# Beyond b-subjects: testing subjecthood in Croatian modal constructions

**Forty Years after Keenan 1976**
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# Presentation based on a co-authored article (with Veronika Wald and Zrinka Kolaković, Universität Regensburg)

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# Structure of the talk

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4. Coding properties
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# 1. Introduction

Keenan's multifactoral model of subjecthood focuses on what he calls ‚semantically basic sentences' (b-sentences) and their subjects (b-subjects), respectively.

In our paper we would like to address the subject properties in sentence structures which do not belong to these b-sentences but are both semantically and formally more complex. Keenan claims that „[…] in any given L(anguage), subjects of non-basic sentences frequently do not have quite as full a complement of the subject properties as do subjects of b-sentences" (Keenan 1976, 323).

Taking this hypothesis as a point of departure we are going to discuss coding, behaviour (and selected semantic) properties of b-subjects in Croatian (partially described by Kučanda 1998) and compare them with derived subjects in constructions with a **modal predicate** MOD and a lexical complement (**m-subjects**).

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# Keenan's definition of b-sentences

Keenan (1976, 307): definition of Basic-Sentence in a Language:

For any Language L,

a)  a syntactic structure x is <u>semantically more basic than</u> a
    syntactic structure y if, and only if, the meaning of y depends
    on that of x. That is, to understand the meaning of y it is
    necessary to understand the meaning x.
b)  a sentence in L is a basic sentence (in L) if, and only if, no
    (other) complete sentence in L is more basic than it.

We will address modal constructions; they are more complex than
b-sentences (first observations on Russian by Grillborzer 2014).

First observation: modal predicates and non-canonical subjects
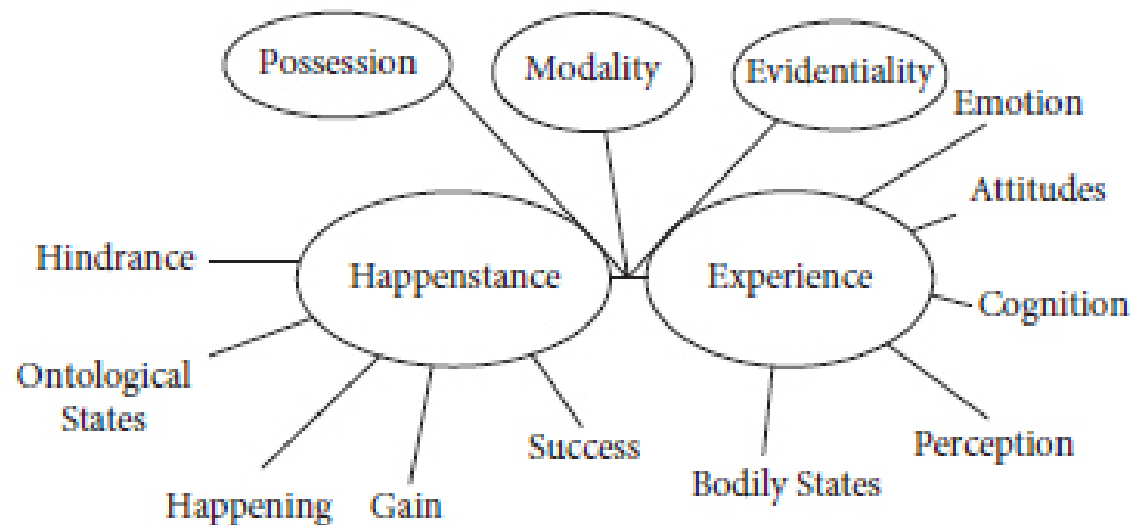


Figure 10. Reconstruction of the semantics of the Dative Subject Construction for a common proto-stage

(Barðdal et al. 2012)

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## 2. Modal predicates and their constructional make-up

Illustration : Modality's semantic map
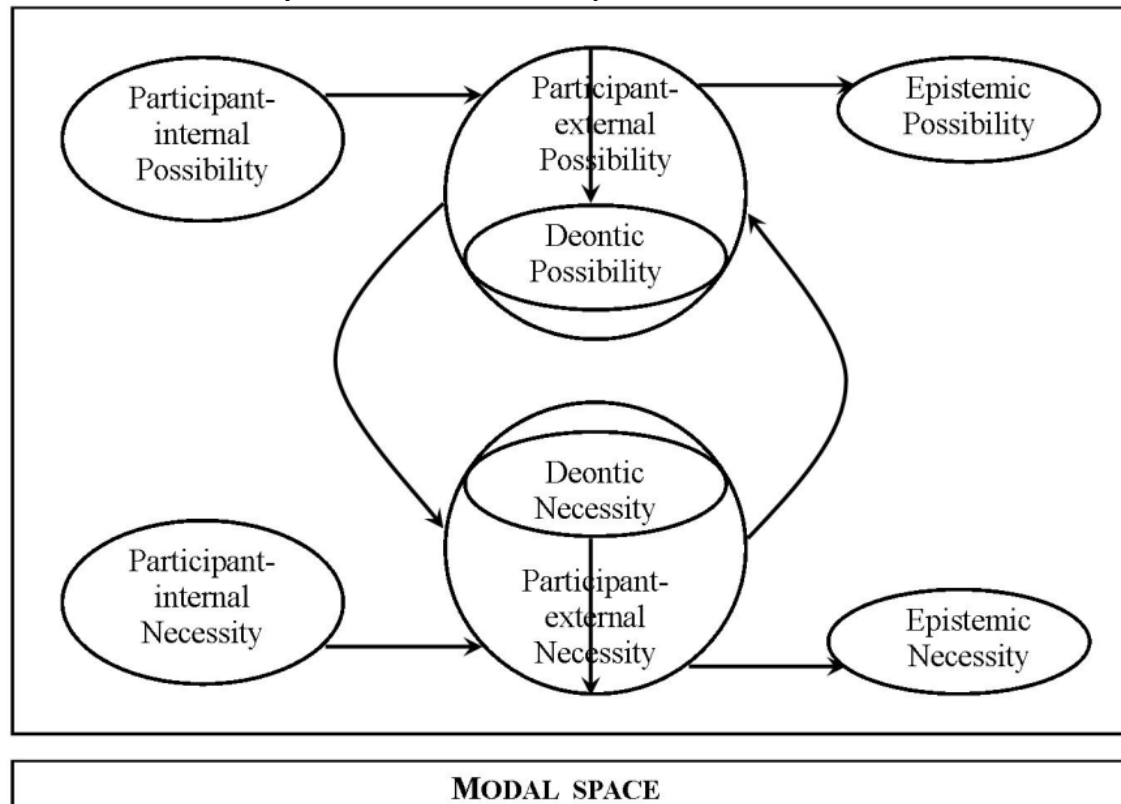


(van der Auwera, Kehayov & Vittrand 2009, 282)

## Structure of m-sentences:

MOD + LEXICAL COMPLEMENT
two potential candidates for the status of subject position
(we use the term PSA: privileged syntactic argument)

(1) *[**Hij**] [moet] [de boeken **Ø²/PRO²** terugbrengen naar de bibliotheek]$_{LEX}$*

(2) *[**Hij**] moet [**Ø²/PRO²** u dat wel gezegd hebben]$_{LEX}$*

## Positions according to raising vs control distinction (Hansen 2014, 116; mainly from Reis 2001, 301)

|  |  | Control | Raising |
| --- | --- | --- | --- |
| Position 1 | Root modals | + | − |
|  | Epist. modals | − | + |
| Position 2 | Root modals | + | − |
|  | Epist. modals | + | − |
| Position 3 | Root modals | − | + |
|  | Epist. modals | − | + |

## 3. Croatian data

One and the same MOD can take either a canonically (ex. 3)  or a non-canonically case marked PSA (ex. 4):

(3)  *Zato*      **$mi_{nom}$**      **$treb\text{-}amo_{1.Pl}$**      **$otići_{inf}$**      *do*   *Ministarstv-a*   *kultur-e*
    therefore   1PL.NOM   must-1PL.PRS   go.INF   to   ministry-GEN   culture-GEN
    'Therefore we have to go to the Ministry of Culture.'

(4)  *Ne*       **$treb\text{-}a$**       **$nam_{Dat}$**   **$ići$**   *daleko.*
    NEG        must-3SG.PRS       1PL.DAT   go.INF   far
    'We don't have to go far. '

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## Qualitative corpus based study

Exclusively **natural data** from the web corpus hrWaC 2.0, accessible via sketch engine; January 2016:
1 746 908 509 words (recently replaced by hrWaC 2.2.)

- largest corpus of Croatian, tagged for POS and MSD; searchable with CQL queries
- procedures to cope with problems of low data quality; tagging accuracy (86.05% for MSDs, Agić et al. 2008, 449), missing deduplication, performance errors in user generated content etc.
- reduce introspection to a minimum

## Selected MSD

[lemma="valjati"]
Infinitive − [tag="Vmn"]
Nominal Dative [tag="N...d"]
Clitic dative [tag="Pp...d--n-n"]
Adverbial participle (converb) [tag="Rr"]
Personal pronoun nominative [tag="Pp3.sn--n-n"]

An example of a full CQL query:

[lemma="trebati" & tag="Vmr3s"] [tag="Pp...d--.-n"] [tag="Vmn"] within <s/>

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## Our sample of MOD

1. polyfunctional verbs (modal auxiliaries): *moći, morati, trebati, valjati, imati*
2. selected non-polyfunctional verbs: *smjeti, umjeti, priličiti*
3. selected non-polyfunctional adjectives: *dužan, potreban, ob(a)veza(ta)n, kadar, moguć*

(Hansen et al. submitted, for the term 'polyfunctional' see Hansen 2014, Hansen & De Haan 2009)

# 4. Coding properties

Nominative case and subject-predicate agreement in number and person
**Our claim:** b-PSAs and m-PSAs show the same coding properties; they allow for canonically marked PSAs in the Nominative and for non-canonical PSAs in the Dative triggering the same subject-predicate agreement patterns

(5) *Ov-u*     *stranic-u*     **valj-a$_{3sg}$**     **nam$_{dat}$**     *gledati*     *kao*  *komercijalnu*  *(...)*
      this-ACC.F    page-ACC    should-3SG.PRS    1PL.DAT    accept.INF    as     commercial     (…)
      'We have to treat this site as commercial.' (www.zadarskilist.hr)

(6)      *Zato*     **mi$_{nom}$**     **treb-amo$_{1.Pl}$**     **otići$_{inf}$**    *do*  *Ministarstv-a*  *kultur-e*
      therefore    1PL.NOM    must-1PL.PRS     go.INF    to     ministry-GEN    culture-GEN
      'Therefore we have to go to the Ministry of Culture.' (www.hnd.hr)

(7)  *[...] hvala,*  ***meni_Dat***  ***se***  *ne*  ***id-e***  *nikuda, […].*
      thanks  1SG.DAT  REFL  NEG  go-3SG.PRS  anywhere
      '[...] thanks, I don't feel like going anywhere […]'

# 5. Behavioural properties
# 5.1. Binding of reflexives

Holds for reflexive constructions in a narrow sense; reflexives in argument positions opened by the predicate (ex. 8) but not for reflexives within NPs (ex. 9); non-canonical PSA can bind reflexives, too (ex. 10)

(8)  *[Šef*              *rusk-e*          *držav-e]_i*        *obavijesti-o*              *je*
     chief.NOM         Russian-GEN.F    state-GEN        inform-PTCP.M           AUX.3SG

     *[ministr-e]_j*          *o*               *[svom_{i/*j}*              *telefonsk-om*
     minister-ACC.PL      about         REFL.POSS.LOC.M      telephone-LOC.M

     *razgovor-u]*              *s*          *američk-im*       *predsjednik-om*    *George-om*
     conversation-LOC      with       American-INS.M   president-INS       George-INS

     *Bush-om.* (glasistre.hr)
     Bush-INS

     'The head of the Russian state informed the ministers about his telephone conversation with the American president.'

(9)    *[Narativn-o     znanj-e]ᵢ*        *nud-i*              *liječnic-ima*
       narrative-NOM.N    knowledge-NOM   offer-3SG.PRS        physician-DAT.PL

       Øⱼ     *upoznavanj-e*              *i*       ***sebe*** *ᵢ/ⱼ*          *i*
              cognition-ACC                and       REFL.GEN             and

       ***svojih*** *ᵢ/ⱼ*            *pacijenat-a.* (akademija-art.hr)
       REFL.POSS.GEN.PL          patient-GEN.PL

       'Narrative knowledge offers physicians to introduce themselves and their patients.'


(10)   *[…] ali*       *ni-je*            ***mi*** *ᵢ*           *žao*          ***sebe*** *ᵢ,*
        but           NEG-be.3SG.PRS     1SG.DAT      pitifully        REFL.GEN

        *ja*          *sam*        *sretn-a*              *u*          *život-u […]*
        1SG.NOM       AUX.1SG      happy-NOM.F            in           life-LOC

        '[...] but I don't feel sorry for myself, I am happy with my life.'

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Modal constructions: reflexive does not depend on the MOD but on LEX (≠ reflexive construction in a proper sense); independent of control vs raising dichotomy

(11)  *U*      *tom*          *slučaj-u*    *ne*   **pro<sub>i</sub>**   *treba-te*          ***joj<sub>j</sub>***
      in      this.LOC.M   case-LOC    NEG                        must-2PL           3SG.DAT.F
      **Ø<sub>i</sub>**      *nuditi*        ***svoju<sub>i</sub>***                   *asistencij-u [...].*
              offer.INF      REFL.POSS.ACC.F              assistance-ACC
      'In this case you have to offer your assistance […]'

nuditi (X, Y)

## 5.2. Control of PRO of adverbial participle phrases

The PSA and only the PSA **controls** the reference of the non-overt first argument **(PRO) of adverbial participle phrases**; canonical (ex. 12) and non-canonical PSA (ex. 13)

(12) **[PRO$_i$** ***Žele-ći*** *da* *se* *njegov* *sin* *izdign-e* *iz*

             want-CVB COMP REFL 3SG.M.POSS.NOM son.NOM stand.out-3SG.PRS from

*ov-e* *mas-e]*, *Niku$_j$* *je* $_{NP}$**[otac** **Jere]$_i$** *posla-o*

this-GEN.F mass-GEN Niko.ACC AUX.3SG father.NOM Jere.NOM send-PTCP.M

*u* *Padov-u* *da* *studir-a* *prav-o [...]*

to Padua-ACC COMP study-3SG.PRS right-ACC

'As his father wanted him to stand out from the crowd he sent him to Padua to study law.'

(13)  [*A*     PRO<sub>i</sub>   *gledaju-ći   Microsoft*],    *sve*     ***me<sub>i</sub>***     *više*
and               look-CVB    Microsoft.ACC  everything  1SG.ACC   more

*podsjeć-a      na  THT,      čuj-em      da    kupu-ju      E-Bay [...]*
remind-3SG.PRS  on  THT.ACC   hear-1SG.PRS  COMP  buy-3PL.PRS  eBay.ACC

'When I have a look at Microsoft everything reminds me of THT, I hear they are
going to buy eBay.'

# Also in m-constructions

(14) *Isto*    *tako*   **PRO**<sub>i/*j</sub>   ***koriste-ći***   *se*   *primjer-ima,*   ***odgajatelj-i***<sub>i</sub>   *treba-ju*
likewise                  use-CVB   REFL   example-INS   nurse-PL        should-3PL.PRS

*uputiti*          ***roditelje***<sub>j</sub>
explain.INF        parents.ACC

'In the same way the nurses should instruct the parents using examples [...]' (www.dvck.hr)


(15) **PRO**<sub>i/*j</sub> *Pozdravljaju-ći*  *slijep-u*       *ili*  *slabovidn-u*                    *osobu*   **Ø**<sub>i</sub>  *treba*
           greet-CVB            blind-ACC.F  or  visually.impaired-ACC.F  person            should.3SG

***joj***<sub>j</sub>        *kazati*    *svoje*    *ime.*
3SG.DAT.F     say.INF     REFL       name.

'Greeting    a    blind    or    visually    impaired    person    one    has    to    say    one's
name.'(www.zadarskilist.hr)

This means that **both canonical and non-canonical m-PSAs** can control PRO in adverbial participle phrases.

**But:** adverbial participles as such are restricted to written language.

We are dealing with a subject property restricted to a certain register.

## 5.3. Obviation in final clauses

Obviation:  „[…] the subject of certain subordinate clauses must be disjoint in reference from certain NPs in the immediately higher clause […]" (Farkas 1992, 85); Usually claimed to be linked to finiteness (infinitive vs subjunctive).

French:

(16)    *Pierre veut partir.* 'Pierre wants to leave.'

(16')    **Il**$_i$ *veut qu'***il**$_j$ *parte.* 'Pierre wants him to leave.'

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## CQL

[lemma="moći" | lemma="morati"] [] {0,5} [tag="Vmn"]
[] {0,5} [word="da" | word="kako"]
[word="bi"][tag="Pp...n--n-n"] within *<s/>*

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Croatian: final clauses only allow for finite verbs;
**But**: dichotomy personal pronoun vs non-overt pro;
**Our claim:** Croatian shows an obviation effect in final adjunct clauses, i.e. the PSA cannot co-refer with the overt pronoun in the final clause (ex. 17)

(17) *Zato*     *jer*     *kod*     *stvaranj-a*     *držav-e,*     **narod$_i$**
therefore     because     with     creation-GEN     state-GEN     people.NOM

*predaj-e*     *dio*     *svoga*     *suverenitet-a*     **vladar-u$_j$**
surrender-3SG.PRS     part.ACC     REFL.POSS.GEN.M     sovereignty-GEN     ruler-DAT

*da*     *bi*     **on$_{*i/j}$**     *na*     *područj-u*
COMP     COND     3SG.M.NOM     on     territory-LOC

*držav-e*     *uve-o*     *red [...].*
state-GEN     introduce-PTCP.M     order.ACC

'Because with the creation of the state the people surrender part of their sovereignty to the ruler who is supposed to introduce the order in the state.'

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# In contrast, non-overt *pro* can be co-referent either with the subject (ex. 18) or the object (ex. 19)

(18) **Sustav$_i$**      *korist-i*      **optičk-i**      **laser$_j$**      *kako*      *bi*

system.NOM      use-3SG.PRS      optical-ACC.M      laser.ACC      which      COND

**pro$_{i/*j}$**      *nadgleda-o*      *promet*      *cijel-o*      *vrijem-e.* (www.vkh.hr)

monitor-PTCP.M      traffic.ACC      whole-ACC.N      time-ACC

'The system uses an optical laser in order to continuously monitor traffic.'

(19) *Zatim*      *je*      **pro$_i$**      *pozva-o*      **Zlatković-a$_j$**      *da*      **pro$_{*i/j}$**      *mu*

Then      AUX.3SG      call-PTCP.M      Zlatković-GEN      COMP      3SG.M.DAT

*pomogn-e*      *pridržava-ti*      *slik-u.* (Perković, cit. in Katičić 1986, 258)

help-3SG.PRS      hold-INF      picture-ACC

'Then he called Zlatković to help him to hold the picture.'

## Also in m-constructions (canonical PSA in ex. 20 and non-canonical PSA in ex. 21)

(20) *[...] **pacijent**$_i$*    *treb-a*    *upozoriti*    ***stomatolog-a**$_j$,*    *kako*    *bi*
patient.NOM    should-3SG.PRS    notify.INF    dentist-ACC    how    COND

***on**$_{*i/j}$*    *moga-o*    *na*    *vrijeme*    *sve*    *izvaditi*
3SG.NOM.M    can-PTCP.M    on    time.ACC    everything.ACC    remove.INF

*iz*    *usta [...]*
from    mouth.GEN.PL

'The patient should warn the dentist so that he can remove everything from the mouth in time.'

(21)    ***Ø**$_i$* *Treb-a*    *ući*    *u*    ***EU**$_j$*    *da*    *bi*    *nas*
should-3SG.PRS    enter.INF    in    EU    COMP    COND    1PL.ACC

***ona**$_{*i/j}$*    *spasi-l-a*    *od*    *balkanskih*    *integracija.*
3SG.NOM.F    save-PTCP-F    from    Balkan    integration.GEN

'We should join the EU in order to avoid Balkan integration.'  (www.hkv.hr)

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Obviation effect in final clauses involving the dichotomy pro vs overt pronoun attested for b- and m-PSAs

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# 6. Semantic properties

B-sentences: grammatical relations (subject-object marking) dissociated from semantic roles; no selection restrictions

M-sentences: selection restrictions depending on predicate and finiteness of verb in complement; ex. 22 non-canonical PSA with non-human referent

(22) *Liječenju*$_{Patient/-human}$ *uvijek treba biti individualizirano.*
  healing.DAT    always should be individual.PTCP.PASS.N.SG
  ‚The treatment should always be individual'

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# 7. Summary

- In Croatian, b-PSAs and m-PSAs show the same coding properties;
- As to behaviour properties, however, b- and m-PSAs diverge;
- b-PSAs have three behavioural properties: i) the PSA and only the PSA binds reflexive pronouns, ii) the PSA and only the PSA controls the reference of the non-overt first argument (PRO) of adverbial participle phrases, and iii) the PSA cannot co-refer with the overt pronoun in the final clause;

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- Canonical and non-canonical m-PSAs can control PRO in adverbial participle phrases and show the obviation effect in final clauses;
- Binding of reflexives is not a behavioural property of m-PSAs;
- Control of PRO in adverbial participle phrases is stylistically restricted;
- specific type of obviation effect in final clauses involving the dichotomy pro vs overt pronoun (and not infinitive vs subjunctive); this needs to be analysed more thoroughly;

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- semantic properties: in M-sentences selection restrictions depend on the predicate AND the finiteness of verb in complement (more details in Hansen et al, submitted)

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# 7. General conclusion (beyond Croatian)

- M-sentences potentially involve two slots for PSAs: one in the modal matrix clause and one (non-overt) in the complement;
- The distinction between raising vs control constructions is crucial (see Hansen 2014);
- m-PSAs show a subset of subject properties found in b-sentences;
- Researching subject properties in a language, one should take into account diastratic and diaphasic variation;
- Binding of reflexives is not a property of m-PSAs;
- Natural corpus data provide a sound empirical base for research on subject properties.

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## **More details:**

Hansen, B. & V. Wald & Z. Kolaković, submitted. Subjektkasus und Finitheit: Eine korpusbasierte Studie zur Mikrovariation und zur Entwicklung kroatischer Modalkonstruktionen. *Zeitschrift für slavische Philologie*.

THANK YOU

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