# Instrumental prefixes in Umó<sup>n</sup>ho<sup>n</sup> (Omaha)

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Experimental and computational approaches to morphology and the lexicon

### Introduction

- The Umó<sup>n</sup>ho<sup>n</sup> language
- Presentation of the instrumental prefixes
- Research questions

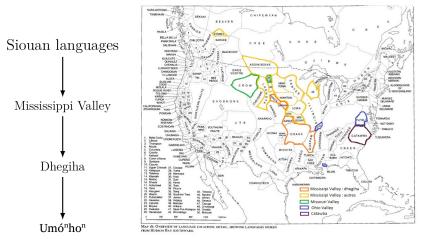
### 2 Analysis

- The causative function of instrumental prefixes
- Prediction of the causative function
- Semantic analysis of the instrumental verbs

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# The Umó<sup>n</sup>ho<sup>n</sup> language

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The Siouan languages (adapted from Mithun 1999)

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### Umó<sup>n</sup>ho<sup>n</sup> documentation

- Highly endangered language (speakers over 70)
- Language thoroughly documented by James DORSEY in the late 19th Century. (Dorsey 1890, 1891, no date)
  - Glossed and translated texts (+800pp)
  - Manuscript dictionary (around 18000 entries)
  - Manuscript grammar
- Contemporary documentation:
  - recordings and transcriptions by Catherine Rudin in the 1990s (Rudin et al. 1989-1993);
  - lexicons and textbooks (e.g. Saunsoci & Eschengeberg 2016; ULCC & UNL 2018);
  - my recordings

Abbreviations for sources from Dorsey: DD, DT, D92 Abbreviations for 20th & 21st Century sources: UNL, RT, RE, UNPS, ...

### Typological features of Umó<sup>n</sup>ho<sup>n</sup>

- SOV, postpositions, determiner follows the noun
- Head marking, with the following characteristics:
  - 2 arguments encoded on the verb
  - 3sg persons are generally not encoded
    - (1) Ø-Ø-no"ón P3sG-A3sG-hear
       "She hears him" (Saunsoci & Eschenberg 2016:117)
  - many valency-changing prefixes on the verb
  - possession mainly encoded on the verb
  - very limited nominal inflection, few postpositions
- many conjugational paradigms (136 different paradigms presented in ULCC 2015)
- a set of 11 definite articles which act as determiners, relativizers, copulas, evidential markers

### Morphological alignment: split intransitivity

(2) Intransitive active verbs (Agentive grammatical role)

a-bó <sup>n</sup>	tha-gthí <sup>n</sup>	a-ó <sup>n</sup> he	<mark>a-</mark> ťé
A1sG-call	A2-sit	A1sG-flee	A1sG-die
I give a call	you sit	I fled	I die

(3) Intransitive stative verbs (Patientive grammatical role)

o <sup>n</sup> -shí <sup>n</sup>	o <sup>n</sup> -wo <sup>n</sup> k <sup>h</sup> ega	<mark>ó<sup>n</sup>-baniuski</mark>	u- <mark>thí-</mark> xpathe
P1sG-fat	P1sG-sick	P1sG-hiccup	(1)-P2-fall(2)
I am fat	I am sick	I hiccupped	you fell

(4) Transitive verbs

a-sitheo<sup>n</sup>-sithao<sup>n</sup>-thá-sitheA1sG-rememberP1sG-rememberP1sG-A2-rememberI remember him/herS/he remembers meYou remember me

### Morphological alignment: split intransitivity

(2) Intransitive active verbs (Agentive grammatical role)

a-bó <sup>n</sup>	tha-gthí <sup>n</sup>	a-ó <sup>n</sup> he	<mark>a-</mark> ťé
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(4) Transitive verbs

a-sithe	o <sup>n</sup> -sitha	o"-thá-sithe
A1sg-remember	P1sG-remember	P1sG-A2-remember
I remember him/her	S/he remembers me	You remember me

Accusative person marker: wa- O3PL for animate objects (5)

<mark>a-wá</mark> -gi-sithe	no <sup>n</sup> péhi <sup>n</sup> =i
A1sg-O3pl-poss-remember	be.hungry = PL
I remember them	they are hungry

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# Presentation of the instrumental prefixes

### The instrumental prefixes

Prefixes with a lexical content: they refer to movements, body parts, natural forces, instruments

- ba- by pushing
- bi- by pressing, by blowing
- ga- by striking, with sudden force, by wind/water (sudden)
- *no<sup>n</sup>* with the feet (walking, running, dancing, kicking, patting...)
- *tha-* with the mouth (talking, singing, eating, drinking, biting...)
- *thi* with hands, by pulling  $\rightarrow$  neutral
- má- by cutting with a knife
- *mú* by shooting, by wind
- ná- by heat, by fire

### The instrumental prefixes: areal feature

Prefixes with a lexical content: they refer to movements, body parts, natural forces, instruments (Mithun 2015)

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- *mú* by shooting, by wind/water
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### Instrumental affixes as an areal feature



"Means/manner/instrumental affixes" (Mithun 2015)

### Instrumental verbs in xó<sup>n</sup>

#### From $x \acute{o}^n$ 'to be broken'

- thi-xó<sup>n</sup> 'to break sth (with the hands)'
   e.g. to break sticks with one's hands (in Dorsey, 1890)
- *bi-xó<sup>n</sup>* 'to break sth by pressing it'
   e.g. to break a stick by leaning on it (in Dorsey, 1890)
- ga-xó<sup>n</sup> 'to break sth by stricking or violent/sudden action'
   e.g. to break a phone by throwing it away (in Saunsoci & Eschenberg, 2016)
- má-xo<sup>n</sup> 'to cut sth with a knife'
   e.g. to cut meat in several parts with a knife (in Dorsey, 1890)
- mú-xo<sup>n</sup> 'to break sth by shooting'
   e.g. to shoot at an elk and break his leg (in Dorsey, 1890)

### Diachronic origin & productivity

Prefixes reconstructed to Proto-Siouan (Sieber 1945; Rankin n.d.) Originally verbs and nouns Three "outer" instrumental prefixes  $m\acute{a}$ - 'with a knife',  $m\acute{u}$ - 'by shooting' and  $n\acute{a}$ - 'by extreme temperature' are newer (other slot in prefixal template), there is evidence that they originated as incorporated nouns or nominalized verb stems (Rankin n.d.: 1)

Syncronically, no link with the corresponding nouns or verbs: tha- 'with the mouth'  $\neq$ 

- í 'mouth'
- tha-t<sup>h</sup>é 'to eat {x}'
- *tha-tó<sup>n</sup>* 'to drink {x}'
- wa'ó<sup>n</sup> 'to sing'

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Productive over a long period of time

(6) ga-ná-kade
 INS:force-INS:temp-?
 'to heat an ob. by
 hammering it' (DD)

### Why prefixes and not stems or bound roots?

- Non-autonomous (not attested as stems, nor roots) exception: ná-zhi (INS:temp-NEG) '{fire} to be extinguished'
- No link with corresponding nouns or verbs
- Umó<sup>n</sup>ho<sup>n</sup> is a prefixing language, with complex morphophonological rules affecting the sequences of inflectional and derivational prefixes, including instrumental verbs

Comparison with non-autonomous root 'ó'si 'jumping (?)'

ightarrow *ga-ó*<sup>n</sup>*si* 'to bounce' (ST)

 $\rightarrow$  *thi-ó<sup>n</sup>si* 'to make a horse jump or prence (once) by pulling on the briddle' (DD)

 $\rightarrow$  *u-ó<sup>n</sup>si* 'to jump (in {x})',  $\rightarrow$  *á-o<sup>n</sup>si* 'to jump over {x}' (DT)

## Derivation with instrumental prefixes

Input: the "base"

- Morphologically simple / not attested alone "ó"si 'jumping (?)'
- Morphologically simple / lexical unit xó<sup>n</sup> 'to be broken'
- Morphologically complex / not attested alone °á\_de (in á-tha-de 'to read {x}')
- Morphologically complex / lexical unit uxpáthe 'to fall'

Output: instrumental verbs

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# Research questions

The syntactic and semantic effects of the instrumental derivation are very diverse:

- From the stative verb xó<sup>n</sup> 'to be broken'
   → ga-xó<sup>n</sup> 'to break {x} by throwing it'
- From the active verb t'é 'to die'
   → mú-t'e 'to kill {x} by shooting' (DD)
  - $\rightarrow$  *mu-te* to kin {x} by shooting (DL)  $\rightarrow$  *ná-t'e* 'to die from the heat' (DT)
- From the noun *ó<sup>n</sup>ba* 'day'
  - ightarrow *no<sup>n</sup>-ó<sup>n</sup>ba* 'to walk until daybreak' (Dorsey 1890:439.6-7)
- From the stative verb *hégazhi* 'to be a lot'  $\rightarrow$  *tha-hégazhi* 'to make great noise (with the mouth)' (DT)
- From the bound root *shtó<sup>n</sup>* stopping, letting go' (DD)
   → *tha-shtó<sup>n</sup>* to stop talking, singing, eating, drinking...'
- From the onomatopoeic bound root táxi
   → ga-táxi 'to make the sound heard when a tree is struck with an
   ax in cold weather' (DD)

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### Research questions

- To what extent are these prefixes causative? (how frequently?)
  - In terms of lexicography
  - In terms of token in the corpora

- To what extent is the causative function predictible? (And the instrumental verb semantics and valency in general?)
  - depending on the meaning of the prefix
  - depending on the meaning of the base

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# The causative function of instrumental prefixes

### Instrumental verbs in xó<sup>n</sup>

### From $x \delta^n$ 'to be broken'

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   e.g. to cut meat in several parts with a knife (in Dorsey, 1890)
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   e.g. to shoot at an elk and break his leg (in Dorsey, 1890)

### Bases (input) of causative derivation

Causative derivation: Addition to a verb of an argument in the subject position, the original subject becoming an object (valency increase, semantic transitivity increase)

- Intransitive stative verbs denoting states: búta 'to be round', ...
   bí-buta 'to make {x} round' (applied to bread dough in ULCDP 2002)
- Intransitive stative verbs denoting events: uxpáthe 'to fall' u-bá-xpathe 'to make {x} fall by pushing' (applied to dead cattle from a train in Dorsey 1891)
- Intransitive active verbs denoting an event: xagé 'to cry' no<sup>n</sup>-xáge 'to make {x} cry by kicking him/her' (applied to a human in Dorsey 1890)

 $\rightarrow$  Semantic criterion: direct manipulation of the causee which has no control nor volition

### Semantically causative derivation

Causative derivation from non-verbal bases

- Nouns: u'úde 'hole'
  - $\rightarrow$   $u\text{-}m\acute{a}\text{-}'ude$  'to cut a hole in  $\{x\}$ ' (applied to tent-skin in Dorsey 1890)
- Sound-denoting bound roots (bound onomatopoeia?):  $p^{h}$ úki  $\rightarrow ga-p^{h}$ úki 'to make {x} produce the sound p<sup>h</sup>úki' (applied to tent-skin in Dorsey 1890)
- Other bound roots, denoting states: *"shpé* 'to be taken off' → *tha-shpé* 'to bite {x} off'

Creation of a transitive verb with direct manipulation, and the object having no control nor volition

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# Prediction of the causative function

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## Meaning of the prefix

One prefix is never causative: ná- 'by extreme temperature'

 (7) Tanúka shé-tho<sup>n</sup> ná-sage a? Ná-tube a? ... meat that-RND INS:temp-hard Q INS:temp-into.pieces Q
 Is that meat hardened by heat? [I]s it cooked tender? (OLIT-UNL 2018:563)

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   Is that meat hardened by heat? [I]s it cooked tender? (OLIT-UNL 2018:563)
- (8) káshi-xti Wakó<sup>n</sup>dagi ná-tube-wá-the.
   a.while-INTENS Water.Monster INS:temp-into.pieces-O3PL-CAUS
   [V]ery long ago he cooked the Water-monsters till the meat fell to pieces[.] (Dorsey 1890: 232.19 / Páthi<sup>n</sup>-no<sup>n</sup>pázhi)

The case of one polysemous prefix: ga-

- "Agentive meaning": by striking, throwing, hitting... (violent and sudden action)
- One of the wind, by effet of movement

The case of one polysemous prefix: ga-

- "Agentive meaning": by striking, throwing, hitting... (violent and sudden action)
- Won-agentive meaning": by falling, by force of the wind, by effet of movement

wakhéga 'to be sick'

 $\rightarrow$  ga-wák<sup>h</sup>ega 'to make {x} sick by striking' (DD), 'to make one sick from riding in a wagon that jolts or goes over rough ground' (DD), 'nauseous from environment: seasick, carsick, rollercoaster' (UNL)

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### wakhéga 'to be sick'

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*btháze* 'ripped open, torn open' (DD)

 $\rightarrow$  *ga-btháze* 'to burst open, as a sack, from falling' (DD); 'to gash {a person's flesh} by striking' (DD); 'to bust by falling (...)' (UNL)

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### The meaning of the base

• The base is a verb modifier:  $k^{h}\acute{u}the$  'quickly' (DD)  $\rightarrow ga \cdot k^{h}\acute{u}k^{h}uthe$  'to beat (something) rapidly' (DT)  $\rightarrow m\acute{u} \cdot k^{h}uk^{h}uthe$  'to shoot more rapidly than before' (DD) Also works for  $h\acute{e}gazhi$  '(to be) a lot', "pí 'well'

The base is a noun of time: *ó<sup>n</sup>ba* 'day'
 → *tha-ó<sup>n</sup>ba* 'to talk all night' (UNL) (= to talk until day)
 → *no<sup>n</sup>-ó<sup>n</sup>ba* 'to walk until daylight' (DT)

Also works for *hó<sup>n</sup>* 'night' and *míthumo<sup>n</sup>shi* 'noon'

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### The meaning of the base

- The base is an onomatopoeic bound root:
- (9) *xthabé thé-xchi thó<sup>n</sup>di zhó<sup>n</sup> gá-sa-i, ga- táxi, aí.* tree this-INTENS there wood INS:force-cut-PL INS:force- taxi say-PL

"At this very place they cut wood, for they make the sound 'Taxi', said he." (Dorsey 1890:456.2-3)

 (10) égithe te-néxe thi<sup>n</sup>k<sup>h</sup>é thi-btháza = biamá, at.length buffalo-bladder the INS:hand-open = PP.REPORT thi- xú'e-gó<sup>n</sup> = ma. INS:hand- xu'é-like = EVID
 At length the Buffalo bladder use tern and making the sound for the sou

At length the Buffalo-bladder was torn open, making the sound "xu'e." (Dorsey 1890: 259.11)

(11)  $Wat^{h} \delta^{n} zi \ tha shpi$   $that^{h} \delta = i \ ki$ ,  $tha s \delta thu = i$ corn INS:mouth-taken.off eat = PL when INS:mouth-rattle = PL ha.

DECL.M

- The base expresses an event that typically combines with another: *"shto"* 'stopping, letting go'
  - ightarrow *ga-shtó*<sup>n</sup> 'to stop striking'
  - $\rightarrow$  *tha-shtó*<sup>n</sup> 'to stop talking; singing; eating...'
  - $\rightarrow$  *ba-shtó*<sup>*n*</sup> 'to stop writing, pushing, or punching' (DD)

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### Difficulties of analysis

#### Intransitive active or transitive?

(12) Hó<sup>n</sup> t<sup>h</sup>e snéde-go<sup>n</sup>, shó<sup>n</sup>-xti ga-ó<sup>n</sup>ba=i.
 night VERT long-as continually-INTENS INS:force-day=PL
 As the night was long, they beat the rattles even till day.
 (Dorsey 1890: 439.6-7 / Páthi<sup>n</sup>-no<sup>n</sup>pázhi)

Methodological question:

Since 3rd persons inanimate or singular objects are not encoded on verbs, when an antecedant is available in the context, how do we know if a verb is transitive or intransitive?

### Intransitive passive or transitive?

(13) ... waníta weági-údo<sup>n</sup> Wakó<sup>n</sup>da thi<sup>n</sup>k<sup>h</sup>é we-gáxa = i animal B1PL-good W. OBV.SIT D1PL-make=PX thó<sup>n</sup>zha, bthúga-xti mú-thi<sup>n</sup>ga = í. though all-INTENS INS:shoot-lack = PL *Literally:* Although Wakó<sup>n</sup>da has created animals for our advantage, they are all exterminated/they have been shot. (Dorsey 1890: 628.6 / unknown speaker)

Methodological question:

On what criteria do we distinguish valency of the verb as a lexeme from its use in special syntactic constructions (i.e., an impersonal construction)?

### Difficulties of analysis

Intransitive active or transitive?

ga-ó<sup>n</sup>ba 1. 'to beat something until day' (intransitive)
2. 'to beat {x} until day' (transitive)

 $\rightarrow$  Considered intransitive on the basis of other instrumental verbs built with  $\delta^n ba$  'day' or with  $h\delta^n$  'night'. For instance:  $m\acute{u}-ho^n$  'to shoot all day until nightfall';  $thi-h\delta^n$  'to work until night'

Intransitive passive or transitive?

*mú-thi<sup>n</sup>ge* 1. 'to be exterminated by shooting' (intransitive)2. 'to exterminate {x} by shooting' (transitive)

 $\rightarrow$  Considered transitive on the bases of other instrumental verbs built with *thi<sup>n</sup>ge* 'to be without {x}'. For instance: *thi-thí<sup>n</sup>ge* 'to demolish {x}' (UNL); 'to pull {*all the fruits, corn*,} leaving none' (DD); *no<sup>n</sup>-thí<sup>n</sup>ge* 'to destroy {x} by trempling'

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# Semantic analysis of the instrumental verbs

Reminder Research question:

To what extent is the causative function predictible? (And the instrumental verb semantics and valency in general?)

 $\rightarrow$  Classification of the instrumental verbs into categories depending on the semantic constribution of the prefix and the base, and the presence or not of a causative function of the prefix

During my dissertation, I identified four main categories, that sometimes include subcategories. This is not an exhaustive classification.

#### 1. **Ins** manner, CAUS + **base** result

- (14) Ins manner, CAUS + base result
  - a. búta 'to be round'
    - $\rightarrow$  *thi-búta* 'to crumple up {*a sheet of paper*}'
    - $\rightarrow$  *bi-búta* 'to press {*x*} round'
  - b. *túbe* 'to be ground, broken up'  $\rightarrow \underline{m}\dot{a}$ -tube 'to cut {meat, tobacco} tolerably fine' (DD)  $\rightarrow \underline{b}i$ -túbe 'to rub {x} to powder'
  - c. uxpáthe 'to fall'
    - $\rightarrow$  *u-bá-xpathe* 'to make {*x*} fall by pushing'
    - $\rightarrow$  *u-bí-xpathe* 'to make {*x*} fall by pressing, rubbing'
  - d. xagé 'to cry'
    - $\rightarrow$  *no<sup>n</sup>-xáge* 'to make {x} cry by kicking them'
    - $\rightarrow$  *tha-xáxage* 'to make {x} cry repeatedly by biting them'

#### 2. Ins natural force, cause + base result

(15) Ins force, cause + base caused event/state/noise

- a. *béni* '(to be) bent forward'  $\rightarrow$  *ga-béni* 'to bend by effect of the wind'
- b. *skó<sup>n</sup>* 'to be melted, thawed'
  - $\rightarrow$  *ná-sko<sup>n</sup>* 'to melt or thaw (because of the heat)'
- c. t'é 'to die', 'to be badly hurt'
  - $\rightarrow$  *no<sup>n</sup>-t'é* 'to be killed / badly hurt by a machine'
  - $\rightarrow$  *ná-t'e* 'to die from the heat'
  - ightarrow *ga-t'é* 'to die from a fall'
- d. táxi (onomatopoeic)
  - ightarrow *ga-táxi* 'to make a tapping sound by falling'

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#### 2. Ins natural force, cause + base result

From nouns:

(16) ga- force, cause + base created result uk<sup>h</sup>iba 'a crack or open space bounded by two parallel lines' (DD)
→ u-gá-k<sup>h</sup>iba 'to crack by effect of the wind'; '{wind} to make a crack' (DD)

#### 3. **Ins** predicate + **base** adverb/circumstantial

- (17) Ins predicate + base adverb / modifier
  - a.  $k^{h}$ úthe 'quickly' (DD)  $\rightarrow \underline{m}$ ú- $k^{h}uk^{h}uthe$  to shoot more rapidly than before (DD)
  - b. hégazhi 'a lot' (also hégabazhi)
    - $\rightarrow$   $\emph{mu-hegazhi}$  'to make a lot of noise while shooting'
    - $\rightarrow$  *tha-hégazhi* 'to make a great noise (with the mouth)'
  - c. \*pí 'good' (DD, who adds: "not used as a separate word")
    - ightarrow *no<sup>n</sup>-pí* 'to dance well'
    - $\rightarrow$  *thi-pí* 'to be good at {*VP*}'

#### 3. **Ins** predicate + **base** adverb / circumstantial

- (18) Ins predicate + base time circumstancial (limit of time)
  - a. *ó<sup>n</sup>ba* 'day'

ightarrow *ná-o<sup>n</sup>ba* 'to burn until day'

- b. *hó<sup>n</sup>* 'night'
  - $\rightarrow$  *shó<sup>n</sup> thi-hó<sup>n</sup>* 'to work until night without stopping'
  - $\rightarrow$  *mú-ho<sup>n</sup>* 'to shoot all day until nightfall' (UNL)
- c. *míthumo<sup>n</sup>shi* 'noon'

 $\rightarrow$  *no<sup>n</sup>-míthumo<sup>n</sup>shi* 'to walk until noon'

#### 4. **Ins** predicate + **base** predicate

#### (19) **Ins** predicate + **base** predicate

- a. *\*shnó<sup>n</sup>* 'to miss (the objective)'
  - $\rightarrow$  *ba-shnó*<sup>*n*</sup> 'to miss {*x*} while pushing' (DT)
  - $\rightarrow$  *mú-shno<sup>n</sup>* 'to miss ({*x*}?) while shooting' (DT, SE, UNL)
  - $\rightarrow$  *thi-shnó*<sup>n</sup> 'to drop {x}' (DT)

 $\rightarrow$  *tha-'á* 'to fail to drink / eat {x}'

 $\rightarrow$  *ná-*'*a* 'to fail, for want of time, in burning or freezing' (DD)  $\rightarrow$  *ga-*'*á* 'to fail (in finishing) to chop wood/strike ({*x*}?)' (DD, UNL)

#### Conclusion

- Ins manner, CAUS + base result
  - Types of bases: intransitive stative verbs; intransitive active verbs; nouns
  - Example: *mú-xo<sup>n</sup>* 'to break {x} by shooting'
- 2 Ins natural force, cause + base result
  - Types of bases: intransitive stative verbs; nouns
  - Example: *ná-t'e* 'to die from the heat'
- **Ins** predicate + **base** adverb / circumstantial
  - Types of bases: manner adverbs; nouns denoting time; stative verbs
  - Example: *tha-ó<sup>n</sup>ba* 'to talk until the day'
- Ins predicate + base predicate
  - Types of bases: bound roots expressing events
  - Example: *ba-shtó<sup>n</sup>* 'to stop writing, pushing, or punching'

#### Conclusion

- Ins manner, CAUS + base result
  - Types of bases: intransitive stative verbs; intransitive active verbs; nouns
  - Example: *mú-xo<sup>n</sup>* 'to break {x} by shooting'
  - Example 2: *bi-búta* 'to press {*x*} round'
- Ins natural force, cause + base result
  - Types of bases: intransitive stative verbs; nouns
  - Example: *ná-t'e* 'to die from the heat'
- **Ins** predicate + **base** adverb / circumstantial
  - Types of bases: manner adverbs; nouns denoting time; stative verbs
  - Example: *tha-ó<sup>n</sup>ba* 'to talk until the day'
- Ins predicate + base predicate
  - Types of bases: bound roots expressing events
  - Example: *ba-shtó<sup>n</sup>* 'to stop writing, pushing, or punching'

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# Thank you

## Wibthaho<sup>n</sup>

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## Additional slides

oduction Analysis Semantic analysis of the instrumental verbs

### Valency-modifying constructions

causative	<i>t'é-the</i> die-caus kill {x}	<i>bi-t'é</i> ins:press-die kill {x}by pressing	<i>snéde gáxe</i> long <mark>make</mark> make {x} long
applicative	<i>í-bat<sup>h</sup>e</i>	gí-bat <sup>h</sup> e	á-gthi <sup>n</sup>
	INST-SEW	BEN-SEW	SUPER-sit
	sew {x} with {y}	sew {x} for {y}	sit on {x}
antipassive	that <sup>h</sup> é	wa-thát <sup>h</sup> e	
	eat	ANTIP-eat	
	eat {x}	eat	
incorp.	gthó <sup>n</sup>	mí <sup>n</sup> -gtho <sup>n</sup>	
	marry	woman-marry	
	marry to {x}	marry	
reflexive	u < kí > k <sup>h</sup> ie	ki-páaze	
reciprocal	<REFL $>$ talk	<b>RECIP-scare</b>	
	talk to oneself	scare each other	

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#### Primary sources: Dorsey's texts

#### MY FIRST BUFFALO HUNT.

#### BY FRANK LA FLÈCHE.

Chiber " of is. Pahni's pift ti a "ging of dals is available might three the sense the sense three the sense three sense three the head three sense three sense three sense three sense three sense and the sense three sense three sense three sense three sense and the sense three sense three sense three sense three sense and the sense three sense three sense three sense three sense and three sense three sense three sense three sense three sense and three sense three sense three sense three sense and three sense three sense three sense three sense we have the sense three sense three sense three sense we have the sense three sense three sense three sense we have the sense three sense three sense three sense we have the sense three sense three sense three sense we have the sense three sense three sense three sense we have the sense three senses three sense three sense

Dorsey's The Dhegiha language (1890)

#### title My first buffalo hunt

thábthiró<sup>s</sup>n pí ha. pahó<sup>s</sup>ga pí té. o<sup>\*</sup>zhl<sup>o</sup>ga, ádo<sup>\*</sup> té awákida-mázhi T<sup>h</sup>ree times / I was there / . / Before / I was there / when / me small, / therefore / buffalo / I did not shoot at them / P. 466, line 1.

thó<sup>n</sup>zha, shó<sup>n</sup>ge wa 'i<sup>n</sup>k<sup>h</sup>ithé wébthi<sup>n</sup>-hno<sup>n</sup>-mó<sup>n</sup> wanáse amá. pahó<sup>n</sup>gaxchi though, / horse / to cause him to carry loads / I used to keep them for them / the ones who surrounded the herd. / At the very first / P. 466, line 2.

wanásai té.di, té awákide 'láthe. shónge dónshte thióntha théthai ki, té dónshte they surrounded them / when, / buffalo / I shoot at them / I spoke of. / Horse / perhaps / It throws you suddenly / when, / buffalo / perhaps / P. 466, line 3.

zháthihe taí, aí. ki awázhi<sup>n</sup>shte. i<sup>n</sup>dádi ak<sup>s</sup>á páheáta zhuó<sup>n</sup>gthe athaí. té-ma gore you / may. / said he. / And / I was in a bad humor. / My father / the (sub.) / to the hill / with me / went. / the buffaloes / P. 466. line 4.

wénaxithai the o<sup>¬</sup>wö<sup>¬</sup>do<sup>¬</sup>be o<sup>¬</sup>gth<sup>¬</sup>i. ki <sup>¬</sup>dádi ak<sup>+</sup>á o<sup>¬</sup>wö<sup>¬</sup>k<sup>+</sup>ie shtewö<sup>¬</sup>, uák<sup>+</sup>lamázhi-hno<sup>¬</sup>-mö<sup>¬</sup>. they atacked them / the / we saw them / we sat. / And / my father / the (sub.) / talked to me / notwit<sup>+</sup>standing, / I did not talk to him at any time. /

## Rankin's transcription of Dorsey's texts (2008)

- DORSEY, James. 1890. The Dhegiha language. Contributions to North American Ethnology, Vol. 6. Washington, D.C., U.S. Government. 820 pp.
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- RANKIN, Robert. 2008. James Owen Dorsey's The Dhegiha language.

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#### Primary sources: Dorsey's dictionary

maginatas, v. pas. of dyeses; to prevent animals re for criming as his tand by welling ince in diagonation, magination is. wa-gi-na"-so, v.poss. to cut wheat, grass, etc., with a mowing-ma chine, for his own family, etc. -- waragina"se, awagina"se.

Example of a dictionary slip file

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The online dictionary

- A Grammar and Dictionary of the Ponca Language by the Reverand J. Owen Dorsey. Manuscript. 444 pp. + 15,000 word entries
- Omaha Ponca Digital Dictionary Database View. http://omahaponcaadmin.unl.edu/.

#### Verb classes (morphosyntactic classification)

Defined by the number of arguments and their grammatical roles

14 verb classes at least (Marsault 2021)

Verb classes relevant today:

- Intransitive active verbs (A)
- Intransitive stative verbs (P)
- Transitive verbs (A/P)

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- Intransitive active verbs (A)
- Intransitive stative verbs (P)
- Transitive verbs (A/P)
- Bivalent stative verbs (P/NP): *thi<sup>n</sup>ge* 'to be without {*NP*}'
- Impersonal verbs (0 argument): no<sup>n</sup>zhí<sup>n</sup> 'to rain', ho<sup>n</sup> 'to be the night' (?)