Recursion and thematic relations in causatives

Yining Nie

San José State University

Thematic Uniqueness

(1) Stratal Uniqueness Law (Perlmutter & Postal 1977)
For a given predicate there can be at most one argument bearing a particular grammatical relation to that predicate.

(2) Uniqueness (Bresnan 1982)
Each argument of a verb is assigned a unique role with respect to the other arguments of that same verb.

One-to-one mapping between theta roles and argument positions

(3) Theta Criterion (Chomsky 1981)
Each argument bears one and only one thematic role, and each thematic role is assigned to one and only one argument.

What is the inventory of theta roles?

In what positions are they assigned?

- Argument-introducing heads and where they merge

Focus on multi-argument constructions in morphologically complex languages

- Productive morphological causatives
- But first, applicatives

Zulu recipient and benefactive applicatives (Halpert 2015)

(4) uMfundo u-nik-e u-mntwana ujeqe.
1.Mfundo 1SM-give-PFV 1.child 1.steamed.bread
'Mfundo gave the child steamed bread.'

(5) u-Mlungisi u-gijim-**el**-a uNtombi
1.Mlungisi 1SM-run-APPL-FV 1.Ntombi
'Mlungisi is running for Ntombi.'

(6) *uMfundo u-nik-**el**(-**el**)-e umama umntwana
1.Mfundo 1SM-give-APPL-APPL-PFV 1.mother 1.child
ujeqe.
1.steamed.bread
Intended: 'Mfundo gave the child steamed bread for mother.'

Bantu applicatives

Swahili recipient and benefactive applicatives

(7) *Ali a-li-m-p-**e**-a   Asha   Juma   kitabu.
1.Ali 1SM-PST-1OM-give-APPL-FV 1.Asha 1.Juma 7.book
Intended: 'Ali gave Juma a book for Asha.'   (Keach & Rochemont 1994)

(8) *Fatima a-li-mw-imb-**i**(-**li**)-a   binti-ye
Fatima 1SM-PST-1OM-sing-APPL-APPL-FV daughter-her
ndege huyo.
bird that
Intended: 'Fatima sang to the bird for her daughter.'

(9) *Reagan a-li-m-pik-**i**(-**li**)-a   mke wake
Reagan 1SM-PST-1OM-cook-APPL-APPL-FV wife his
mtoto ugali.
child ugali
Intended: 'Reagan cooked the child some ugali for his wife.'

Assume that applied arguments are introduced by Appl heads in the extended projection of the verb (McGinnis 1998, Pylkkänen 2008)

- Voice introduces the agent (Kratzer 1996)
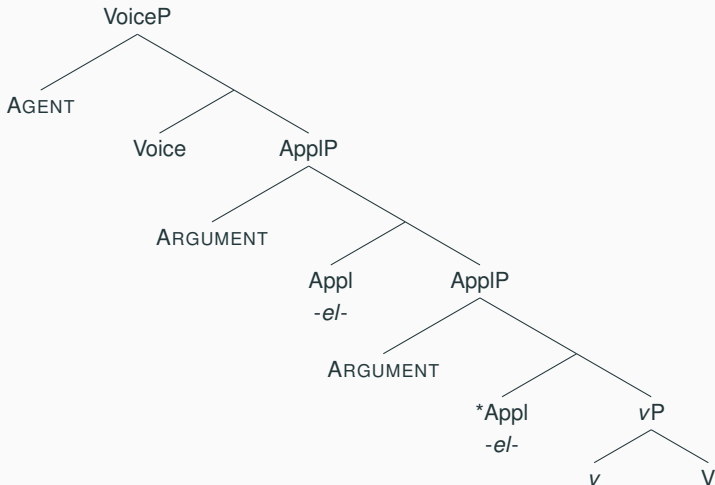- *v* introduces an event (Harley 1995)

(10)
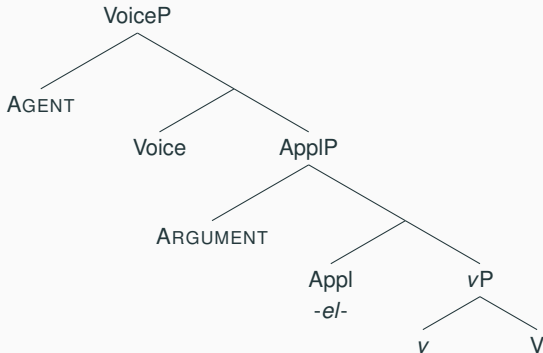
Bantu applicatives

Perhaps Appl can't select another ApplP in Zulu and Swahili

(11)

Bantu applicatives

Multiple applied arguments are possible in other languages

Kinyarwanda multiple applicatives (Kimenyi 1995, Ngoboka 2005)

(12) Umugóre a-ra-som-**er-er**-a umugabo abáana
     woman SM-PRES-read-APPL-APPL-ASP man children
     igitabo.
     book

     'The woman is reading the book to the children for the man.'

(13) Umugabo y-a-tem-**eesh-er**-eje umugore igiti
     man 1SM-PST-cut-INSTR-APPL-ASP woman tree
     ishooka.
     axe

     'The man cut the tree for the woman with an axe.'

Bantu applicatives

Multiple applied arguments are possible in other languages

KiChaga multiple applicatives (Moshi 1998)

(14) Mangí n-á-lé-wé-**í**-á mká máná nyámá
chief FOC-1SM-PST-slice-APPL-FV wife child meat
kíshú kílrínyi.
knife room-in
'The chief sliced for the child the meat for the wife with a knife in the room.'

Luganda multiple applicatives (Pak 2008)

(15) Walusimbi y-a-lag-**is**-a omuggo abaana
1.Walusimbi 1SM-PST-show-APPL-IND 3.stick 2.child
omusomesa.
1.teacher
'Walusimbi showed the children the teacher with a stick.'

Bantu applicatives

Multiple applied arguments are permitted in some languages and not in others

- Recursive merge of Appl heads occurs freely in the syntax
- Result is constrained by independent case/licensing properties of the language (Nie 2020a, submitted)
  - Zulu, Swahili: Only one applied argument is licensed
  - Kinyarwanda, Luganda: All applied arguments are licensed
- Result is constrained by Thematic Uniqueness, even for recursive applicative languages

What about morphological causatives?

Do morphological causatives recurse cross-linguistically?

What governs the availability of causative recursion?

What can causative recursion tell us about the inventory of theta roles and where they are assigned?

Do morphological causatives recurse cross-linguistically?

Kinyarwanda does not allow causative recursion (Jerro 2016)

(16) Habimana   y-a-men-**esh**-eje   umwana igikombe.
     1.Habimana 1S-PST-break-**CAUS**-ASP 1.child   7.cup
     'Habimana made the child break the cup.'

(17) * Habimana y-a-men-**esh-esh**-eje   umugabo
     1.Habimana 1S-PST-break-**CAUS-CAUS**-ASP 1.man
     umwana igikombe.
     1.child   7.cup
     Intended: 'Habimana made the man make the child break the
     cup.'

11

Tagalog does not allow causative recursion (Nie 2020a)

(18) **P**<in>**a**-takbo-∅   ako   ni Luz.
      <PFV>CAUS-run-PV 1SG.NOM GEN.PN Luz
      'Luz made me run.'

(19) * I-**p**<in>**a**-(**pa**-)takbo   ako   ni Luz
      CV-<PFV>CAUS-CAUS-run 1SG.NOM GEN.PN Luz
      kay Kiko.
      OBL.PN Kiko
      Intended: 'Luz made Kiko make me run.'

Japanese does allow causative recursion (Kuroda 1993, Nie 2020a)

(20) George-ga   Naomi-ni   Ken-o   oki-**sase**-ru.
     George-NOM Naomi-DAT Ken-ACC   get.up-CAUS-PRS
     'George will make Naomi make Ken get up.'

(21) George-ga   Naomi-ni   Ken-ni   tabako-o
     George-NOM Naomi-DAT Ken-DAT   cigarette-ACC
     suw-**ase**-ru.
     smoke-CAUS-PRS
     'George will make Naomi make Ken smoke a cigarette.'

Turkish does allow causative recursion (Nie 2020a, to appear)

(22) Öğretmen Mary-yi yine koş-**tur**-du.
teacher Mary-ACC again run-CAUS-PST
'The teacher made Mary run again.'

(23) Baba-sı öğretmen-e Mary-yi yine
father-3SG.POSS teacher-DAT Mary-ACC again
koş-**tur-t**-tu.
run-CAUS-CAUS-PST
'Her father made the teacher make Mary run again.'

Languages differ in their availability of both applicative recursion and causative recursion (Nie 2020a)

What governs the availability of causative recursion?

- Can we take the same approach as for applicative recursion?
- Free recursive merge of an argument-introducing head constrained by case/licensing?

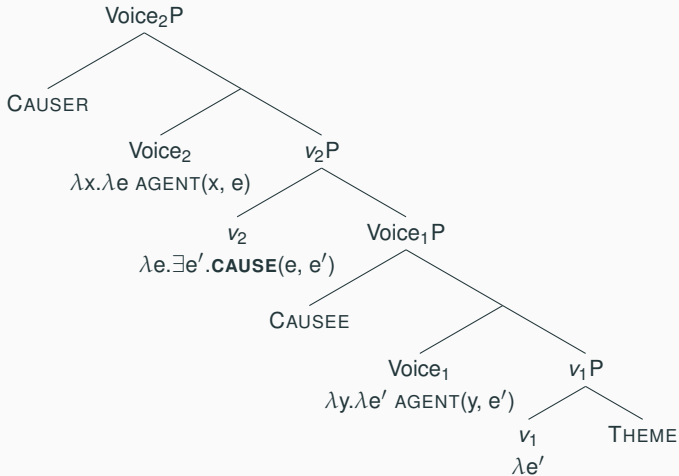**What governs the availability of causative recursion?**

Causation is generally thought of as involving events

- Some event e is the cause of another event e′ (e.g. Parsons 1990, Hale & Keyser 1993, Levin & Rappaport Hovav 1995, Harley 1995, Folli & Harley 2005, Pylkkänen 2008, Ramchand 2008)
- Causer argument is the AGENT of the causing event e
- $\lambda x.\lambda e.\exists e'.$ [**CAUSE**(**e, e′**) $\wedge$ AGENT(x, e)]

Causative recursion

Assuming that *v* introduces events: Causative *v* embeds another *v*
(Harley 2008, 2013)

(24)

Voice_2P

CAUSER

Voice_2
$\lambda x.\lambda e\ \text{AGENT}(x, e)$

$v_2\text{P}$

v_2
$\lambda e.\exists e'.\textbf{CAUSE}(e, e')$

Voice_1P

CAUSEE

Voice_1
$\lambda y.\lambda e'\ \text{AGENT}(y, e')$

$v_1\text{P}$

v_1
$\lambda e'$

THEME

Recursive embedding of *v* predicts that causative recursion should be available (Key 2013)

- Causative *v* embeds another *v*, which can itself be a causative *v* that embeds another *v*
- ... $\text{CAUSE}(\mathbf{e}, \mathbf{e}') \wedge \text{CAUSE}(\mathbf{e}', \mathbf{e}'') \wedge$ ...
- Semantics permits any number of causal links between events
- However, we have seen that not all languages with morphological causatives allow causative recursion

Eventhood

How do we account for non-recursive causatives?

Not all productive causatives have distinct causing and caused events (Nie 2020a)

- Eventhood diagnostics reveal the presence of distinct events in some causatives and not in others

Eventhood correlates with recursion

- Causatives with distinct causing and caused events can recurse
- Causatives without distinct events cannot recurse

Eventhood

Events are spatio-temporal entities that can be modified (Davidson 1967)

Diagnostics for (dynamic) eventhood

- Manner adverbs, e.g. *slowly*, *loudly*
- Temporal adverbs, e.g. *Saturday*, *next week*
- (Negation)
- (Permission readings)

Each event represented in the syntax should be able to receive independent modification

Japanese has distinct causing and caused events

Manner adverbs

Context: Naomi and Jiro are roommates. Naomi's parents drops by for a surprise visit. However, the kitchen is a mess so she quietly asks her roommate Jiro to quickly do the dishes.

(25) Naomi-wa *shizuka-ni* Jiro-ni *hayaku* sara-o
Naomi-TOP quietly-DAT Jiro-DAT quickly dish-ACC
araw-ase-ta.
wash-CAUS-PST

'Naomi *quietly* **made** Jiro *quickly* **wash** the dishes.'

Recursive causatives

Japanese has distinct causing and caused events

Temporal adverbs

Context: Naomi and Jiro are roommates. On Monday Naomi draws up a cleaning schedule, which makes Jiro responsible for washing the dishes on Wednesday.

(26) Naomi-wa *getsuyoubi-ni* Jiro-ni *suiyoubi-ni*
      Naomi-TOP Monday-DAT Jiro-DAT Wednesday-DAT
      sara-o **araw-ase**-ta.
      dish-ACC wash-CAUS-PST

      'Naomi *on Monday* **made** Jiro **wash** the dishes *on Wednesday*.'

Turkish has distinct causing and caused events

Manner adverbs

Context: Cinderella doesn't know how to dance but wants to impress at the ball. A fairy gives her the power to dance elegantly.

(27) Peri külkedisi-ni *zarifçe* **dans et-tir**-di.
 fairy Cinderella-ACC elegantly dance do-CAUS-PST
 'The fairy made Cinderella **dance** *elegantly*.'

Context: Cinderella doesn't want to dance at the ball. A fairy makes her dance with an elegant spell.

(28) Peri *zarifçe* külkedisi-ni **dans et-tir**-di.
 fairy elegantly Cinderella-ACC dance do-CAUS-PST
 'The fairy *elegantly* **made** Cinderella dance.'

Turkish has distinct causing and caused events

Manner adverbs

Context: Özlem is a choir teacher. One of her students keeps singing too loudly. Özlem gets frustrated and shouts at the student to sing quietly.

(29) Özlem *ses-li bir şekil-de* öğrenci-ye *sessizce* şarkı
Özlem loud one way-LOC student-DAT quietly song
söyle-t-ti.
sing-CAUS-PST

'Özlem *loudly* **made** the student **sing** *quietly*.'

Turkish has distinct causing and caused events

Temporal adverbs

Context: Özlem learns that her son Ali will miss the race on Friday, so tomorrow she will register him to run on Saturday.

(30) *Yarın*   Özlem Ali-yi   *cumartesi günü* **koş-tur**-acak.
     Tomorrow Özlem Ali-ACC Saturday day run-CAUS-FUT

     '*Tomorrow* Özlem will **make** Ali **run** on *Saturday*.'

Two temporal adverbs seem to be unavailable in the past tense (Akkuş 2021)

Non-recursive causatives

Tagalog does **not** have distinct causing and caused events

Manner adverbs

Context: Cinderella doesn't know how to dance but wants to impress at the ball. A fairy gives her the power to dance beautifully.

(31) **P**<in>**a-sayaw**-∅   niya   si Cinderella
<PFV>CAUS-dance-PV 3SG.GEN NOM.PN Cinderella
nang maganda.
ADV beautiful
'S/he made Cinderella **dance** *beautifully*.'

Tagalog does **not** have distinct causing and caused events

Manner adverbs

Context: Cinderella doesn't want to dance at the ball. A fairy makes her dance with an beautiful spell.

(32) **# P**<in>**a-sayaw**-∅   niya   si Cinderella
     <PFV>CAUS-dance-PV   3SG.GEN   NOM.PN Cinderella
     nang maganda.
     ADV beautiful
     Intended: 'S/he *beautifully* **made** Cinderella dance.'
     Can only mean: 'S/he made Cinderella **dance** *beautifully*.'

(33) **??** *Maganda* niya=ng   **p**<in>**a-sayaw**-∅
     beautiful   3SG.GEN=LK   <PFV>CAUS-dance-PV
     si Cinderella.
     NOM.PN Cinderella

27

Tagalog does **not** have distinct causing and caused events

Manner adverbs

(34) **P**<in>**a-salita**-∅   niya   ang bata *nang tahimik.*
    <PFV>CAUS-dance-PV 3SG.GEN NOM child ADV quiet
    'S/he made the child **talk** *quietly*.'

(35) **??** *Tahimik* niya=ng   **p**<in>**a-salita**-∅   ang bata.
    quiet   3SG.GEN=LK <PFV>CAUS-talk-PV NOM child
    Intended: 'S/he *quietly* **made** the child talk.'

28

Tagalog does **not** have distinct causing and caused events

Temporal adverbs

Context: Luz learns that her daughter Maria will miss the race this week, so tomorrow she will register Maria to run next week.

(36) **??** Pa~**pa-takbu**-hin ni Luz *bukas* si Maria
IPFV~CAUS-run-PV GEN.PN Luz tomorrow NOM.PN Maria
sa susunod na linggo.
OBL next LK week

(37) **??** *Bukas* pa~**pa-takbu**-hin ni Luz si Maria
tomorrow IPFV~CAUS-run-PV GEN.PN Luz NOM.PN Maria
sa susunod na linggo.
OBL next LK week
Intended: '*Tomorrow*, Luz will **make** Maria **run** *next week*.'

29

Productive morphological causatives can be bi-eventive or mono-eventive

Generalization: Causative recursion is only available for bi-eventive causatives

What's going on with mono-eventive causatives? Options:

- Distinct causing and caused events are present in the semantics but not represented in the syntax
- Distinct causing and caused events not present in either the semantics or the syntax

Eventhood

Proposal: Non-recursive causatives involve causer participants rather than causing events

(38) Lee fixed the car.

- Bi-eventive causatives add a causing **event** e involving a participant Lee
  ... CAUSE(e, e′) ∧ AGENT(Lee, e) ...
- Mono-eventive causatives add a causer **participant** Lee
  ... CAUSE(Lee, e′) ...
- Lexical causatives involve an added participant rather than an added event (e.g. Reinhart 2003, Alexiadou et al. 2006, 2015, Schäfer 2008)

Proposal: Non-recursive causatives involve causer participants rather than causing events

(39) Lee made the mechanic fix the car.

- Mono-eventive causatives add a causer **participant** Lee
  ... CAUSE(Lee, e') ...
- Productive causatives: e' happens to also have an external argument (the causee)

Predictions for recursion

Bi-eventive causatives

- Recursion: ... CAUSE(e, e$'$) $\wedge$ CAUSE(e$'$, e$''$) $\wedge$ ...
- No problem with multiple causing events

Mono-eventive causatives

- Recursion: ... *CAUSE(x, e) $\wedge$ CAUSE(y, e) $\wedge$ ...
- Multiple CAUSE arguments would violate Thematic Uniqueness!
- Multiple CAUSE arguments associated to the same event does not give the right hierarchical interpretation

What can causative recursion tell us about theta roles and argument positions?

Proposal: Non-recursive causatives involve causer participants rather than causing events

What argument positions are associated with the causer and causee? Which heads introduce the causer and causee?

Nie 2020b: Both the causer and causee are introduced by Voice in mono-eventive causatives

- Both the causer and causee exhibit agentive properties
- Diagnostics for agenthood: Agent-oriented adverbs, instruments

(40) [CAUSER Voice [CAUSEE Voice [*v* THEME]]]

Tagalog causers and causees both exhibit properties of agents

Agent-oriented adverbs

(41) Um-**iyak** si Kiko *nang sinasadya*.
AV.PFV-cry NOM.PN Kiko ADV deliberately
'Kiko **cried** *deliberately*.'

(42) **P**<in>**a-iyak**-∅ ko si Kiko
<PFV>CAUS-cry-PV 1SG.GEN NOM.PN Kiko
nang sinasadya.
ADV deliberately
'I made Kiko *deliberately* **cry**.' /
'I *deliberately* **made** Kiko cry.'

Roles and positions

Tagalog causers and causees both exhibit properties of agents

Instruments

(43) **P**<in>**a-lakad**-∅   ko   si   Kiko
    <PFV>CAUS-walk-PV 1SG.GEN NOM.PN Kiko
    gamit ang tungkod.
    using NOM cane
    'I made Kiko **walk** *with the cane*.' /
    '*With the cane* I **made** Kiko walk.'

(44) **P**<in>**a-luto**-∅   ko   si   Kiko ng pansit
    <PFV>CAUS-cook-PV 1SG.GEN NOM.PN Kiko GEN pancit
    gamit ang kahoy.
    using NOM stick
    'I made Kiko **cook** pancit *with the stick*.' /
    '*With the stick* I **made** Kiko cook pancit.'

Tagalog causers and causees both exhibit properties of agents

- Thematic Uniqueness: The causer and causee cannot **both** bear an AGENT theta role
- Which bears the AGENT role, the causer or causee?
- What's the other theta role and where does the head that introduces it (call it Caus) merge?

(45)   [<u>CAUSER</u> Caus [**AGENT** Voice [*v* THEME]]]

(46)   [**AGENT** Voice [<u>CAUSEE</u> Caus [*v* THEME]]]

Evidence for Caus introducing the causee

Kinyarwanda has syncretic causative and instrumental applicative morphology (Jerro 2016)

(47) Umw-arimu y-a-ndik-**ish**-ije   in-kuru i-karamu.
     1-teacher   1S-PST-write-ISH-PERF 9-story 5-pen

   'The teacher wrote the story with a pen.'

(48) Umw-arimu y-a-ndik-**ish**-ije   umw-ana in-kuru.
     1-teacher   1S-PST-write-ISH-PERF 1-child   9-story

   'The teacher made the child write the story.'

Evidence for Caus introducing the causee

Kinyarwanda causees and instruments cannot co-occur (Jerro 2016)

(49) *N-a-ndik-**ish**(-**ish**)-ije   umw-ana i-karamu in-kuru.
     1SG-PST-write-ISH-ISH-PERF 1-child   5-pen   9-story
     'I made the child write the story with a pen.'

Causatives can be passivized, but passives cannot be causativized (Jerro 2016) (CARP template, Hyman 2003)

- Also true of Tagalog (Schachter & Otanes 1972) and Niuean (Massam 2015)

Causee and instrument both merge below Voice

Evidence for Caus introducing the causee

Tagalog causers must be animate, suggesting that they bear the AGENT role

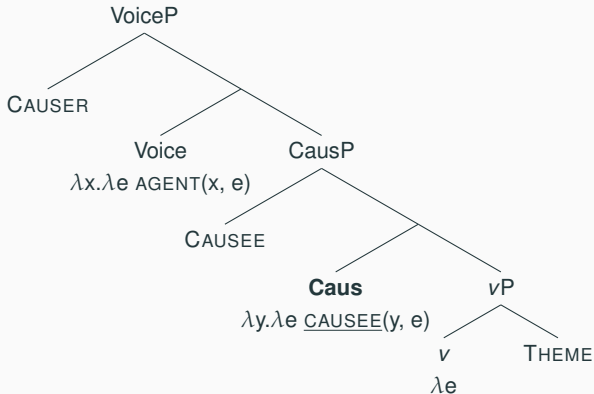- Causees can be inanimate

(50) Nag-**pa**-bili   kanila   ng kanila=ng kasangkapan {
    AV.PFV-CAUS-sell 3PL.OBL GEN 3PL.OBL=LK furniture
    ang babae   / *ang kahirapan nila   }.
    NOM woman   NOM poverty 3PL.GEN
    'The woman / *Their poverty caused them to sell some of their
    furniture.'   (adapted from Schachter & Otanes 1972)

(51) **Pa**-tu~tuyu-in   ko   ang damit.
    CAUS-IPFV~dry-PV 1SG.GEN NOM dress
    'I'll let the dress dry.'   (Schachter & Otanes 1972)

Mono-eventive causatives: Caus merges below Voice and introduces the causee

(52)

VoiceP

CAUSER

Voice
$\lambda x.\lambda e\ \text{AGENT}(x, e)$

CausP

CAUSEE

Caus
$\lambda y.\lambda e\ \underline{\text{CAUSEE}}(y, e)$

vP

v
λe

THEME

Roles and positions

Mono-eventive causatives involve some sort of added CAUSEE role

- What exactly is the CAUSEE role? Many options:
  - Link in a causal chain, which might explain why causees pattern with instruments (Jerro 2017)
  - Affected experiencer
  - 'Low agent' (Tollan 2018)
  - Doer but not initiator (Sigurðsson & Wood 2021)
- However we characterize the causee's theta role, Thematic Uniqueness tells us it must be distinct from the theta role borne by the causer
- Causees are also distinct from ordinary applicatives

Causees are distinct from ordinary applicatives

Zulu prohibits multiple applicatives but allows an applicative and a causative to combine (Halpert 2015)
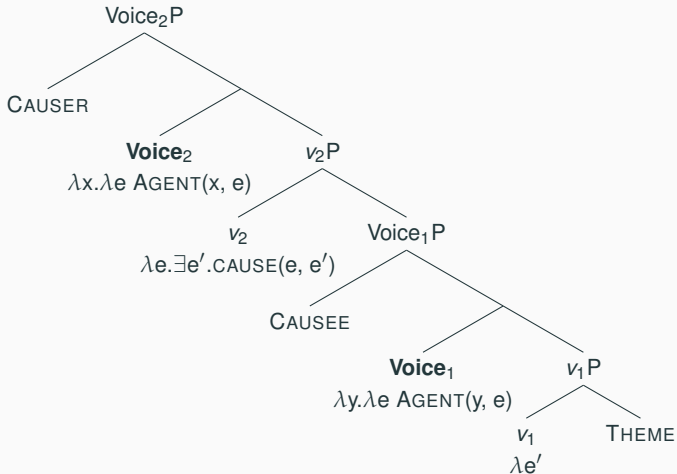
- Also true of Tagalog (Schachter & Otanes 1972)

(53) ubaba u-cul-**is-el**-a inkosi
      AUG.1father 1SM-sing-CAUS-APPL-FV AUG.9chief
      abantwana i-Nkosi Sikelel′ iAfrika.
      AUG.2children AUG5-9lord bless AUG.5Africa
      'Father made the children sing the chief the national anthem.'

What about bi-eventive causatives?

(54)

What about bi-eventive causatives?

- Bi-eventive causatives can recurse, indicating they do not violate Thematic Uniqueness
- Thematic Uniqueness holds at the level of the event, applying to the participants of the **same** event
- Causing and caused events can each have their own AGENT
- Possible that the theta role borne by the causee in mono-eventive and bi-eventive causatives are different

Questions and some answers

Do productive morphological causatives recurse cross-linguistically?

- Languages differ in whether causative recursion is available

What governs the availability of causative recursion?

- Recursion correlates with eventhood: Bi-eventive causatives can recurse, while mono-eventive causatives cannot

What can causative recursion tell us about the inventory of thematic roles and where they are assigned?

- We need distinct theta roles for causers and causees in mono-eventive causatives
- Caus head likely introduces the causee rather than the causer

Thank you!

Akkuş, Faruk. 2021. On causee in Turkish indirect causatives. In *6th Workshop on Turkic and Languages in Contact with Turkic*.

Alexiadou, Artemis, Elena Anagnostopoulou & Florian Schäfer. 2006. The properties of anticausatives crosslinguistically. In Mara Frascarelli (ed.), *Phases of interpretation*, 187–212. Berlin: Mouton de Gruyter.

Alexiadou, Artemis, Elena Anagnostopoulou & Florian Schäfer. 2015. *External arguments in transitivity alternations: A layering approach*. Oxford: Oxford University Press. doi:10.1093/acprof:oso/9780199571949.001.0001.

Bresnan, Joan. 1982. *The Mental Representation of Grammatical Relations*. Cambridge, MA: MIT Press.

Chomsky, Noam. 1981. *Lectures on Government and Binding*. Dordrecht: Foris.

Davidson, Donald. 1967. The logical form of action sentences. In Nicholas Rescher (ed.), *The logic of decision and action*, 81–95. Pittsburgh, PA: University of Pittsburgh Press.

Folli, Rafaella & Heidi Harley. 2005. Flavours of v: Consuming results in Italian & English. In Paula Kempchinsky & Roumyana Slabakova (eds.), *Aspectual enquiries*, 95–120. Dordrecht: Springer.

Hale, Kenneth & Samuel J. Keyser (eds.). 1993. *The View from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*, vol. 24 (Current Studies in Linguistics). Cambridge: MIT Press.

Halpert, Claire. 2015. *Argument licensing and agreement*. Oxford: Oxford University Press.

Harley, Heidi. 1995. *Subjects, events, and licensing*: MIT dissertation.

Harley, Heidi. 2008. On the causative construction. In Shigeru Miyagawa & Mamoru Saito (eds.), *The Oxford Handbook of Japanese Linguistics*, 20–53. Oxford: Oxford University Press .

Harley, Heidi. 2013. External arguments and the Mirror Principle: On the distinctness of Voice and v. *Lingua* 125. 34–57.

Hyman, Larry. 2003. Suffix ordering in Bantu: A morphocentric approach. *Yearbook of Morphology* 245–281.

Jerro, Kyle. 2017. The causative–instrumental syncretism. *Journal of Linguistics* 53(04). 751–788. doi:10.1017/S0022226717000044.

Jerro, Kyle J. 2016. *The Syntax and Semantics of Applicative Morphology in Bantu*: University of Texas at Austin dissertation.

Keach, Camillia N. & Michael Rochemont. 1994. On the syntax of possessor raising in Swahili. *Studies in African Linguistics* 23. 81–106.

Key, Gregory. 2013. *The morphosyntax of the Turkish causative construction*. Tucson, AZ: University of Arizona dissertation.

Kimenyi, Alexandre. 1995. Kinyarwanda applicatives revisited. In *8th Niger-Congo Syntax-Semantics Workshop*. Boston University. http://www.kimenyi.com/kinyarwanda-applicatives-revisited.php.

Kratzer, Angelika. 1996. Severing the external argument from its verb. In Johan Rooryck & Laurie Zaring (eds.), *Phrase Structure and the Lexicon*, 109–137. Dordrecht: Kluwer.

Kuroda, S.-Y. 1993. Lexical and Productive Causatives in Japanese: An examination of the theory of paradigmatic structure. *Journal of Japanese Linguistics* 15(1). 1–82. doi:10.1515/jjl-1993-0102.

Levin, Beth & Malka Rappaport Hovav. 1995. *Unaccusativity: At the syntax–lexical semantics interface*. Cambridge, MA: MIT Press.

Massam, Diane. 2015. Applicatives as secondary predicates. In Amber Camp, Yuko Otsuka, Claire Stabile & Nozomi Tanaka (eds.), *Proceedings of AFLA 25*. 185–199. Asia-Pacific Linguistics.

McGinnis, Martha. 1998. *Locality in A-movement*. Cambridge, MA: MIT dissertation.

Moshi, Lioba. 1998. Word order in multiple object constructions in KiVunjo-Chaga. *Journal of African Languages and Linguistics* 19(2). doi:10.1515/jall.1998.19.2.137.

Ngoboka, Jean Paul. 2005. *A syntactic analysis of Kinyarwanda applicatives*. Durban: University of KwaZulu-Natal dissertation.

Nie, Yining. 2020a. *Licensing arguments*: New York University dissertation.

Nie, Yining. 2020b. Morphological causatives are Voice over Voice. *Word Structure* 13(1). 102–126. doi:10.3366/word.2020.0161.

Nie, Yining. to appear. Turkish causatives are recursive: A response to Key (2013). *Linguistic Inquiry* .

Pak, Marjorie. 2008. A-Movement and Intervention Effects in Luganda. In Natasha Abner & Jason Bishop (eds.), *Proceedings of the 27th West Coast Conference on Formal Linguistics*. 361–369. Somerville, MA: Cascadilla Proceedings Project.

Parsons, Terence. 1990. *Events in the semantics of English: A study in subatomic semantics*. Cambridge, MA: MIT Press.

Perlmutter, David M. & Paul M. Postal. 1977. Toward a Universal Characterization of Passivization. In *Proceedings of the 3rd Annual Meeting of the Berkeley Linguistics Society*. 394–417.

Pylkkänen, Liina. 2008. *Introducing arguments*. Cambridge, MA: MIT Press.

Ramchand, Gillian. 2008. *Verb meaning and the lexicon: A First-Phase Syntax*. Cambridge, UK: Cambridge University Press. doi:10.1017/CBO9780511486319.

Reinhart, Tanya. 2003. The Theta System: An overview. *Theoretical Linguistics* 28(3). doi:10.1515/thli.28.3.229.

Schachter, Paul & Fe T. Otanes. 1972. *Tagalog Reference Grammar*. Berkeley, CA: University of California Press.

Schäfer, Florian. 2008. *The syntax of (anti-)causatives*. Amsterdam/Philadelphia: John Benjamins. doi:https://doi.org/10.1075/la.126.

Sigurðsson, Einar Freyr & Jim Wood. 2021. On the implicit argument of Icelandic indirect causatives. *Linguistic Inquiry* 1–74. doi:10.1162/ling_a_00384.

Tollan, Rebecca. 2018. Unergatives are different: Two types of transitivity in Samoan. *Glossa: a journal of general linguistics* 3(1). 35. doi:10.5334/gjgl.223.