articles in Seri (Marlett & Moser 1994; Moser 1978) occur as finite verb forms in locative descriptions.[3] The following examples show locative descriptions involving the following posture verbs: *-oom* 'be lying' in example (1), *-oop/-aap* 'be standing' in example (2), and *-iij* 'be sitting' in example (3).[4] The root of the locative verb that occurs in each of the examples above is the root that the definite article (co-occurring with the figure nominal) is derived from (for example, *quij* is the definite article and *-iij* is the verbal root).

(1)　*I-c-aaspoj*　　　　　*com*　　　*hant*　*i-ti*　　*i-c-aaspoj*
　　　3POSS-UNSPEC.SBJ-write　DEF.ART.SG.lie　land　3POSS-on　3POSS-UNSPEC.SBJ-write

　　　com　　　　*i-ti*　　　***moom.***
　　　DEF.ART.SG.lie　3POSS-on　RP.lie
　　　'The pencil (lit. with which one writes) is on the desk (lit. land on which one writes).' (GHF BowPed 59)

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[3] These definite articles are likely derived from the subject nominalized forms of the posture roots. In other words, the definite article *quij* is likely derived from the nominalized form *quiij* 'that is sitting', *com* from *coom* 'that is lying' and *cap* from *caap* 'that is standing'. There are also definite articles that are derived from motion verbs. For more information, see Marlett & Moser (1994) and O'Meara (2010).

[4] Abbreviations used: 1, 2, 3 person; ABS: absolutive, ACC: accusative, ART: article, DECL: declarative, DEF: definite, DEM: demonstrative, DETRANS: detransitive, DET: determiner, DP: distant past, EMPH: emphatic, GEN: genitive, INTERR: interrogative, LOC: locative, NCOUNT: non-countable, NMLZ: nominalization, NOM: nominative, OBL: oblique, PASS: passive, PFV: perfective, PL: plural, POSS: possessive, RP: recent past, SBJ: subject, SG: singular, UNSPEC: unspecified.

(2)   *Cmaacoj   cop*   *ha-aco*   *cap*
        man   DEF.ART.SG.stand   ABS.POSS-house   DEF.ART.SG.stand

        i-sxap   *hac*   *i-ti*   ***yoop***.
        3POSS-top.of.head   DEF.ART.SG.LOC   3POSS-on   DP.stand
        'The man is standing on the roof of the house.' (GHF BowPed 34)

(3)   *Siip   quij*   *hehe   i-ti*   *i-qu-iicolim*   *quij*
        boy   DEF.ART.SG.sit   wood   3POSS-on   3POSS-UNSPEC.SBJ-sit.PL   DEF.ART.SG.sit

        i-pac   *hac*   *ano*   ***miij***.
        3POSS-back   DEF.ART.SG.LOC   3POSS.on   RP.sit
        'The boy is sitting behind the chair (lit wood on which one sits down).'
        (GHF BowPed 64)

The following examples illustrate locative descriptions which contain the
general locative predicates *-iih* 'be (located)' in (4), (5) and (6) and *-aahca* 'be
(located)' in (7) and (8). The difference in their use is, as of yet, not clear.
Preliminarily, forms with the root *-aahca* seem to be less frequent than with *-iih*.
Note that their distribution is not linked to the type of verb form that is produced
or the declarative marker that follows any nominalized forms.

(4)   *Zixcam   i-pxasi*   *iictim*   *quih*   *eenim*
        fish   3POSS-meat   OBL.NMLZ-be.cut   DEF.ART.SG.UNSPEC   knife

        com   *i-ti*   ***yiih***.
        DEF.ART.SG.lie   3POSS-on   DP.be.LOC
        'There is a piece of fish meat on the knife.' (GHF BowPed 12)

(5)   *Ha-p-aspoj*   *ha-noocaj*   *tiix*   *hant   i-ti*
        SBJ.NMLZ-PASS-write   SBJ.NMLZ.PASS-hold   DEM   land   3POSS-on

        i-qu-eaacalca   *com*   *i-yat*
        3POSS-UNSPEC.SBj-store.possessions   DEF.ART.SG.lie   3POSS-on.top

        hac   *i-ti*   ***yiih***.
        DEF.ART.SG.LOC   3POSS-on   DP.be.LOC
        'The book (lit. what is written that is held) is on top of the bookshelf (lit. land
        on which one stores possessions).' (AIM BowPed 8)

(6)   *Hateiictim   quih*   *contiir imatax   cop*   *i-ti*
        piece.of.cloth DEF.ART.SG.UNSPEC   candle   DEF.ART.SG.stand   3POSS-on

        qu-iih   *iha*.
        SBJ.NMLZ-be.LOC   DECL
        'The piece of cloth is on the candle.' (GHF BowPed 4)

(7)   *Ziic   i-ime*   *hehe   cap*   *i-ti*   ***c-aahca***   *ha*.
        bird   3POSS-nest   wood   DEF.ART.SG.stand   3POSS-on   SBJ.NMLZ-be.LOC   DECL
        'The nest is in the tree.' (RHF BowPed 67)

(8)   *I-iqui*   *cöiyanaaaij*   *ihmaa   pac   i-ti*
        3POSS-toward   OBL.NMLZ.curve.around   other   some   3POSS-on

> **c-aahca**   ha...
> SBJ.NMLZ-be.LOC   DECL
> 'It is on the other part that is like a curve...' (AIM NovelObjects_PartElic 1)

In contrast with examples (1)-(5), examples (6)-(8) illustrate locative constructions that have nominalized forms of locative predicates followed by a declarative marker, as opposed to recent past or distant past prefix markers. The use of a nominalization plus a declarative marker is not specific to the verb *-aahca* 'be (located)' (nor to locative descriptions), as is illustrated below with *-iij* 'be sitting' in (9), *-ocaai* 'be hanging' in (10), and *-oom* 'be lying' in (11). Nominalizations in Seri are quite prevalent. In order for a nominalized verb form to function as the main predicate of an utterance, it must be followed by a declarative marker, *iha* in (9) and *ha* in (7). The form of the declarative marker that appears at the end of the utterance is determined phonologically.

(9)   *Hehe   i-s   quij   ha-mcanoiin quij   ano*
       wood   3POSS-fruit   DEF.ART.SG.sit   ABS.POSS-pot   DEF.ART.SG.sit   3POSS.in

       qu-iij   iha.
       SBJ.NMLZ-sit   DECL
       'The fruit is in the pot.' (RHF BowPed 2)

(10)   *Ziix   c-oqueht   an   i-c-oopxoj*
       thing   SBJ.NMLZ-bounce   3POSS.in   3POSS-UNSPEC.SBJ-DETRANS.inflate

       *quij   hehe   com   i-ti   **c-ocaai**   ha.*
       DEF.ART.SG.sit   wood   DEF.ART.SG.lie   3POSS-on   SBJ.NMLZ-hang   DECL
       'The balloon (lit. thing that bounces) is hanging from the tree.' (RHF BowPed 20)

(11)   *Canoaa com   xepe   com   i-ti   **c-oom**   iha.*
       boat   DEF.ART.SG.lie   seawater   DEF.ART.SG.lie   3POSS-on   SBJ.NMLZ-lie   DECL
       'The boat is in the ocean.' (RHF BowPed 11)

When it comes to animate referents, locative predicates headed by posture verbs describe the actual posture of the referent of the figure nominal, as this type of referent has the possibility of volitionally putting itself in a particular position. This is shown in example (12), where the figure nominal refers to a boy who is in a seated position behind a chair (this is a description of one of the BowPed illustrations). The posture verb *-iij* 'be sitting' is used to describe the boy's posture.

(12)   *Qu-isil   ctam   quij   hehe   i-ti   i-qu-iicolim*
       SBJ.NMLZ-small   man   DEF.ART.SG.sit   wood   3POSS-on   3POSS-UNSPEC.SBJ-sit.PL

       *quij   i-pac   hac   ano   qu-**iij**   iha.*
       DEF.ART.SG.sit   3POSS-back   DEF.ART.SG.LOC   3POSS.in   SBJ.NMLZ-sit   DECL
       'The boy (lit. little man) is sitting behind the chair (lit. wood on which one sits).' (RHF BowPed 64)

In example (13), the figure nominal describes a dog that is in a seated position next to a dog house. Since the dog is sitting, the posture verb *-iij* 'be sitting' is used here, just as this verb root is used to describe the posture of the boy in (12).

(13)   *Ha-xz   tiix   y-aaco   cap   i-hiin   hac*
        ABS.POSS-dog DEM   3POSS-house DEF.ART.SG.stand   3POSS-near   DEF.ART.SG.LOC

        i-ti   yiij.
        3POSS-on   DP.sit
        'The dog, it is sitting near its house.' (AIM BowPed 40)

In order to describe the location of a man who is standing on the roof of a house, the posture verb *-oop* 'be standing' is used, shown in example (14).

(14)   *Cmaacoj cop   h-aaco   i-yat   hac*
        man   DEF.ART.SG.stand ABS.POSS-house 3POSS-point DEF.ART.SG.LOC

        i-ti   yoop.
        3POSS-on   DP.stand
        'The man is standing on top of a house.' (AIM BowPed 34)

Finally, example (15) shows how *-oom* 'be lying' is used to describe the posture of a dog as it is lying inside of its dog house.

(15)   *Ha-xz   quih   y-aaco   cop*
        ABS.POSS-dog DEF.ART.SG.UNSPEC 3POSS-house DEF.ART.SG.stand

        ano   yoom.
        3POSS.in   DP.lie
        'The dog is lying in its house.' (AIM BowPed 71)

The locative verb roots that are unspecified for posture, *-aahca* and *-iih*, both 'be located,' are used in locative descriptions involving figures where the actual posture or disposition of the figure referent is unknown. For instance, *-iih* is commonly used when asking where someone or something is. Examples of such expressions are provided in (16), where the referent of the figure nominal is animate, and in (17), where the referent is inanimate.

(16)   *¿Rebeca quih   háqui   t-iih?*
        Rebeca   DEF.ART.SG.UNSPEC   where   INTERR-be.LOC
        'Where is Rebeca?' (GHF Landscape 7/11/06 1)

(17)   *¿Ziix   an   icoosi   quij   háqui t-iih?*
        thing 3POSS.in OBL.NMLZ.DETRANS.drink DEF.ART.SG.sit where INTERR-be.LOC
        'Where is the cup (lit. thing with which one drinks)?' (AIM BowPed 2)

-Iih 'be located' has a separate polysemous sense 'live' or 'reside'. This is shown in the question in (18), which asks the addressee where they live.

(18)   *¿Me   zó   hant   ano   qu-iih-ya?*
        2   what land   3POSS.in   SBJ.NMLZ-be.LOC-INTERR
        'Where do you live?' (Moser & Marlett 2005: 497)

Finally, among inanimate figure objects, *-iih* selects for objects that are flexible, again, without any specification for a particular posture.

The second general locative verb, *-aahca* 'be located', also appears in locative descriptions. Like *-iih*, this locative verb root does not express a particular posture or disposition of the figure object. An example of an instance of this verb root being used to describe one of the BowPed line drawings is provided in (19) (example (6) repeated here).

(19) *Ziic i-ime   hehe cap   i-ti   c-aahca   iha.*
       bird 3POSS-nest wood DEF.ART.SG.stand 3POSS-on SBJ.NMLZ-be.LOC DECL
       'The bird's nest is in the tree.' (RHF BowPed 67)

It is at this time unclear what the precise semantic differences are between *-aahca* and *-iih*. *-Iih* seems to occur in locative descriptions of objects that are flexible as well as groups of small entities, such as beans or other less identifiable objects that are generally presented in mass. *-Aahca*, on the other hand, does not seem to possess any such classificatory properties, at least not as it appears in locative descriptions.

Other "dispositional" verb roots (following Bohnemeyer & Brown 2007), which do not lexicalize postures such as 'sit', 'stand' and 'lie', likewise play an important role in Seri locative descriptions. Examples of such verb roots include *-ocaai* 'be hanging', *-iti* 'be connected, *-oocp* 'stuck to'. Note that there are no definite articles that are derived from these roots. In this work, these verb roots are not discussed in further detail, but see O'Meara (2010) for examples and further discussion on the use of these verb roots in locative descriptions.

The types of objects that occur with the posture predicate *-iij* 'be sitting' in Seri can be categorized as not being tall and being somewhat stout in their shape, in other words, they can generally be further extended on the horizontal axis than on the vertical one. However, these entities are not always wider than they are tall, but for the most part require a solid base that makes contact with the ground, such as a water drum, which is described as sitting. It also seems that this predicate is used with entities that have to do with being in a seated position, such as chairs and bicycles. Nominals/nominal expressions that occur with *-iij* 'be sitting' include *ziix an icoosi* 'cup', *hehe is* 'fruit' (used to describe an apple), *ziix coqueht* 'ball', *icaaitom an ipe* 'telephone' (on wall), *ziix an ihahaapl* 'refrigerator', *ziix caay iti cöiquiij* 'bicycle', *trooqui* 'car', *hant imaasij* 'tire', *hehe iti iquiicolim* 'chair', *hehe an icaaij* 'water drum', *xiica cocoptoj* 'stinging insects', *tojquitajc* 'owl' (in tree), *ziix ina cooxp* 'rabbit', *haxz* 'dog' and *ziix canaao* 'cat'.

The types of entities that typically co-occur with *-oop* 'be standing' in locative descriptions can best be characterized as having one axis that is much longer than the other axis is wide. Nominals/nominal expressions that occur with *-oop* 'be standing' include *hehe hapec* 'tree', *haaco* 'house', *hehe hapec* 'post', *hant*

ihasaaij 'shovel' and *hehe ipacotim* 'axe'. An example is provided in (20) where the speaker is indicating the location of *hehe hapec* 'tree' and uses a form of *-oop*.

(20)   *Hehe   ha-p-ec   cop   haaco   cop*
        wood   SBJ.NMLZ-PASS-planted   DEF.ART.SG.stand   ABS.POSS.house   DEF.ART.SG.stand

        i-hiin   hac   i-ti   yoop.
        3POSS-near   DEF.ART.SG.LOC   3POSS-on   DP.be.standing
        'The tree is standing next to the house.' (GHF BowPed 49)

The types of entities that are categorized as being in a lying position generally illustrate a longer horizontal axis than vertical one, even much more so than for objects that occur with *-iij* 'be sitting'. For certain types of objects the predicate *-oom* 'be lying' is used in locative descriptions where the figure object is on its side, for instance with brooms that are lying on the ground or bottles that are on their side. This has to do with describing the actual orientation of the object and not using its canonical orientation to determine which posture predicate to use. However, for the most part, the objects that fall within this group are longer than they are tall in their canonical position, and as such co-occur with this predicate in locative descriptions. This is the case with boats, drills and tables. Nominals/nominal expressions that occur with *-oom* 'be lying' include *canoaa* 'boat', *icaaspoj* 'pencil' (lying on desk), *hateeya* 'bottle' (when on its side), *hax ixapz ano yaii* 'cooler', *hant ipasaquim* 'broom' (lying on the ground or leaning on the house), *hehe iti icoohitim* 'table', *eenm icaatj* 'hammer' and *ziix ihacaptax* 'drill'.

As mentioned earlier, certain groups of items that are in a pile or are identified as a group and not as individual items are categorized using the locative predicate *-iih* 'be located', as opposed to a particular predicate that lexicalizes posture semantics. Nominals/nominal expressions that occur with *-iih* 'be located' include *hazaamt pac* 'some bricks' (in a pile) and *hacaalca hapsaalim pac* 'some hung clothing'.

5.2. Yaqui

Yaqui is a synthetic/agglutinating, head-final language. In contrast to the other languages from the same branch, Yaqui keeps track of syntactic functions of nominal arguments using a nominative-accusative case system; the nominative case is unmarked and the accusative case is marked by the suffix *-ta*; when plural, the nominals are only marked by the suffix *-(i)m* excluding case marking. The strength of the head-final order is seen in the predominant use of postpositions, and verbal suffixes; also, the genitive follows the possessive noun, and adjectives usually precede the noun.

Previous studies dealing with some aspects of motion and locative descriptions in Yaqui include the brief description in Dedrick & Casad (1999),

and the monographic studies in Guerrero (2004, 2012a, 2014), Belloro & Guerrero (2012), and Gutierrez (2011). There is a small set of verbs that describes a locative situation in Yaqui; some of these verbs are unspecified for posture, e.g. general copulative-like verbs, but others describe the collocation of an entity using posture verbs.

General locative verbs like *orek* 'be placed' and *manek* 'be situated' describe the location of inanimate entities without a concrete geometrical shape. For instance, *orek* is used in locative descriptions involving *chichi* 'saliva', *baajup* 'wastes', *piisam* 'blankets' and *tomi* 'money' (21a), while *manek* is used with figure nominals used to refer to seeds and liquids, or containers used to hold liquids (21b). There is also a general locative predicate that is used to refer to human entities, *aane* 'be around'; the clause in (21c) is the natural response to the question 'where is your mother?' when the actual posture of the figure entity is unknown.

(21)a. *U   ji'osia tomi-Ø   mesa-po   **orek***.
        DET paper   money-NOM table-LOC be.placed
        'The money is on the table.'

   b. *U   joyo-Ø   pu'ato-po **manek**-ame   siime   **go'ote**-k.*
        DET poison-NOM plate-LOC be.placed-NMLZ everything fall.NCOUNT -PFV
        'The poison which was inside the plate fell down.' (Estrada *et al.* 2004)

   c. *In   maala-Ø   kosina-po   **aane***.
        1SG.GEN mother-NOM kitchen-LOC be.around
        'My mother is in the kitchen.'

Most commonly, locative descriptions make use of posture verbs. In addition to the encoding of state, inchoative and causative interpretations, posture verbs in Yaqui have suppletive forms depending upon the number of the figure nominal (Table 1).[5] Notice that the stative alternations are marked by the past perfective *-ka ~ -k*, the inchoatives are marked by *-te* and the causatives take the transitive marker *-a*. The examples below illustrate the actual posture of humans and certain animate entities while these entities are 'standing' (22a-b), 'sitting' (22c), and 'lying down' (22d).

	stative		inchoative		causative	
	singular	plural	singular	plural	singular	plural
lie, be lying	*bo'oka*	*to'oka*	*bo'ote*	*to'ote*	*yecha*	*joa*
sit, be sitting	*katek*	*jo'oka*	*yejte*	*jo'ote*	*te'eka*	*to'a*
stand, be standing	*weyek*	*ja'abwek*	*kikte*	*japte*	*kecha*	*ja'abwa*

Table 1. Posture verbs in Yaqui

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[5] The use of suppletive forms in posture verbs is very common inside the Uto-Aztecan family (see Guerrero 2012b).

(22)a. *Ju'u   yoeme-Ø   kari-bepa   **weyek***.
      DET   man-NOM   house-on.the.top   be.standing.SG
      'The man is standing on the top of the house.' (BowPed 34)

   b. *U   chu'u-Ø   bankoa   naa   **weyek***.
      DET   dog-NOM   chair   near   be.standing.SG
      'The dog is standing near the chair.'

   c. *U   chu'u-Ø   kari-po   pa'aku **katek***.
      DET   dog-NOM   house-LOC   outside be.sitting.SG
      'The dog is sitting outside the house.' (BowPed 6)

   d. *U   chu'u-im   rama-po   **to'oka***.
      DET   dog-PL.NOM   ramada-LOC   be.lying.PL
      'The dog is lying down under the ramada.'

The most interesting cases are locative descriptions of inanimate entities and animates that are conceived of as not being able to change their position volitionally, since posture verbs normally encode inherent or salient orientational properties of those entities. For instance, 'standing' is usually associated with trees, since they have a salient vertical extension, while 'sitting' encodes the canonical position of buildings, highlighting their horizontal extension over a flat ground. Yet, the locative description of ants, lizards, apples, hats, or grains can be slightly more difficult to classify in terms of the vertical and horizontal dimensions.

Among the three basic posture verbs, *bo'oka/to'oka* 'be lying' is, perhaps, the easiest to describe since it expresses the location of entities that are spread out horizontally on a flat surface. Among the inanimate entities associated with this posture verb are *wako'i* 'comal' (a griddle frequently used for cooking tortillas), *tajkaim* 'tortillas', and *laapis* 'pencil' in (23a). Items such as tablecloths and blankets are also associated with 'be lying' when extended over or covering the ground as in (23b-c), though the posture verb *katek* 'be sitting' can also be used when these items are not covering the surface but are supported by it, as in (23c).

(23)a. *Laapis-Ø   eskritorio-po **bo'oka***.
      pencil-NOM   desk-LOC   be.lying.SG
      'The pen is on the desk.' (BowPed 59)

b. *Selbietam   mesa-po   bo'oka*.[6]
   table cloth.PL.NOM   table-LOC   be.lying.SG
   'The tablecloth is on the table.' (BowPed 29)

c. *U   jipetekia-Ø   kama-po   bo'oka*.
   DET   blanket-NOM   bed-LOC   be.lying.SG
   'The blanket is on the bed.'

d. *Piisam   kaamam bepa   katek*.
   blanket.PL.NOM   bed.PL   over   be.sitting.SG
   'The (folded) blankets are on the bed.'

This predicate is also used to describe the inherent position of certain animals, including reptiles, snakes, worms and several other insects whose bodies are in full contact with the ground, e.g. *wuikuim* 'lizard' (24a), *eyeekuim* 'centipede', *kurues* 'boa', *porowim* 'cuija lizard (*coleonyx variegatus)*', *bejo'orim* 'spiny lizard (*Sceloporus spp.)*', *waitopichim* 'salamander', *sakkoam* 'gila monster', *bakot* 'snake' and *chumkuria* 'worm'. By semantic extension, objects like *maangera* 'hose' can also be described as lying (24b). In (24c), *bo'oka* describes the depth of the cave.

(24)a. *U   wuikuim   teta-t   bo'oka*.
     DET   lizard.PL.NOM   rock-LOC   be.lying.SG
     'The lizard is on the rock.'

b. *U   mangeera-Ø   kuta-t   bo'oka*.
   DET   hose-NOM   trunk-LOC   be.lying.SG
   'The hose is on the top of the trunk.'

c. *U   teeso-Ø   tebesi   bo'oka*.
   DET   cave-NOM   long   be.lying.SG
   'The cave is very deep.'

The types of entities that are categorized as being in a lying position generally illustrate a longer horizontal axis than vertical one, in the sense that they can be extended over a surface, e.g., *pu'ato* 'plate', *wako'i* 'comal'; *tajkaim* 'tortillas', *piisam* 'blanket, tablecloth', *saaweam* 'underwear', *jiniam* 'shawl', *wichara'akiam* 'sling', *jipetam* 'bedroll (made with palm)', *josoim* 'bedroll (made with 'zarzo')'.

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[6] There are several nominals which are always marked as plural regardless of the actual number of entities they introduce (i.e. plurale tantum), e.g. *selbietam* 'tablecloth', *wuikuim* 'lizard'; in these examples, the inherent plural marker is not glossed. Notice also that in some cases like (i-ii) the number of the nominal subject does not 'agree' with the number of the suppletive verb. This explains the combinations found in (23b, d), (24a), (27d), (28a), (29a, c). See Gutiérrez (2011) for a preliminary explanation of these cases in terms of positional verbs as verbal classifiers.

i. *Sakkaom   juya-po   katek*
   gila.monster.PL.NOM   hill-LOC   be.sitting.SG
   'The gila monster is standing on the hills.'

ii. *Chiinim   saako-po   waiwa   katek*
   cotton.PL.NOM   sack-LOC   inside   be.sitting.SG
   'The cotton is sitting inside the sack.'

Figure objects that can be described as being in a lying position also include *kookam* 'necklace', *reepam* 'earrings', *kandaom* 'padlock', *kareenam* 'chains', *tepojtim* 'branding iron', *kutam* 'wood', *chichikia* 'comb', *bo'o* 'path', *mangeera* 'hose', *inyeksionim* 'syringe', *peena kabai* 'bit' and *chaptiam* 'scissors'. Additionally, there are figure objects that are conceptualized as a group (mass) that lies on a surface like *ainam* 'flour', *arosim* 'rice', *sapam* 'ice, hail', *chinim* 'cotton', *ji'um* 'quelites', *mamyam* 'quelites', *ejootem* 'green beans', *jiosiam* 'leaves', *naapo jisi'am* 'Milky Way', *masam* 'wings', *seriom* 'matches', *teneboim* 'butterfly cocoons used for dancing'.

According to Newman (2002: 2), the posture of 'be standing' demands a higher control and volition on the part of the figure entity to maintain that position. As such, it would hardly describe the most natural posture for human entities. In Yaqui, animals with four legs like horses, cows and deer, combine with *weyek/ja'abwek* 'be standing' to describe their canonical position, as in (25a). In addition, 'standing' describes the inherent posture of *toto'im* 'hens' (25b), *kampamoochi* 'praying mantis' and *esuki* 'ants' (25c).

(25)a. *U   kaba'i buki-Ø   kora-po **weyek**.*
        DET horse baby-NOM corral-LOC be.standing.SG
        'The baby horse is in the corral.'

   b. *Toto'i-m   bwia-po   **ja'abwek**.*
       hen-PL.NOM   ground-LOC be.standing.PL
       'The hens are on the ground.'

   c. *Esuki-Ø kuta-t   **weyek**.*
       ant-NOM stick-over be.standing.SG
       'The ant is on the stick.'

With inanimate entities, *weyek/ja'abwek* combines with (usually long and thin) objects that can be standing up or can maintain a vertical position with respect to the ground. This is the natural position for all types of trees (26a) or things that, because of their function, are expected to be in a standing position like *sapti* 'walls (made with giant reeds)', *kanteelam* 'candles', *jichikia* 'broom', *ejkalea* 'ladder', and the flag pole standing outside the school. Among the terms used to refer to body parts, all of which involve reference to hair are also described as 'standing', e.g. mustache and beard. Interestingly, the locative description of a *teekuku* 'whirlwind' (26b) is also conceived of as being in a vertical orientation with respect to the ground, while a fence can be both, 'standing' (26c) or 'sitting' (26d).

(26)a. *Juupa-Ø   juya-po **weyek**.*
        mesquite- NOM   hill-LOC be.standing.SG
        'The mesquite tree is on the hill.' (BowPed 17)

   b. *U   teekuku-Ø mekka   jikau **weyek**.*
       DET whirl-NOM far.away up   be.standing.SG
       'The whirlwind is [located] far away.'

   c. *U   sapti-Ø   kari   naapo **weyek***.
           DET reed.fence-NOM house near   be.standing.SG
           'The fence is near the house.' (BowPed 15)

   d. *Waka-ta kora-Ø   bene'e-ku   **katek***.
           cow-ACC   corral-NOM shallows-LOC be.sitting.SG
           'The cow's corral is on the shallows.' (BowPed15)

The types of entities that typically co-occur with *weyek/ja'abwek* 'be standing' in locative descriptions can be characterized as being taller than they are wide. Additional entities that combine with this posture predicate include all types of trees, *sapti* 'wall', *baaka* 'carrizos', *pu'eta* 'door', *raama* 'ramada', *tambo* 'barrel', *saakom* 'sack' and *kora* 'corral'; figure objects like *tepuam* 'machete', *cahptiam* 'scissors', *antorchaam* 'torches', *juiwam* 'arrows', *laabos* 'nails' are also described as 'standing' when leaning on a wall, for instance.

    The third posture verb *katek/jo'oka* 'be sitting' is a little more complex to characterize than the other two because it can be associated with several types of entities without an apparent common geometrical property. For instance, 'be sitting' is the default position for different types of birds (27a) and amphibians like *kuchu* 'fish' (27b). Other animate entities associated with this posture include *mochik* 'turtle', *boobok* 'frog, toad', *chana* 'blackbird', *balakasi* 'cicada', *baro* 'parakeet', *chiiwi* 'wild turkey', *chirik* 'thick-billed kingbird (*Tyrannus crassirostris)*', *choa'awe* 'hawk', *kooni* 'raven', *se'eboi* 'fly', *jupa* 'skunk' and *chupiari* 'chamaleon'. The collocation of stars also involves the verbal predicate for 'be sitting' (27c).

(27)a. *Wiikit-Ø juya-t   **katek***.
         bird-NOM   tree-over be.sitting.SG
         'The bird is in the tree.'

   b. *U   kuchu-Ø frajko-po   ba'am waiwa **katek***.
          DET fish-NOM   container-LOC water   inside be.sitting.SG
         'The fish is inside the water container.' (BowPed 32)

   c. *U-me'e chokim   mek-jika-t **jo'oka***.
         DET-PL   star.PL.NOM far-up-over be.sitting.PL
         'The stars are over there.'

The locative description of a town, house, church, mountains, water springs and nets, furniture like tables, chairs, beds, latrines, figure objects like cups, glasses, pitchers and pots, as well as cars, boats, and wheelbarrows are all situated using *katek/jooka* 'be sitting'; some examples are shown in (28a-b). Some body parts also co-occur with 'sitting' like *puusim* 'eyes', *naakam* 'ears', *bi'am* 'nape', *chooam* 'crown of head', *gokterokim* 'ankle', as well as internal organs like *o'orem* 'brain', *siniam* 'intestine', *chibusi'ika* 'gallbladder' and *jeemam* 'liver'.

Additionally, inanimate objects with a round shape like squash, tomatoes, onions, lemons, eggs, stones and balls are all described as 'sitting' (28c-d).

(28)a. *Wiibisim   Rajum-met   cha'aka **katek***.
Wiibisim.PL.NOM Rajum-LOC.PL after   be.sitting.SG
'Huírivis is before Rahum.' [both are villages, located one after the other]

    b. *U   kaaro-Ø   bo'o-po   **katek***.
DET car-NOM   road-LOC be.sitting.SG
'The car is on the road.'

    c. *Mansaana-Ø soto'i-po waiwa   **katek***.
apple-NOM   pot-LOC   inside be.sitting.SG
'The apple is inside the pot.' (BowPed 2)

    d. *U   pelo'otam   banko betuk   **katek***.
DET ball.PL.NOM chair under   be.sitting.SG
'The ball is under the chair.' (BowPed 16)

Most of the figure objects associated with 'be sitting' can be described as having particular geometric properties outside the vertical or horizontal dimensions, e.g. some sort of solid base or bottom part that allows them to be supported by or be in contact with the ground. Indeed, some of these figures can only co-occur with 'be sitting', especially those that have a round shape. The locative description of the book on a shelf (29a), the hat on the head (29b), and even the bugs on the wall (29c) also involve the verb 'be sitting'.

(29)a. *U-me librom   tabla-po jiika-t   **katek***.
DET-PL book.PL.NOM shelf-LOC up-over be.sitting.SG
'The book is up in the shelf.' (BowPed 8)

    b. *Mobei-Ø kooba-t   **katek***.
hat-NOM   head-over be.sitting.SG
'The hat is on the head.' (BowPed 5)

    c. *U-me animal-im   sami-t   **katek***.
DET-PL animal-PL.NOM wall-over be.sitting.SG
'The animals (bugs) are on the wall.' (BowPed 52)

5.3. Other nearby Southern Uto-Aztecan languages

There are no monographic studies dealing with posture verbs in other Sonoran Uto-Aztecan languages, and the available grammars barely mention the possible combinations of these locative predicates with different types of entities. Yet, the data presented in the *Archivo de Lenguas Indígenas* series[7] includes several

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[7] The *Archivo de Lenguas Indígenas*, published by El Colegio de México, is a collection of volumes describing basic linguistic structures obtained by a syntactic questionnaire including intransitive and transitive sentences, simple and complex constructions. The goal of this publication is to provide a first set of morpho-syntactic data that can be used to compare different languages; so far, there are more than 30 *Archivos* from languages from different linguistic affiliations.

examples of locative descriptions which, potentially, involve posture verbs. Table 2 summarizes the examples for Mayo (Freeze 1989), Guarijio (Miller 1993), Lower Pima (Estrada 1999), in addition to Seri (Moser 1996) and Yaqui as documented by Estrada Fernández (2009). Unfortunately, we do not have the relevant data to compare posture verbs in O'odham at this time. When alternative locative expressions are found in Seri and Yaqui from data collected during our fieldwork (i.e. stylistic variations, alternative postures), we include them in a second line.

The questionnaire includes a dozen sentences exploring locative descriptions; occasionally, the sentences come in pairs such as the first sentence that asks for the location of an entity (e.g., *where is the church?*) and the second one that provides a locative clause as an answer (e.g., *the church is in the town*). Unlike the BowPed questionnaire, there is no visual stimulus for this data, it is a translation questionnaire. The relevant data for comparison is presented in Table 2.[8]

	Seri	Yaqui	Mayo	Guarijio	Lower Pima
human	*quiij* 'sit'	*katek* 'sit'	*a:ne* 'be'	*kahtí* 'sit'	*daha* 'sit'
dog	*caap* 'stand' *coom* 'lie'	*bo'oka* 'lie' *weyek* 'stand' *katek* 'sit'	*a:ne* 'be'	*cuhkú* 'kneel'	*kiika* 'stand'
bird	*quiij* 'sit'	*katek* 'sit'	*katek* 'sit'	*werí* 'stand'	*kiika* 'stand'
fly	*quiij* 'sit'	*katek* 'sit'	*katek* 'sit'	*cuhkú* 'kneel'	kiika 'stand'
pot	*quiij* 'sit'	*bo'oka* 'lie' *katek* 'sit'	*o:rek* 'be$_{placed}$'	*werí* 'stand'	*dah* 'sit'
machete	*caap* 'stand'	*weyek* 'stand'	*o:rek* 'be$_{placed}$'	*po'i* 'lie'	*kiika* 'stand'
church	*caap* 'stand'	*katek* 'sit'	*o:rek* 'be$_{placed}$'	*werí* 'stand'	*kiika* 'stand'
house	*caap* 'stand'	*katek* 'sit'	*o:rek* 'be$_{placed}$'	*werí* 'stand'	*kiika* 'stand'
store	*caap* 'stand'	*katek* 'sit'	*o:rek* 'be$_{placed}$'	*werí* 'stand'	*kiika* 'stand'
fence	*quiij* 'sit'	*weyek* 'stand' *katek* 'sit'	*o:rek* 'be$_{placed}$'	*werí* 'stand'	*kiik(a)* 'stand'
clothes	*quiih* 'be'	*aayuk* 'be' *manek* 'be$_{placed}$'	*o:rek* 'be$_{placed}$'	*maní* 'be$_{placed}$'	*vivuta* 'be$_{inside}$'
beans	*quiih* 'be'	*manek* 'be$_{placed}$'	*o:rek* 'be$_{placed}$'	*maní* 'be$_{placed}$'	*vivuta* 'be$_{inside}$'

Table 2. Some correspondences of locative descriptions in Seri and Sonoran Uto-Aztecan

Based on this preliminary set of data, we find some interesting correspondences. First, it seems that all of these languages make use of some sort of classification of animate objects with respect to their actual posture (or default posture) and inanimate objects with respect to their geometrical properties. Second, the locative descriptions involving a human entity in this questionnaire are preceded by the question 'where is your father?' meaning the person does not know the actual position of the human referent. The interesting point here is that, except for

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[8] As it was constructed, the questionnaire used in the *Archivo* does not motivate the occurrence of a 'lying' posture predicate, but the lack of this data here does not mean the language lacks this posture predicate in locative descriptions.

Mayo, all of the languages make use of the 'sitting' posture verb as the default answer to that question.[9] Note that in the question itself Seri and Mayo use the locative predicate unspecified for posture and the other three languages use the posture predicate 'be sitting'. Third, figure objects referring to birds and flies are described as 'be sitting' in Seri, Yaqui and Mayo, but are described as 'be standing' in Pima; in Guarijio, birds are described as 'be standing', while flies and dogs are both conceived of as being in a kneeling position. And fourth, in all of the languages in the sample locative descriptions involving entities that are identified as a group of non-individuated entities (e.g. items that have a mass interpretation like clothes and beans) co-occur with general locative predicates that do not lexicalize posture meanings.

While the data from both Yaqui and Seri show that there is a tendency for classifying figure objects based on their posture and geometric structure, the preliminary data from Mayo show a very different situation: instead of posture verbs, the language makes use of the general locative verb *aane* 'be' when describing the location of animate entities and *o:rek* 'be placed' to locate inanimate entities. As shown in (21) above from Yaqui, and (30) below in Mayo, these locative verbs do not lexicalize posture semantics. This is of particular interest due to the fact that Yaqui and Mayo are much closer in grammatical terms. Based on the evidences we have from the other Sonoran languages, we have to say that Mayo is shifting away from using posture verbs to preferring general locative and/or existential verbs; perhaps the preference for a non-posture verb in locative descriptions has been induced by contact with Spanish where speakers also prefer a generic locative verb *estar* 'be located'. All of the other languages of this study have had contact with Spanish, but this situation has not yet changed the predominance of posture verbs in locative descriptions.

(30)a. *In   pa   howa-po **a:ne**.*
       1POSS   father house-in be.LOC
       'My father is in the house.' (Freeze 1989: 80)

   b. *Haku-su   **a:ne**   hu'   ču:'u?*
      where-EMPH be.LOC   this dog
      'Where is the dog?' (Freeze 1989: 82)

   c. *Soto'-ri bwiya-po **o:rek**.*
      pot-ABS   ground-in be.placed
      'The pot is on the ground.' (Freeze 1989: 81)

In Guarijio, there is another posture verb describing a 'standing' position for animals using four legs as in (31a). As far as we can tell, there is no equivalent

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9 In the *Archivo* of Lower Pima, *daha ~ dah* is glossed as 'standing'; however, after reviewing some other publications and looking for some cognates with other Uto-Aztecan languages (Dakin, ms.), it has become clear that this verb refers to 'be sitting' and it comes from the causative alternation *yasa/yecha* 'to put in a sitting position' found in other Sonoran languages; the stative version is also found in Tarahumara and Eudeve. *Kiika* is clearly related to *kikte* 'stand up (sg)'.

of this posture verb in Yaqui or any of the other languages of the sample. The locative description in (31b) involves a machete in a 'lying' position; the verb *po'i* in Guarijio is cognate with *bo'ote* 'be lying' in Yaqui.

(31)a. *Ahká=na*   **cuhkú**   *cuhcúri?*
   where=MODAL be.standing.with.four.feet   dog
   'Where is the dog?' (Miller 1993: 70)

  b. *Weh-cí*   **po'i**   *macíra=ga.*
    ground-on   be.lying   machete=EMPH
    'The machete is on the ground.' (Miller 1993: 69)

Apparently, the locative description of pots and machetes are not easy to compare since in Seri, Yaqui and Lower Pima, pots are categorized as 'sitting', while machetes are categorized as 'standing', but in Guarijío, pots 'stand' and machetes 'lie'. Again, since there is no visual stimulus for data from the *Archivos*, it is hard to know if the translated descriptions correspond to the usual position of such entities or not, e.g. a particular machete that is 'lying' in Guarijío because it is not in use vs. one 'standing' in another situation. On the other hand, locative description of churches, houses, stores and fences co-occur with 'standing' in Seri, Guarijío and Pima, but not in Yaqui.

Therefore, based on this small corpus, we may say that Seri, Yaqui, Guarijio and Lower Pima utilize a small but contrastive set of posture verbs in locative descriptions, while Mayo tends to use a single locative verb, i.e. suppletive forms for animate/inanimate entities, in order to locate objects in space. However, as mentioned above, the types of entities that occur with the different posture predicates in Seri, Yaqui, Guarijio and Lower Pima differ depending on language specific properties of spatial or geometric classification of entities. Before we conclude, we continue this discussion of locative descriptions by sharing some observations with respect to the semantic properties that seem to determine which posture predicate is utilized in locative descriptions in Seri and Yaqui, which can be found in the following section.

6. Discussion

Following Newman (2002) and Ameka & Levinson (2007), locative descriptions involving posture verbs can be characterized by either the disposition they describe and/or by concrete or abstract properties of the figure object. As expected in languages that use a handful of posture verbs in locative descriptions (following Ameka & Levinson 2007: 858-890), posture verbs in Seri and Yaqui draw on the posture verbs that can easily describe the postures of animate entities, especially humans, 'be sitting', 'be standing' and 'be lying'. In the two languages, these posture predicates also combine with abstract and concrete nominals.

Newman proposes four semantic domains that are relevant to the description of the English posture verbs 'sit', 'stand' and 'lie': spatio-temporal, force

dynamics, the active zone associated with each predicate, and the socio-cultural domain (Table 3). The first domain relates to the overall spatial configurations associated with each posture, i.e. the posture encoded by each verb indicates the position of the figure maintained through time. The force dynamic domain characterizes the manner in which entities exercise or balance force in order to be in a particular posture. The active zone domain, on the other hand, refers to the specific area or subpart of an entity that participates directly in a spatial relation, i.e. usually one part of the body that is more engaged than another (e.g. the legs and feet for standing). Finally, the socio-cultural domain refers to the speakers' world view and how they conceptualize the various postural states. These three posture verbs are the basic ones; examples of other kinds of posture encoded in verb forms can include *lean, recline, kneel, hang*, and many others.

spatio-temporal domain	*sit*	relatively compact position
	stand	vertical elongated position
	lie	horizontal elongated position
force dynamics domain	*sit*	medium degree of control and balance (upper torso), easily maintained
	stand	highest degree of control and balance (upper & lower torso); most difficult to maintain
	lie	lowest degree of control and balance; no physical effort to maintain
active zone domain	*sit*	buttocks (& upper torso)
	stand	legs (and upper torso)
	lie	whole body
socio/cultural domain	*sit*	comfortable position either for working or relaxing
	stand	potentially most physically powerful position
	lie	associated with tiredness, sickness, sleep, death

Table 3. Central meanings of English *sit, stand,* and *lie* (Newman 2002: 2)

In contrast to neighboring languages, Seri has developed a complex system of articles and demonstratives based on posture predicates, as discussed in section 5.1. Just as is the case with the use of Seri articles derived from posture verbs, the use of these verbs in locative descriptions is, at least, partially determined by physical or abstract geometric properties of the figure object and this appears to apply across all of the languages in the sample. For some entities and some positions, the horizontal axis is relevant, for others, the vertical dimension is crucial. In addition, some entities are canonically associated with certain postures, i.e. the position in which an object normally occurs, is used, or stored; this is particularly true for locative descriptions of inanimate entities (see Gutiérrez 2011, for Yaqui and O'Meara 2008, for Seri). To get a better idea of the semantic properties of the posture verbs in Seri and Yaqui and the types of

entities that tend to occur with these posture verbs in locative descriptions, see Table 4.[10]

As can be observed from the information presented in Table 4, the types of factors that play a significant role in the semantic subcategorization of the types of entities that co-occur with these posture predicates in Seri and Yaqui are strikingly similar. This is in contrast with the lexical differences that exist between Seri and Yaqui and the lexical similarities that are present between the Sonoran Uto-Aztecan languages. However, looking beyond the lexical realization of these verbal predicates, we see similar strategies in categorization based on spatial affordances and geometric properties of objects.

7. Conclusions

To conclude this paper, we return to the topic of contact between Seri and the Sonoran Uto-Aztecan languages spoken in the same larger geographic area of what is currently northwestern Mexico. Given that Seri is a language isolate spoken in a geographic area that is located among various Uto-Aztecan languages, it would be expected that one would find evidence of contact between Seri speakers and their neighbors. Although it is not definitively clear how long the Seri have been inhabiting northwestern Mexico, Bowen (1983: 222) has indicated that their arrival predates ceramic times, which translates to around twelve centuries before the present, following Marlett (ms. 38). It has also been suggested by Beals (1961) that there is potential evidence of contact at a social level that is visible through the linguistic repercussions as observed in the Seri and Cahita kinship systems. We also observe certain similarities in the way that Seri speakers and Yaqui speakers categorize objects based on their use of locative verbs that involve posture semantics (see Table 3). The spatial and geometric characteristics that determine the use of the posture predicates in locative descriptions are strikingly similar between the two languages.

A potential explanation for the similarities that we observe could be related to the fact that Seri speakers and the nearby speakers of Uto-Aztecan languages have been in such close proximity over the course of many years, undoubtedly with many contact opportunities. While we see relatively few loanwords in Seri (some of them being of Uto-Aztecan origin), it is possible that contact has manifested itself linguistically in other ways, such as that which we observe in this paper. Regardless of our tentative conclusions, it is clear that more work should be conducted in order to further investigate not only the potential linguistic evidence of contact between these groups, but also the historical and archaeological evidence that can corroborate similarities.

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[10] We do not include the last two dimensions here since they are primarily relevant for human/animate entities, i.e. only certain entities can show a higher or lower degree of control and balance to hold and maintain a standing position.

SEMANTIC DOMAIN	POSTURE VERB	BASIC CHARACTERISTICS OF FIGURE objects IN SERI	BASIC CHARACTERISTICS OF FIGURE OBJECTS IN YAQUI
SPATIO-TEMPORAL	'be lying'	Entities showing a longer horizontal axis than vertical one that can be supported horizontally by the ground, including items like boats on the water and knives; this is the canonical position for humans.	Slightly flat and/or long entities which can be supported horizontally by the ground (i.e., horizontal axis); animate entities like reptiles select this posture as their canonical position.
	'be standing'	Entities that can best be characterized as having one axis that is much longer than the other axis is wide, especially thin entities like trees and poles, but this also includes water in a container.	Thin and/or tall entities that can hold a vertical position from the ground (i.e. vertical axis), including trees, containers; they may be able to hold a vertical position or be leaning on the ground, like machetes or broom.
	'be sitting'	Tall entities, somewhat stout in their shape, generally wider than they are tall. However, these entities are not always wider than they are tall; it also seems that this predicate is used with entities that have to do with being in a seated position, like chairs and bicycles.	The orientation in terms of horizontal and vertical axis is not central, but volume or shape. Animate entities like birds, insects, and amphibians select this posture as their canonical position, the same that round objects, and multiple or mass-type figure like water, sand, seeds (i.e. usually contained objects)
ACTIVE ZONE	'be lying'	Extended contact between the figure and the ground.	There is a full, or almost full contact between the figure object (or a salient part of the figure) and the ground.
	'be standing'	Support of the figure is provided by some stabilizing component such as legs (of a table or ladder) or roots (of a tree).	Figure objects usually have some sort of support (e.g. legs, feet, roots), that allows them to maintain this position.
	'be sitting'	For the most part requires a solid base that makes contact with the ground, providing support to the figure entity.	Some contact of the bottom part of the figure with the ground; the entity is supported by below.

Table 4. Semantic factors associated to Seri and Yaqui posture verbs

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