THE DIACHRONY OF THE ZAPOTEC PERFECT
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ZAPOTEC LANGUAGES

- Zapotec is a family of about 56 languages, spoken primarily in Oaxaca, Mexico.
- There are around 250,000 speakers of these languages.
- Language use is vigorous in some communities and waning in others. All varieties face pressure from Spanish.
- Zapotec and Chatino form a larger group called Zapotecan. Zapotecan is branch of the Otomanguean stock.
- This talk is about languages in the Central branch, which all have perfect morphology.
OAXACA

Google Maps
Oaxacan Languages

from Munro et al 2007
CLASSIFICATION

Zapotec

- Solteco
  - Western
    - Papabuco
      - (other branches)
        - Southern
          - Cisyautepec
        - Central
        - Northern
CENTRAL ZAPOTEC LANGUAGES
MODERN AND COLONIAL VALLEY ZAPOTEC

- Data comes from fieldwork on modern Central Zapotec languages and from historical records.
- Colonial Valley Zapotec (CVZ) is the form of Zapotec from the Valley of Oaxaca during the Spanish colonial period (ca 1550-1810). (Also called Antequera Zapotec.)
- CVZ is known to us from written documents only. Several closely related but distinct Zapotec languages are spoken in this area now.
- CVZ may represent
  - A single Zapotec language, whose dialects have developed into some of the modern languages.
  - A somewhat standardized written form of a few closely related Zapotec languages.
ZAPOTEC VERB MORPHOLOGY

- Zapotecan lgs typically show a small set of inflectional categories for verbs:
  - Aspect
  - (Repetition/Direction)
- Pronouns are typically enclitics on verbs
- A typical verb template might be:

  ASPECT-(repetition/direction)-ROOT(=applicative)(=subject clitic)(=object clitic)

  Û-tyùg=bì=ny
  perf-cut=3:hum=3:inan
  ASP-ROOT(=subj)(=obj)

  'He cut it'  (SDOZ = San Dionisio Ocotepec Zapotec)
MODERN CENTRAL ZAPOTEC ASPECT SYSTEMS

A typical aspect system for a Central Zapotec system is seen in San Dionisio Ocotepec (SDOZ):

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<tr>
<td>Potential</td>
<td>gi- ~gu- ~ fortition +^H</td>
<td>event not yet begun; control complement</td>
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<td>Definite Future</td>
<td>zi- ~ s-</td>
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<td>stative events</td>
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PERFECT IN MODERN CENTRAL ZAPOTEC

- Most Modern Central Zapotec languages have an á= ~ bá= clitic that is associated with a perfect reading.
- This is not an aspect marker itself, since it attaches to the left of the perfective or stative aspect in most languages.
- In isolation a verb with this clitic is usually translated as 'now' or 'already' (Spanish *ya*).
- The perfect only has the 'resultative' reading; not the other readings found in a language like English.
- Examples from San Dionisio Ocotepec
  - Á=ù-rù'g       yààg
  - Perf=perfv-be:cut    wood
  - 'Now the wood has been cut ~ The wood has already been cut'
The same clitic can be used with stative predicates:
Á=n-ààn  Juáàny.
Perf-stat-know  Juan
'Now Juan knows.' (Implication: there was some previous stage at which Juan did not know.)

Nevertheless, á= is not a general adverb meaning 'now', since it cannot be used with a verb in any other aspect:
*Á=cá-güè'=n  dì'dx cùn  Àròn.
Perf=prog-speak=1pl  word with Aaron
(Intended: Now we are talking with Aaron)
MODERN CENTRAL ZAPOTEC PERFECT IN CONTEXT

- In isolation, the perfect tends to get a reading in which refers to a state that overlaps with speech time (now)

- In discourse context, however, it often appears when the time of a resultant state overlaps with some other event.

Ne chi a = b-dxial ti = by, gul = tixtee lua = a te par chalee cha-tozaca = by
and when prf = com-find = 2pl = 3s imp:pl-tell to = 1s so for pot:1s:go pot:1s-worship = 3s
'And when you have found him, tell me so that I can also go and worship him.' (Guelavía Matt 2:8)
Á= vs =bá

- Most modern Central Zapotec languages have á= for the perfect clitic, but a few have bá=.
- The clearest description is for Mitla Zapotec (Briggs 1961:59-60).
- á= and bá= apparently have the same meaning, but á= is the normal word-initial form and bá= is the non-initial form.
- Some examples show the clitic repeated:

Á=ŋa=bá=bi-dzun=á.
prf=now=prf=com-arrive=1:s
I have now arrived.
BA IN GUEVEA DE HUMBOLDT

Guevea de Humboldt Zapotec is a Central Zapotec variety, but geographically isolated from other Central Zapotec languages.

It represents a migration of Central Zapotec toward the Isthmus ca. 1370.

Thus Guevea de Humboldt Zapotec is in many respects more conservative than other Central Zapotec varieties.

The perfect in this variety is *ba*, treated as a particle, rather than a clitic in my sources:

..no hor *ba* by-dzial la'd leeme
..when hour perf perfv-find 2pl 3hum
'And when you have found him...'
**EVALUATIVE SENSES OF BA**

- In Guevea de Humboldt, but not in other Central Zapotec varieties, the *ba* particle also has another sense, roughly ‘The resultant state of E is true now’:
  - It is used as a reply to yes/no questions about completed events, with a reading like ‘Yes, it has already happened’ or ‘Yes, I have’.
  - It is also used with an implied context in a question *Ba-la?* ‘Have you (done what you intended/needed to do)’?
ISTHMUS ZAPOTEC ASPECT

- A cognate to the perfect marker in Valley Zapotec is found in Isthmus Zapotec. Like Guevea, the ancestors of Isthmus speakers migrated from the Valley about 700 years ago, and their language is somewhat more conservative.

- Isthmus Zapotec grammars list a /wa-/ <hua> prefix with a perfect sense. In the affirmative it implies repeated past actions with a current relevance; in the negative it can deny the existence of a state with current relevance.

> Ma' **huay**-eeda Betu chonna tiru  
> now perf-come Betu three time  

'Beto has come three times now.'  
(Pickett, Black, & Marcial Cerqueda 2001:54)

> O laca **huay**-uunda=tu ...  
Or q prf-read=pl

'Or haven't you read...?'  
(Matt 12:5)
Readings of the Perfect

There are two grammars of Colonial Valley Zapotec – Cordova (1578) and Levanto (1732) – which give descriptions of the /wa-/ (orthographic <hua- ~ oa->) prefix. There are also many texts that show the perfect in context.

These grammars and the textual evidence show a range of meanings wider than that of the modern perfect.

Although modern á= ~ bá= appears before another aspect marker, the colonial texts show two patterns:
- Pre-aspectual /wa/: wa-ASP-ROOT
- Aspectual /wa-/: wa-ROOT
MEANINGS FOR PRE-ASPECTUAL WA-

- **Pre-aspectual, overlap.** Pre-aspectual /wa/ appears on a verb inflected for imperfective (/r-/ <r> or <t>) aspect, when the time of event denoted overlaps with the time of a second event.

- **Pre-aspectual, 'ongoing'.** Pre-aspectual /wa/ appears on a verb inflected for imperfective (/r-/ <r> or <t>) or a verb with an irregular progressive form, to show simultaneity with the time of speech.
The Overlap Reading

1. **Hua-r-aca=ñee Pedro, co-nna=ni naa.**
   Prf-impf-be=applic Pedro, pftv-say=3 1s
   ‘Ayudando Pedro me dijo.’
   ‘While helping, Pedro said to me.’ (Levanto 1732:59)

2. **Hua-ti-ñaa=ca=ya yobi=ca=ni**
   Prf-impf-see=emph=1s same=emph=3
   pe-yapi=ni quiepaa.
   Pftv:caus-rise=3 heaven
   ‘Estandolo mirando ellos se subió al cielo.’
   ‘While I was looking at it, the same ones rose to heaven.’
   (Cordova 1578:70v)
THE ‘ONGOING' READING

3. **Hua-t-ago=a**
   Prf-impfv-eat=1sg
   ‘Ya estoy comiendo.’
   ‘I am already eating.’ (Cordova 1578:55v)
Meanings for Aspectual wa-

- **Aspectual, positional.** Aspectual /wa/ appears on a positional verb which is followed by another verb. The combination of positional + second verb is interpreted as a single event in progress.

- **Aspectual, perfect 1.** Aspectual /wa/ appears on a verb when it denotes an event with a resultant state relevant to a reference point either at speech time or in the past.

- **Aspectual, perfect 2.** Aspectual /wa/ appears on a verb when it shows whose action is or will be completed at the time of a second action.
POSITIONAL USES

4. **Hua-zooba xeela=ya**
   Prf-sit    send=1s
   ‘Estoy embiando’
   ‘I am sending.’ (Lit. ‘While sitting, I send’.)

5. **Hua-zooba ro-looba=ya**
   Prf-sit    impf-sweep=1s
   ‘Estoy barriendo’
   ‘I am sweeping.’ (Lit. ‘While sitting, I sweep’.)
Perfect Uses (Resultant State & Speech Time)

6. **Huay-aca=chahui**
   Prf-do=well
   ‘Ya está hecho.’
   ‘It is (already) done.’

7. **Huay-oocho**
   Prf-rot
   ‘Ya está podrido.’
   ‘It is already rotten.’
PERFECT USES (RESULTANT STATE & EVENT TIME)

8. **Huay-ago=ca=la=ya** chij qu-eta=lo
   Prf-eat=emph=clit=1s when pot-come=2s
   ‘Quando tu vengas ya yo aure comido’
   ‘I will already have eaten when you arrive.’
### WA- as Perfect

<table>
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<tr>
<th>Word</th>
<th>Yaca</th>
<th>channa</th>
<th>acalaati</th>
<th>Cocooni</th>
</tr>
</thead>
</table>

#### Morphemes
- yaca
- channa
- aca
- laa = ti
cocooni

#### Lex. Gloss
- NE: father, priest
- NE: focus?
- PT/NEG2: virgin

#### Transcription
- yonna
- Cocooni
- nataa
- nacani
- =ni

#### Translation
- intact virgin
- virgin
- STA pure
- STA be(not-PERF/PRF) 3

#### Notes
- huayannacani
- huayooni
- cani
tolla
gueche

#### Free Eng
No Father, she was not a virgin, because she already knew the sins of the world.

#### Spn
No Padre, no era Virgen, porque ya sabia de pecados de mundo.

Aguero 1666:f26
ADDITIONAL USES OF WA-

- There are at least two other readings found in texts that are not mentioned in the colonial grammars:
  - An evaluative (‘must have/be’) sense appears in some examples.
- A durative sense. The contexts of use show that this form generally seems to be habitual (repeated) or continuous (extended stative) in its semantics.
  - The readings are approximately 'X always Vs'; 'X has always V-ed'; 'X has V-ed many times'
  - For stative predicates, the reading is approximately 'X is/has been V for a long time'.
It is often not easy to distinguish these readings in texts.
EVALUATIVE SENSE

9. Beni cani oapaga c-acaapea lachi=ni person this quickly pot-know heart=3

na ticha=ni, oa-tij beni t-ana=ni?
? thing=3 prf-exist person impv-know

quiba
metal

'This person will quickly know that this thing [clock], there must be some person who knows the metal [clock]..'
**Durative or Evaluative Sense**

10. **hua-tij=ca=xa dios**  
**PRF-sit=EMPH=EMPH God**  
'God certainly exists.'  
'Está o ay ciertamente Dios.' (Cordova 1578:51v)

11. **hua-zó=ci cani**  
**PRF-be.standing=only this**  
'It is still there.'  
'Todavía está allí.' (Cordova 1578:51v)
HABITUAL/CONTINUOUS SENSES

12. \(\text{oa= ti- zabilachi bezeloo chela co-çaca =ni} \)
\(\text{prf=impv-desire devil and pfv-cause=3} \)
\(\text{queni tono tola...} \)
\(\text{qu-eni =tono tola...} \)
\(\text{IRR-do=1pl sin} \)

'the devil desires and causes us to do sins' (Feria 1567:f55)
Desea el demonio, y p[ro]cura que pequemos

⇒ Habitual 'the devil habitually wants...' or
⇒ Continous 'the devil always wants'
WA-NA HABITUALS

1 Word
quela ninaquíaçaalonezaçalo
Morphemes quela = ni quíaça lo neza ça lo
Lex. Gloss NOM REL be.necessary walk face/to:through:from; to road walk face/to:through:from; to
queya tobi tobi queche : la oanacalo coníya , la
queya tobi tobi queche = la òa(= pre-aspect) STA be(not-PERF/PREF) 2s merchant or
market every one pueblo or PRF(pre-aspect) STA be(not-PERF/PREF) 2s merchant or
oanacalo còona , la anacalo cobeche ,
oa = n aca = lo còona = la a - n aca = lo cobeche
PRF(pre-aspect) STA be(not-PERF/PREF) 2s worker or PRF STA be(not-PERF/PREF) 2s official
nañij ooachibaa tete çaaloo : quechela
oa zij ooachibaa tete çaaca = lo quechela
PRF affliction PRF misery very cause, create 2s IRR RE reach? obtain? (w/RE)
lo quicha guechelayoo .
lo quicha gueche layoo
face/to:through:from; to property pueblo land

Free Eng In acquiring this you will have to work because it is necessary that you go through the path and through the markets from town to town being merchant, laborer, official, and have to go through many bad chances: to reach the earthly goods.

Span El adquirir loste ha d costar trabajo, por que es ne cessario, que andes por los caminos y por los mercados, de pueblo en pueblo: ora seas mercader, ora seas labrador, ora seas official, has de passar mucha mala ventura: para alcançar los bienes terrenales.

Feria 1567:27v
## Colonial vs Modern Uses

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<tr>
<th>Reading</th>
<th>Colonial</th>
<th>Modern</th>
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<td>Overlap</td>
<td>Yes ((wa-asp-V))</td>
<td>No (\rightarrow) Progressive</td>
</tr>
<tr>
<td>Ongoing</td>
<td>Yes ((wa-asp-V))</td>
<td>No (\rightarrow) Progressive</td>
</tr>
<tr>
<td>Positional</td>
<td>Yes ((wa-V))</td>
<td>No (\rightarrow) Progressive</td>
</tr>
<tr>
<td>Perfect 1 (Res State = Speech Time)</td>
<td>Yes ((wa-V))</td>
<td>Yes ((a-asp-V))</td>
</tr>
<tr>
<td>Perfect 2 (Res State = Event Time)</td>
<td>Yes ((wa-V))</td>
<td>Yes ((a-asp-V))</td>
</tr>
<tr>
<td>Evaluative</td>
<td>Yes ((wa-V))</td>
<td>No?</td>
</tr>
<tr>
<td>Durative</td>
<td>Yes ((wa-asp-V))</td>
<td>Isthmus only ((wa-V))</td>
</tr>
</tbody>
</table>
RECONSTRUCTED PHONOLOGY

- Proto-Central Zapotec *gʷa
  - Guevea ba
  - Mitla ba ~ a 'perfect'
  - Colonial texts wa (spelled hua- ~ oa)
  - Isthmus wa- 'perfect, repeated action'
  - Other modern Valley a 'perfect'
- *gʷ > b is a regular rule in Zapotec historical phonology
- *gʷ > w is also attested in some forms, however most modern Valley Zapotec languages do not permit word-initial /w/ (a few borrowed excepted)
- w > Ø is unexpected
ORIGINS OF THE PERFECT

- The particle/clitic marking perfect (*gwa > ba ~ wa ~ a) shows no verbal or adpositional properties at all.
- Its likely cognate outside Central Zapotec is a particle in Northern Zapotec meaning approximately 'The event/state is true at speech time'.
  - Atepec wa= 'sí'
  - Zoogocho ba 'affirmativo'
  - Macuiltianguis ba 'it is true that X'
- If this is correct, then the diachronic development is from evaluative to perfect.
- Pragmatically, 'X is now true' suggests that at some previous point X was not true. This pragmatic inference is a possible diachronic pathway for perfect readings.
COMPETITION WITH THE PROGRESSIVE

- Broadwell (2015) argues that the progressive is a fairly recently innovated aspect in Central Zapotec (ca. 1000 C.E.)
- Although the progressive appears in colonial texts, its range is far smaller than the modern range of uses.
- As the progressive has expanded historically, the perfect has contracted.
  - In particular the overlap, progressive, and positional readings are all expressed with the progressive aspect in modern languages.
  - The perfect readings continue into most of modern Central Zapotec.
  - Isthmus Zapotec has a 'repeated past action' reading that is probably related to the durative readings of the colonial material
CONCLUSIONS

- In contrast to the expansion of the perfect seen in many languages, Central Zapotec shows a historical contraction of the readings for the perfect.

- In colonial texts, the *wa*- morpheme is used
  - a) For events which overlap with speech time or event time
  - b) For resultant states which overlap with speech time or event time
  - c) For durative/habitual events and states
  - d) In evaluative statements

- In modern languages,
  - the overlap readings in (a) are no longer available
  - Isthmus shows a continuation of the durative reading (c)
  - other Central Zapotec shows a continuation of the resultant state reading (b)
  - Whether any languages still have the evaluative reading (d) is unclear
REFERENCES

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