

NooJ08: The 11th NooJ conference and workshop

Organized by

The Department of Language Technology of Res. Inst. for Linguistics (Hung. Acad. Sci.),
Laboratoire de Semio-Linguistique, Didactique et Informatique of Université Franche-Comte,
and by Maison des Sciences de l'Homme Claude Ledoux

At the Research Institute for Linguistics of the Hungarian Academy of Sciences
2008, June 8-10, Budapest

Bea Ehmann¹ and Vera Garami²:

NooJ-Aided Semantic Mapping: Linguistic Markers of Subjective Time Experience in Self Reports

¹Institute for Psychological Research of the Hung. Acad. Sci.

²Pecs University, Doctoral School in Psychology

Table of Contents

- I. The work of the Hungarian Narrative Psychological NooJ Community
- II. Subjective time experience in psychology
- III. Fields of narrative psychological time research
- IV. Preliminary results
- V. Summary and outlook

I/1 NooJ Family: The Hungarian Branch

1. Department of Language Technology of the H.A.S.

Tamás Váradi & Kata Gábor

2. Pécs University, Institute of Psychology

János László & Orsolya Vincze, Éva Fülöp, Kata Szalay, Réka Ferenczhalmy, Sara Bigazzi, István Csertő, Rita Hargitai, Melinda Pohárnok, Bernadette Péley

3. Institute for Psychological Research of the H.A.S.

János László & Bea Ehmann & Vera Garami; Tibor Pólya

4. Morphologic Ltd

Gábor Prószéky & Márton Mihálcz

I/2 The logic of narrative psychological content analysis -1

„Whenever a person produces a message [...] he employs a complex set of encoding habits. It seems reasonable to assume that these language habits are organized in the same way as the habits underlying nonlanguage behavior...”
(Osgood, 1958)

„NooJ’s linguistic engine uses an annotation system. An annotation is a pair (position, information) that states that a certain sequence of the text has certain properties. (NooJ v2 Manual, p. 12, Silberztein, 2008)

I/3 The logic of narrative psychological content analysis -2 – László, 2008

Hermeneutic narrative psychology	Psychometric studies with narratives	Scientific narrative psychology
Meaning in social, cultural and textual context	Psychological correlates of language use or impact of narrative organization on mental life	Narratives as vehicles of representations of individual and group experiences
Case-based interest in narrative composition and structure	No interest in narrative composition or structure	Narrative composition of life stories reflect psychological states and identity qualities
Qualitative methodology	Quantitative methodology	
No or limited measurement	Using computer technology for measuring word frequency	Using computer technology for identifying narrative components and patterns

I/4 Psychological Modules of NooJ - 1

Basic Sets of Modules:

- Emotion
- Cognition
- Intention
- Time
- Activity-Passivity
- Evaluation
- Negation
- Self- and We references

I/5 Psychological Modules of NooJ – 2

Composite Modules

PERSPECTIVE:

EMOTION + COGNITION + INTENTION + SUBJECTIVE EXPRESSION

AGENCY:

INTENTION + ACTIVITY-PASSIVITY

CHARACTERS AND FUNCTIONS:

PERSPECTIVE + AGENCY + EVALUATION

(These composite modules are partly completed, and partly in process)

II. WHY TIME? = TIME TOPICS IN PSY RESEARCH

1. Time as indicator of pathology

PERSONAL AND HISTORICAL TRAUMAS

- *Anniversary reactions* (Family holidays, religious holidays, and national or individual traumatic anniversaries (anger, anxiety or depression, e.g. Sunday neurosis, Christmas suicides)
- *Distortions* in time flow, duration and sequence perception, in time orientation and in experiential age; fragmented time experience

II. WHY TIME? = TIME TOPICS IN PSY RESEARCH

Subjective time experience:
Personality state or trait?

- *Milton Rokeach: Trait!* (closed minded people have narrower future perspective than open minded people)
- *Kurt Lewin: State!* (time perspective can be manipulated > perspective narrowed, moral level decreases)

FIELDS OF NARRATIVE PSYCHOLOGICAL TIME RESEARCH

SEMANTICAL

- TIMELINE ANCHORABILITY
- SUBJECTIVE QUALITIES OF TIME

STRUCTURAL

- TEMPORAL SEQUENCE STUDIES

COMPOSITE APPROACHES

- SEMANTICAL + STRUCTURAL

TIME ASPECTS ACCORDING TO TIMELINE ANCHORABILITY

FIXED (now, tomorrow) >>—X—>>

CONTINUOUS (for 4 days) >>—XXXX—>>

PERFECT (until, ever since) >>—▶|—>>

REPEATED (often, rarely) >>—X—X—X—>>

ETERNAL TIME (always), **NEVERTIME** (never)

and **UNCERTAIN** (any time):

>>—?—>>

PRELIMINARY RESULTS: TIME EXPERIENCE AS A PERSONAL TRAIT

„OUT-OF-TIME”, DAY-DREAMING PEOPLE:

MORE DURATION AND EVERTIME EXPRESSIONS (e.g. ‘every day’, ‘always’, etc.)

WELL-MANAGED PEOPLE:

MORE TIME-FIXED ANCHORING AND SEQUENTIAL ADVANCE
e.g. ‘at two o’clock yesterday’, ‘and then’, etc.

DEPRESSED PEOPLE:

SLOWENED TIME PERCEPTION AND MORE DISTANT FUTURE REFERENCES

e.g. utterances referring to slow movement and rumination

IMPULSIVE PEOPLE:

MORE REFERENCES TO START AND NEAR FUTURE (e.g. ‘Let’s begin it right now!’)

(Ehmann, et al., 2007)

STRUCTURAL STUDIES

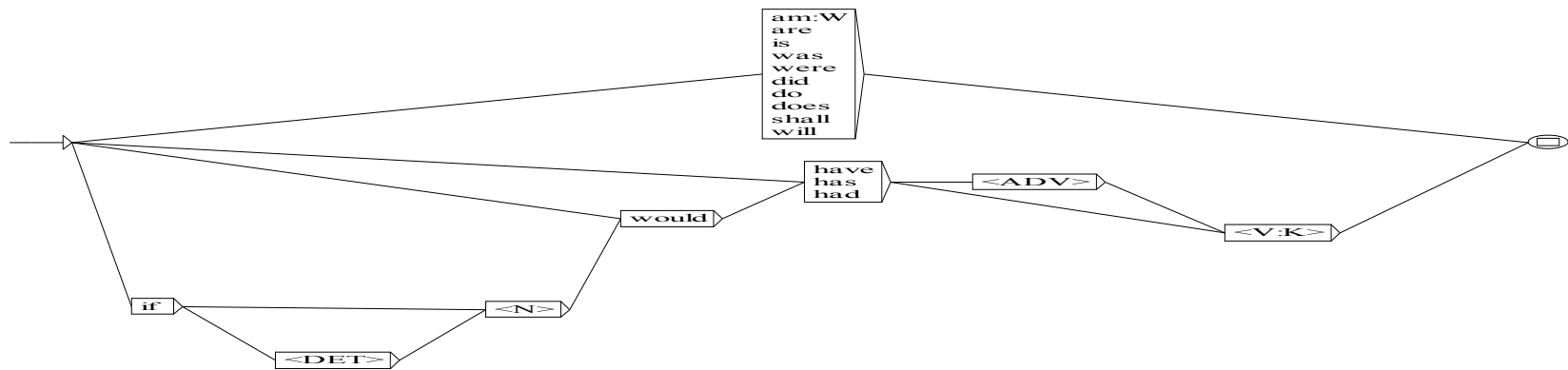
Hypothesis:

The temporal structure of self narratives is indicative of psychological meaning

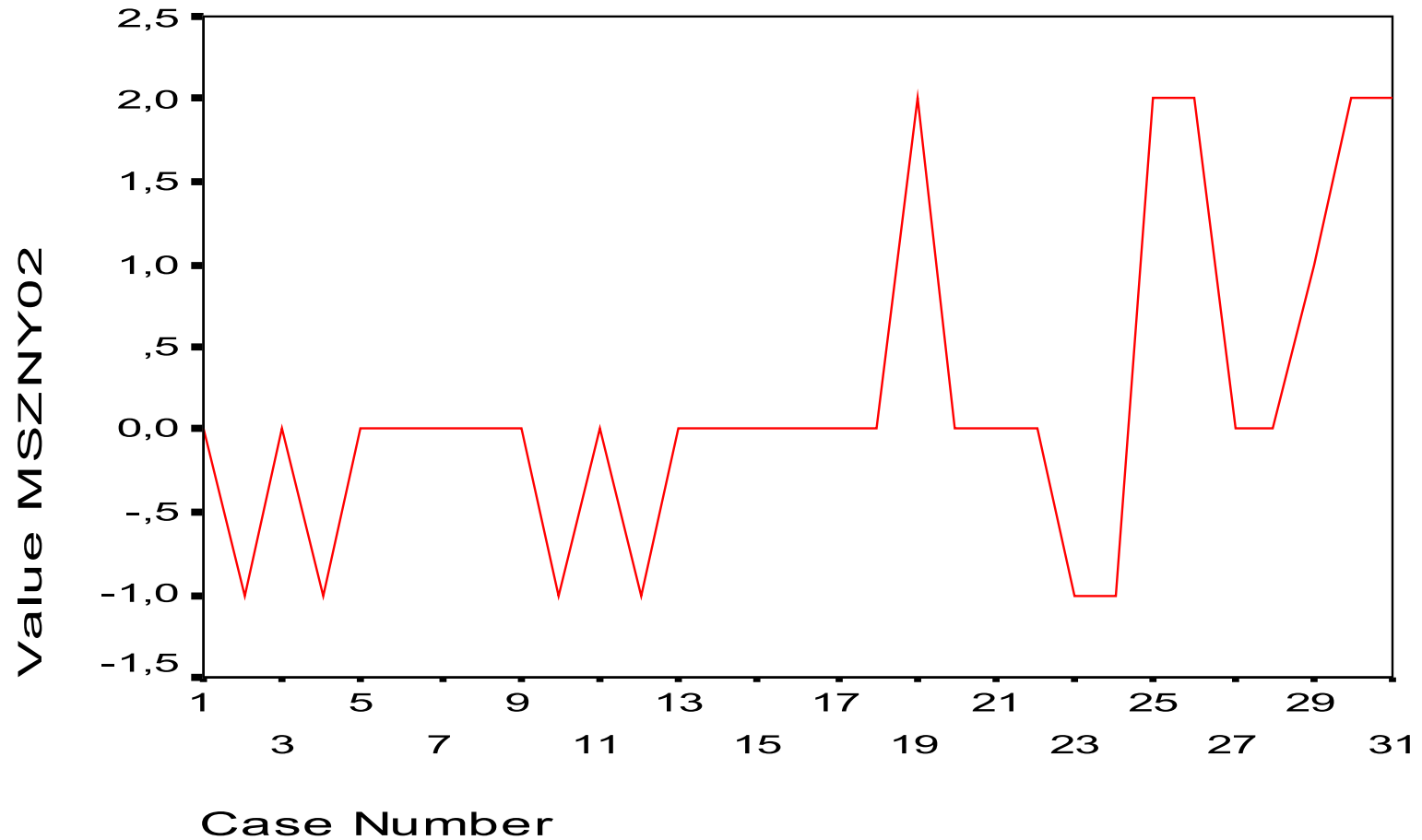
Example: Witnessing car crash

« I was only 9 years old. I had left my home in California to go to my Uncle's house in Mound Minnesota. A neat place right on the lake. I was going there for Uncle Bills camp. Something my siblings had done and it was now my turn. A time to learn some things I did not get a chance to at home. A wonderful trip but with an experience I can describe. My cousin lived there as well and worked at the local fast food chain. Uncle Bill, Aunt Anne and myself jumped into Rosey, a 69 Dodge Dart in shining red. We got up to the restaurant and went in and saw my cousin Sally. She was working and we ordered a big dinner. Then I was a bit hungry again. As we left, Uncle Bill went back and we got an apple pie. Now we got in Rosey and headed home. About 100 yards up the four lane road we stopped to witness the very first moments of the victims of a car accident. We were there first, the only civilians helping. We pulled over and Uncle Bill jumped out with Aunt Anne. They told me to lie down in the back. I had seen the accident already. Blood was dripping out of the car door. High pitched screams of pain from the passengers side in the car. I had seen these bodies. A 4 seater 2 door hatchback with 4 people inside. The two in back were crushed into the back of the car. The ones in front were lying on the dash trying to move. They could not get out. They could not move. The car was a ball of steel. I looked up to see Uncle Bill pulling one of the front seat, I think the driver, out of the car. He was covered in blood screaming at the top of his lungs, talking about his friends in the back. I was terrified. I lay back down and grabbed the small pillow that sat in the back seat and hugged it for security. The sound of screams and cars was terrifying. I do not remember sirens. Suddenly the door opened and Uncle Bill told me he needed the pillow. I gave it to him, my last security blanket, and jumped to the seat again. I was crying, terrified, and nervous. I did not know what to do. I kept thinking that if I had not gotten the apple pie we would have seen the accident - the compression of bodies - the splattering of blood. I do not remember hearing sirens or seeing rescue people. I do not remember driving home. I just know that I sat awake for 3 nights terrified. I remember repeatedly seeing the crash behind the driver. There was glass everywhere. I remember more people somewhere and the car was white. I have seen that scene again in my mind when I am very tired. I do not know what happened to any of them. I do not want to know. »

A graph for identifying present tense and conditionality references



Temporal structure plot of the car crash story



COMPOSITE APPROACHES SEMANTICAL + STRUCTURAL

Lay stories about negative events in Hungarian history:

- settled events have timeline-anchored sequence;
- non-settled traumas have the following features:
 - Present and future tense
 - Conditionalities
 - Allness references (e.g. never, ever)
 - Emotional words
 - Self references

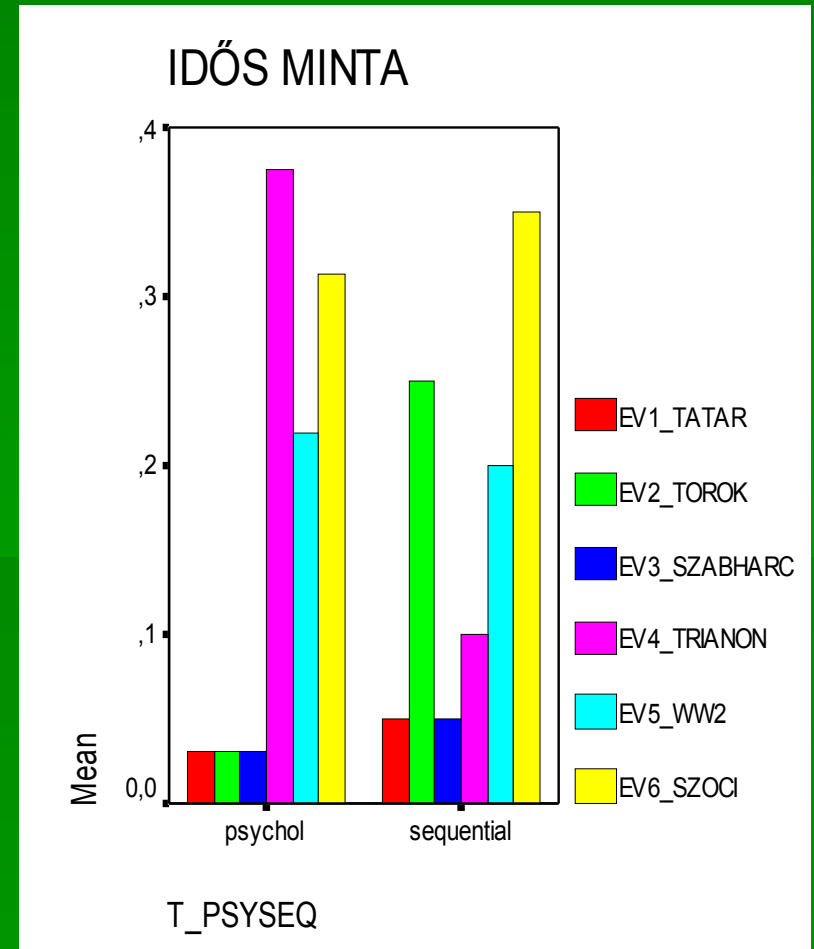
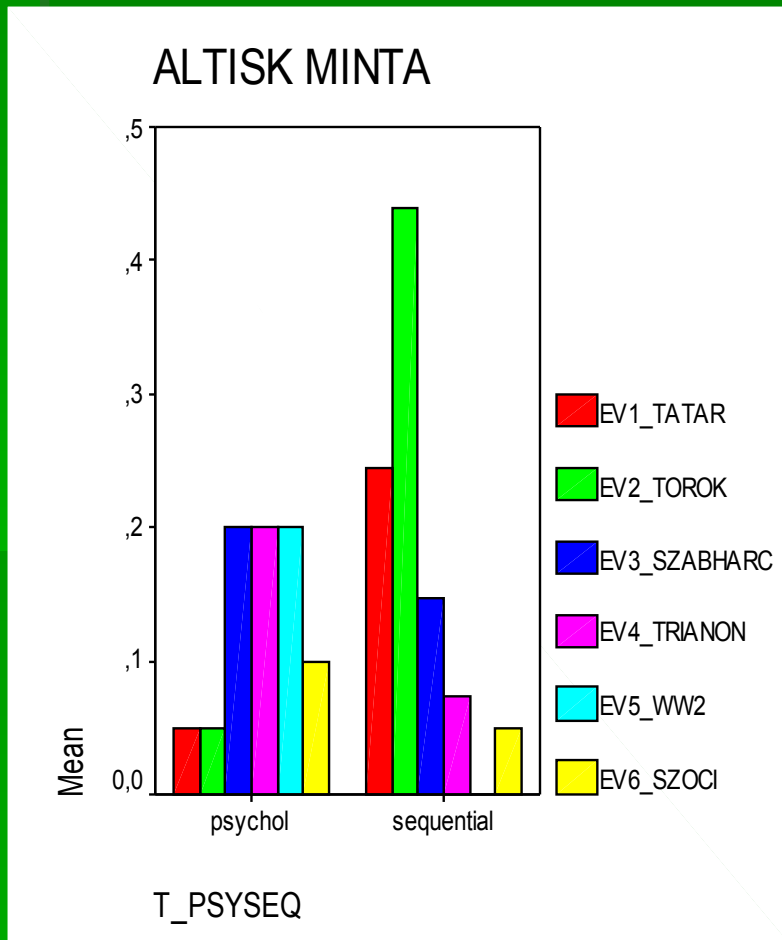
Illustration: Child, Sequential time

„The Turks occupied a large territory, and it was the Hungarians’ task to stop them before they occupy Europe as a whole. The Hungarians fought not only for themselves, but for the whole Christian Europe as well. The Turks burned down a great many villages, and a great many people died. It was only the Castle of Eger that was able to stop them.”

Illustration: Child, Psychological time

„*For me* the Mongol Invasion in 1241 was horrifying. *I* do not like killing or cruelty. The Tatars took away Hungarian *children* from their families for ever. King Bela the 4th *should not have run away* and leave the country alone. But he came back, and that's why he *is called* the second founder of our country.”

Negative events of Hungarian history: Sequential and psychological recalls by children and elderly persons (n = 200)



SUMMARY - 1

The psychological research on recalled Subjective Time Experience (STE) is a three-phase process:

- identifying phenomenological types of STE
- developing a standardized tool of their measure in the texts, and
- connecting the identified STE types to existing psychological constructs

...Some of our local grammars for STE research are ready, and others are under construction.

**SUMMARY – 2:
OUR PRESENT FOCUS:
TIME ASPECTS ACCORDING TO SUBJECTIVE
QUALITIES OF TIME**

■ **START AND END**

- GOOD START (planning, deciding, creating sg that will grow or develop)
- BAD START (start of sg bad, e.g. war, disease, etc.)
- GOOD END (e.g. achievement, end of sg bad)
- BAD END (e.g. decay, destruction, end of sg good)

■ **STABILITY AND CHANGE**

- SLOW, UNCHANGED, FROZEN, SAFE CONDITIONS
- QUICK, CHANGING, RISKY CONDITIONS

SUMMARY – 3

NooJ can be conceived as a third generation psychological content analysis software:

3. Word freq based softwares (General Inquirer, LIWC, RID, etc.)
4. Theory building qualitative softwares (e.g. Atlas.ti)
5. Local grammar (graph) based software: NooJ

Thank you
for your kind attention.