Thesis Proposal: Valence-Changing Morphology in Grammar Customization

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Overview

- Adding support for valence-changing morphology to Grammar Matrix customization system (Bender et al., 2010)
- aka *ValenceChangey McValenceChangeyFace*
- Typological scope
  - Valence-reducing:
    - ⋆ Subject-removing: anticausative, passive
    - ⋆ Object-removing: deobjective/antipassive, reflexive/reciprocal
  - Valence-increasing:
    - ⋆ Subject-adding: causative (also e.g. affective [jpn])
    - ⋆ Object-adding: applicative (benefactive, instrumental, posessor-raising, etc.)
- Focusing on verbal morphology
  - Periphrastic constructions will be excluded
  - Assuming a morphophonological analyzer

Approach

- Decompose valence-changing operations into building blocks:
  - Remove { subject | object }
  - Demote [erstwhile] { subject | object }
  - Add { subject | object }
  - Add predicate (e.g. `cause_v_rel`)
  - Change case frame
  - Coindex NPs
  - Invert syntactico-semantic relationship

Example: Passive in Mam

(1) a. *ma* *ch-ok* *t-b'iyo-'n* *Cheep* *kab'* *xjaa*
PAST 3PL+O-DIRectional 3SG+A-hit-DIR José two person
'José hit two people.' [mam]

b. *ma* *chi* *b'iy-eet* *kab'* *xjaa* *(t-u'n* *Cheep)*
PAST 3PL+S hit-PASS two person 3SG-REL/AGENT José
'Two people were hit (by José).' [mam]

- Component operations:
  - Remove subject arg
  - Promote object to subject
  - Move erstwhile subject to instrumental phrase

(England, 1983, in Dixon & Aikhenvald, 1997, p. 75)

Example: Deaccusative in Hungarian

(2) a. *Az orvos szán-ja a beteg-et*
the doctor pity-3SG the patient-ACC

'The doctor pities the patient.' [hun]

b. *Az orvos szán-akoz-ik a beteg-en*
the doctor pity-DEACC-3SG the patient-SUPERESS

'The doctor feels pity for the patient.' [hun]

- Component operations:
  - Demote object to adjunct
  - Case change on adjunct

(Károly, 1982, in Haspelmath & Müller-Bardey, 2004, p. 4)

Example: Causative in Vengo

(3) a. *nw nìi táa nìì*
he enter in house

'He entered the house.' [bav]

b. *m nìi-s nw táa nìì*
I enter-CAUS him in house

'I made him enter the house.' [bav]

- Component operations:
  - Add subject
  - Add predicate
  - "Demote" event scope

(Schaub, 1982, in Haspelmath & Müller-Bardey, 2004, p. 11)

Example: Multiple application in Lakota

(4) a. *hayápi kiŋ pusmáyayekhiye*
hayápi kiŋ púzA-ma-yÁ-ya-khiyA
clothes DET dry-1SG.P-CAUS.INTR-2SG.A-CAUS.TR

'You made me dry the clothes'. [lkt]
(Ullrich, 2011)

b. Desired MRS:

```
[ LTOP: h1 INDEX: e15
      RELS: < [ "_clothes_n_rel" LBL: h3 ARG0: x4 ]
              [ "exist_q_rel" LBL: h5 ARG0: x4 RSTR: h6 BODY: h7 ]
              [ "_dry_a_rel" LBL: h8 ARG0: e2 ARG1: x4 ]
              [ "cause_v_rel" LBL: h11 ARG0: e10 ARG1: x12 [ PNG 1sg ] ARG2: h13 ]
              [ "cause_v_rel" LBL: h14 ARG0: e15 ARG1: x16 [ PNG 2sg ] ARG2: h17 ] >
      HCONS: < h6 qeq h3 h1 qeq h14 h13 qeq h8 h17 qeq h11 > ]
```

- Component operations:
  - Add subject
  - Add predicate
  - "Demote" event scope
  - (repeat)

Example: Psych applicatives in Halkomelem

(5) a. *q̓c'q'-ət* *č* *ce^{ʔ}* *k^{w}θə* *nəc'əwməx^{w} ʔi* *ce^{ʔ}* *tecəl*
surprise-TR 2SUBJ FUT DET AUX FUT arrive

'You will surprise the visitors when they arrive.' [hur]

b. *c'əq'-me^{ʔ}-t* *č* *ce^{ʔ}* *k^{w}θə* *nəc'əwməx^{w} ʔi* *ce^{ʔ}* *tecəl*
surprise-REL-TR 2SUBJ FUT DET AUX FUT arrive

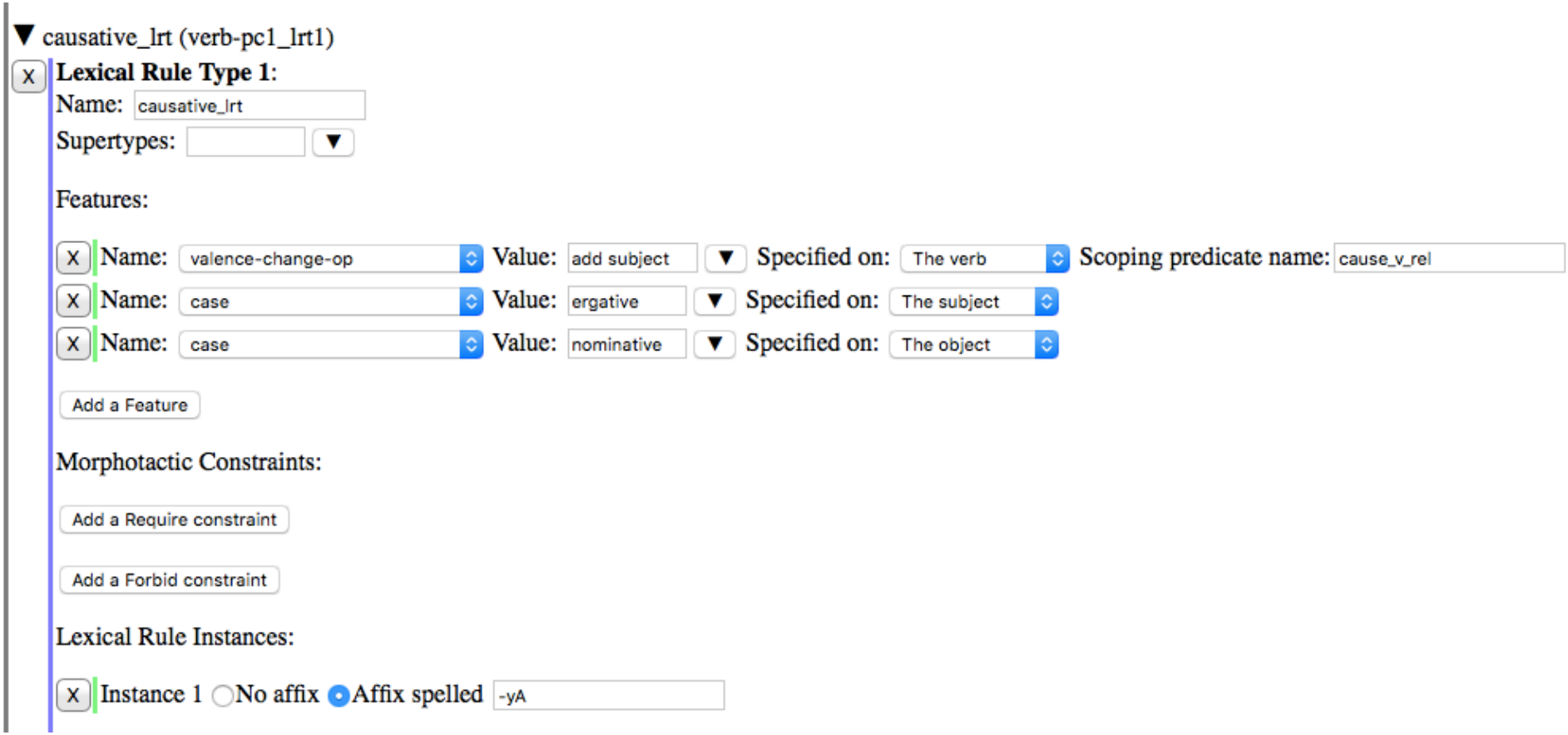
'You will be surprised at the visitors when they arrive.' [hur]

- Component operations:
  - Reverse syntactico-semantic indexes

(Gerdts & Kiyosawa, 2005, p. 334)

Implementation

Conceptually:



Some Questions

- Axiom: Causative is 2-place
- Questionnaire interface
  - Reducible to (pseudo)features?
- Cycles in derivations (multiple application)
- Ditransitives in the Grammar Matrix
- Interaction with other libraries