Introduction
00000000

Methodology
000

Findings
0000000000

Discussion
0000

References

Exploring western Indonesian applicative constructions through the lexicon

Christina Truong
cltruong@hawaii.edu

Bradley McDonnell
mcdonn@hawaii.edu

University of Hawaiʻi at Mānoa

June 30, 2021
Palacký University, Olomouc, Czech Republic

Goals

1. Describe the distribution of functions for applicative affixes across lexical bases in western Indonesian languages.
2. Investigate the extent to which components of lexical semantics consistently correlate with particular constructions or functions.
3. Identify areas of consistency and variation in the patterns observed across languages.

Applicative morphemes

- ▶ Most western Indonesian languages (with the exception of Philippine-type languages) have applicative morphology and constructions (Himmelmann 2005)
- ▶ Small inventory, usually 1-3 applicative affixes.
- ▶ Applicative morphemes in these languages are extremely polyfunctional (see Truong & McDonnell Forthcoming).
    - ▶ Causative alternations
    - ▶ Aspectual functions
    - ▶ Changes in semantic meaning of verb
    - ▶ Pragmatic functions (e.g. increase individuation, affectedness of patient)

Alternations with applicative morphology

(1) **Besemah benefactive/instrumental applicative -*ka***

a. *Jeme   tu   m-batak buku ke sekulah.*
   person that AV-bring book to school

   'The person brought a book to school.'

b. *Jeme   tu   m-batak-ka   anak=(ny)e mainan.* [Benefactive]
   person that AV-bring-APPL child=3   toy

   'The person brought his child a toy.'   (McDonnell in prep.)

Alternations with applicative morphology

(2) **Besemah goal/locative applicative *-i***

    a. *Anak tu n-(t)anye duit   nga bapang=(ny)e.*
        child that AV-ask   money with father=3

        'The child asked for money from his father.'

    b. *Bapang tu   n-(t)anye-ghi anak=(ny)e PR.*   [Goal]
        father   that AV-ask-APPL child=3   homework

        'The father asked his child (about) his homework.'

                                       (McDonnell in prep.)

Alternations with applicative morphology

(3) **Besemah -*ka* as causative**

    a. *Jendile tu la pecah.*
       window that PFV shatter

       'The window is shattered.'

    b. *Jeme tu m-(p)ecah-ka jendile tu.*   [Causative]
       person that AV-shatter-APPL window

       'The person shattered the window.'   (McDonnell in prep.)

Introduction
○○○○○●○○

Methodology
○○○

Findings
○○○○○○○○○○

Discussion
○○○○

References

Alternations with applicative morphology

(4) **Besemah goal/locative applicative -i**

   a. *Jeme tu m-batak buku ke sekulah.*
     person that AV-bring book to school

     'The person brought a book to school.'

   b. *Jeme tu m-batak-i buku ke sekulah.* [Iterative aspect]
     person that AV-bring-APPL book to school

     'The person brought the books (back and forth) to school.'
                              (McDonnell in prep.)

Explanation for distribution of functions?

- ▶ Other approaches have included:
    - ▶ Compile lists of bases compatible with each of the different functions (e.g., in descriptive grammars)
    - ▶ Treat multiple constructions as one unified syntactic function (e.g. Cole & Son 2004)
    - ▶ Appeal to syntactic properties of the base (e.g. Vamarasi 1999)
    - ▶ Separate into multiple homophonous affixes (e.g. Kroeger 2007)
- ▶ Semantic properties of bases have been shown to play a role in determining compatibility with particular constructions (e.g., resultatives) in other languages (e.g. Levin 1993 for English).
- ▶ To date, no in-depth study of the role of semantic properties for western Indonesian applicatives, neither across the lexicon of a single language nor systematically across languages.

Research question

To what extent do the functions of applicative morphemes correlate with lexical semantics across languages of western Indonesia?

▶ When an applicative morpheme attaches to a base meaning 'buy', does it always have a benefactive function?

Methodology

Sample of languages

- ▶ Small sample for exploratory study
- ▶ Prioritize languages with available corpora, dictionaries, and/or documentation that allow for compilation of comparable data.
- ▶ Try to include languages with different inventories of applicative morphemes.
- ▶ Besemah, Sundanese, Indonesian, Javanese, Balantak, Ampenan Sasak.

Methodology

Selection of lexemes

▶ The Leipzig Valency Classes Project's Database Questionnaire Manual (see Malchukov & Comrie 2015).

▶ List of 80 meanings: "conceived of as representative of the verbal lexicon."

▶ Recorded function of applicative morphemes when combined with the base representing each meaning.

▶ Excluded meanings with no lexical bases (e.g. BE A HUNTER), or with little semantic coherence across lexical bases (e.g. DRESSED) in these languages.

▶ Consolidated multiple meanings represented by a single base in most sample languages (e.g. SEE/LOOK.AT/SHOW, LEAVE/LIVE, CARRY/BRING).

Methodology

Complications

▶ What is the base and how does this affect the interpretation of the function?
  ▶ Some precategorical bases function as both a noun and a verb without any morphology.
▶ Interpreting instruments, goals, recipients, etc.
  ▶ This is a problem because it results in circularity: *-i* marks goals.
  ▶ Careful not to make our semantic roles fit a preconceived "pattern".

Distribution of Functions
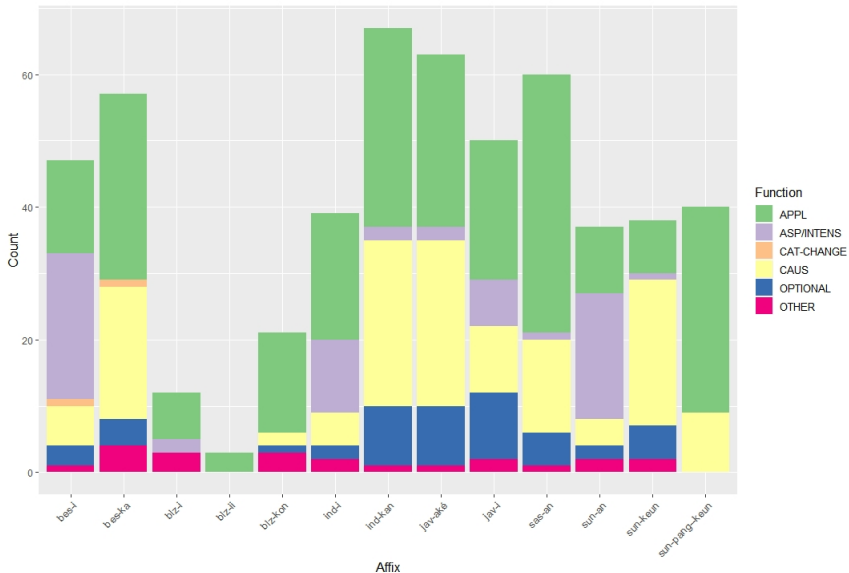
Distribution of Applicative Functions
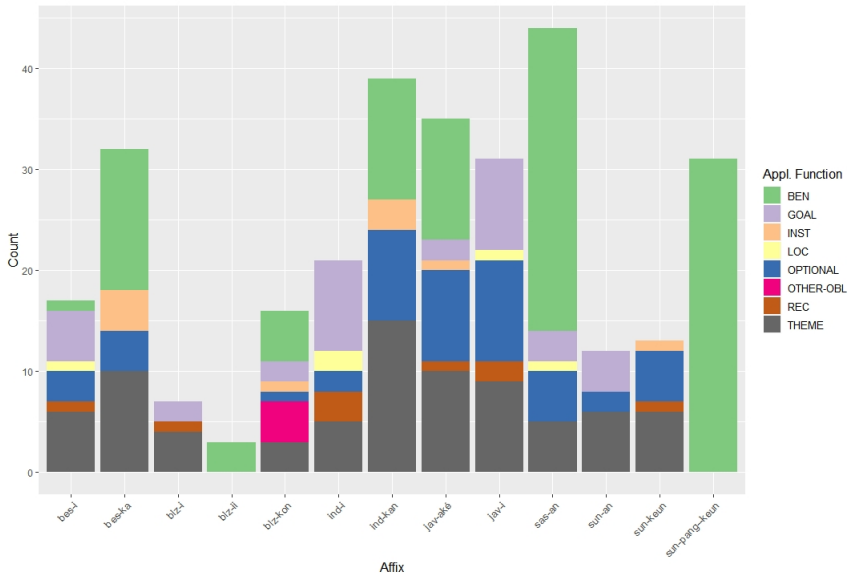
Bases showing consistent patterns

- ▶ Filtered for meanings with ≥ 5 derived forms representing the same function (arbitrary cut-off).
- ▶ Sorted into patterns based on the predominant function and secondary predominant function (if applicable).
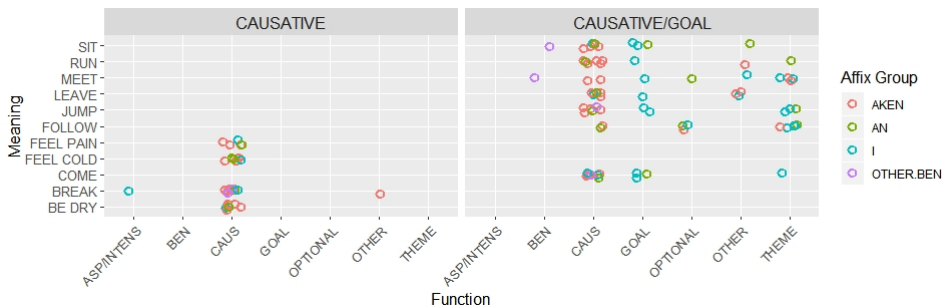
Patterns

- ▶ **Causative** pattern: BE DRY, BE COLD, FEEL PAIN, BREAK
- ▶ **Causative/Goal** pattern: SIT, RUN, JUMP, MEET, COME, LEAVE, FOLLOW
- ▶ **Benefactive** pattern: COOK, BUILD
- ▶ **Benefactive/Aspectual** pattern: TAKE, STEAL, BRING, ASK FOR
- ▶ **Instrumental/Aspectual** pattern: HIT, *CUT
- ▶ **Theme** pattern: THINK, SING, TALK, TELL

Introduction
00000000

Methodology
000

Findings
0000●000000

Discussion
0000

References

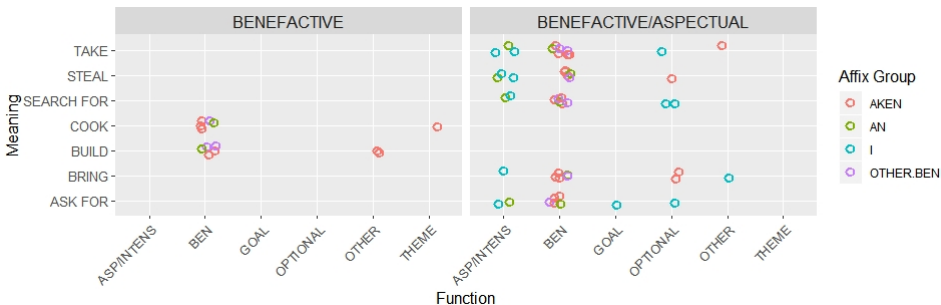# Bases showing consistent behavior

Bases showing consistent behavior

- ▶ **Causative** pattern: BE DRY, BE COLD/FEEL COLD, FEEL PAIN, BREAK/BROKEN.
- ▶ **Causative/Goal** pattern: SIT, RUN, JUMP, COME, LEAVE, FOLLOW, MEET

Introduction
00000000

Methodology
000

Findings
0000000000

Discussion
0000

References

Bases showing consistent behavior

- ▶ **Benefactive** pattern: COOK, BUILD
- ▶ **Benefactive/Aspectual** pattern: TAKE, STEAL, BRING, ASK FOR

Bases showing consistent behavior
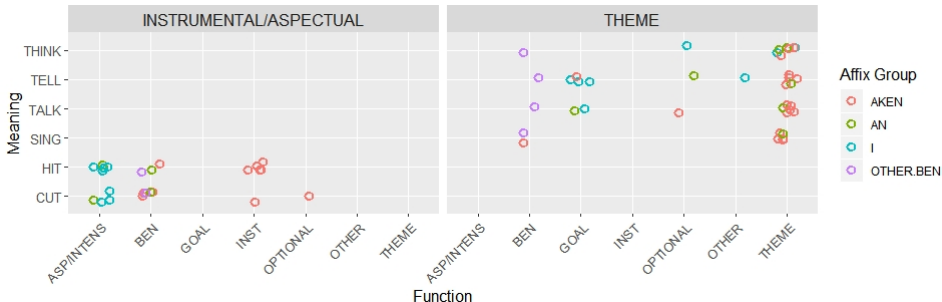
- ▶ **Instrumental/Aspectual** pattern: HIT, *CUT
- ▶ **Theme** pattern: THINK, SING, TALK, TELL

Bases showing variable behavior

- ▶ Filtered for meanings with ≤ 3 derived forms representing the same function (arbitrary cut-off).
- ▶ Discarded meanings with < 7 derived forms in the data (*n* below median)

Inconsistent Bases

- ▶ **Complex event structure**: TIE, THROW, FILL, PUT, (GIVE)
- ▶ **Semantically trivalent**: TEACH, HELP, GIVE, NAME
- ▶ **Other**: SEE, HUG, SMELL/KISS, SHAVE

- ▶ Some variation is an artifact of variable coding, so that needs to be remedied.

Bases showing variable patterns

GIVE

- ▶ **Opt.+Theme**: Ind. *memberi∼memberi-kan*
- ▶ **Opt.+Recipient**: Jav. *wèh ∼ngewèh-i*
- ▶ **Detrans.+Theme**: Jav. *ngewèh-aké*, Bes. *enjuk-ka*, Sas. *bèng-an*
  - ▶ 'to give Y an X' → 'to give X (to Y)'
- ▶ **Aspectual**: Sun. *méré-an*, Bes. *enjuk-i*
- ▶ **Benefactive**: Sun. *mang-méré-keun*

- ▶ Semantic overlap between recipient, beneficiary, and goal for the verb GIVE.
- ▶ Detransitivizing function is particularly curious.

Bases showing variable patterns

THROW (AT)

- ▶ **Opt.+Theme**: Ind. *melempar~melempar-kan*, Jav. *mbalang ~mbalang-aké*
- ▶ **Goal**: Ind. *melempar-i*, Jav. *mbalang-i*
- ▶ **Theme**: Blz. *mambalo'-kon*
- ▶ **Inst./Theme**: Bes. *nelempak-ka*
- ▶ **Aspectual**: Bes. *nelemplak-i*, Sun. *ngalung-an*
- ▶ **Benefactive**: Sun. *mang-alung-keun*, Sas. *salut-an*
- ▶ **Other**: Blz. *mam-balo'-kon* 'to dispose of, throw out'

- ▶ Semantic overlap between theme and instrument for verbs meaning THROW/PELT.
- ▶ Base verb syntax is not completely comparable across languages, though the semantics are quite consistent.

Discussion

- ► This exploratory study looks at the role of lexical semantics on the behavior of applicative morphology.
- ► The distribution observed shows that behavior of applicative morphology is not as clear-cut as some have assumed.
  - ► Semantic verb classes show promise for explanation of some portion of the data, e.g. our consistent patterns.
  - ► To this we must add constructional meaning (attraction of affixes to certain functions) + pragmatics.
- ► To answer our research question: Yes, 'buy' always has a benefactive applicative function in our sample. But other forms are variable, e.g. *nukoni* Jav. 'to go to s.w. to buy s.t.', Sun. *meuli-an* 'to buy repeatedly'.
  - ► This variation is not explained by semantic/syntactic dichotomies.

Acknowledgements

We would like to thank the following organizations and people:

1. Khairunisa
2. Dewi Setiani
3. Hendi Feriza
4. The Bilinski Educational Foundation

Next steps

- ▶ Refine criteria for identifying base constructions.
  - ▶ e.g. Is Ind. *meng-isi-kan* 'to put Y into X' a derived form of the verb *meng-isi* 'to fill X with Y' or the noun *isi* 'contents'?
- ▶ Refine typology and coding of functions
  - ▶ e.g. Some constructions are both causative and goal-selecting, etc.
  - ▶ e.g. "OPTIONAL" is not a function. Possible pragmatic uses must be investigated.
- ▶ Investigate relationship of lexical semantics to syntactic variation in applicative constructions.

Sources

- ▶ The lexical database for this study was compiled from the authors' field notes and the following sources: McDonnell in prep, Khairunisa & McDonnell in prep., van den Berg & Busenitz 2012, Busenitz & Bradbury 2016, Robson & Wibisono 2002, Hemmings 2013, Sneddon 1996, Pusat Bahasa (Indonesia) 2007, and the Leipzig Corpora Collection (see Goldhahn, Eckart & Quasthoff 2012).

- ▶ Data visualizations were produced using R 3.5.2 (R Core Team 2018) and the tidyverse collection of packages.

References I

Busenitz, Robert L. & Daniel Bradbury (eds.). 2016. Balantak Dictionary. SIL International.

Cole, Peter & Min-Jeong Son. 2004. The Argument Structure of Verbs with the Suffix -kan in Indonesian. Oceanic Linguistics 43(2). 339–364.

Goldhahn, Dirk, Thomas Eckart & Uwe Quasthoff. 2012. Building Large Monolingual Dictionaries at the Leipzig Corpora Collection: From 100 to 200 Languages. In Proceedings of the 8th International Language Resources and Evaluation (LREC'12).

Hemmings, Charlotte. 2013. Causatives and applicatives: The case for polysemy in Javanese. Working Papers in Linguistics 16. 167–194.

Himmelmann, Nikolaus P. 2005. The Austronesian languages of Asia and Madagascar: Typological characteristics. In K. Alexander Adelaar & Nikolaus P. Himmelmann (eds.), The Austronesian languages of Asia and Madagascar (Routledge Family Language Series), 110–181. New York: Routledge.

Kroeger, Paul. 2007. Morphosyntactic vs. morphosemantic functions of -kan. In Annie Zaenen, Jane Simpson, Tracy Holloway King, Jane Grimshaw, Joan Maling & Christoper D. Manning (eds.), Architectures, Rules, and Preferences: Variations on Themes of Joan Bresnan, 229–251. Stanford, CA: CSLI Publications.

Levin, Beth. 1993. English verb classes and alternations. Chicago: University of Chicago Press.

References II

Pusat Bahasa (Indonesia). 2007. Kamus besar bahasa Indonesia. 3rd. Jakarta: Balai Pustaka Pub.

Robson, Stuart & Singgih Wibisono (eds.). 2002. Javanese-English dictionary. Hong Kong: Periplus Editions.

Sneddon, James Neil. 1996. Indonesian: A comprehensive grammar. London: Routledge.

Truong, Christina L. & Bradley J. McDonnell. Forthcoming. Neglected functions of western Indonesian applicative morphology. In Sara Pacchiarotti & Fernando Zuñiga (eds.), Applicative morphology: Neglected syntactic and non-syntactic functions (Trends in Linguistics). De Gruyter Mouton.

Vamarasi, Marit Kana. 1999. Grammatical Relations in Bahasa Indonesia. Canberra, Australia: Research School of Pacific and Asian Studies, The Australian National University.

van den Berg, René & Robert L. Busenitz. 2012. A grammar of Balantak, a language of Eastern Sulawesi. (SIL E-Books 40). SIL.