

The effect of prosody on thematic role assignment in Hungarian adults

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INTRODUCTION

Use of Visual Context

- Depicted actions can be efficiently linked to linguistic input – facilitates online processing (Knoeferle & Guerra, 2012, Münster, 2016).
- Adults utilise visual input from objects & actions for thematic role assignment in locally ambiguous NP-V-NP sentences (Knoeferle et al., 2005).

Initial Stress to Thematic role

- Locally ambiguous NP-V-NP clause with stress on the sentence-initial noun phrase is likely to be interpreted: Object & Patient of the utterance (Grünloh et al., 2011, MacWhinney, Bates, Kliegl 1984, Weber et al., 2006; studies on German, English and Italian).
- Hungarian: initial focus in NP-V-NP sentence is likely to be deemed a Subject & Agent. (MacWhinney, Pleh, & Bates, 1985).

Hungarian Focus & Syntax

- Left periphery: positions designated to topics and foci.
- Postverbal domain: flexible order (basic VSO).
- The focus phrase moves into the leftmost position of the predicate phrase and attracts the verbal head (É. Kiss, 1998, 2010 Szendrői, 2003).
- Most frequent order in corpora: SVO (Behrens 1982).

Prosodic structure in Hungarian

- Intonational nucleus falls on the leftmost constituent of the phonological phrase that contains the predicate (Szendrői, 2003).
- Preverbal constituents are not part of this phrase if they are topics, in which case they form a separate phonological phrase.
- This results in:
 - $(NP_{top})_{\phi} (\underline{V} NP)_{\phi}$
nucleus: fall within the stressed syllable (H*+L)
 - $(NP_{foc} V NP)_{\phi}$
nucleus: rise within the stressed syllable (L*+H)
- Postnuclear domain is deaccented.

AIM

- Using a **visual-world eye-tracking method** (tracking eye gaze in scenes as people listen to related audio stimuli), we assess to what extent thematic role assignment is motivated by prosodic factors.

Experiment I - Unambiguous

Table I. Factorial design of Experiment I (X: nuclear stress)

Stress	Word order	
	SVO	OVS
Marked	<u>NP</u> _{NOM} V NP _{ACC}	NP _{ACC} V <u>NP</u> _{NOM}
V stress	NP _{NOM} <u>V</u> NP _{ACC}	NP _{ACC} <u>V</u> NP _{NOM}

Example 1. Experiment I, SVO & OVS

- A BÉKA(nom) nézi(verb) mindjárt(adv) a libát(acc).
- A békát(acc) NÉZI(verb) mindjárt(adv) a lepke(nom).
The frog(subj/obj) watches soon the goose/the butterfly(obj/subj).



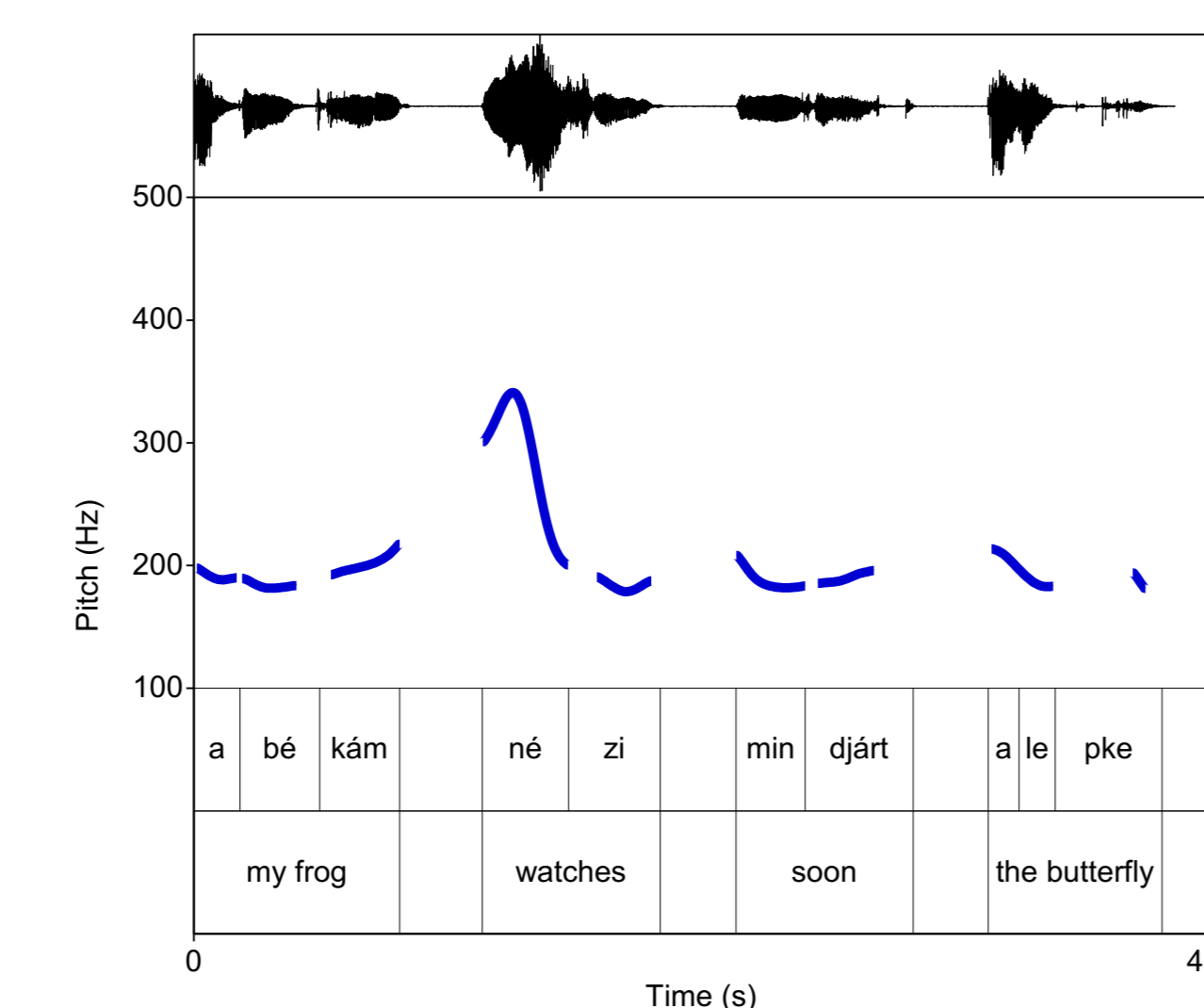
Example 2. Experiment II, OVSc (case marked) & OVSa (ambiguous)

- A békát(acc) NÉZI(verb) mindjárt(adv) a lepke(nom).
- A békám(pos. 1st.sing) NÉZI(verb) mindjárt(adv) a lepke(nom).
The frog(obj)/My frog watches soon the butterfly(nom).

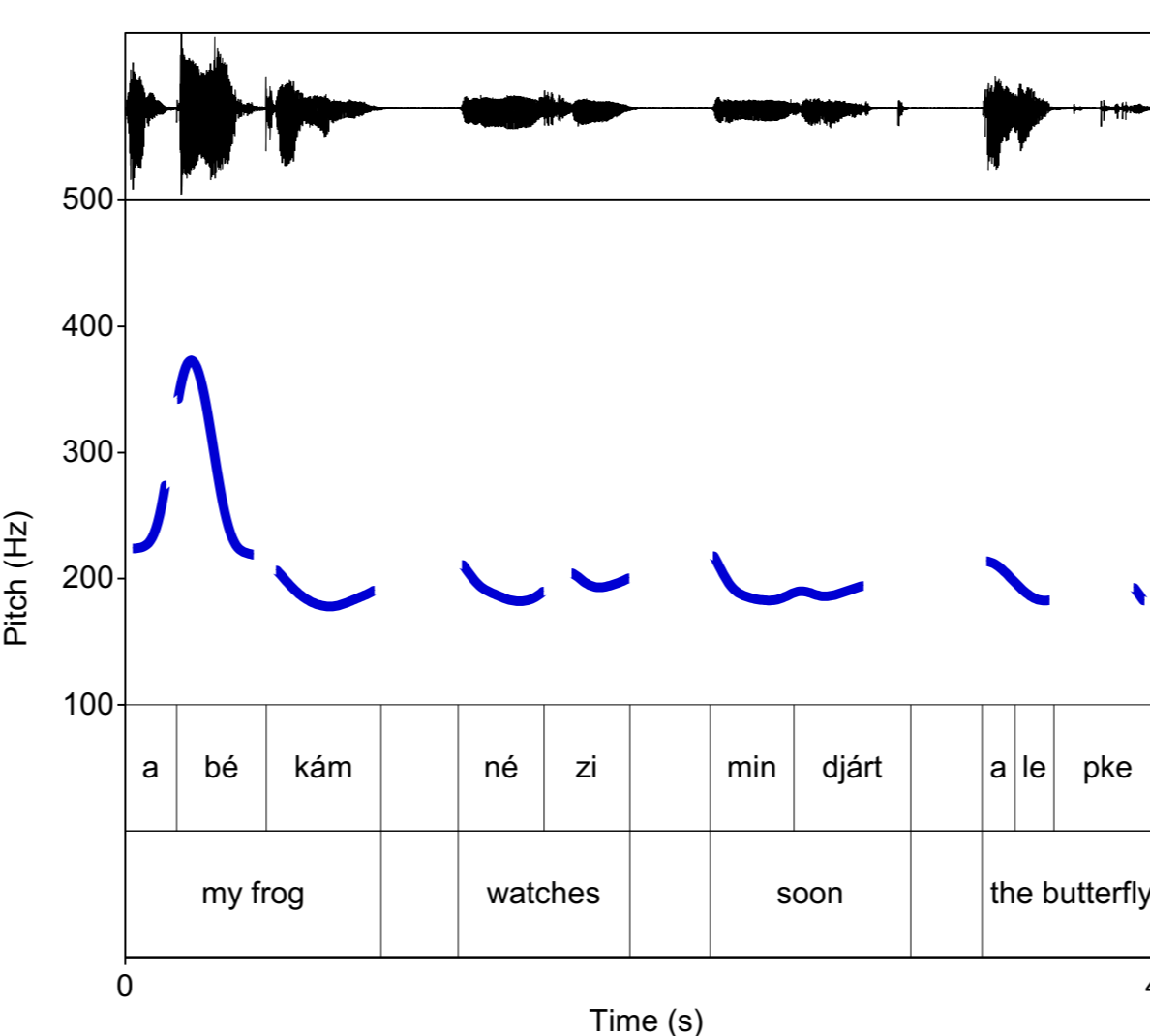


TARGET PROSODIC CONTOUR

Stress on the V: unmarked prosodic structure (Ex 2a)



Preverbal Stress: Initial focus (Ex 2a)



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METHODS

- 24 adults/experiment (18-31 years old)
- Native Hungarian, monolingual
- No sight & hearing impairment
- 12 SVO & 12 OVS target items (Exp. I)
- 12 OVS + case & 12 locally ambiguous OVS target items (Exp. II)
- 72 fillers (Exp. I & Exp. II)

PRELIMINARY RESULTS

Figure I. Experiment I – Combined time course graph

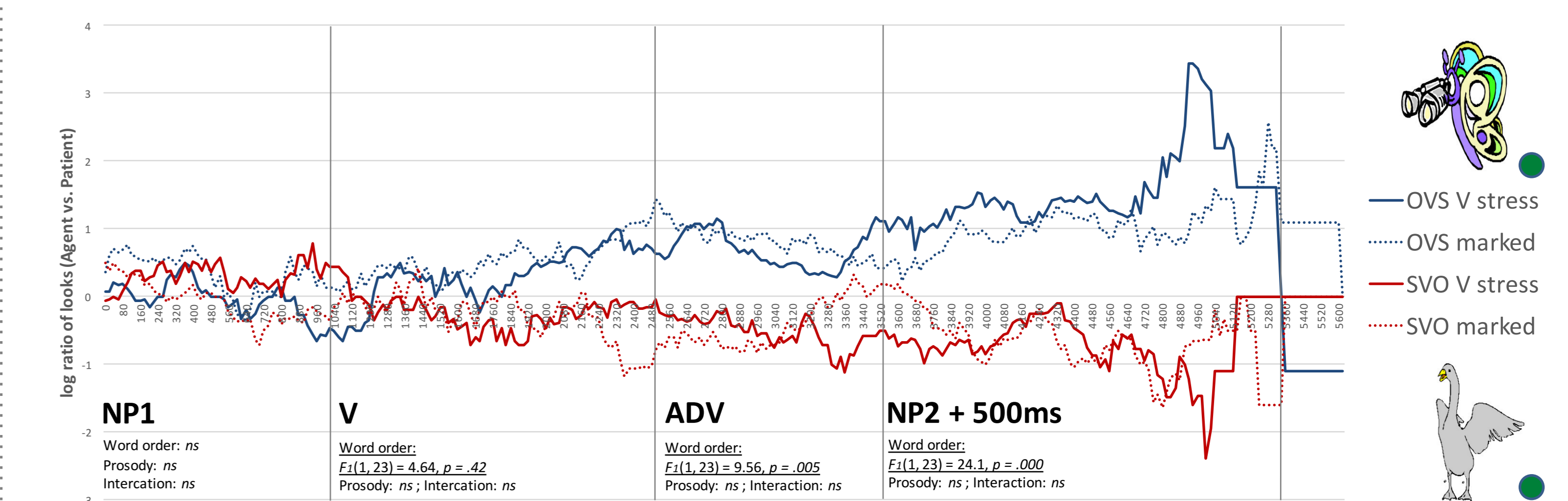
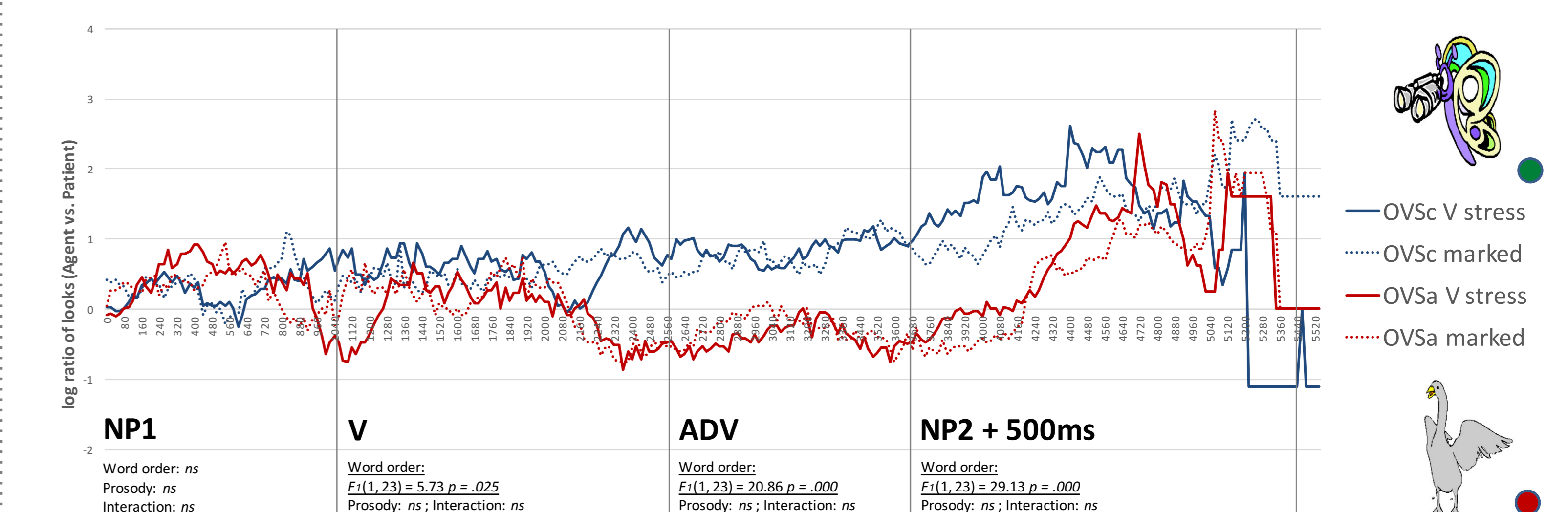


Figure II. Experiment II – Combined time course graph



CONCLUSIONS

- Preliminary results are in line with the previous findings and suggest that Hungarian adults don't utilise prosodic variations when it comes to thematic role disambiguation in locally ambiguous NP-V-NP sentences. Due to the rich case marking system, word order (Experiment I) and case marking (Experiment II) have a clear influence on thematic role assignment. This will not necessarily be true when looking at 4-5 year-old children's performance who may not have fully acquired case and we might observe a later anticipation of thematic role fillers. Natives' preference to interpret locally ambiguous sentences as SVO ones is apparent (see Figure II, OVSc - V & ADV regions); This pattern suggests that participants may have an SVO bias leading them to anticipate the incorrect target (the patient). Only when listeners encountered NP2 did they produce anticipatory looks toward the appropriate target (the agent).

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