

# Causation and Serialization in Hmong

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CoCOA

September 13, 2024

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# Introduction

This talk explores the relationship between **verb serialization** and **causation**.

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Both domains are sensitive to a boundary around the level of Voice:

- Serial verb constructions (SVCs) are often described as monoeventive (Stewart 2001, Bisang 2009, Cleary-Kemp 2015), which (by hypothesis) makes them a single VoiceP constituent.
- Direct/indirect causatives are encoded below/above Voice, and are monoeventive/bieventive (Fodor 1970, Rappaport Hovav & Levin 2001, Pytkänen 2008, Harley 2008, Schäfer 2009, Nie 2020, among many others).

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The first VoiceP of the verbal extended projection (the “event domain”) has a special status with respect to the derivation of events (the “first phase” of Ramchand 2008) and lexical insertion (the “domain of special meanings” of Marantz 1997, 2007).

# Introduction

Here, I present data from White Hmong (Hmong-Mien, Laos/Thailand).

In Hmong, direct causation is expressed by a productive serial verb construction, while indirect causation is expressed using a dedicated causative verb *ua* 'make'.

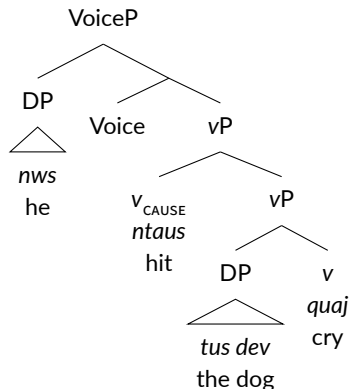
- (1) nws **ntaus** tus dev **quaj** *Direct causative (SVC)*  
3SG hit CLF dog cry  
'He hit the dog (making it) whine.'
- (2) nws **ua** tus dev **quaj** *Indirect causative (make-causative)*  
3SG make CLF dog cry  
'He made the dog whine.'

Both Hmong causatives are “periphrastic” (the cause and effect are described by two distinct words), yet they show a (relatively) typical direct/lexical vs. indirect/functional distinction.

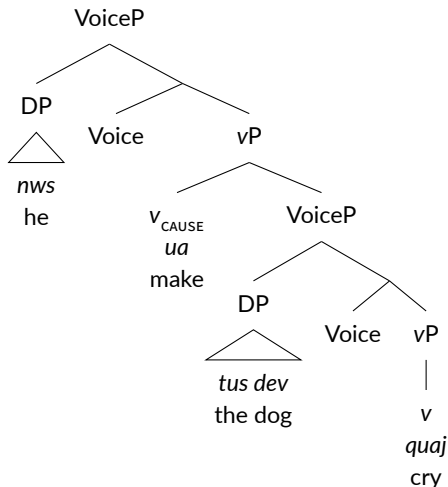
# Introduction

I show that the Hmong indirect causative is encoded in a higher syntactic position than the direct causative (e.g. Rappaport Hovav & Levin 2001, Harley 2008, 2017).

(3) Direct causative:



(4) Indirect causative:



Direct (SVC) causatives:

- A lexical  $V_1$
- A direct interpretation
- A single VoiceP

Indirect (*make*) causatives:

- A functional causative verb
- An indirect interpretation
- Multiple VoiceP layers



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To capture these contrasts, I propose:

- The “rich” conceptual content of lexical verbs enforces a direct interpretation of the causative construction (Bittner 1999, Kratzer 2004)
- Lexical verbs must merge within the event domain (i.e., VoiceP) even in highly serializing languages like Hmong.

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## Direct causatives via serialization

The direct causative is the better-described of the two Hmong causatives (see Jarkey 2015 on the “Cause Effect SVC”).

- (5) a. nws **ntaus** tus dev **quaj**  
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3SG smash CLF bowl break  
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- c. lawv **ua** lub tsev **loj~loj**  
3PL build CLF house RDUP~be(come).big  
'They built the house really big.'

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- $V_1$  must be transitive (an affective transitive verb or a creation verb).
- $V_2$  must be unaccusative (see Johnston 2024, §3.1.1.2); can be an Activity, Accomplishment, or State.

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- (6) Candii<sup>3</sup> liit<sup>4</sup> sù<sup>a5</sup> liap<sup>4</sup> (Lao; Cole 2016)  
Jandee iron shirt be.smooth  
'Jandee ironed the shirt smooth.'
- (7) Òzó sù<sup>á</sup> ágá dé (Edo; Stewart 2001)  
Ozo push chair fall  
'Ozo pushed the chair down.'

## Indirect causatives with *ua* 'make'

Hmong indirect causatives have received only cursory description (see Mottin 1978, Jaisser 1984, Bisang 1991, Jarkey 2006, 2015).

(8) kuv **ua** nws **ntshai** dab  
1SG make 3SG fear spirit  
'I made him fear ghosts.'

(9) kuv **ua** Tub **quaj**  
1SG make Tou cry/whine  
'I made Tou cry./'I made Tou whine.'

(10) kuv **ua** Tub **hais** lus  
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- The first verb is always *ua* 'make'.
- The second verb is not limited to any particular transitivity or situational aspect class.

These properties more closely resemble those of English *make*-causatives (and French *faire*-causatives, etc.) than serial verb constructions.

- How many events?
  - Temporal dissociation
  - *rov.qab* 'again'
  - Manner adverbs
- How many agents?
  - Agent-oriented adverbs
- Other properties:
  - (Un)intentional causation?
  - (Non)implicative causation?

- Monoeventivity is frequently cited as a definitional property of verb serialization (Stewart 2001, Bisang 2009).
- Direct causatives have a simpler event structure than indirect causatives (Fodor 1970 and much subsequent work).



# Mono- vs. bi-eventivity: temporal dissociation

Direct causative ✗

- (11) a. CONTEXT: My brother hit the dog, and as a result, the dog immediately began to whine.

nws **ntaus** tus dev **quaj**

3SG hit CLF dog cry

'He hit the dog (and it) whined.'

- b. CONTEXT: My brother hit a metal pot, which made a loud noise that scared the dog, and as a result, the dog began to whine.

#nws **ntaus** tus dev **quaj**

3SG hit CLF dog cry

Intended: 'He hit (something) and caused the dog to whine.'

## Indirect causative ✓

- (12) a. CONTEXT: My brother hit a metal pot, which made a loud noise that scared the dog, and as a result, the dog began to whine.

nws **ua** tus dev **quaj**

3SG make CLF dog cry

'He made the dog whine.'

- b. [haus cawv ntau~ntau nag-hmo] **ua** nws **mob** taub.hau  
[drink alcohol RDUP~much yesterday-evening] make 3SG be(come).sick head

hnuv-no

day-this

'Drinking lots of alcohol last night made his head ache today.'

## Mono- vs. bi-eventivity: *rov qab* 'again'

Direct causative: 1 attachment site

- (13) a. CONTEXT: Yesterday, I hit Tou, which made him start crying. Today, I again hit Tou, which again made him start crying.

kuv rov.qab **ntaus** Tub **quaj**

1SG again hit Tou cry

'[I hit Tou and he cried] again.'

Presupposition: There is a prior event in which I hit Tou and made him cry.

- b. CONTEXT: Yesterday, I said something mean to Tou, which made him start crying. Today, I hit Tou, which made him start crying again.

kuv (#rov.qab) **ntaus** (\*rov.qab) Tub (\*rov.qab) **quaj**

1SG again hit again Tou again cry

Intended: 'I hit Tou and [he cried again].'

Intended presupposition: There is a prior event in which Tou cried.

Indirect causative: 2 attachment sites

- (14) a. *kuv rov.qab ua Tub hais lus*  
1SG again make Tou say speech  
'[I made Tou speak] again.'  
Presupposition: There is a prior event in which I made him speak.
- b. *kuv ua Tub rov.qab hais lus*  
1SG make Tou again say speech  
'I made [Tou speak again].'  
Presupposition: There is a prior event in which he spoke.

Direct causative: 1 attachment site

- (15) a. kuv sib.zog/ceev~ceev      **ntaus** Tub **quaj**  
1SG forcefully/RDUP~quickly hit    Tou cry  
'I forcefully/quickly hit Tou and he cried.'
- b. kuv **ntaus** Tub (\*sib.zog/\*ceev~ceev)      **quaj** (\*sib.zog/\*ceev~ceev)  
1SG hit    Tou (forcefully/RDUP~quickly) cry (forcefully/RDUP~quickly)  
Intended: 'I hit Tou and he cried (forcefully/quickly).'

Indirect causative: 2 attachment sites

- (16) a. kuv nrov~nrov **ua** Tub hais lus  
1SG RDUP~loudly make Tou say speech  
'I loudly [made Tou speak].'
- b. kuv **ua** Tub nrov~nrov hais lus  
1SG make Tou RDUP~loudly say speech  
'I made [Tou speak loudly].'

- Causatives vary in whether the causee can be interpreted as an agent (see e.g. Pylkkänen 2008, Harley 2008, Nie 2020).
- I assume that an agent must be introduced by (a flavor of) Voice (Kratzer 1996, Schäfer 2009, Alexiadou et al. 2015).

Direct causative: 1 attachment site

- (17) a. kuv txhob.txwm/yaam.kev **ncaws** tus dev **khiav**  
1SG purposely/accidentally kick CLF dog run  
'I purposely/accidentally kicked the dog and it fled.'
- b. \*kuv **ncaws** tus dev txhob.txwm/yaam.kev **khiav**  
1SG kick CLF dog purposely/accidentally run  
Intended: 'I kicked the dog and it purposely/accidentally fled.'



Indirect causative: 2 attachment sites

- (18) a. kuv txhob.txwm/yaam.kev **ua** [kuv tus kwv] **ua** lub tais poob  
1SG purposely/accidentally **make** 1SG CLF younger.brother **make** CLF bowl fall  
'I purposely/accidentally made my brother drop the bowl.'
- b. kuv ua [kuv tus kwv] txhob.txwm/yaam.kev **ua** lub tais **poob**  
1SG make 1SG CLF younger.brother purposely/accidentally make CLF bowl fall  
'I made my brother purposely/accidentally drop the bowl.'

## (Un)intentional causation

Both constructions are capable of describing either intentional or unintentional causation.

- (19) kuv txhob.txwm/yuam.kev **ua** kuv tus kwv **ua** lub tais **poob**  
1SG purposely/accidentally make 1SG CLF younger.brother make CLF bowl fall  
'I purposely/accidentally made my brother drop the bowl.'
- (20) kuv txhob.txwm/yuam.kev **ncaws** tus dev **khiav**  
1SG purposely/accidentally kick CLF dog run  
'I purposely/accidentally kicked the dog and it fled.'

## (Non)implicative causation

In both constructions, the truth of the entire construction entails that the effect occurs.

- (21) #nws **ua** tus dev **quaj** Indirect causative  
3SG make CLF dog cry  
'He made the dog whine (#but it didn't whine).'
- (22) #nws **ntaus** tus dev **quaj** Direct causative  
3SG hit CLF dog cry  
'He hit the dog and it whined (#but it didn't whine).'

## Diagnostics: Recap

	Direct causative	Indirect causative
Mono/bi-eventivity	Monoeventive	Bieventive
Temporally separable?	X	✓
Multiple positions for <i>rov.qab</i> 'again'	X	✓
Multiple positions for manner adverbs?	X	✓
Mono/bi-agentivity	Monoagentive	Biagentive
Agent-oriented modification of causee?	X	✓
Non-implicative interpretation?	X	X
Intentional interpretation	✓	✓
Unintentional interpretation	✓	✓

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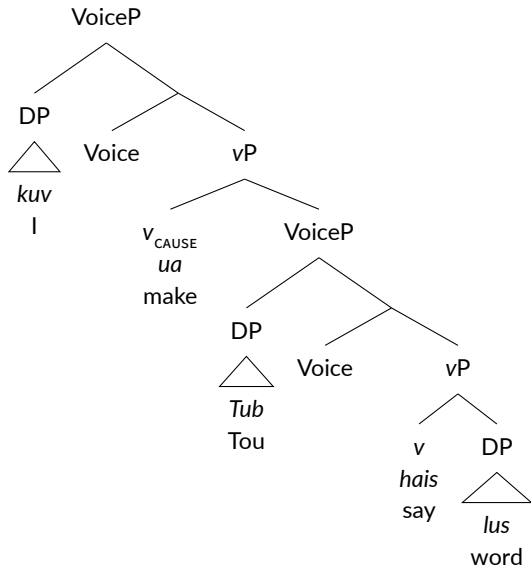
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Hmong indirect causatives:

- Bieventive
- Biagentive
- First verb must be the causative verb *ua* 'make'
- Second verb is unrestricted

# Syntax for indirect causatives

(23) Indirect causative:



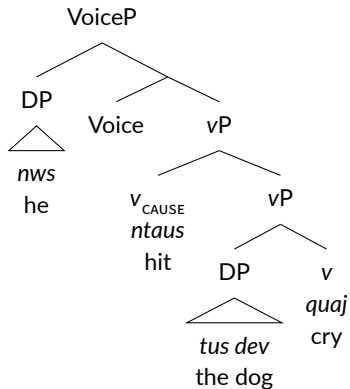
Among direct causatives:

- Monoeventive
- Monoagentive
- $V_1$  must be transitive (an affective transitive verb or a creation verb).
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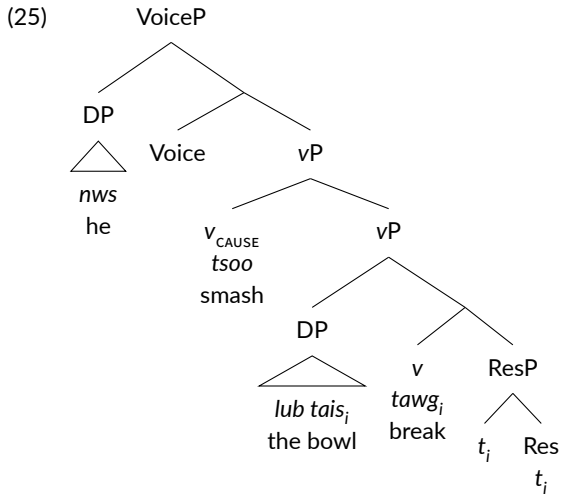
# Syntax for direct causatives

(24)



# Syntax for direct causatives

Recall: there is variation in the situational aspect class of  $V_2$  (Activity, Achievement, or State). This is captured by variation in the structure of the  $vP$  complement of  $v_{CAUSE}$ .

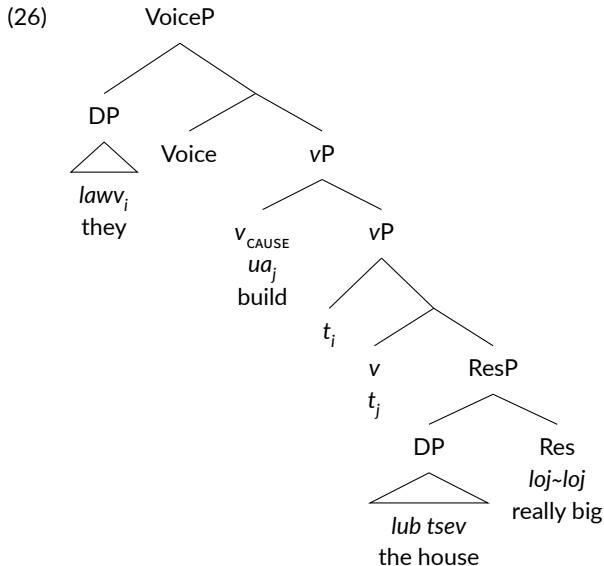


## Syntax for direct causatives

Activity:	[VP [UNDERGOER] [V]]
Achievement:	[VP [UNDERGOER] [[V] [ResP [RESULTEE] [Res]]]]
State:	[ResP [RESULTEE] [Res]]
Inchoative (derived from State):	[VP [UNDERGOER] [[V] [ResP [RESULTEE] [Res]]]]

## A special case: Creation verbs as $V_1$

When  $V_1$  is a creation verb,  $V_2$  can only be a State (not an Activity or Accomplishment). In this case, the creation verb merges in  $v$ , with  $V_2$  heading its ResP complement.



- The Hmong direct causative results when two verbs spell out (causally-linked) heads within the event domain.
- The Hmong indirect causative results when  $v_{\text{CAUSE}}$  takes a VoiceP complement.

Main goal: To connect the “richness” of a verb’s meaning (i.e., whether it is a lexical verb or a dedicated causative verb) to directness of causation.

Main assumptions:

- $v_{\text{CAUSE}}$ ,  $v$ , and Res introduce (sub-)events, which can potentially be associated with distinct properties of events (as in Ramchand 2008).
- A verb contributes only a property of events.

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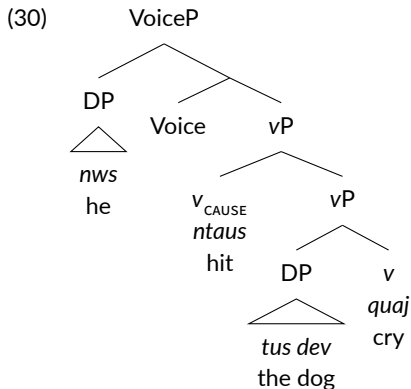
$$(27) \quad \llbracket v_{\text{CAUSE}} \rrbracket = \lambda Q_{\langle v,t \rangle} \lambda P_{\langle v,t \rangle} \lambda e. Q(e) \wedge \exists e' [P_{\langle v,t \rangle}(e') \wedge \text{CAUSE}(e)(e')]$$

$$(28) \quad \llbracket \text{ntaus} \rrbracket = \lambda e. \text{hit}(e)$$

$$(29) \quad \llbracket v_{\text{CAUSE}} \rrbracket (\llbracket \text{ntaus} \rrbracket) = \lambda P_{\langle v,t \rangle} \lambda e. \text{hit}(e) \wedge \exists e' [P_{\langle v,t \rangle}(e') \wedge \text{CAUSE}(e)(e')]$$

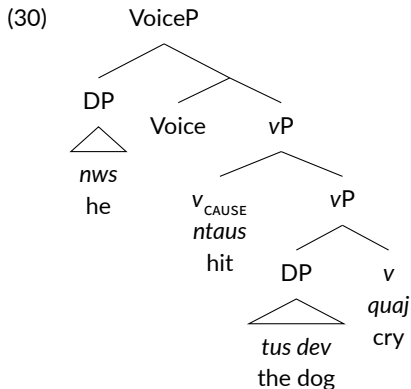


# Semantics: The direct causative



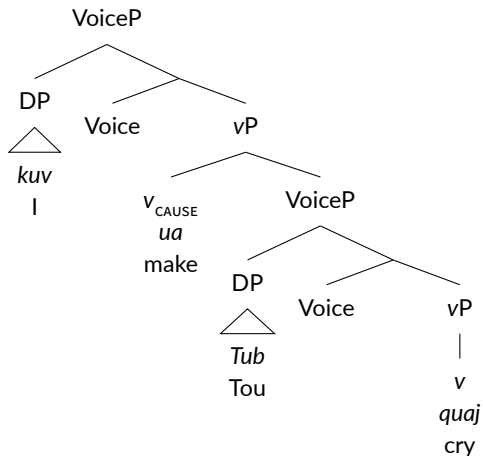
(31)  $\llbracket (30) \rrbracket = \lambda e. hit(e) \wedge INITIATOR(he, e) \wedge \exists e' [cry(e') \wedge UNDERGOER(e')(the\ dog) \wedge CAUSE(e)(e')]$

# Semantics: The direct causative



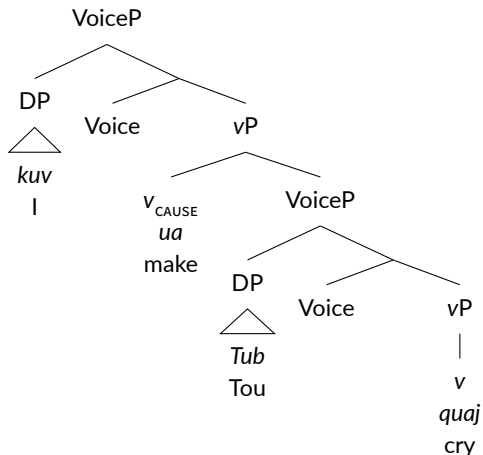
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(33)  $\llbracket (32) \rrbracket = \lambda e. \text{MAKE}(e) \wedge \text{INITIATOR}(e, I) \wedge \exists e' [\text{cry}(e') \wedge \text{INITIATOR}(e')(Tou) \wedge \text{UNDERGOER}(e')(Tou) \wedge \text{CAUSE}(e)(e')]$

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# The meaning of CAUSE

Can direct and indirect causation be captured by the same CAUSE operator?

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Can direct and indirect causation be captured by the same CAUSE operator?

Yes...if CAUSE is sensitive to the semantic content of the predicates used to lexicalize the causative construction.

# Bittner's Generalization

Bittner (1999) claims that so-called “concealed causatives” (including lexical causatives, resultatives, and causative SVCs) necessarily convey direct causation.

(34) “Concealed causatives” (Bittner 1999)

- a. John killed the robber.
- b. John shot the robber dead.
- c. yang man ra mai=pruk-ri kauh-ram  
I you ACC 2=hit-OBV.1 fall-PST.2  
'I knocked you down.'

Miskitu (Misumalpan, Nicaragua)

Bittner's Generalization:

If a causal relation is syntactically concealed (only its arguments are overtly expressed), then it is semantically direct (no intermediate causes).

## Bittner's Generalization applied (Kratzer 2005)

Kratzer (2005) leverages this generalization in an account of English resultatives. Kratzer assumes:



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  - As the causal chain is convex, no relevant intermediate causes can be omitted.

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- There can be (at least some degree of) mismatch between conceptual events and linguistically-represented events.

- (35) a.  $e_1 \rightarrow e_2$   
b.  $e_1 \rightarrow e_2 \rightarrow e_3$   
c.  $e_1 \rightarrow \dots \rightarrow e_n$

## Bittner's Generalization applied (Kratzer 2005)

Kratzer (2005) claims that directness of causation is not a property of the causal chain itself.

- Longer chains *allow* for the possibility of indirect causation without *requiring* it.
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(36) die Teekanne leer trinken (Kratzer 2005)  
the teapot empty drink  
'Drink the teapot empty.'

"The direct causation interpretation of adjectival resultatives, for example, is produced by identifying the events described by the participating verb with causal chains leading to a state described by the adjective. Which of those causal chains qualify as 'direct' is determined by the denotation of the verb." (Kratzer 2005, p. 199)

# The meaning of CAUSE

Following Kratzer (2005), I claim that:

- $\text{CAUSE}(e)(e')$  simply requires a causal relation between  $e$  and  $e'$ , but does not comment on the directness of causation.
- Directness of causation arises from the lexical semantics of the predicates that express the causal relation

Assuming mismatches between conceptual and linguistic events are possible, there are multiple ways of representing a complex event of *hitting-causing-crying*:

- (37) a.  $\underbrace{e_1}_{\llbracket \text{hit} \rrbracket} \rightarrow \underbrace{e_2}_{\llbracket \text{cry} \rrbracket}$
- b.  $\underbrace{e_1 \rightarrow \dots \rightarrow e_n}_{\llbracket \text{hit} \rrbracket} \rightarrow \underbrace{e_{n+1}}_{\llbracket \text{cry} \rrbracket}$

This is not to say that *hit* can describe an indirect causal relation!

A single *hitting* might be conceived of as a number of distinct events: clenching one's fist, drawing back one's arm, swinging one's arm forward, a physical impacted on the patient, a series of neural impulses, the sensation of pain...

Despite this, events of *hitting* are unified by a number of factors, primarily:

- A (possibly pre-linguistic) conceptual action type
- Temporal consistency (an event of *hitting* is tightly-fitted to the temporal extent of the action it describes)



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What we must exclude are causal chains like those in (38):

$$(38) \quad \underbrace{e_1}_{\llbracket \text{hit} \rrbracket} \rightarrow \dots \rightarrow \underbrace{e_n}_{\llbracket \text{cry} \rrbracket}$$

# A new generalization

I claim that Bittner's Generalization is one aspect of more general requirement:

New generalization:

A causal chain can contain only events which fall within the denotation(s) of the predicate(s) that express it.

# The meaning of MAKE

$$(39) \quad \underbrace{e_1 \rightarrow \dots \rightarrow}_{\llbracket \text{make} \rrbracket} \underbrace{e_n}_{\llbracket \text{cry} \rrbracket}$$

With this in mind, what must *ua* 'make' (and English *make*) contribute, in order to derive indirect causation?

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$$(40) \quad \llbracket \text{make} \rrbracket = \lambda e. \text{ACTION}(e) \wedge \text{COMPLEX-CAUSAL-EVENT}(e)$$

(where  $\text{COMPLEX-CAUSAL-EVENT}(e) = 1$  iff  $e$  can be mapped to a causal chain)

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A *making* event is not equivalent to a causative; rather, a *making* event is only a particular type of cause.

# The meanings of CAUSE and MAKE

To summarize:

- CAUSE does not distinguish between direct and indirect causation
- MAKE simply supplies an underspecified property of events
- The lexical semantics of the predicates determine whether they describe direct or indirect causation
  - More highly specified predicates (like *ntaus* 'hit') place more restrictions on the causal relation
  - Less highly specified predicates (like *ua* 'make') place fewer restrictions on the causal relation
  - (How far can the denotation of the predicate be “stretched”?)



## ① Introduction

## ② Direct and indirect causatives in Hmong

Basic description

Structural diagnostics

## ③ Analysis

Syntactic structures

Semantics

## ④ Conclusion

Syntactic predictions

The distribution of “rich” lexical content

Cross-linguistic perspective

## Prediction: More complex event structures

Given that  $v_{\text{CAUSE}}$  can appear in multiple positions within the clause, we expect that:

Hmong indirect causatives can embed other causatives...

(41) kuv **ua** [kuv tus kwv                      **ua** [lub tais **poob**]]  
1SG make 1SG CLF younger.brother make CLF bowl fall  
'I made my brother drop the bowl.'

(42) kuv **ua** [kuv tus kwv                      **thawb** [tus dev **mus**]]  
1SG make 1SG CLF younger.brother push CLF dog go  
'I made my little brother push the dog away.'

...but Hmong direct causatives cannot.

(43) \*kuv **thawb** [kuv tus muam **thawb** [kuv tus kwv      **poob**]]  
1SG push 1SG CLF sister push 1SG CLF brother fall  
Intended: 'I pushed my sister (causing her to) push my brother (so that he) fell.'

## Prediction: More complex event structures

In the direct causatives,  $v_{\text{CAUSE}}$  takes a vP complement. This complement can be of arbitrary complexity (and can itself contain multiple predicates comprising a serial verb construction):

- (44) kuv **pov** [lub tais **poob tawg**  
1SG throw [CLF bowl fall break]  
'I threw the bowl (so that it) fell and broke.'

*Direct causative +  
"attainment" construction*

## The distribution of “rich” lexical content

Given that lexical verbs in Hmong have a wider distribution than verbs in non-serializing languages, and that such verbs can realize  $v_{\text{CAUSE}}$  in the direct causative, why are verbs are unable to spell out  $v_{\text{CAUSE}}$  in the *indirect* causative?

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I propose that even in serializing languages, verbal roots cannot (initially) merge outside the event domain or “first phase”

(45) First-phase lexical insertion principle:

Verbal roots with “rich” lexical-semantic content cannot be initially merged outside the first phase (the first VoiceP constituent of the verbal extended projection).

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(45) First-phase lexical insertion principle:

Verbal roots with “rich” lexical-semantic content cannot be initially merged outside the first phase (the first VoiceP constituent of the verbal extended projection).

- “Rich” lexical-semantic content’ must identify a class of roots whose meanings make reference to specific, possibly extra-linguistic concepts (including *tsoo* ‘smash’, *thawb* ‘push’, *tua* ‘kill’...)
- This does not rule out the converse, i.e. functional items merged within the first phase (of which there are innumerable examples)
- This may reflect the role of categorization in lexical access (e.g. Arad 2003) or some more general property of the “domain of special meaning” (see Marantz 1997, 2007, Harley 2008)

## The distribution of “rich” lexical content: *ua* ‘make’ vs. *ua* ‘build’

This principle may offer an explanation for the contrast in meaning between two senses of *ua*: the causative verb meaning ‘make, cause’ and the lexical verb meaning ‘make, build, create’:

- (46) lawv **ua** lub tsev loj~loj *Direct causative*  
3PL build CLF house RDUP~be(come).big  
‘They built the house really big.’
- (47) kuv **ua** Tub hais lus *Indirect causative*  
1SG make Tou say speech  
‘I made Tou speak.’

The behavior of Hmong appears to reflect a general trend among serializing languages: they employ SVCs for direct causation and dedicated causative verbs for indirect causation.

(Bittner's Generalization appears to be robust!)



The behavior of Hmong appears to reflect a general trend among serializing languages: they employ SVCs for direct causation and dedicated causative verbs for indirect causation.

(Bittner's Generalization appears to be robust!)

Two factors make this difficult to confirm:

- A lack of detailed semantic information
- An over-inclusive definition of “serialization”

# Cross-linguistic perspective (Aikhenvald 2018)

“Cause-effect SVCs” (“symmetrical”)

(48) Mwotlap (François 2006)

Tali mi-**tit**      **teñteñ** Kevin

Tali PRF-**punch cry**.RDUP Kevin

‘Tali made Kevin cry by punching him’

(49) Cantonese (Matthews 2006)

keoi5 **haam3-sao1**-zo2 go zam2tau4

CLF **cry-be.wet**-PFV CLF pillow

‘She’s made her pillow wet by crying’

(50) Alambak (Bruce 1985)

na miy-t(-e)              team-f

1SG tree-3SG.fem-SP coconut.palm-3DU

**foh-tat-an-f**

**fell-hit-1SG-3DU**

‘I felled a tree (causing it to) hit (two)  
coconut palms’

“Causative SVCs” (“asymmetrical”)

(51) Tetun Dili (Hajek 2006)

labele **fó sai** lia ne’e!

NEG.can **give exit** voice this

‘You can’t reveal this matter!’

(52) Cantonese (Matthews 2006)

ngo5 **zing2** keoi5 **dit3**

I **make** 3SG **fall**

‘I made him fall’

(53) Yimas (Foley & Olson 1985)

na-bu-**wul-cay**-pra-kiak

3SGO-3SGS-**afraid-try.to.make**-come-RP

‘They tried to make him afraid as he  
came’

# Thank you!

Special thanks to my consultants, Ka Lee-Paine and Sy Moua, for sharing their knowledge of the Hmong language with me. Any errors are my own.

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