



# **Linguistic Markers of Mental States and their Significance in Perspective Taking**

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# Perspective-taking in Social Psychology

- **Perspective-taking is essential for social functioning**
  - Taking the perspective of another person can
    - Facilitate prosocial behavior
    - Reduce social aggression
    - Reduce errors in social judgment
- **In social psychology, perspective-taking is studied by attribution**
  - Attribution theories deal with the way people explain behaviors
  - Jones & Nisbett (1971) actor-observer bias
    - Perspective produces different explanations of behaviors

# Explanations of behavior differ depending on intergroup contexts

(Ultimate attributional error, Pettigrew, )

- Negative behavior

- If John is an in-group member

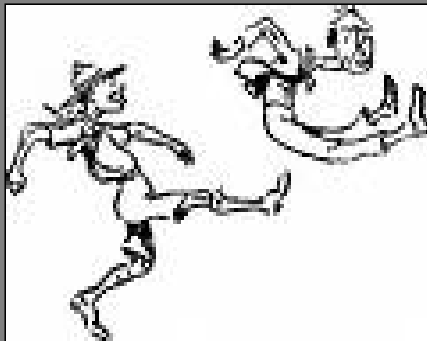


- Observer (in-group members) cites **situational factors** in her explanation  
„because Mike happened to be there”

- If John is an out-group member



- Observer cites **personal factors** in her explanation  
„because he is aggressive”



John kicked Mike

# Explanations of behavior differ depending on intergroup contexts

- Positive behavior
  - If John is an in-group member



- Observer cites **personal factors** in her explanation  
*„because he is helpful”*

- If John is an out-group member



- Observer cites **situational factors** in her explanation  
*„because he went there accidentally”*



John helped Mary

# Other forms of intergroup bias

- Bias in language usage – Linguistic Intergroup Bias (Maas et.al., 1998)
  - Negative behaviors performed by in-group and positive behaviors performed by out-group are linguistically presented on a concrete level by using context dependent **descriptive verbs**.
    - „John kicked Mike” / „Gerry gave his sandwich to Mary”
  - Positive behaviors performed by in-group and negative behaviors performed by out-group are linguistically presented on a more abstract level by using context free **adjectives**
    - „John is helpful” / „Gerry is aggressive”
- Infrahumanization (Leyens et. al., 2000)
  - This is a tendency for people to perceive their own group as more human than the out-groups.
    - **Emotions**
      - People reserve the uniquely human, so called social or secondary emotions, to their own group, whereas out-group are endowed with primary emotions which humans share with animals
    - **Mental states** (Kozak et. al., 2008)
      - Research showed that subjects who scored high on a prejudice scale attributed significantly fewer mental states to minorities than to their own social category.



# Role of perspective-taking in reducing intergroup conflict

- **Perspective-taking in reducing stereotype** (Galinsky & Moskowitz, 2000; Vescio, Sechrist, & Paolucci, 2003; Galinsky & Ku, 2004)
  - Increased the perceived similarity toward the target
  - positive evaluation of the target
  - positive attitude toward the whole group the target belonged to
- **Perspective-taking and infrahumanization** (Leyens et al., 2003)
  - people fail to infrahumanize out-group members whose perspective they have taken

# Process of perspective-taking

- In the course of perspective-taking people extend their attention to mental states of the target



taking into consideration the target's thoughts, feelings, intentions, results in subtle interpretation of the behaviors



Increases the likelihood of considering situational factors

# Study

- Previous studies
  - Perspective-taking increases the consideration of mental states
  - People attribute more mental states to their in-group than the out-group
- Present study
  - We analyzed the presentation of the Austro-Hungarian Monarchy in history schoolbooks published between 1900 and 2007.
    - We studied the distribution of tagged mental states between in and out-group.
    - We also examined the distribution in time

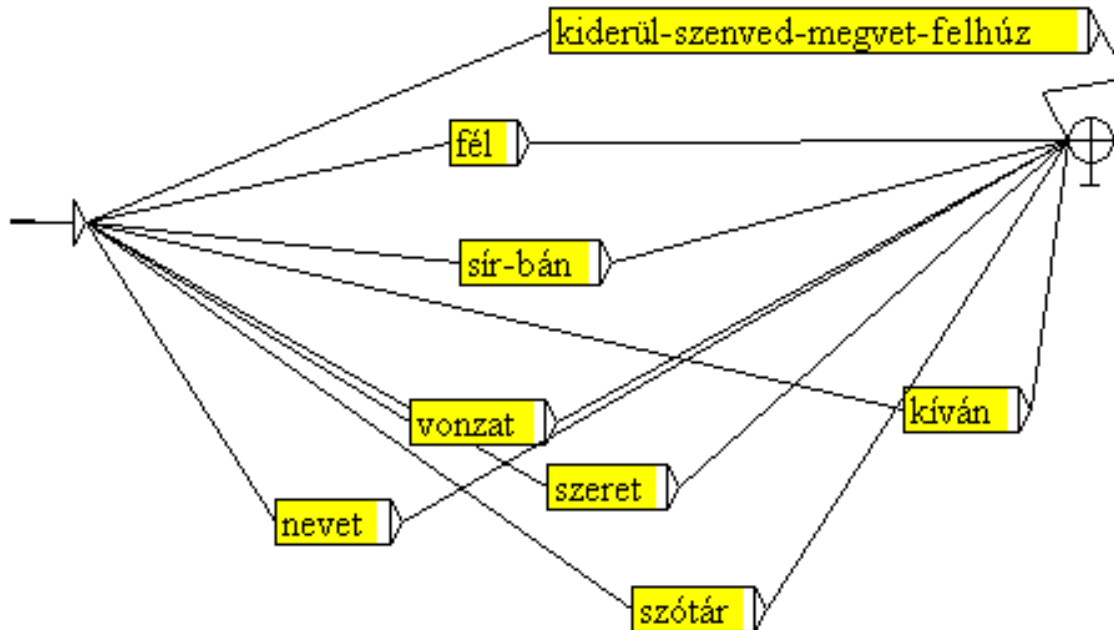


## Hypothesis: group narratives and social identity

- Group narratives are carriers, and at the same time mediators of group identity.
- Besides presenting facts in the narratives, they describe events from a particular perspective.
- Displaying the character's
  - ***consciousness*** (what does she think and feel),
  - ***capability for acting*** (passive or active)
  - ***evaluation of action*** (positive or negative)are subtle narrative tools of mediating group identity
- By the linguistic expression of these narrative tools actions can be described in a manner that make the event acceptable according to the group identity.

# Nooj software

- For analyzing the history schoolbooks we used Nooj linguistic analyzer software
  - Locate grammars were applied to identify linguistic expressions of mental states
    - Perspective module (Pólya, Ferenczhalmy, Fülöp, Vincze, László, 2008)
      - Cognitive (Vincze & László, 2006)
      - Emotion (Fülöp & Laszló, 2006)
      - Intention (Ferenczhalmy & lászló, 2006)



# Graphs and analysis

- Perspective modul
  - consists of verbs and nouns - itself expressing inner states and mental phrases.
- The XML form produced by Nooj was loaded into Atlas-ti (content analyzer program) to identify subjects (Hungarian or Austrian characters)

Erzsébet királynét, nemzetünk Patrónáját is, aki mindig velünk <V ERZELEM>könnyezett</>, ha szenvedtünk, és velünk <V ERZELEM>örvendett</>, ha <V ERZELEM>örvendtünk</>, aki velünk <V KOGNITIV><>érezett</></V>jóban rosszban, s a legelső magyar Asszony volt mióta elfoglalta örök emlékü ősenek, Gizellának a trónját, s nemzetünk jószágos, <V ERZELEM>szerető</></> szívű Anyja mióta Magyarország királynéjává avattatott. E nagy nap óta új nemzedék nőtt fel, mely tovább fejlesztette és megerősítette a nemzeti fellendülés örökét a nagy Uralkodónak védőszárnyai alatt, a ki <V KOGNITIV><>látta szabadságharcunkat</></V>, a <V ERZELEM>szomorú</> bukás után bekövetkezett sötét időket, <V KOGNITIV><>látta</></V> szívós kitartásunkat, hűségünket, és érezte meleg <ERZELEM>szeretetünket</> még a legzordabb éveken is, a kinek nemes és lovagias szíve, mert <V KOGNITIV><>megismerte nemzetünket</></V>, lelke pedig <V KOGNITIV><>megértette az idők jeleit</></V>, szintén <V ERZELEM>szeretettel</> és <ERZELEM>bizalommal</> fordult hozzánk.

# Results

- **In general, Hungarians produce significantly more mental actions (cognitive and emotional) than Austrians.**
- **Considering time:**
  - **There is no significant difference between the two groups in the books published at the beginning of the 20th century, during the Monarchy period.**
  - **From the 1940s, tagged mental states more frequently appear related to Hungarian characters.**

| Year       | Number of Words | Mental states       |                    |
|------------|-----------------|---------------------|--------------------|
|            |                 | Hungarian character | Austrian character |
| 1900       | 5301            | 49                  | 40                 |
| 1910       | 7070            | 65                  | 45                 |
| 1920       | 4000            | 32                  | 19                 |
| 1930       | 7091            | 50                  | 30                 |
| 1940       | 10970           | 67*                 | 44                 |
| 1950       | 21413           | 139*                | 49                 |
| 2000       | 10352           | 62*                 | 26                 |
| <b>sum</b> |                 | <b>439*</b>         | <b>280</b>         |

# Results

- Dividing mental states into cognitive and emotional actions, we can see that
  - Hungarian characters express emotional and cognitive states significantly more often
  - At the beginning of the century these emotions represent a general positive attitude toward Austrians .
- However, further from the events in time, the Hungarian perspective becomes more emphasized as indicated by the frequencies of cognitive phrases

| year       | words | Cognitive phrases |            | Emotional phrases |           |
|------------|-------|-------------------|------------|-------------------|-----------|
|            |       | HUN               | AUS        | HUN               | AUS       |
| 1900       | 5301  | 21                | 31         | 28*               | 9         |
| 1910       | 7070  | 36                | 32         | 29*               | 13        |
| 1920       | 4000  | 17                | 10         | 15                | 9         |
| 1930       | 7091  | 38*               | 21         | 12                | 9         |
| 1940       | 10970 | 51                | 36         | 16                | 8         |
| 1950       | 21413 | 85*               | 33         | 44*               | 16        |
| 2000       | 10352 | 55*               | 21         | 7                 | 5         |
| <b>Sum</b> |       | <b>331*</b>       | <b>206</b> | <b>162*</b>       | <b>74</b> |

# Summary

- Linguistic markers of mental states are narrative tools, which:
  - promote perspective-taking of characters through empathy processes
  - display emotional qualities concerning relationships
- The role of their identity-mediator function reveals itself by the manner in which they emphasize the in-group perspective:
  - The period of the Austro-Hungarian Monarchy is narrated in a way that maintains the continuity of identity even as the events themselves fade further into the past.
  - They displays the event in accordance with identity demands, both in the actual (simultaneously with the event) and the retrospective narratives.

Thank you for your attention!

PÉCS

