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An analysis of the influence of animacy, givenness, and focus in Croatian ditransitives

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Introduction

- Croatian is a free word order language: all word orders are attested but preferred in different contexts
- SVO is the word order with widest contextual applicability
- The clitic is fixed in second position
- This study investigates how *animacy*, *givenness*, and *focus* influence word order in Croatian
- We will use ditransitive structures: IO-DO or DO-IO
- This is not Dative Alternation because there is no variation is structure, but only word order permutations

The effects of these factors on word order

- **Animacy hierarchy**: Human<Animate<Inanimate
- Animate items are always highly accessible and thus easy to retrieve

- **Given before new** principle
- Givenness influences object ordering so that contexts with given themes trigger DO-IO, and contexts with given recipients trigger IO-DO.

- **Background<Focus**

Research questions and predictions

1) Are the factors observed cross-linguistically also influential in Croatian?
2) What effect do animacy, givenness, and focus have on object order?
3) Which one of these factors is the most relevant in object order placement?

1) Yes, these factors should also be relevant in Croatian

2) Animate will precede inanimate, given will precede new, background will precede focus

3) The factor that is the most relevant will overrule the others in neutral conditions

Method

- **Study 1: Corpus study**
- Double Object Database (DODB) containing utterances of CDS from CHILDES structured according to object order (IO-DO vs. DO-IO) and object form (NP, PR, CL)
- The objects are marked for the factors
- Here we are considering only animacy and accessibility

- **Study 2: Survey**
- Expanded to 4 word orders: VID,IVD, VDI, and DVI
- Neutral contexts were provided
- Focus is included

The DODB

- **Animacy**: Human + Animate
- **Accessibility**: Given + Present + Salient
- We searched for conditions of neutral animacy or neutral accessibility: all IOs were animate, most objects were accessible
- Given the situation of the naturalistic data we made the following prediction:
- *if animacy is a more important factor than givenness, we can predict that there will be predominantly IO-DO word orders; while if givenness is more important there should not be any significant preference of word order*

DODB: distribution of the data

Form	IO-DO	DO-IO
NP-NP	55	17
NP-PR	3	0
NP-CL	0	27
PR-NP	15	2
PR-PR	0	3
PR-CL	0	8
CL-NP	144	1
CL-PR	15	0
CL-CL	12	n/a
Total	245	58

The DODB: the occurrences taken into account

Objects' form	IO-DO	DO-IO
NP-NP	55	14
NP-PR	3	/
Total	72	

IO-DO		DO-IO	
VID	IVD	VDI	DVI
53	5	13	1
72			

The DODB properties

Animacy	IO-DO	DO-IO
Both	1	0
IO	57	14

- We are mainly interested in these occurrences since the factors we are looking into cannot explain why the DO-IO is attested here.

- The language is quite uniformed with all IOs being animate and almost all objects being accessible

Accessibility	IO-DO	DO-IO
Both	55	13
IO	3	0
DO	0	1

Some examples of DO-IO

1. *Curica baci loptu medi.*
   girl-NOM throws-3rd.sing ball-ACC bear-DAT
   "The girl throws the ball to the bear."

Discourse Topic

2. *daj rukicu mami daj rukicu .*
   give-IMP hand-ACC mom-DAT give-IMP hand-ACC
   "Give mom your hand, give it."

Saliency

The DODB observations

- IO-DO is the predominant word order, more precisely VID
- Animacy is most likely the cause for this
- Considering the prediction we made earlier (slide 6), this would entail that animacy is a stronger factor than givenness; however since all objects are accessible, it could be the combination of accessible and animate of the IO that cause the IO-DO predominance
- We have looked into the DO-IO productions to see what was causing the DO to be placed in front of the IO and found out that Discourse Topic is also a relevant factor

The Survey

- Provides us with the neutral contexts
- Each context sentence was followed by the target sentence presented in 4 different word orders: VID, IVD, VDI, DVI
- The participants had to judge them on a 5-point scale
- Total of 18 targets over 12 contexts
- A total of 82 native speakers of Croatian completed the survey (age: 18-53)
- We do not expect any word order to be judged particularly low
- The Focus conditions were examples with questions

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All conditions	VID	IVD	VDI	DVI
	3.11	3.53	3.83	3.60

Example of survey question

Molim te, uđimo u ovaj dućan.
Please you-CL, enter in this store
Moram pogledati košulje
Must.1st.sing look shirts-ACC
VID: *Željela bih za rođendan pokloniti ocu*
Wish-cond.2nd.sing want-AUX for birthday give_as_a_gift father-DAT
košulju.
shirt_ACC

CONTEXT SENTENCE

VDI: *Željela bih za rođendan pokloniti košulju ocu.*
IVD: *Željela bih za rođendan ocu pokloniti košulju.*
DVI: *Željela bih za rođendan košulju pokloniti ocu.*

TARGET SENTENCES

Translation: Can we please go into this store? I want to look at the shirts, I would **like to gift (give as a gift) my father a shirt** for his birthday (VID, VDI, IVD, and DVI alternatives are provided for the participant to judge) for his birthday.

Condition: **IO Animate, DO Given**

Importance of the factors

- We created three models using linear mixed effects where word order + each factor are used as a predictor
- We compare each of those the null model where word order is the only predictor
- The comparison of the factor model to the null model can tell us how precise is a factor in predicting word order
- **Null vs. givenness**: not significant (p-value=0.175)
- **Null vs. animate**: significant (p-value=0.02)
- **Null vs. given+animate**: very significant (p-value=$5.139e^{-06}$)
- **Null vs. focus**: significant (p-value=0.007)

Neutral conditions

	Balanced animacy		Unbalanced animacy
	Both Animate	Both Inanimate	IO Animate
DO Given	1	1	2
IO Given	1	1	2
No Given	1	1	2
Total	12		

Neutral givenness: effect of animacy

Animacy	VID	IVD	VDI	DVI
Unbalanced	3.67	4.27	4.03	3.82
Balanced	2.57	2.92	4.16	4.19

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- Here we expected a better acceptance of IO-DO orders when the animacy is unbalanced (IO animate) and thus we find a preference for IVD
- VID is the least accepted.
- In the balanced animacy condition, DO-IO orders are much better accepted than the IO-DOs
- The latter condition is also the condition of complete neutrality because both objects are given and either animate or inanimate

Neutral animacy: the effect of givenness

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Given		VID	IVD	VDI	DVI
DO	* *	2.48	3.00	4.09	4.15
IO	*	3.56	3.20	4.10	3.57

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- When animacy is neutralized there is a preference towards DO-IO orders
- It is unusual that in IO-Given condition the DO-IO is still preferred
- Once animacy is neutralized, the preferred order is DO-IO regardless of the givenness value
- The IO-DOs have a significantly better acceptance in the IO G condition

Contexts with Focus

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DO Focused	VID	IVD	VDI	DVI
Unbalanced A.	4.56	3.54	2.80	2.20
Balanced A.	4.10	3.25	3.19	2.46

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IO Focused	VID	IVD	VDI	DVI
Unbalanced A.	3.20	2.95	4.02	4.02
Balanced A.	3.40	2.00	4.01	4.54

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S Focused	VID	IVD	VDI	DVI
Unbalanced A.	3.56	3.84	3.34	3.18
Balanced A.	2.52	2.59	4.45	4.46

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Discussion

- All four word orders are judged quite highly so we are looking at layers of acceptability
- Lowest scores: VID (2.48) in DO G Bal.AN context, DVI (2.46) in DO FOC Bal.AN, IVD (2.00) in IO FOC Bal.AN. These can be considered ungrammatical
- There is a discrepancy between the DODB and the survey: the most frequent word order in the survey (VID), is the least accepted order across conditions
- There is a preference towards DO-IO orders in when animacy is neutralized
- There is a preference towards DO-IO in the All Neutral condition
- This makes animacy a very relevant factor
- Focus is seems to be the most important factors since the difference in animacy only comes into play when neither of the objects is in FOC (S-FOC)

Conclusions

- Animacy and focus have the predicted effect on object order
- The effect of givenness is unclear
- The frequency of IO-DO in naturalistic data is due to IO being animate
- According to the Survey data we can conclude that the relevance of factors is the following: **focus<animacy<givenness**

QUESTIONS?

References

- Anderssen, M., Rodina, Y., Mykhaylyk, R., & Fikkert, P. (2014). The acquisition of the dative alternation in Norwegian. *Language Acquisition*, *21*(1), 72-102.
- Branigan, H. P., Pickering, M. J., & Tanaka, M. (2008). Contributions of animacy to grammatical function assignment and word order during production. *Lingua*, *118*(2), 172-189.
- de Marneffe, M.-C., Grimm, Scott, Arnon, Inbal, Kirby, Susannah, and Bresenan, Joan (2012). A statistical model of the gramamtical choices in child production dative sentences. *Language and Cognitive Processes, 27*(1), 86.
- Hughes, M. E. a. A., Shanley E.M. (2013). The effect of individual discourse-pragmatic features on referential choice in child English. *Journal of Pragmatics, 56*, 16.
- Mithun, M. (1992). Is Basic Word Order Universal? In D. L. Payne (Ed.), *Pragmatics of Word Order Flexibility* (pp. 15-61). Amsterdam, Philadelphia: John Benjamin Publishing Co.
- Mykhaylyk, R., Rodina, Y., & Anderssen, M. (2013). Ditransitive constructions in Russian and Ukrainian: Effect of givenness on word order. *Lingua*, *137*, 271-289.
- Schütze, C. T. (1994). Serbo-Croatian Second Position Clitic Placement
- and the Phonology-Syntax Interface*. *MIT Working Papers in Linguistics, 21*(Papers on morphology and Phonology), 101.
- Siewierska, A., and Ludmila Uhlirova. (1998). An overview of word order in Slavic languages. In A. Siewierska (Ed.), *EMPIRICAL APPROACHES TO LANGUAGE TYPOLOGY* (Vol. 20, pp. 46). Berlin: Mouton de Gruyter.
- Zovko- Dinković, I. (2007). Dative Alternation in Croatian. *SL, 63*, 65-83.