The Piipaash word for 'coyote' as a window into Yuman historical development

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- The Piipaash Elders and the broader Piipaash community for having shared their language with me.
- Skye Anderson
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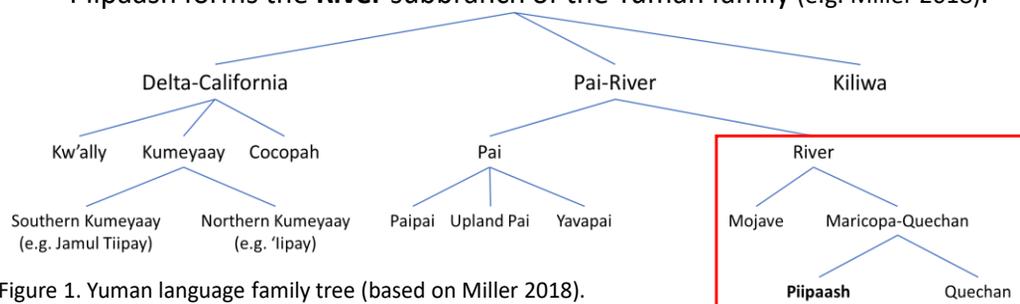- John Powell
- Kelly Washington

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Introduction

- I hypothesize that the Piipaash word *xatlywe* /xatʌwe/ 'coyote' derives from historical reflexes of two independent morphemes: *xat* /xat/ < /*xat/ 'dog' and *lyvii-* /ʌviː-/ < /*ʌwi(ː)-/ 'be like, look like'.
  - That is, *xatlywe* more literally refers to something which 'looks like a dog'.
  - This is supported by the use of *xatlywe* in archival materials, wherein Piipaash speakers extend it to other *Canidae*, namely 'fox' and 'wolf'.
  - I show that other Yuman languages similarly derive a common name for 'coyote' from that for 'dog', which is distinct from the name of mythic Coyote.
- The /v/ of *lyvii-* reflects a shift from Proto-Yuman /*w/ > River /v/. *Xatlywe* became lexically frozen prior to this shift, hence the retention of /w/.
  - *Xatlywe* provides evidence for the direction of the proposed shift, which both is rare cross-linguistically and has had important historical implications.
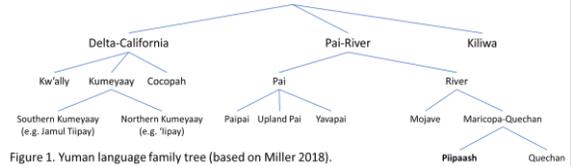
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Piipaash

- **Piipaash** (mrc; 33.51, -111.75) (also spelled "Pee Posh"; a.k.a. Maricopa) is a **Yuman** language spoken near Phoenix, AZ (Ethnologue s.v. "Maricopa").
  - Yuman languages are today spoken in Arizona, California, and Baja California.
  - Together with Mojave (mov; 34.89, -114.6) and Quechan (yum; 32.79, -114.6), Piipaash forms the **River** subbranch of the Yuman family (e.g. Miller 2018).

Figure 1. Yuman language family tree (based on Miller 2018).

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  - Together with Mojave (mov; 34.89, -114.6) and Quechan (yum; 32.79, -114.6), Piipaash forms the **River** subbranch of the Yuman family (e.g. Miller 2018).
- The U.S. Census Bureau estimated that there were 35 speakers of "Cocomaricopa" in 2015. However, more recent estimates place the number of speakers much lower (e.g. SRPMIC Cultural Resources Department, n.d.).
  - Community members are fluent in English, some also in Akimel O'odham (Uto-Aztecan).
  - Revitalization efforts are ongoing at both the Salt River Pima-Maricopa Indian Community's O'odham Piipaash Language Program and the Gila River Indian Community.

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Observations from archival materials

House sparrow Cactus wren

- The names for flora and fauna are occasionally glossed inconsistently in archival materials: they may be inconsistent across speakers/fieldnotes, or inconsistent with how today's speakers use the same words.
  - Some of these inconsistencies reflect misidentifications, most likely on the part of the linguist, who may be unfamiliar with the local wildlife and/or unable to make the relevant connections (e.g. Rea 2007: xvi-xvii).[1]
    - Whereas Langdon et al. (1991) and others have recorded *xnvchiip* as 'small sparrow', Spier (1946: 113) glosses the same word as 'cactus wren (?)'.
    - James Crawford (1962) worked with one speaker who identified *chyer* 'bird' as 'bluejay'.
  - But some of these inconsistencies reflect legitimate differences in how speakers of the past used these words, and these differences can provide valuable insights into how Piipaash has changed over time.........

[1] In respect of Piipaash customs which prohibit using the names of the deceased, I refer to the linguists who collected these notes instead. 6

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The 'coyote' problem

- In modern Piipaash, *xatlywe* /xatʌwe/ is used only as the common name for 'coyote' (Langdon et al. 1991). However, archival materials attest to this name being extended to 'fox' and 'wolf' as well.
    - In field notes dating from 1929 to the early 1960s (collected by James Crawford, Judy Crawford, Alfred Kroeber, and Leslie Spier) *xatlywe* is glossed as 'fox' either in addition to or in place of 'coyote' a number of times.
    - Additionally, at least two speakers are attested as having used *xatlywe* as a generic term for 'coyote, fox, and wolf' (Spier 1946: 105; Alpher 1970).
        - cf. modern Piipaash *qoqo/mkwe* 'fox', *xatkuuly* 'wolf' (Langdon et al. 1991).
    - This latter grouping includes all of the major *Canidae* which Piipaash speakers would have been familiar with, with the exception of *xat* 'dog'.

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The 'coyote' problem

- Why are speakers attested as having used *xatlywe* historically for 'fox' and 'wolf', in addition to 'coyote'? There are two possibilities:

1. These are mistakes. Someone involved in recording these materials must have misidentified *xatlywe* as 'fox, wolf'.
    - Spier thought so: Near the end of his notes (1929-1930), he wrote that earlier glosses of *xatlywe* needed to be corrected from 'fox' to 'coyote'.

2. These are valid uses of *xatlywe*. Historically it served as a generic term for non-dog *Canidae*, with its meaning narrowing to 'coyote' over time.

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The 'coyote' problem

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   - Spier thought so: Near the end of his notes (1929-1930), he wrote that earlier glosses of *xatlywe* needed to be corrected from 'fox' to 'coyote'.
   - BUT! Coyote is an important character in Piipaash folklore (e.g. Spier 1933).
   - AND! Coyotes are not uncommon in the Southwest. It would be strange for Piipaash speakers or even American linguists to misidentify them………

2. These are valid uses of *xatlywe*. Historically it served as a generic term for non-dog *Canidae*, with its meaning narrowing to 'coyote' over time.

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Two observations about *xatlywe*

1. The mythic character Coyote has a different name which is unrelated to the common name *xatlywe* (Spier 1933: 353; Wares 1968: 81; Alpher 1970).
   - This is true in other Yuman communities, such as Yavapai (Kendall 1980: 132).
   - Traditional Piipaash customs prohibit using the names of living and (especially) deceased individuals (Spier 1933: 197-198) (hence I avoid using the mythic name here).

2. The first syllable of ***xat****lywe* overlaps with the morpheme *xat* 'dog'.
   - This is also true of the common name ***xat****kuuly* 'wolf'.
   - It's tempting to hypothesize that both *xatlywe* 'coyote' and *xatkuuly* 'wolf' are derived from *xat* 'dog'. This might even explain why *xatlywe* is never extended to 'dog' in archival materials………

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Hypothesis

- I hypothesize that the common name *xatlywe* 'coyote' derives from historical reflexes of *xat* 'dog' and the verb *lyvii-* 'be like, look like'.
  - That is, *xatlywe* more literally refers to something which 'looks like a dog'.
  - Speakers combined these morphemes to form a new word which could have plausibly referred to any non-dog *Canidae*, and which they used to refer to the common 'coyote' in order to avoid using the mythic name.
  - The historical use of *xatlywe* for 'fox, wolf' reflects speakers' sensitivity to the morphological composition of this word (these animals too look like a dog).
  - Over time, *xatlywe* became lexically frozen and narrowed in its scope, such that speakers now can only use it to mean 'coyote'.

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Evidence for *xat* 'dog' as a component of *xatlywe*

- Dogs (*xaat*) were an important pet kept by the Piipaash (Spier 1933: 73-74).
  - One of Spier's consultants attested that dogs were in several senses human (hence their meat could not be eaten, unlike other animals kept as pets), and they could even appear in dreams in the form of humans (Spier 1933: 74; 254).
- Did Piipaash speakers use *xat* to derive other names? If so, it would make it more plausible that they also used *xat* to create *xatlywe*.
  - *ny**xat*** 'pet' (*ny-xat* 'POSS-dog') (Spier 1933: 73; Langdon 1978; Langdon et al. 1991).
  - ***xat**kuuly* 'wolf' (Spier 1946; Langdon et al. 1991) – Spier (1946: 106) hypothesizes that it means 'bigger than a dog', but I suspect that the second morpheme is *kuly-* 'climb, go up', making *xatkuuly* literally a 'dog that climbs'.
  - *txpa(sh)* 'Akimel O'odham/Pima' (Spier 1933: 7; Langdon et al. 1991) – I suspect that this is metathesized from *** *xt**pa(sh)* (*xt-pa-sh* 'dog-person-PL').
    - *txpa **xat*** 'dog Pima', another O'odham-speaking group (Spier 1933: 7).

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Evidence for *xat* 'dog' as a component of *xatlywe*

- In fact, Piipaash seems to have followed a Yuman-wide strategy of deriving a common name for 'coyote' using the morpheme for 'dog':
  - I surveyed other Yuman languages + Cochimí (which Mixco (1978) identifies as a distant relative of Yuman) for the words for 'dog' and 'coyote'.
  - In 3/4 subfamilies + Cochimí, at least one language appears to derive the word for 'coyote' from that for 'dog' plus another morpheme.

Table 1. Yuman words for 'dog' and 'coyote'.								
	River			**Pai**	**Delta-California**		**Kiliwa[2]**	**Cochimí[7]**
	Piipaash[1]	**Quechan[2]**	**Mojave[2,3]**	**Yavapai[4]**	**Cocopa[5]**	**Ipai[6]**		
'dog'	xat	'axáṭ ('horse')	'ahat ('pet'), hatchoq	kθár	xaṭ	'ehatt	tʰát	ʔ-t-(k)at
'coyote'	**xat**lywe	**xat**alwé	hukthar	**kθàr**ʔhāna	**xṭ**pa	**hatt**epaa	milti?	ʔ-t-**(x)at**-wachitaba-wa
The data presented in this table comes from the following: [1] Langdon et al. (1991); [2] Wares (1968); [3] Munro et al. (1992); [4] Shaterian (1983); [5] Crawford (1989); [6] Couro and Hutcheson (1974); [7] Mixco (1978). As I aim only to demonstrate similarities across forms within individual languages, I have not attempted to regularize the orthographies used here.								

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Evidence for *xat* 'dog' as a component of *xatlywe*

Figure 1. Yuman language family tree (based on Miller 2018).
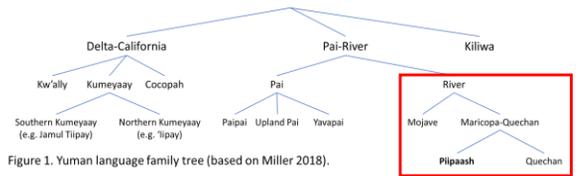
- Given that speakers have formed other words from *xat* 'dog', it is plausible that they also derived *xatlywe* 'coyote' this way.

- Given (1) that a similar form exists in Quechan *xatalwé* 'coyote', (2) that these languages are closely related, and (3) that historical animosities had existed between the two communities (Kroeber and Fontana 1986) which likely precluded contact/borrowing between them, it seems plausible that *xatlywe* dates back at least to speakers of **Proto-Maricopa-Quechan**.
  - It could also be that *xatlywe* dates back to **Proto-River**, with Mojave *hukthar* having replaced it as a form borrowed from the neighboring Pai languages (cf. Hualapai *gathád* [gaθar] (Watahomigie et al. 2003); Yavapai *kθár* 'dog' (Shaterian 1983) (see also Wares 1968: 81)), but this is entirely speculative.

- For simplicity, I will continue to treat this as a Piipaash phenomenon.

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Phonological developments in River Yuman

- So if Piipaash *xatlywe* 'coyote' is related to *xat* /xat/ 'dog' and *lyvii-* /ʎviː-/ 'be like, look like', then why is the word not *xatlyvii?

- I propose that *xatlywe* involved historical forms /*xat/ and /*ʎwi(ː)/.
  - /*xat/ is a fairly uncontroversial reconstruction of the Proto-River form for 'dog' (cf. Mojave *ahat* 'dog, pet', Quechan *'axáṭ* 'dog, horse' (Wares 1968)), which has remained unchanged in Piipaash *xat* and *xatlywe*.
  - /*ʎwi(ː)/ must have undergone two changes, both of which have been proposed for the River subbranch previously:
    - Lowering of /*i(ː)/ to /e/ in *xatlywe* (Langdon 1976; Munro and Gordon 1990);
    - Strengthening of /*w/ to /v/ in *lyvii-*, but not in *xatlywe* (Langdon 1975).

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Lowering of high vowels in River Yuman

- Langdon (1976) proposed a three-vowel system for Proto-River: /*i, *u, *a/.

- Furthermore, she proposed that the high vowels /*i, *u/ lowered to /e, o/ except before palatal consonants or /k, s/ (see also Munro and Gordon 1990).[2]
  - The /*i/ of /*ʎwi(ː)/ would have lowered to /e/ in *xatlywe*. However, the vowel remained /iː/ in *lyvii-*, which often cooccurs with the *-k* realis suffix.
  - Similar /e~iː/ alternations can be found in Piipaash (and in Mojave, Quechan):
    1. *we-xa* 'do-IRR'   *wii-k* 'do-say.COMP'   (Munro and Gordon 1990)
    2. *kwe* 'cloud'   *kwii-* 'be cloudy'   (Langdon et al. 1991)
    3. *xwe* 'enemy, war'   *xwii-* 'be enemies, have war'   (Langdon et al. 1991)

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[2] Working with limited data beyond Quechan, Langdon (1976) originally framed this as a process which had applied in Quechan. However, this rule can and has also been applied in explaining phonological developments in Mojave and Piipaash (Munro and Gordon 1990).   16

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Strengthening of /*w/ to /v/ in River Yuman

- A major sound correspondence differentiating River Yuman from the other subbranches is that between /w, j/ and River /v, ð/ (Kroeber 1943, Wares 1968).

	Kiliwa	Pai	Delta-California	River		
Table 2. Correspondence sets for non-River /w, j/ vs. River /v, ð/ (data from Wares 1968).						
Word		Yavapai	Cocopa	Piipaash	Mojave	Quechan
'house'	**w**áˀ	uw**á**	**w**á	a**v**áˀ	ˀa**v**á	ˀa**v**á
'stone'	**w**é·y	ˀuw**í**ˀ	**w**í	**v**í·	ˀa**v**í·	ˀa**v**í·
'tooth'	**y**á·w	ˀ**y**ó·ˀ	i**y**á	i**đ**ó	i·**đ**ó·	i·**đ**ó·

I have maintained Wares' original transcriptions. The letter ‹y› corresponds to /j/, and ‹đ› corresponds to /ð/.

- Langdon (1975) proposed that these sounds correspond to Proto-Yuman /*w, *j/, which strengthened to /v, ð/ **root-initially** in River Yuman.

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Strengthening of /*w/ to /v/ in River Yuman

- I propose that *xatlywe* became lexically frozen prior to the /*w/ > /v/ shift in River, preserving the original consonant of /*ʎwi(:)/ (> Piipaash *lyvii-*).

- Phonological shifts whereby glides strengthen to fricatives (rather than the reverse) are rare cross-linguistically (Pulleyblank 1989: 388; Shaul and Hill 1998: 380). In fact, the rarity of this change has been used as evidence:
  - for grouping Mojave, Quechan, and Piipaash into a sub-family of Yuman.
  - that speakers of Proto-River and Proto-Tepiman, which exhibits a similar shift /*w, *j/ > /g, d/, were in contact in the Hohokam period: glide strengthening diffused from one speech community to the other (Shaul and Hill 1998).

- The preservation of /*w/ in *xatlywe* substantiates this shift in River Yuman, evidence for the direction of which has until now been lacking.

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Loose ends

- Have Piipaash speakers ever used *lyvii-/-lywe* to form other words?
  - To my knowledge, no. There are no other words in Langdon et al. (1991) which bear *-lywe*, nor am I aware of other such words in Piipaash.
  - This is not unusual: plenty of other animal names decompose into at least one morpheme which doesn't recur in others (e.g. *xat**kuuly*** 'wolf').
- Could Piipaash speakers have borrowed *xatlywe*?
  - We have seen that other Yuman languages, except Quechan, use a different word for 'coyote'. Even if Piipaash speakers borrowed *xatlywe* from Quechan (or vice versa), it still originated within the Maricopa-Quechan sub-family.
  - The Piipaash and O'odham (Uto-Aztecan) have long lived together (Spier 1933), but the relevant names in O'odham are different (cf. *ban* 'coyote', *gogs* 'dog' (Zepeda 1984)), so it is unlikely that they influenced *xatlywe*.

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Summary

- In archival materials, Piipaash speakers are attested as having extended *xatlywe* 'coyote' to 'fox, wolf' as a generic term for non-dog *Canidae*.
- I have proposed that *xatlywe* is derived from historical reflexes of *xat* 'dog' and *lyvii-* 'be like, look like': namely, /*xat/ and /*ʌwi(ː)/.
  - Piipaash has followed a Yuman-wide strategy of deriving a common name for 'coyote' from that for 'dog', possibly to avoid using Coyote's mythic name.
  - While *xat* remained the same, /*ʌwi(ː)/ underwent (1) lowering of the vowel to /e/ in *xatlywe*, and (2) strengthening of /*w/ to /v/ root-initially in *lyvii-*.
  - /*w/ > /v/ is a characteristic feature of River Yuman, and the direction of this shift has significant historical implications (Shaul and Hill 1998). *Xatlywe* became lexically frozen prior to this shift, and so preserves the /w/. This etymology of *xatlywe* thus provides crucial evidence for the direction of this shift.

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