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A Cognitive Analysis of Mixtepec-Mixtec Body Part Terms

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II Coloquio Internacional sobre la Tipología de las lenguas Amerindias
Lima, 27-29 de octubre de 2016

Mixtepec-Mixtec (Sa'an Savi)

- Sa'an Savi '*rain language*'
- ISO 639-3 code: 'mix'
- Oto-Manguean, Mixtecan, Mixtec-Cuicatec, Mixtepec-Mixtec

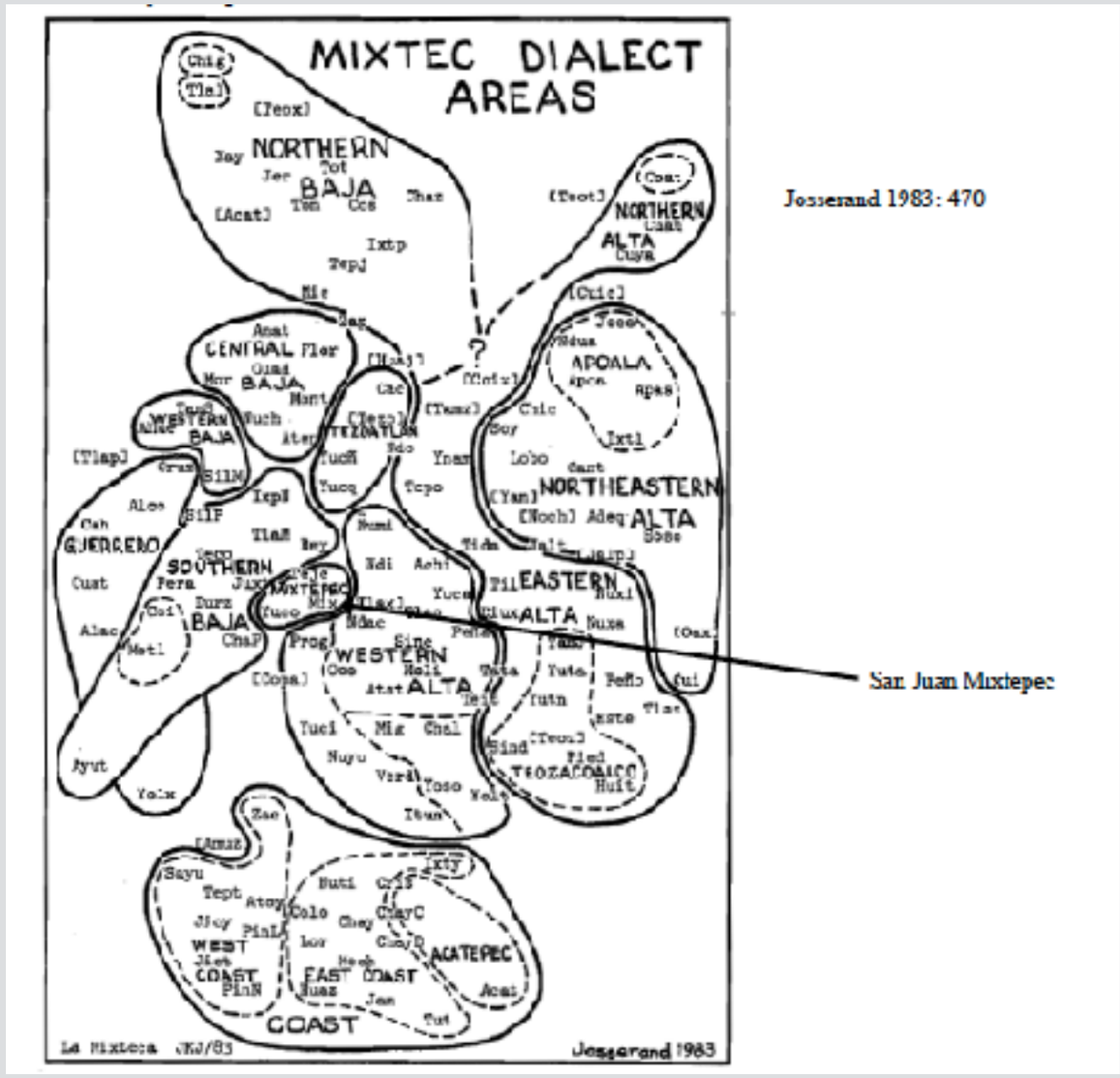
Source: Ethnologue

• San Juan de Mixtepec Juxtlahuaca district (Oaxaca, MEX)

  •Data mostly collected in sessions working with speakers from a small village called Yucanani (17.301559,-97.893763) in the SJM municipality

• Estimated (+-9,000-9,500 speakers)

Source: Beckman and Nieves (2005)



Josserand 1983: 470

Has been studied by:

- Pike and Ibach (1978); Paster and Azcona (2004-2007); Beckman and Nieves - SIL (2005-current)

Body-Part Terms (BPT) in Mixtepec-Mixtec

- Polysemous BPT in MIX and other Mixtecan: '*head'* , *'face', 'back', 'foot', 'leg', back', 'hand/arm','stomach', and 'mouth'*
- Compounding prominent strategy
- Many or most of BPT extensions in MIX and other Mixtecan varieties express locative or spatial configurational functions
- also used to express other functions of varying levels of conceptual and grammatical abstraction
- Metaphor, Metonymy primary cognitive and lexical vehicles of extension
- different paths show different levels of grammaticalization
- *'foot'* [tsà?á] and *'face'* [nǜű] are the most frequently extended BPT in MIX as is the case in related varieties of Mixtecan
- In addition to polysemous extensions, BPT are also observed incorporated into compounds with unknown possible prefixes, which show higher level of grammaticalization
- Inalienable in literal use
- No body part prefixes

Preliminary Examples:
(MIX compounds w/ Body Part Terms)

xnuu
[*(ʃ)*+**face**]
‘bring down from’

xi**ní nta’a**
[head+hand]
‘finger’

vikó **nuu**
[cloud+**face**]
‘fog’

sata nta’a
[back+hand]
‘back of the hand

nuu nta’a
[face+hand]
‘palm’

ntuchi nuu
[bean+**face**]
‘eyes’

nuu itu
[**face**+field]
‘cornfield’

BPT in Mixtec Literature

- BPT express locative relations
- Spatial BPT described as nouns in N-N compound sequences (Brugman,1983; Brugman and Macaulay,1986)
- Figure-Ground system (Talmy, 1985) used to systematize spatial relations of “N-N” compound, with ‘figure’ representing predicated entity, ‘ground’ representing the relative entity (Brugman,1983; Brugman and Macaulay,1986)
- Semantic and Syntactic Changes:

  Paths move from more concrete to more abstract (Hollenbach, 1995)
- Mechanisms of semantic change: Metaphor & Metonymy (Brugman,1983; Brugman and Macaulay,1986; Hollenbach, 1995)
- Mechanisms of syntactic change less clear than those of Semantic, though most important is *Syntactic Reanalysis* (Hollenbach, 1995)

Key Theoretical Principles

Embodiment (Johnson,1987; Johnson & Lakoff, 1989)

- Embodied experience from physical and perceptual interacting with entities, relationships and processes in the external world gives rise to schematic knowledge (image-schemas);

- Need to accomodate new, possibly more nuanced, complext concepts into knowledge base grows with experience, to do so humans re-use/ anchor the novel information to salient/readily accessible properties and/ or relationships of pre-existing areas of ontological knowledge

- Due to their prominent role in human experience, these pre-existing terms and concepts used are often from '*Primitives*', or '*Primes*' such as body parts, environmental features, or prominant cultural enitities

- Key strategies at work are Metaphor and Metonymy* on the cognitive and lexical level

“lexical items, and particularly spatial ones, are strongly polysemous, i.e., characterized by a multiple set of distinct, but systematically related senses”

(Lakoff, 1987; Langacker, 1987; Deane, 1988; Cuyckens, 1991; Geeraerts, 1993; Regier, 1996; Tuggy, 1999; from Zlatev, 2007)

Key Motivating Ontological, Schematic Knowledge

- Meronymy (i.e. *part-whole relations*)
- Physical Attributes (e.g. shape, size, color, etc.)
- Natural Partitions (polarized, or distinct configurations)
- General Physical Orientation *(front, back, side, top, bottom)*
- Function(s) (*associated with the body part or region)*

(Johnson,1987; Langacker, 1987 Johnson & Lakoff, 1989; Svorou,1994;)

Note: these are not mutually exclusive and may co-occur

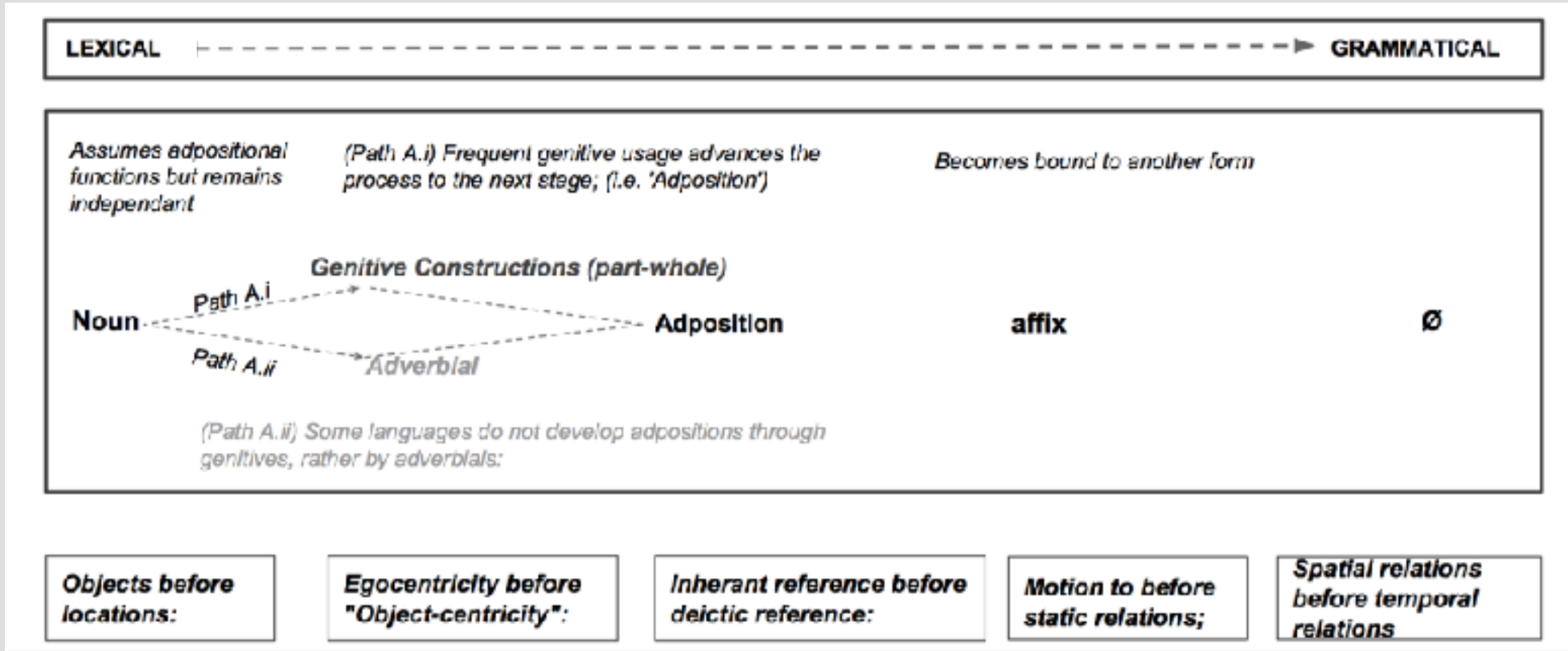
Key Studies in BPT and the Language of Space

Svorou (1994):

- Compared sources of ‘spatial grams’ BPT in 55 languages
- Small number of BPT give rise to small number of spatial grams
- Functionality of BP is also a motivation for extension
- Unidirectional diachrony between relational BP going to relational object part
- BPT make good candidates for grammaticalization because of their relational nature
- The gap between an ‘*open*-’ and ‘*close*-’ class form is the degree of grammaticalization

Continuum of Grammaticalization (Svorou, 1994)

"To qualify for grammatical status, a lexical item should have lost its ability to be modified by free and bound elements and its independence in appearing in different positions within the sentence, and assumed a fixed position."



'Open-class'

Forms are semantically rich, more conceptually concrete

'Close-class'

Grammatical Forms:

- *have little to no independent semantic value;*
- *are more conceptually abstract, potentially meaningless outside of context*

Metaphor & Schematic Motivations

PHYSICAL SHAPE + RELATIVE LOCATION

nta'a yutu

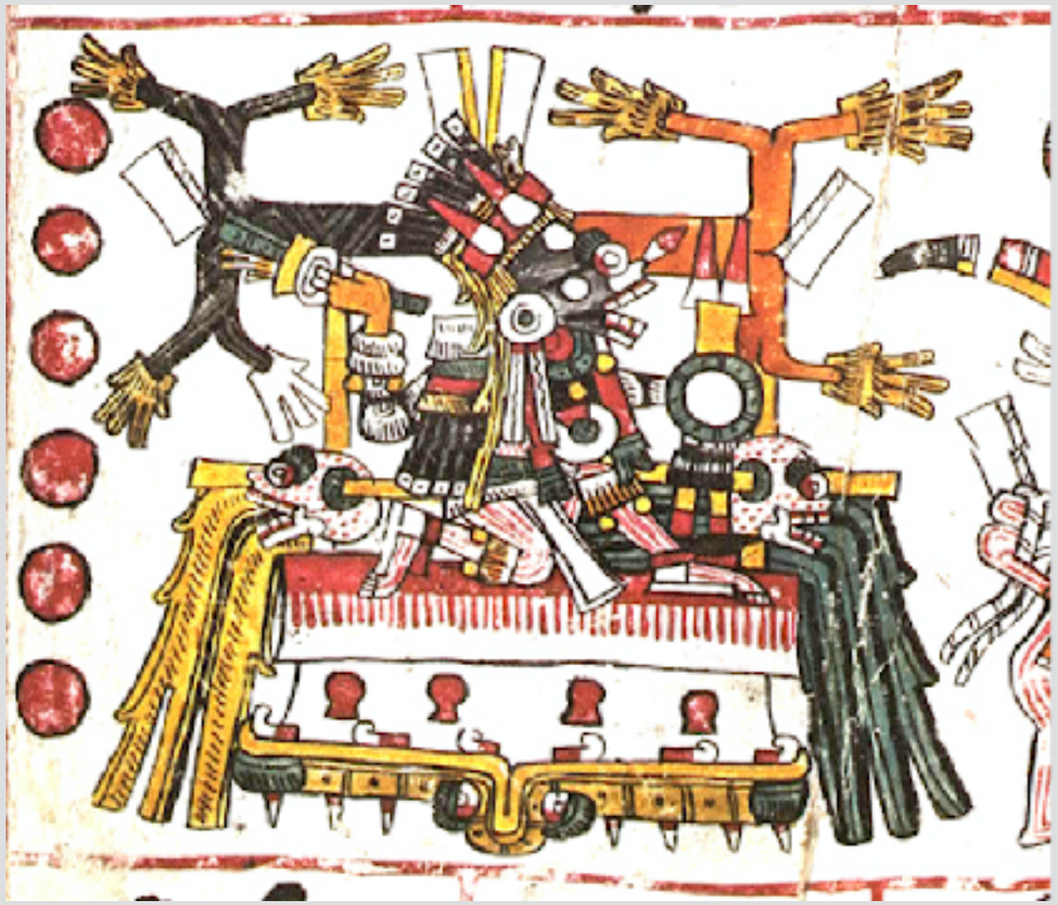
hand/arm tree

'tree branch'

'rama'

active attribute (source)= physical shape (HAND/ARM)

target= TREE BRANCH



Mixtec Codex Borgia

Metaphor & Schematic Motivations

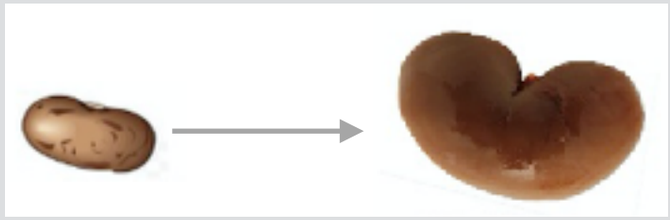
FUNCTION

yu'u yucha
mouth+river
'river bank'
'orilla del río'

active attribute (source)= function (MOUTH(BODY))
target= RIVER

PHYSICAL SHAPE + COLOR

ntuchi
bean
'kidney'
'riñón'



active attribute (source)= physical attributes (BEAN)
target=KIDNEY

PHYSICAL SHAPE + FUNCTION

xii mesa
leg+table
'table leg'
'pata de mesa'

active attribute (source)= physical shape, function (LEG(ANIMAL))
target=TABLE

Spatial Semantics

A spatial expression must express a *'trajector' (TR*) whose profile is of relevance to the identification of a '*landmark' (LM). (Lakoff,1987; Langacker, 1987; Regier, 1996)*

(trajector-landmark system similar to notion 'Figure' (Talmy 1975, 1983, 2000; Levinson 1996, 2003))

Spatial expressions do not usually tend to specify the trajector's location with full precision; instead they most often place it within a certain region with respect to the landmark. This region is the '*Search Domain*'.

Hawkins (1984), Langacker (1987, 2002)

The trajector/landmark asymmetry is fundamental to relational predicates and underlies the universal subject/object distinction (Langacker 1987).

Zlatev (2007): elaboration of TR-LM system

- Trajector: (static I dynamic)
- Landmark: (person I object *I event*)
- Frame of Reference (For): (viewpoint centered I relative I intrinsic)
  - Region: (interior I exterior)
  - Path: (beginning I middle I end I zero)
  - Direction: (*in combination w/FoR where no LM present*)
  - Motion: (*multiple types possible)*

(*based on Levision, 1996)*:

Key Spatial, Configurational Schemas

Multiple studies of Mixtecan and other languages have shown BPT extensions to express the following spatial schematics:

TOP-BOTTOM (configuration of object): HEAD-FOOT

FRONT-BACK (configuration of object): FACE-BACK

ABOVE-BELOW (adjacent space to object): HEAD-FOOT

IN FRONT OF-IN BACK OF (adjacent space to object): FACE-BACK

(Brugman,1983; Brugman and Macaulay,1986; Svorou,1994; Hollenbach, 1995)

Basic Paths of BPT Polysemy in Spatial Language

*Metaphor

*Metonymy

body part (INDIVIDUAL) > INDIVIDUAL

subpart of (BODY) > subpart of (OBJECT)

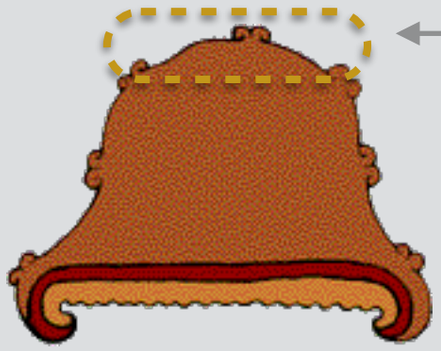
subpart of body(INDIVIDUAL) > adjacent space to body(INDIVIDUAL)

subpart of physical form(OBJECT) > adjacent space to (OBJECT)

Metaphor & Schematic Motivations

FoR:Relative

TOP-BOTTOM (configuration of object): HEAD-FOOT



part whole

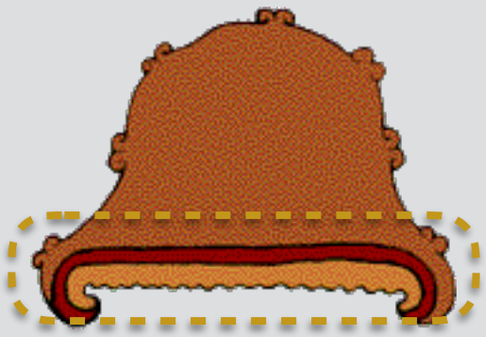
xiní yuku

[head+hill]

‘top of the hill’

active attribute (source)= physical orientation, natural partitions (HEAD(BODY))

target= HILL



part whole

tsa’a yuku

[foot+hill]

‘bottom of the hill’

active attribute (source)= physical orientation, natural partitions (FOOT(BODY))

target= HILL

Metaphor & Schematic Motivations: Configurational Space

FRONT-BACK (configuration of object): FACE-BACK



part whole

nuu ve'e

[face+house]

'front of the house'

'frente de la casa'

active attribute (source)= physical orientation, natural partitions, function (FACE(BODY))

target= HOUSE

part whole

sata ve'e

[back+house]

'back of the house'

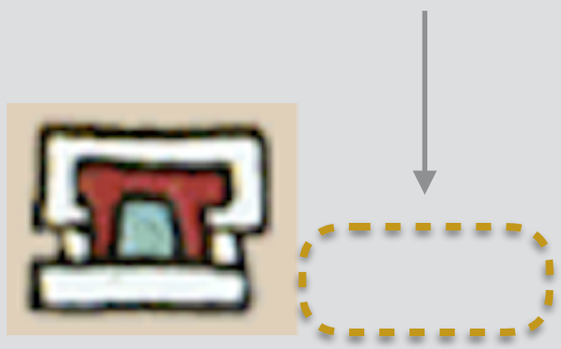
'trasera de la casa'

active attribute (source)= physical orientation, natural partitions (BACK(BODY))

target= HOUSE

>Note: this is not implying a schema based on verticality but on the frame of reference with regards to the gereral orientation of the source and target!!

Metaphor & Metonymy in Adjacent Space



-TR(static) LM

ku-ntu'u-u **xii** ve'e

CMND-sit-2SG.INF **leg** house

'sit next to/on the side of the house'

Process=(I)Metaphor, (II)Metonymy

Schematic Motivations =Natural Partitions, General Orientation, Function

Metaphor:

SIDE REGION (BODY (LEG)) > SIDE REGION (OBJECT (HOUSE))

Source Domain (BODY) > Target Domain (HOUSE)

Metonymy:

Adjacent Space to FRONT REGION (Object (HOUSE))

Conceptual Overlap

Some instances the literal term overlaps with the extended:

TR(static) LM

kantu'u likuaku **nuu nta'a** suluu-ka
sit[3SG.INF] lizard ***palm***[face+hand] boy-TPC
'the lizard is in the boys hand(palm)'

TR(static) LM

skaa tutu **sata** lurru
[CMND]put[2SG.INF] wood **back** donkey
'put the wood on the donkey/on to the donkey's back'

\

Configurational Alignment





LM

TR (static)

ntu’u saa-ka **nu-u̲**

sit[3SG.INF] bird-TPC **face\1SG**

‘the bird is sitting in front of me’





LM

TR (dynamic)

ntava saa-ka **nu-u̲**

CMPL\fly[3SG.INF] bird-TPC **face\1SG**

‘the bird flew in front of me’

>This case represents an intermediate case where the literal sense of the BPT is equally as valid semantically as the extended sense in which the body part occurs with the posessive

possessor raising

possessive body part (INDIVIDUAL) > INDIVIDUAL

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*Note: “**- u̲**” represents falling tone inflection as represented in Mixtec orthography*

BPT in Motion

Backwards motion:

FoR: Relative, Origin, Addressee (no explicit TR or LM)

kaka **sata**
[CMND]walk[2SG.INF] **back**
'walk backwards'

Process=Metonymy
Schematic Motivations = (Reverse) General Orientation (LOCALMOTION)

'face' in Contrasting Spatial and Motion Constructions

Stationary location within landmark:

LM -TR(static)

nuu juku inkaa-yu

face forest COP.LOC-1SG

'I am in the forest'

Motion towards & subsequent interaction with goal:

TR(static) LM

ntava chumi-ka **nuu** yutu

CMPL\fly owl-TPC **face** tree

'the owl flew into the tree'

Motion away from source:

TR(static) LM

ntakoo chumi-ka **nuu** yutu

CMPL\arise owl-TPC **face** tree

'the owl arose(flew) out of the tree'

Nuances

Interaction-based differences

TR (DYNAMIC) LM

ntava tikuchi-ka ni-ntivi-a **nuu** kava

CMPL\fly bat-TPC CMPL-enter-3S.INF **face** cave

‘the bat flew into the cave’

’the bat flew to the opening/mouth of the cave, and entered’

TR (DYNAMIC) LM

ntava tikuchi-ka **yu’u** kava

CMPL\fly bat-TPC **mouth** cave

‘the bat flew to the cave’

’the bat flew to the opening/mouth of the cave’ (but didn’t enter))

> Key difference in the use of BPT is not spatial in nature but has to do with interaction with the goal

Ommision of adpositional BPT

Absence of additional polysemous BPT:

ku-nche’e ntuchi**nu-u̱**
CMND-look[2SG.INF] **eyes**[=bean+face]\1s
‘look into my eyes’

This case represents an another intermediate case where is no polysemous relational extended body part term needed as the literal presence of the BPT ‘eyes’ provides sufficient information

Omission of BPT or adposition

Motion to goal:

TR LM

ku-kitsa-i **nuu** sachuun ka uni

FUT-arrive-GL.FOC-3SG.INF **face** work 3_o'clock

'she will get to work at 3'

Motion to goal: *home focus*

LM TR

ku-**nu'**-in ka uni

FUT-go.GL.FOC=HM-3SG.INF 3_o'clock

'go_home'

'she will go home at 3'

(Hypothesis):
If the root of the word "**nu'u**" '*go home*' is in fact a reduced, coalesced and reanalysed version of "**nuu**" *'face*'; then the fact that there is no adposition needed in this second phrase as opposed to the first is significant and can likely be accounted schematically from the 'general orientation' schema that is inherant to the concept of FACE and is being analogically applied to the concept of HOME

Non-Spatial Extensions:
Possessive BPT > Pronouns & General Reference

Pronoun-Indirect object: LISTENER

ntakan-i na nu-**u̲** ña …..
CMPL\tell-3SG.INF MOOD **face\1SG** CONJ…
*'someone told **me** that…'*

Pronoun-Indirect object: RECIPIENT

\TR LM$_I$ LM$_{II}$
kun-kua'a chuun **nuu** Jack
FUT^{ii}-give\1SG money **face** Jack
'I will give money to Jack'

Comparative Conjunction & Pronoun: THEME

TR LM$_I$
nani kue-ta'a-ka nuu mee
be_elder PL-sibling-TPC **face** **1SG**
*'my siblings are elder **than me**'*

Process = Metonymy: (Part > Whole)
Schematic Motivations = Meronymy, General Orientation (body, individual), Function=Identity & primary region of interaction with (individual)

Since humans inherantly associate the 'face' with the everyday person-person interactions, and attention, this BPT makes a fiting candidate to expand in expressing concepts that are related to the functional nature of the BPT (Svorou, 1994)

Non-Spatial Extensions: *'foot'*

Conjunctive adverbials: BENEFACTIVE

TR		LM
sachuun	**tsa'a**	Maria -ka
work\1SG	**foot**	Maria-TPC

"I'm working <u>instead of</u> Maria"

TR		LM
ka'an-yu	**tsa'a**	Pedro
speak-1SG	**foot**	Pedro

'I am speaking <u>on behalf of</u> Pedro'

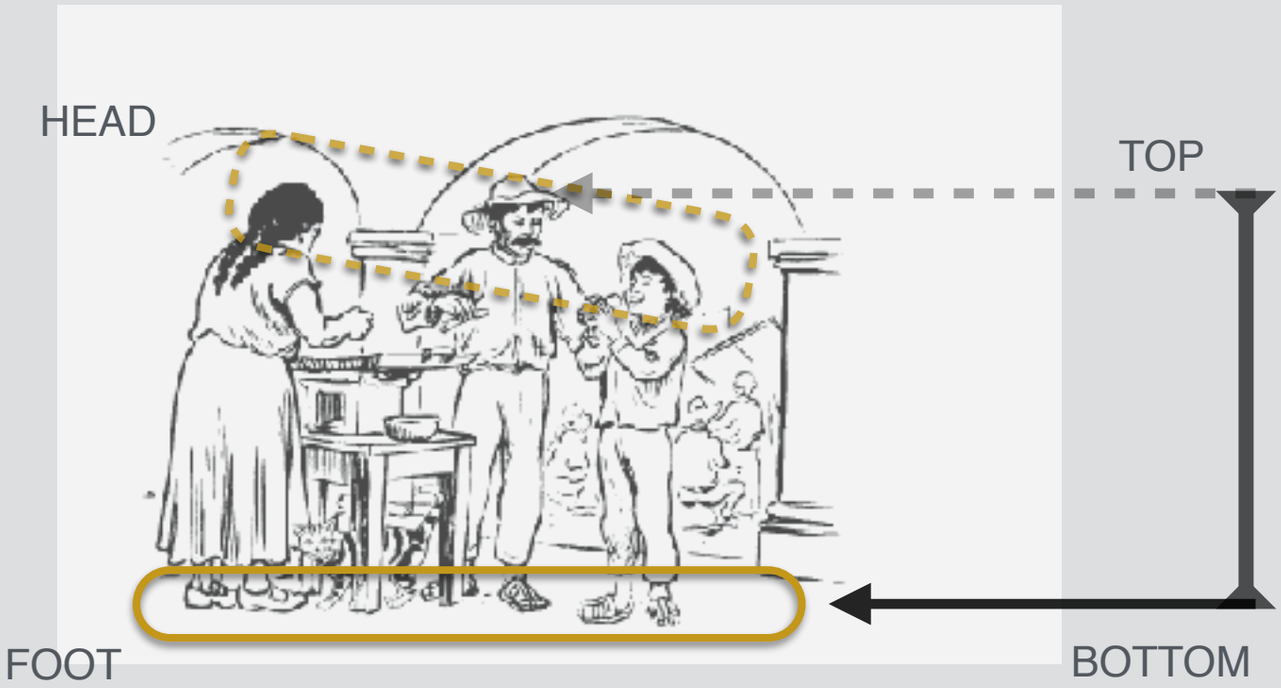
Topical preposition: STIMULUS

TR					LM
sko'a	ncho'a	tsini-yu	na	**tsa'a**	kue- azteka -ka
unk	adv-deg.much	know-1SG	CONJ	**foot**	PL- aztecs -TPC

'I know a lot about the Aztecs'

Gramaticalization (*via Metaphor & Metonymy*): Schematic Motivations

BEGINNING-END (process of event): HEAD-FOOT



tsa'a ña nikuita yu
[foot+RELATIVIZER]
'because of, due to (the fact that)'

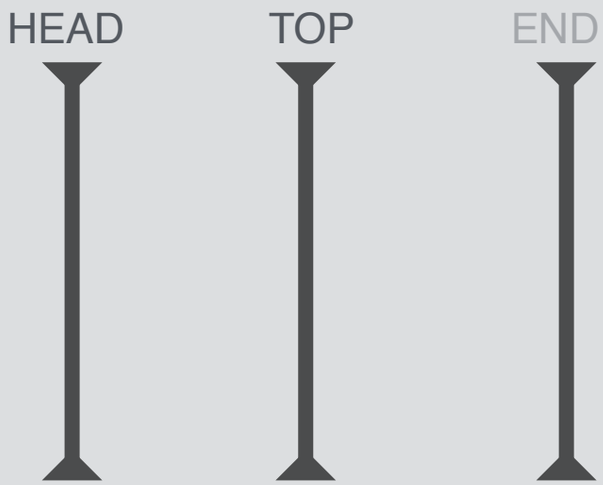
metaphor:
FOOT (BOTTOM partOf BODY) >
(BEGINNG partOf EVENT)

metonymy:
(meronymy: part for whole):
BEGINNING of event > CAUSE of EVENT

active attribute (source)= physical orientation, natural partitions (FOOT(BODY),)
target= CAUSE OF EVENT

Gramaticalization (*via Metaphor & Metonymy*): Schematic Motivations

BEGINNING-END (process of event): HEAD-FOOT



tsa'a + ña

BEGINNING of EVENT > CAUSE of EVENT

metaphor:
FOOT (BOTTOM partOf BODY) >
(BEGINNG partOf EVENT)

metonymy:
(meronymy: part for whole):
BEGINNING of event > CAUSE of EVENT

BPT in Grammaticalized Compound Adpositions: Deviation of *'face'*

nchaa tsa'a
*(ndʒà)***+foot**
'on top (of container)'



nchaa nuu
*(ndʒà)***+face**
'on bottom (of container)'



chi ni **nuu**
[*(ʧí)+(nì)*+**face**]
'south'

Static configurational position:

chikuchi inkaa xin-u ra chi ni**nuu** inkaa tsa'-u
above COP.LOC head-2SG.INF CONJ below COP.LOC foot-2SG.INF

'your head is above your feet'
'your head is above, your feet are below'

Conclusions

- Examples in which there is an equally valid interpretation of the BPT as an extended sense and/or a literal sense show semantic and pragmatic licence for the extensions within the language
- BPT may have multiple possible schematic sources of lexical extension
- A single BPT may have multiple separate yet concurrent paths of extension *as per Svorou (1994)*
- Evidence from MIX in which an actual body part is involved BPT shows that the semantic profiles of the lexical content of an utterance can supercede what would be otherwise regarded as ‘grammatical structure’
- Grammaticalized compounded adpositions merit more investigation

Tatsa’vi kueni!
Thank you!

Special thanks also to my se’e savi for sharing so much of their time and language with me!

- Tisu’ma X Salazar
- Geremaia Salazar

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