

The clausal manifestation of L2-German advancedness: A functionally oriented longitudinal study

AILA 2008

Essen, Germany

August 25, 2008

Hiram H. Maxim, Emory University (USA)
Lone Petersen, Georgetown University (USA)

Overview

1. Background of study and its place within scholarship on L2 writing
2. Explication of theoretical framework
3. Specification of the educational setting
4. Presentation of results from longitudinal study on writing development
5. Discussion of results' relevance for understanding advancedness

1. The Research Context: Collegiate FL Instruction in the U.S.A.

- Four years of university study, from beginning to advanced
- Limited contact hours (45-75 per semester)
- Traditional focus at the lower levels on “language” within a communicative language teaching framework
 - 2-4 semester language requirement contributes majority of lower-level enrollment; noticeable attrition after completion of requirement
- Subsequent focus at the upper levels on “content”, i.e, literary and cultural studies

Goal of study

To contribute to a more differentiated understanding of **advanced** L2 writing, particularly its **gradual development** in **instructed settings**

L2 writing research I

- Advancedness
 - Varied operationalizations
 - Institutional status / Program level
 - Test scores
 - “Native-like” ability
 - Facility with late-acquired language features
 - Increasing incidence, variety, and length of clauses yet reduced number of clauses
 - Challenges in comparing data
 - Lack of theoretical framework

L2 writing research II

- Gradual development of advancedness, i.e., longitudinal studies
 - Different research designs (Ortega & Iberri-Shea, 2005):
 - Quantitative research
 - Descriptive-quantitative studies
 - Programmatic longitudinal studies
 - Instructional effectiveness studies
 - Qualitative research
 - Sociocultural SLA studies
 - Longitudinal ethnographies of L2 learners

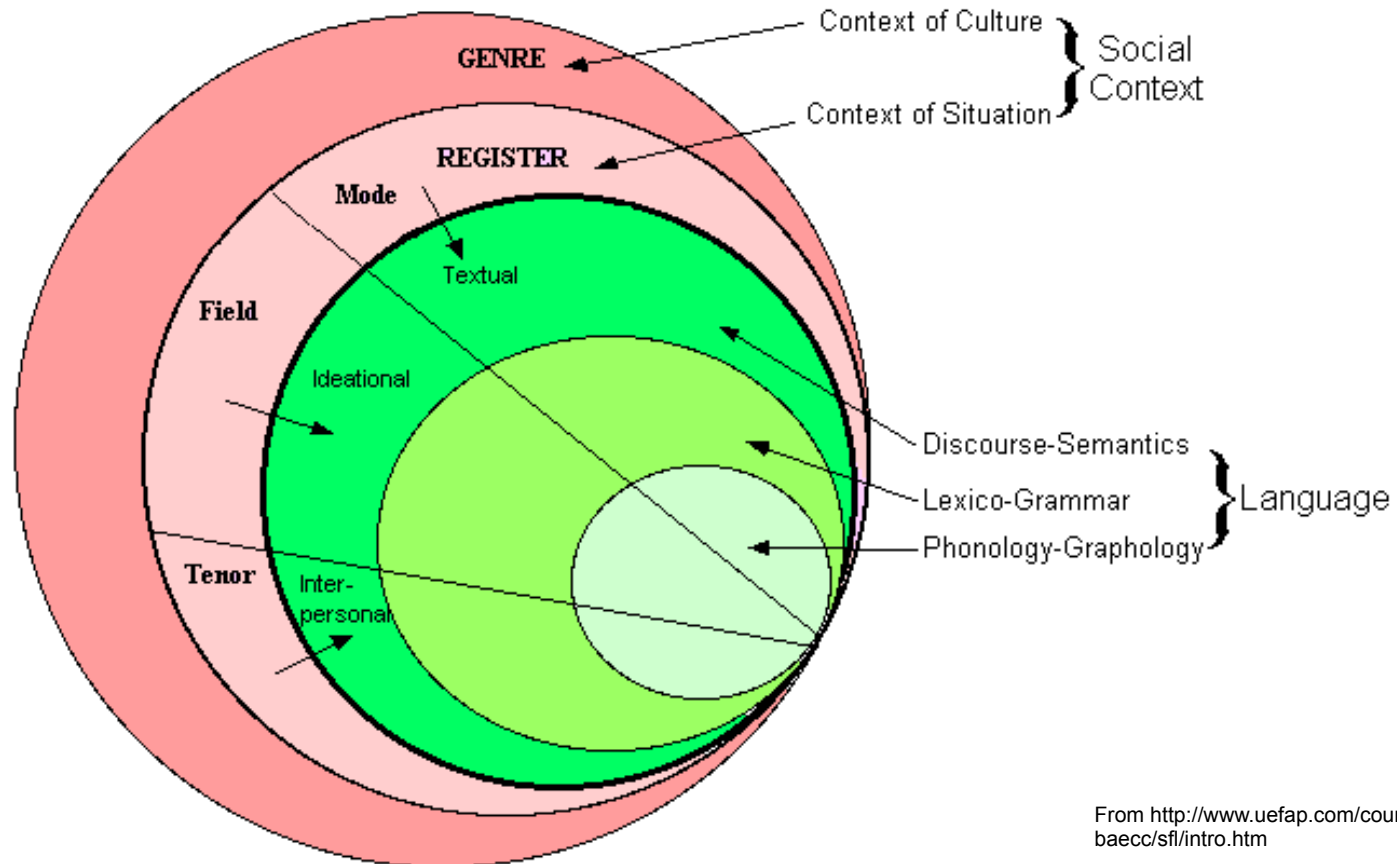
BUT predominance of cross-sectional studies

L2 writing research III

- Development of advancedness in instructed settings, i.e., curriculum-based learning trajectory
 - Different settings:
 - ESL, EFL, FL
 - University - Secondary - Primary
 - Study abroad
 - Different data elicitation
 - Curriculum-independent writing prompts
 - Time-constrained writing assignments
 - Take-home writing assignments

BUT very few U.S. collegiate FL contexts and even fewer from a programmatic perspective

2. Systemic Functional Linguistics I



LEVELS OF COMMUNICATION: DISCOURSE-SEMANTICS

From <http://www.uefap.com/courses/baecc/sf/intro.htm>

Systemic Functional Linguistics II

Metafunctions of language:

- Interpersonal metafunction
mood and modality
- Textual metafunction
theme/rheme
- Ideational metafunction
clause complex transitivity
 - » Experiential
 - » Logical

Systemic Functional Linguistics III

Categories of the ideational metafunction:

- **Expansion** of meaning through:

<i>Category</i>		<i>Expands meaning through</i>
Elaboration:	—————→	apposition, clarification
Extension:	—————→	addition, variation
Enhancement:	—————→	spatio-temporal, manner, causal-conditional

- **Projection** of thoughts/speech

Compact and **dispersed** realizations

3. Educational setting: Georgetown University German Department (GUGD)

- Highly selective private university with strong tradition of language and linguistic study
- Unique integrated four-year, content-oriented, genre-based undergraduate curriculum
- Articulated curricular and pedagogical practices for the development of advanced competencies

Data source I

- 14 learners who completed three consecutive curricular levels:
 - Level II: telling personal stories about contemporary issues in the German-speaking world
 - Level III: framing personal stories in public events and histories, 1945-present
 - Level IV: “reading” discourses of contemporary public life
 - “Students begin to develop the kinds of literacy abilities that are at the heart of summarizing, interpreting, critiquing, presenting and substantiating an opinion or argument, and practice these orally and in writing. Such language use is critical for study abroad as well as any other professional context in which the German language is used.” (Developing multiple literacies)

Data source II

- End-of-level prototypical performance writing tasks (PPTs)
 - Curriculum-dependent and pedagogy-embedded tasks that reflect content and language focus of particular level
 - Detailed task sheet divided into 3 categories
 - Task appropriateness
 - Content
 - Language focus
 - Rough draft submitted to corpus

Overview of PPTs

Thematic Focus	Textual Focus	Audience
Level II Imaginative treatment of personal relationships [Alternative Ending to the Novel „The Story of Mr. Sommer“]	Placing narration about personal lives into the context of a literary work, literary conventions	Personal and public
Level III Multicultural lives in contemporary German [Journalistic treatment „At home in Germany? A Portrait of a Vietnamese Family“]	Placing personal experiences into a broader social context	Public
Level IV Germany’s role in the EU; creation of a constitution [European Union and the United States: comparisons and lessons’]	Making an argument about social, political, economic developments in societies	Public

Previous GUGD-based writing research (Byrnes, et al. 2005)

- Cross-sectional syntactic analysis of 86 participants who completed curriculum-dependent PPTs and curriculum-independent Baseline Writing Tasks (BWTs)
- Analysis of
 - Mean length of T-Unit (MLTU)
 - Mean length of clause (MLC)
 - Clauses per T-Unit (CTU)
- Analogous developmental patterns on both tasks
⇒ Changes in syntactic complexity are related to learner development via the curriculum, i.e., refutation of task effect

4. Treatment of data

- No SFL grammar of German
 - Steiner and Teich 2004
 - Eggins 2004, Halliday and Matthiesen 2004
- Clause coding (double coding)
 - identification and computation of clauses (complexing, taxis and logico-semantics)
- Transitivity coding (double coding, double checking)
 - identification and computation of processes and participants

Clause types

- Clause = A grammatical unit that includes a predicate and an explicit or implied subject, and expresses a proposition.
- Clause simplex = A sentence of only one clause
 - Wir liefen bis Morgen, in den Wald, in die Heide, überall. (*We ran until morning, into the woods, in the heath, everywhere*)
- Clause complex = A sentence of more than one clause
 - Ich war sehr müde, als wir in ein kleines Dorf in den Gebirgen kamen. (*I was very tired when we arrived in a small town in the mountains*)
 - Er klopfte viele Male und endlich kam eine alte, müde Frau. (*He knocked many times and finally an old, tired woman came*)
- Embedded clause = Clauses functioning at “phrase/group rank”
 - Wenn man die Familie Ngoc zu Hause in Berlin besucht, findet man eine Mutter und Tochter, {{die sich sehr gut in der deutschen Gesellschaft integriert haben}}. (*When one visits the Ngoc family in Berlin, one finds a mother and daughter who have integrated themselves very nicely into German society*)

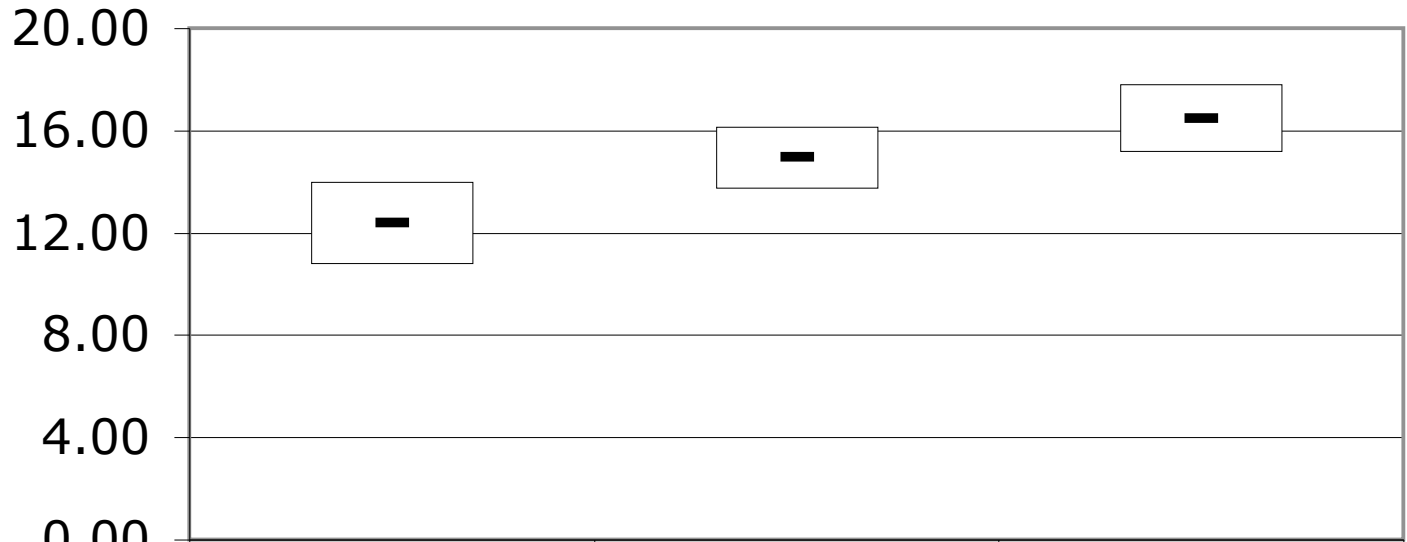
Clause analysis I

- Mean length of sentence
- Mean length of clause
- Lexical density (= content words/clause)
- Clause complexes per sentence
- Grammatical intricacy (=clauses/sentence)
- Embedded clauses per sentence

Clause analysis II

Length of Sentence by Level

Tokens per sentence

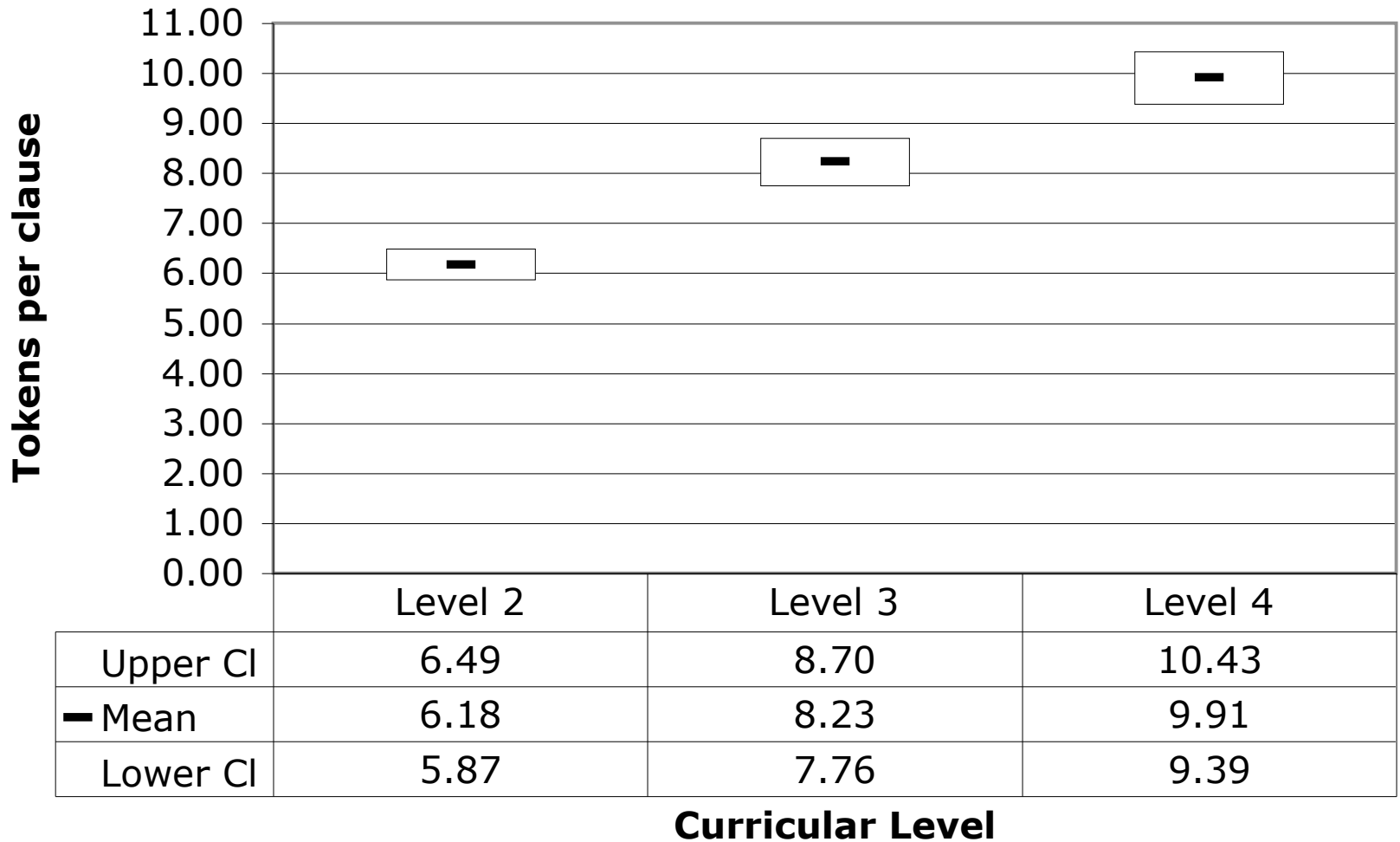


	Level 2	Level 3	Level 4
Upper CI	14.00	16.15	17.79
— Mean	12.41	14.96	16.49
Lower CI	10.82	13.77	15.19

Curricular Level

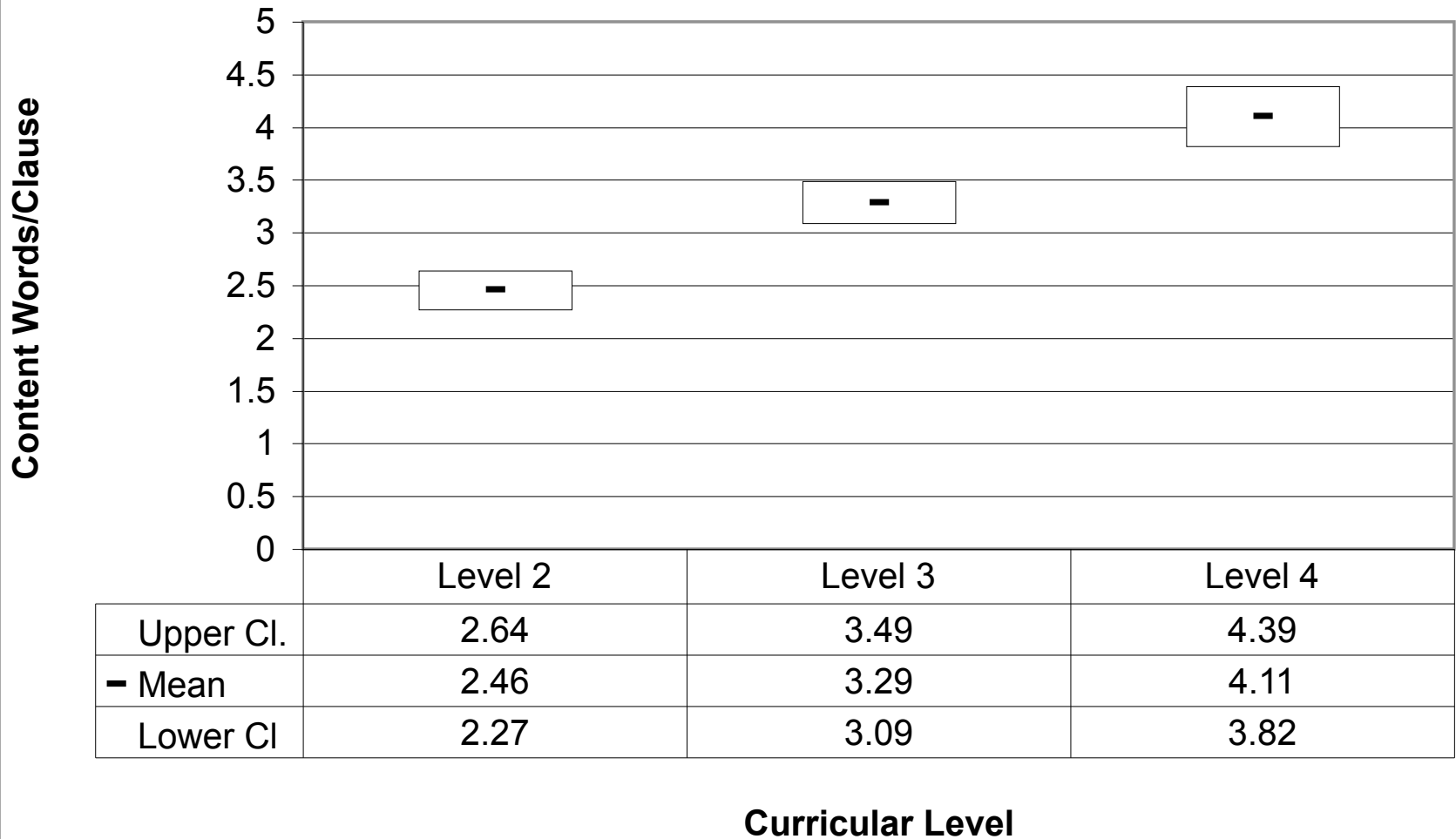
Clause analysis III

Length of Clause by Level



Clause analysis IV

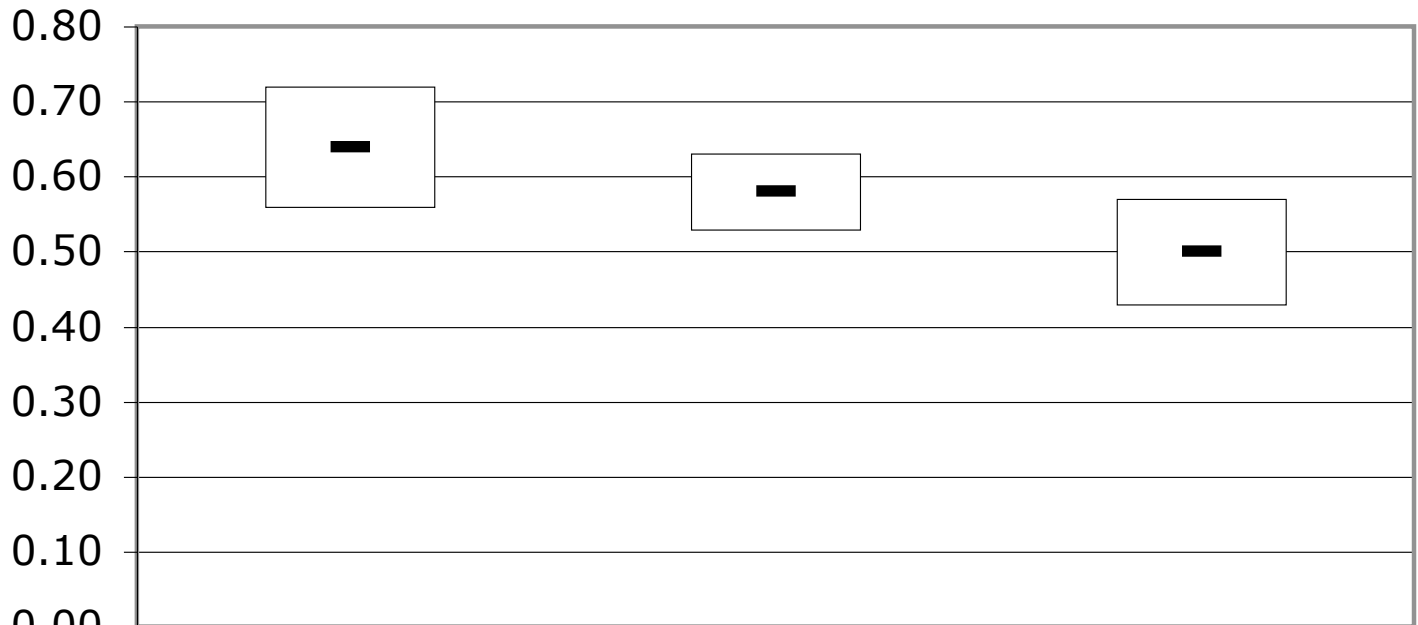
Lexical Density By Level



Clause analysis V

Clause Complexes per Sentence by Level

Clause complexes per sentence

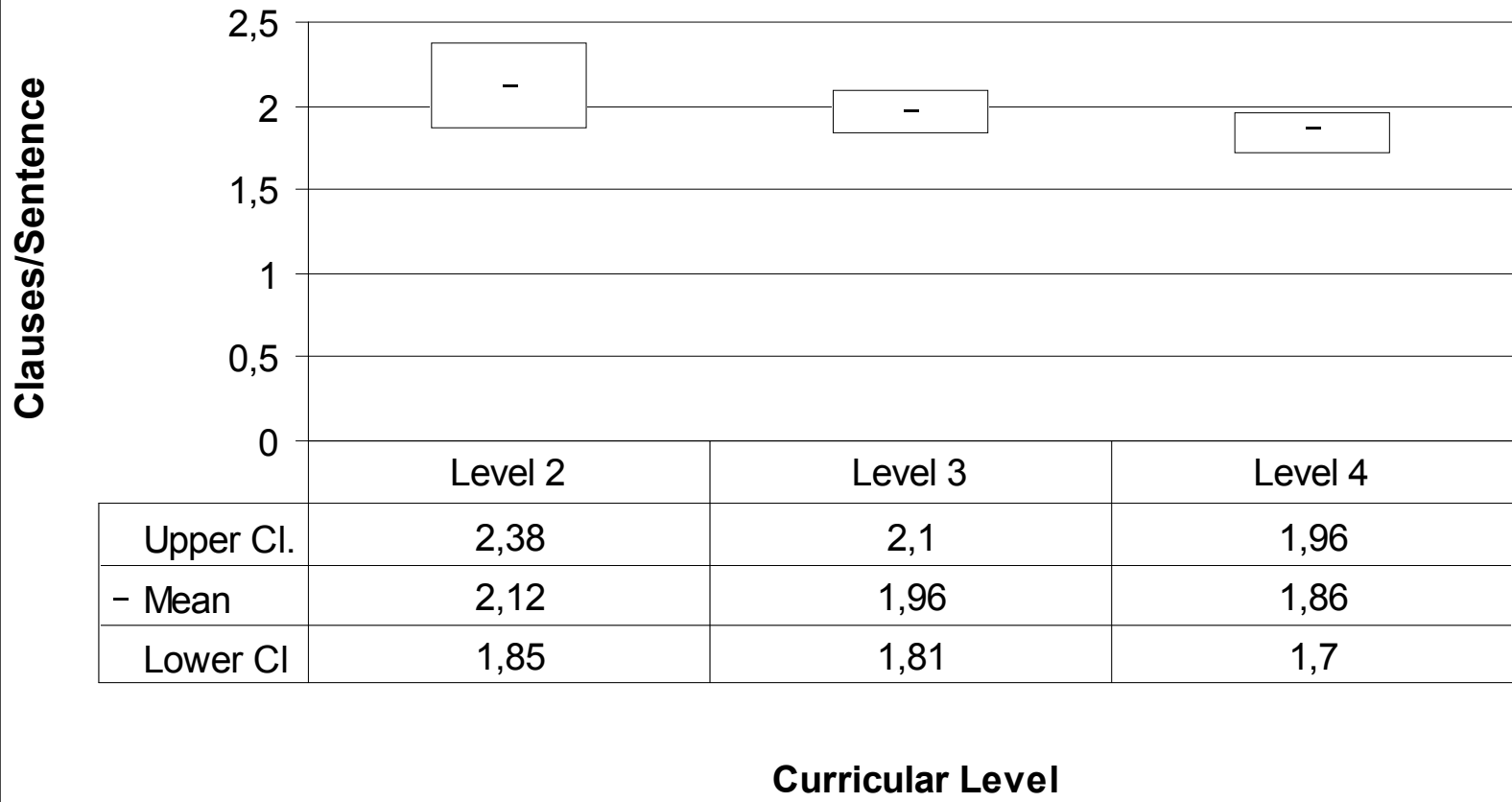


	Level 2	Level 3	Level 4
Upper CI	0.72	0.63	0.57
— Mean	0.64	0.58	0.50
Lower CI	0.56	0.53	0.43

Curricular Level

Clause analysis VI

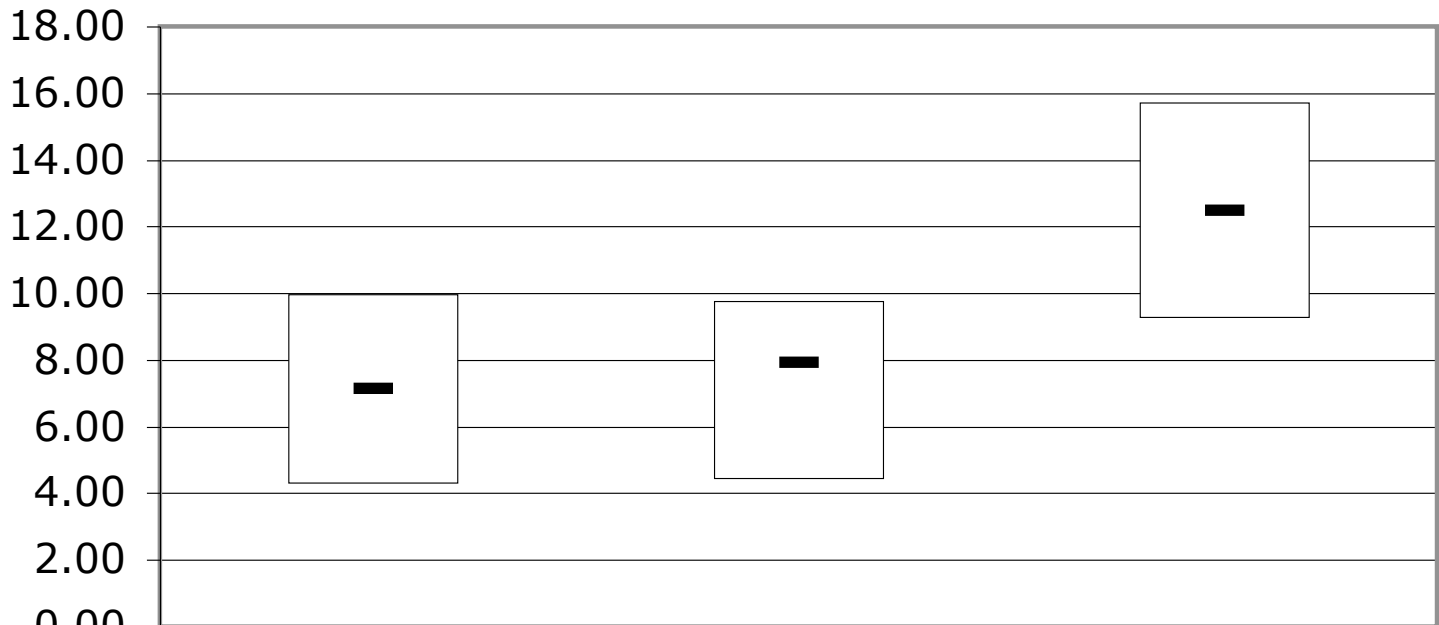
Grammatical Intricacy by Level



Clause analysis VII

Embedded Clauses by Level

Number of Embedded clauses



	Level 2	Level 3	Level 4
Upper CI	9.97	9.75	15.72
— Mean	7.14	7.93	12.50
Lower CI	4.31	4.46	9.28

Curricular Level

Summary of clause analysis

- As learners progress through the curriculum, their trend is to produce ...
 - Longer sentences
 - Longer* & more lexically dense* clauses
 - Fewer clause complexes and thus sentences that are less grammatically intricate
 - More embedded clauses

*statistical significance (alpha = 0.05)

Interclausal relationships

Taxis

Hypotaxis

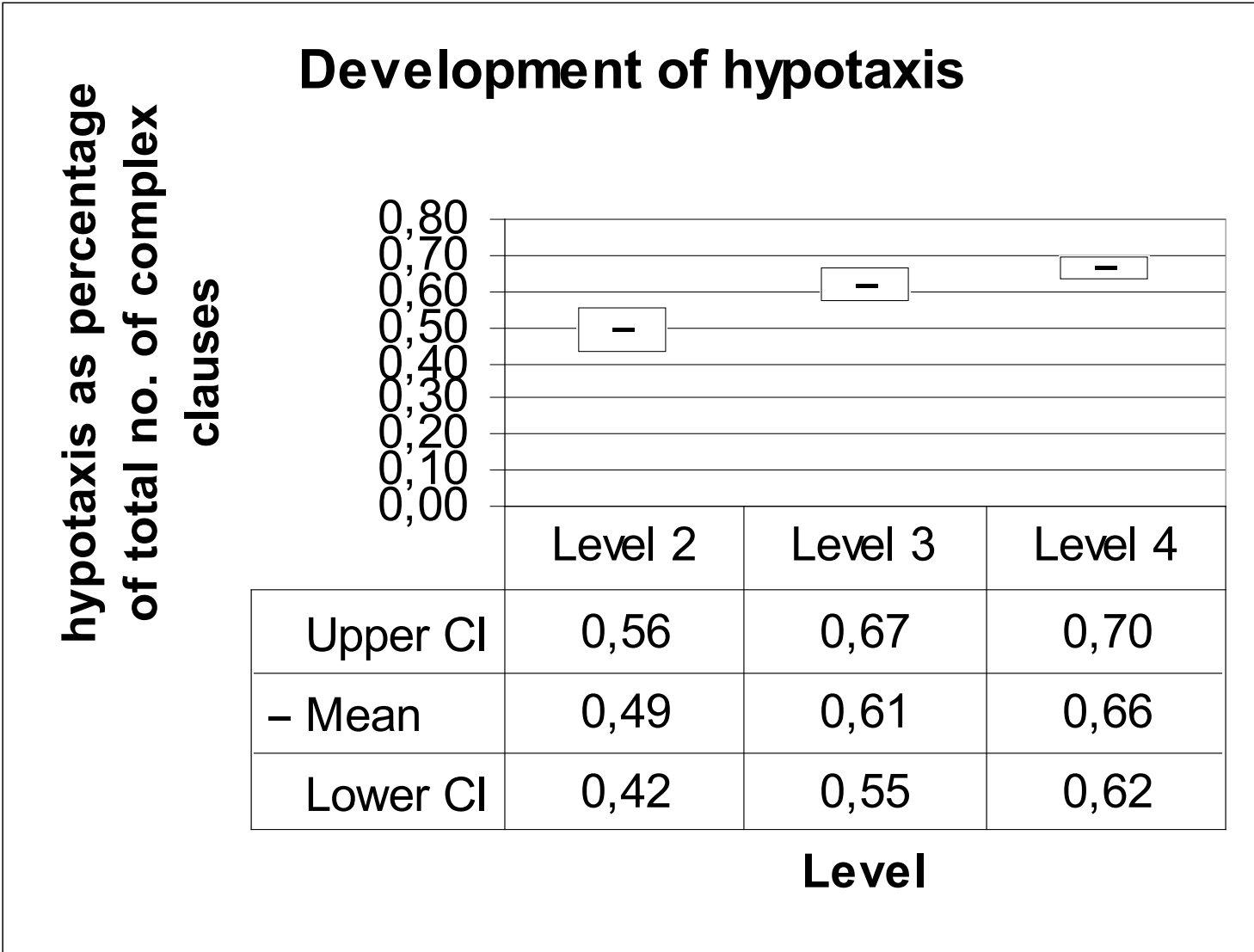
Parataxis

Logico-semantics

Projection: locution, idea

Expansion: elaboration, extension,
enhancement

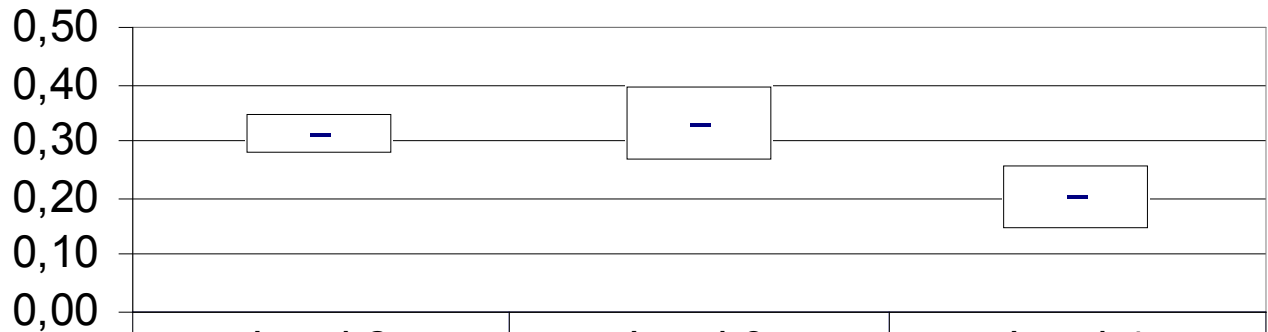
Taxis I



Taxis II

Development of projection (hypotaxis and parataxis)

projected clauses as
percentage of total no. of
complex clauses



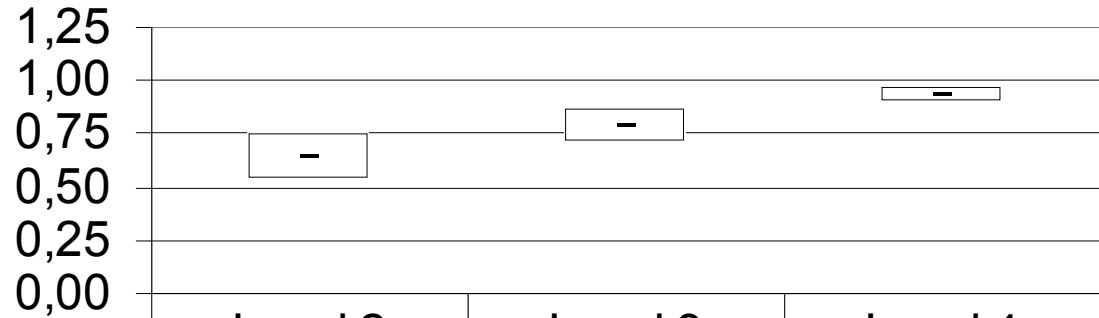
	Level 2	Level 3	Level 4
Upper CI	0,35	0,40	0,26
– Mean	0,31	0,33	0,20
Lower CI	0,27	0,26	0,14

Level

Taxis III

Percentage of hypotactic projected clauses as percentage of total no. of projected clauses

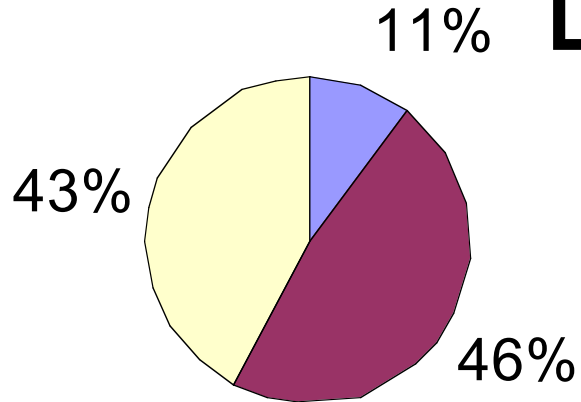
**Percentage of total
no. of projected
clauses**



	Level 2	Level 3	Level 4
Upper CI	0,75	0,87	0,98
- Mean	0,64	0,78	0,93
Lower CI	0,52	0,70	0,88

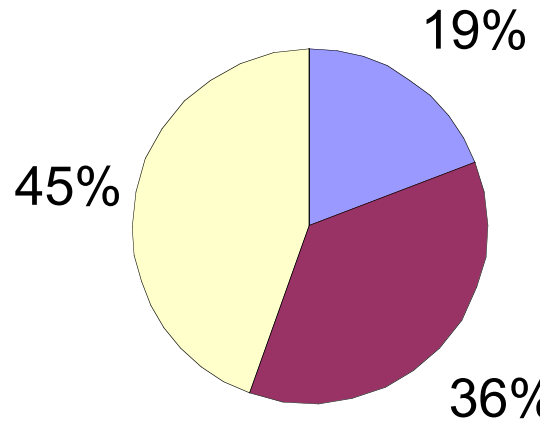
Level

Logico-semantic I

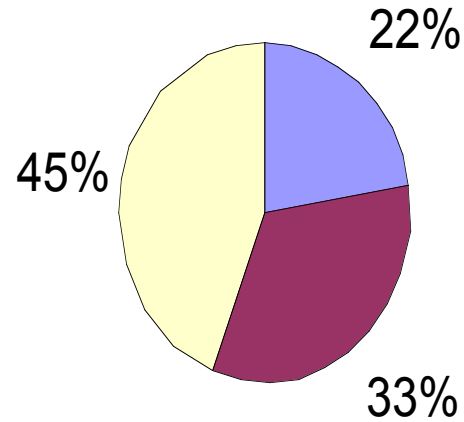


Level 2

Distribution of clause expansion types



Level 3



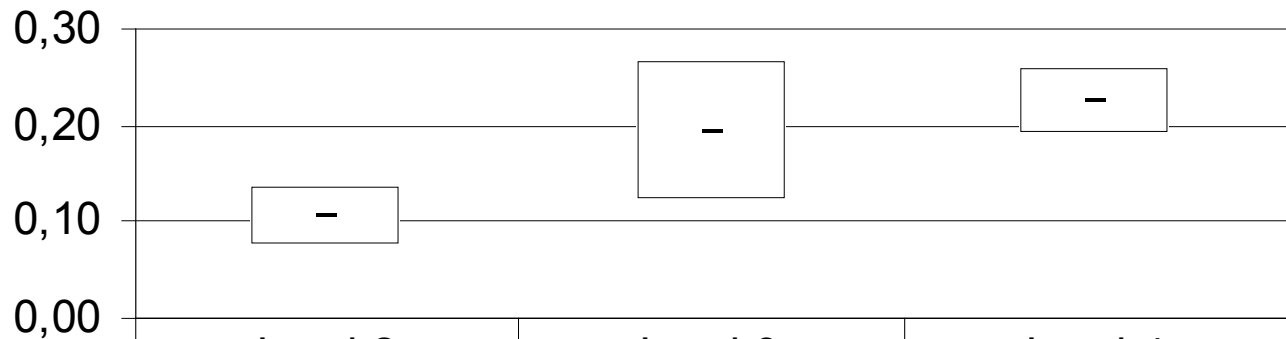
Level 4



Logico-semantic II

elaboration as percentage
of total no. of complex
clauses

Development of elaboration



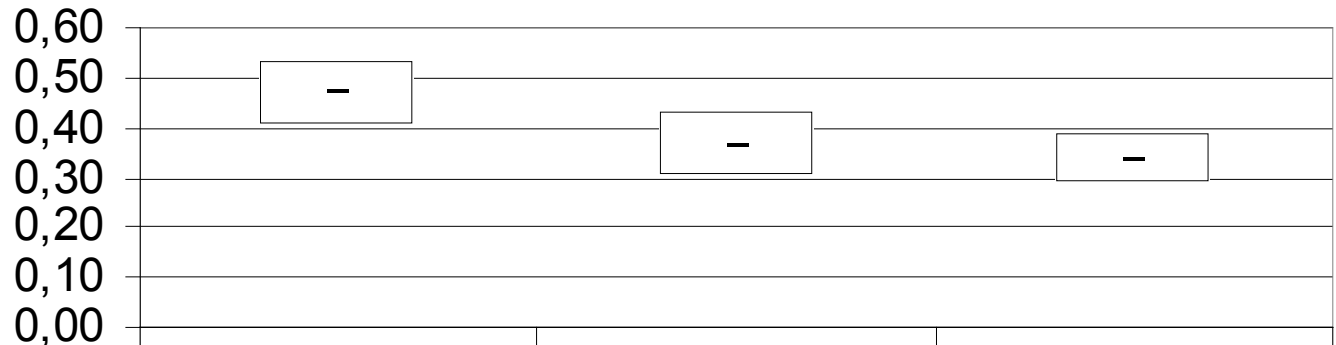
	Level 2	Level 3	Level 4
Upper CI	0,14	0,27	0,26
- Mean	0,11	0,19	0,22
Lower CI	0,07	0,12	0,19

Level

Logico-semantic III

Development of extension

**Extended clauses as
percentage of total no. of
complex clauses**

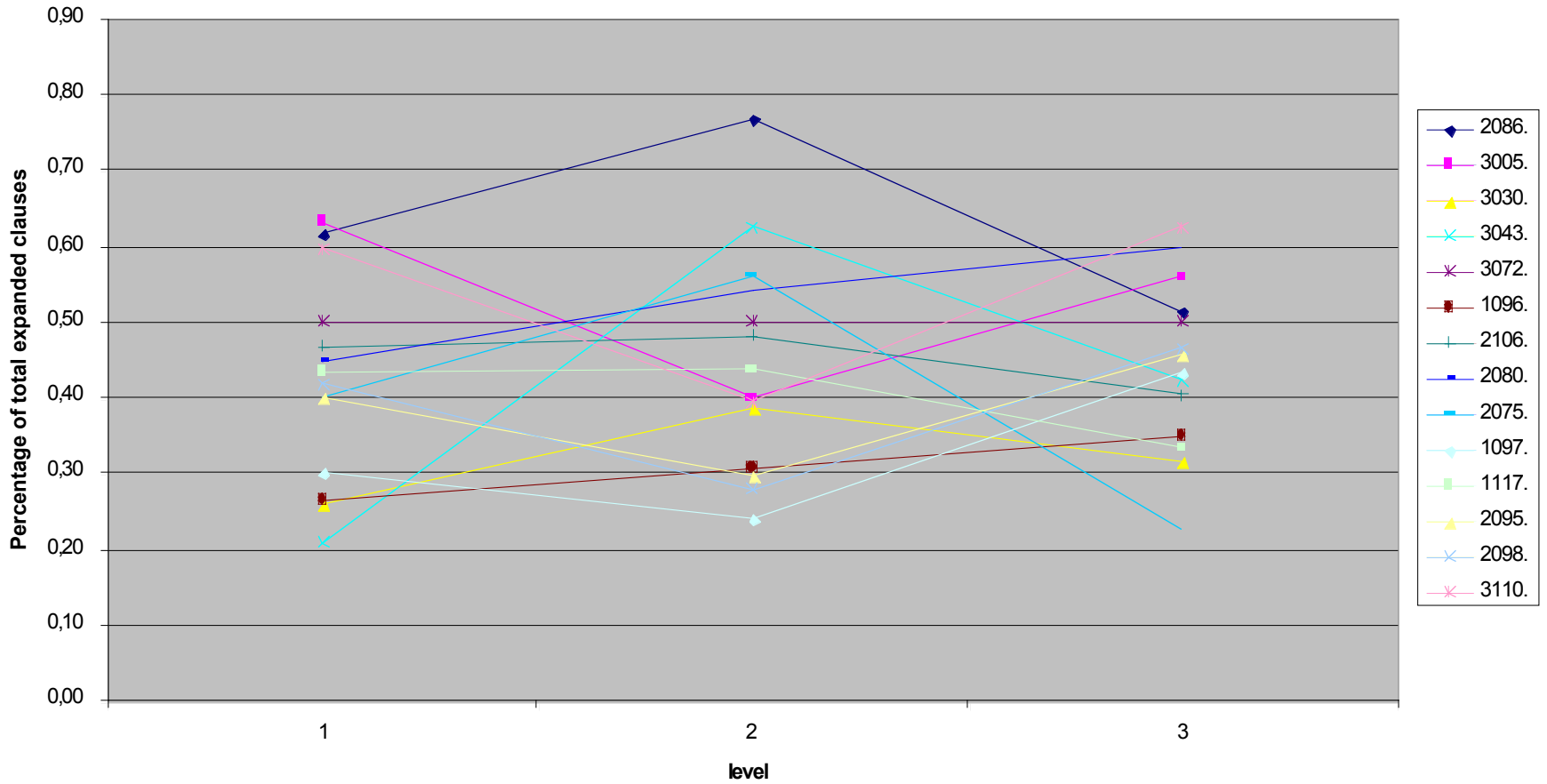


	Level 2	Level 3	Level 4
Upper CI	0,54	0,43	0,39
- Mean	0,47	0,36	0,33
Lower CI	0,40	0,29	0,28

Level

Logico-semantic IV

Development of enhancement over three levels



Findings for taxis and logico- semantics

Taxis:

- General significant increase in hypotaxis from levels 2 to 4. Increase in hypotactic projection.

Hypotaxis requires more planning on the side of the writer.

The construction of hypotactic projection is more complex than paratactic projections

Logico-semantics

- Significant increase of elaboration and decrease of extension from levels 2 to 4.

Extension hardly occurs in hypotaxis and simply joins clause to clause

Intraclausal relationships: processes I

Processes

- Material
- Mental
- Verbal
- Behavioral
- Relational
- Possessive
- Existential:
- Casuative

Encoded meaning:

doing, happening

cognition, perception, affection

verbal action

physiological and psychological behavior

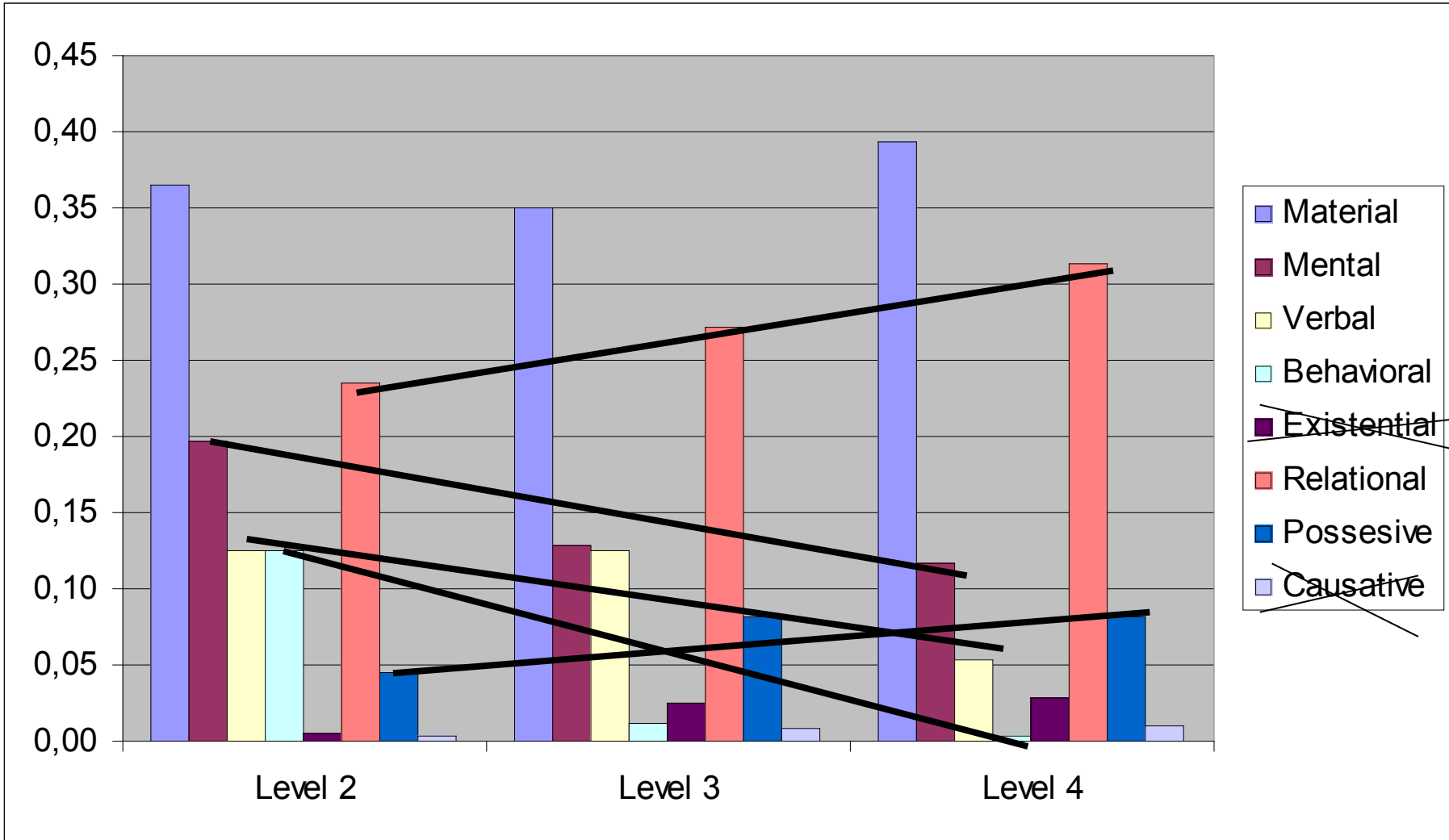
being (attributive and identifying)

possession

being

causing

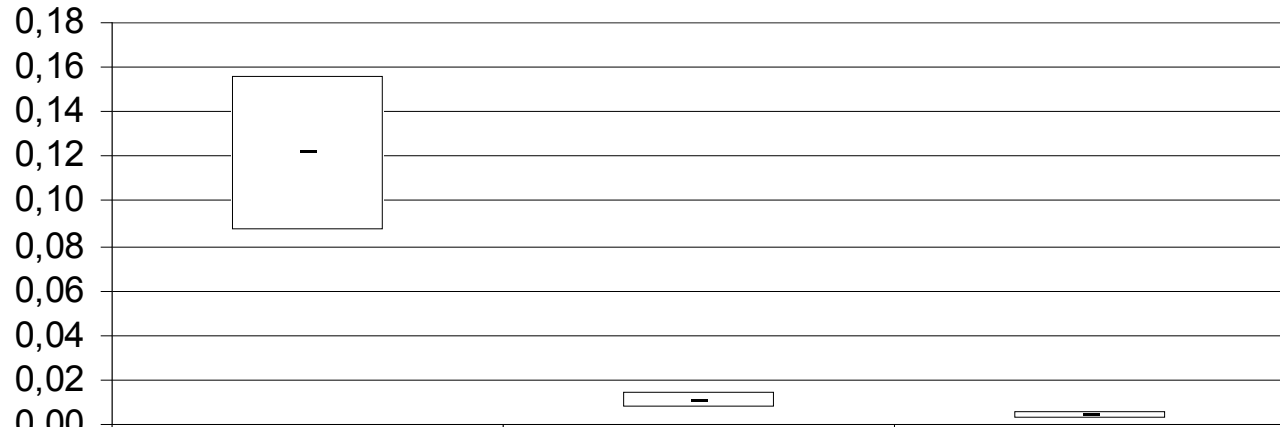
Processes II



Processes III

Development of behavioral processes

Behavioral processes as percentage of total no. of processes



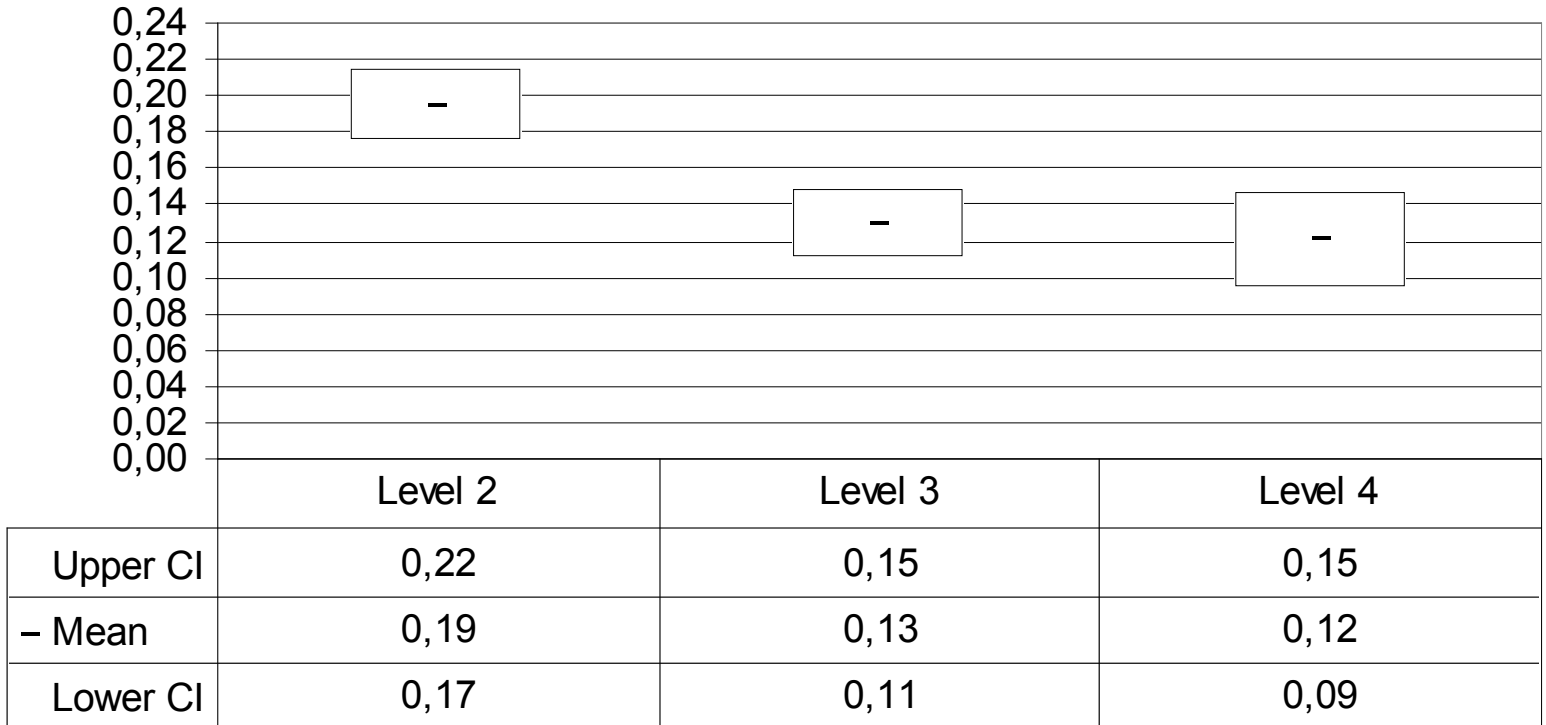
	Level 2	Level 3	Level 4
Upper CI	0,16	0,02	0,01
- Mean	0,12	0,01	0,00
Lower CI	0,09	0,01	0,00

Level

Processes IV

Development of mental processes

mental processes as percentage
of total processes

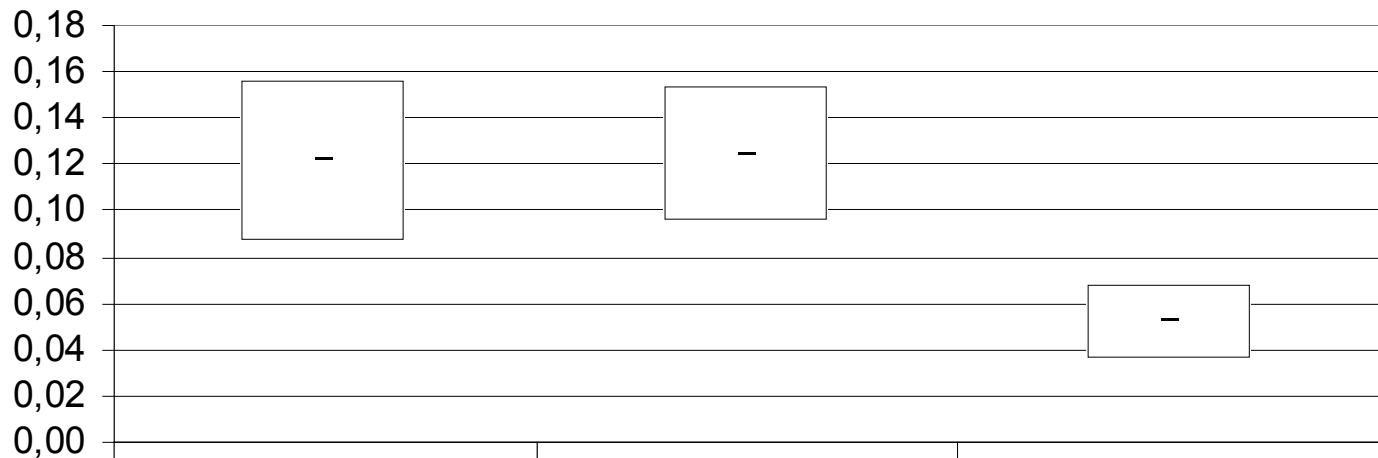


Level

Processes V

Development of verbal processes

Verbal processes as percentage of total no. of processes



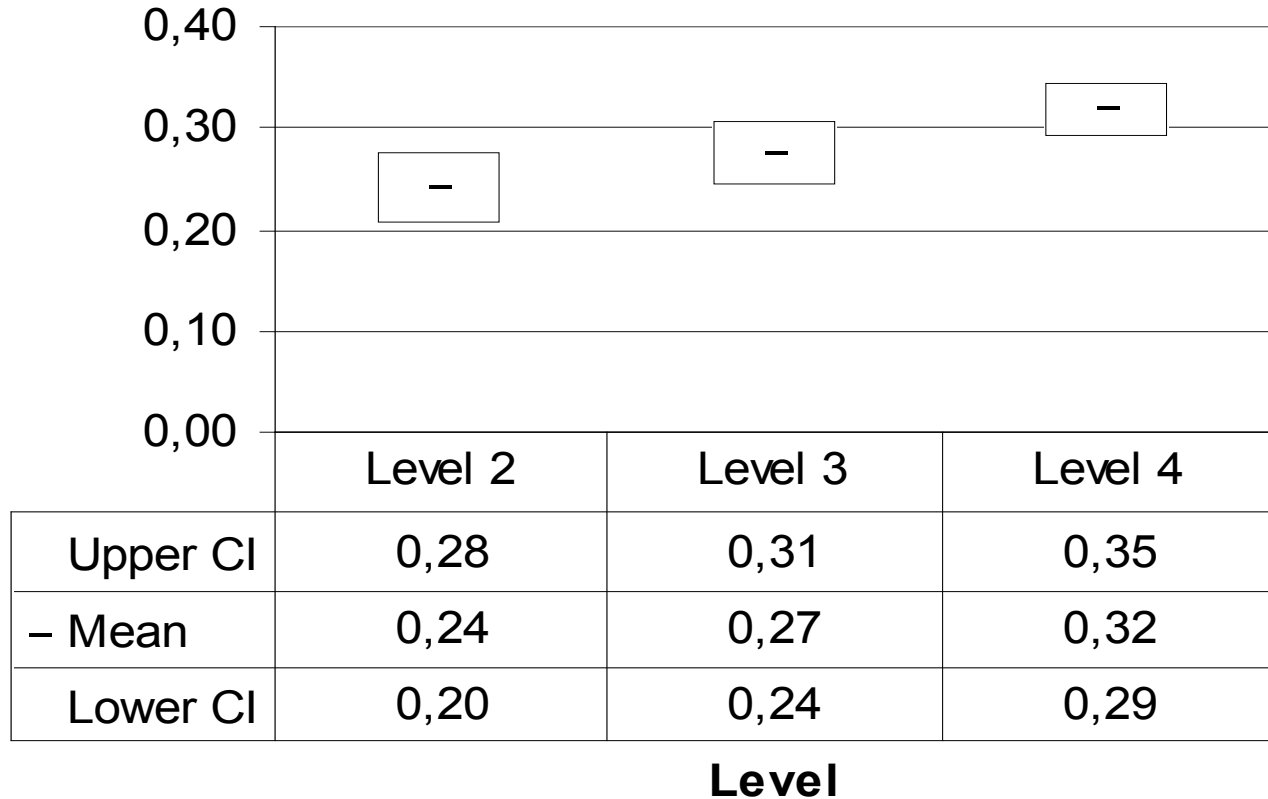
	Level 2	Level 3	Level 4
Upper CI	0,16	0,15	0,07
- Mean	0,12	0,12	0,05
lower CI	0,09	0,09	0,03

Level

Processes VI

Development of intensive relational processes

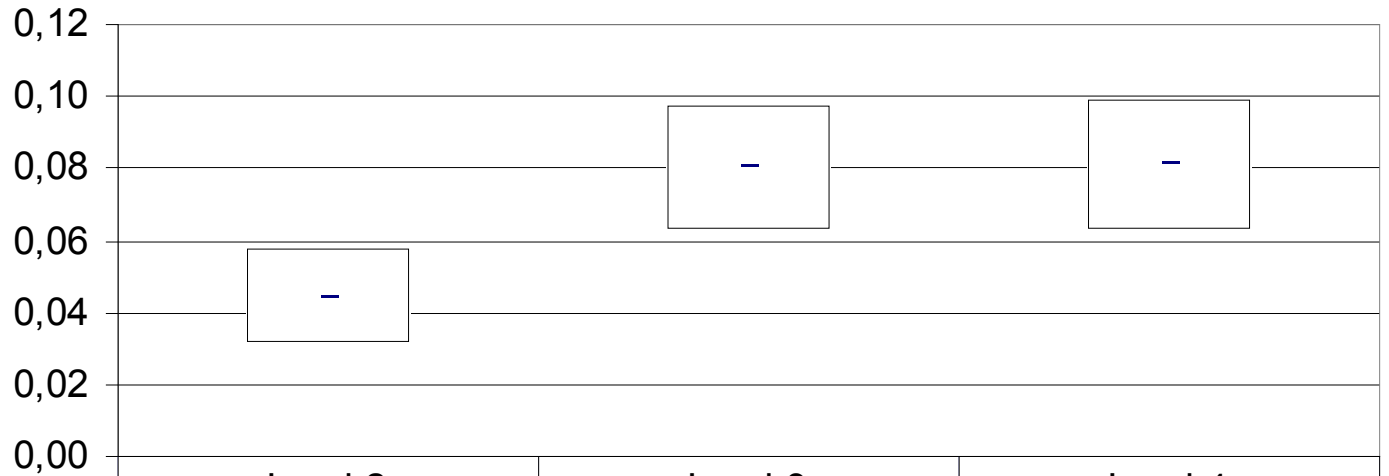
Intensive relational processes
as percentage of total
processes



Processes VII

Development of possessive processes

Possessive processes as percentage of total no. of processes



	Level 2	Level 3	Level 4
Upper CI	0,06	0,10	0,10
– Mean	0,04	0,08	0,08
Lower CI	0,03	0,06	0,06

Level

Processes VIII

Example of relational processes in level 4:

Die Vereinigung der amerikanischen Staaten (T) war (Pi) eher eine Notwendigkeit als eine echte Wahl (V).

The unification of the American states was a necessity rather than a real choice

Processes: findings

The percentage of behavioral and mental processes is significantly higher in level 2 than in levels 3 and 4. The percentage of verbal processes is significantly lower in level 4 than in levels 2 and 3. The percentage of possessive processes is significantly lower in level 2 than levels 3 and 4. There is a tendency for increase in intensive relational processes from level 2 to 4.

- **Mental** and **behavioral** processes are used to describe and hypothesize about psychological/physiological events and actions of figures in the narrative of level 2. There is less hypothesizing in the texts of level 3 and 4.

-The narrative of level two incorporates dialogues between characters and thus makes use of **verbal** processes for this. The level 3 text quotes the different utterances made by figures appearing in it.

-The texts of level 3 and 4 focus on description and are thus obliged to express a variety of statements concerning 'being', 'not being', 'having' and 'not having'.

Circumstances I

Circumstances:

Location:

Manner

Cause

Extent

Contingency

temporal, spatial

means, comparison, quality, degree

cause, reason, purpose, behalf

distance, duration, frequency

condition, concession

enhancing

Accompaniment

additive

extending

Role

guise, product

elaborating

Matter

“with reference to”, about

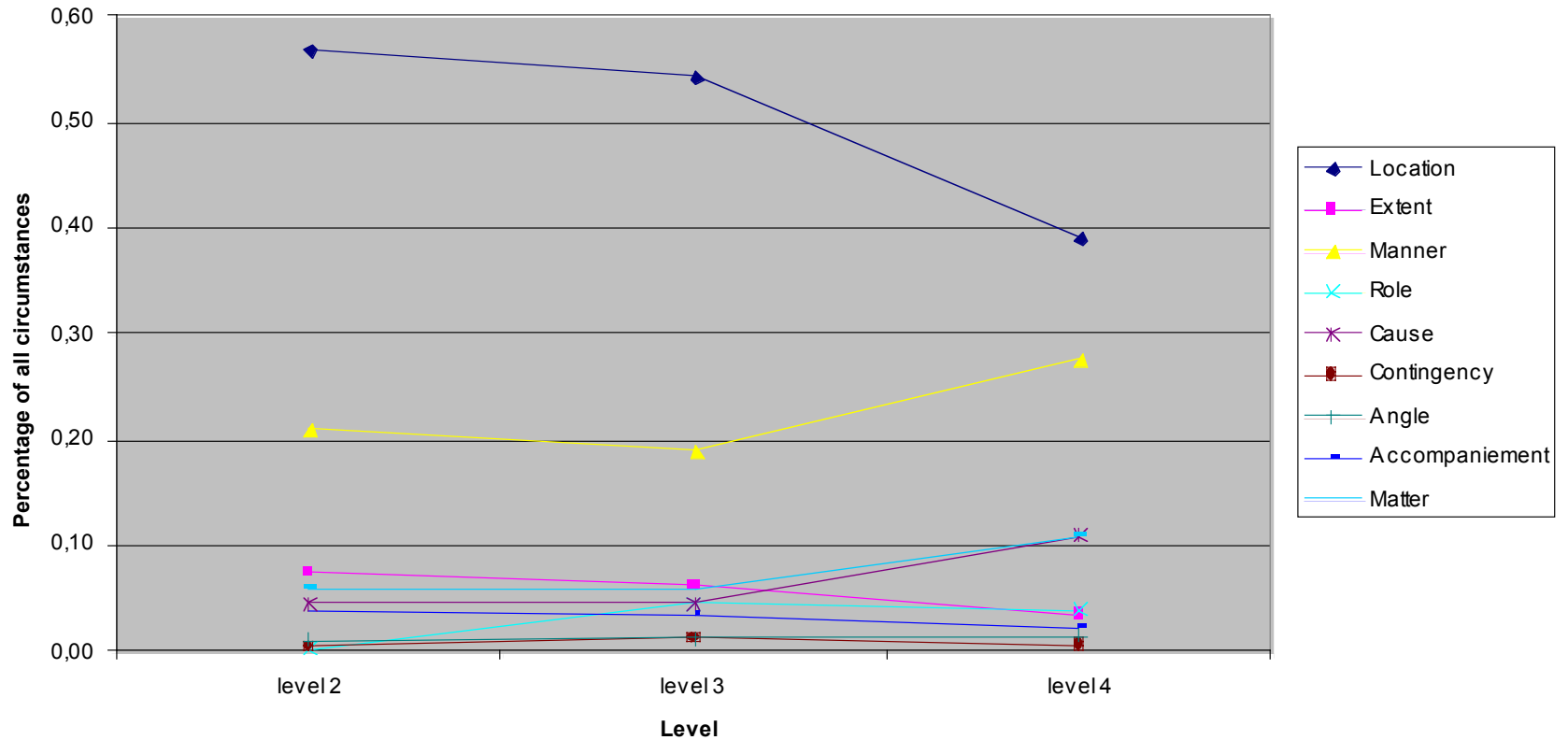
Angle

viewpoint

projecting

Circumstances II

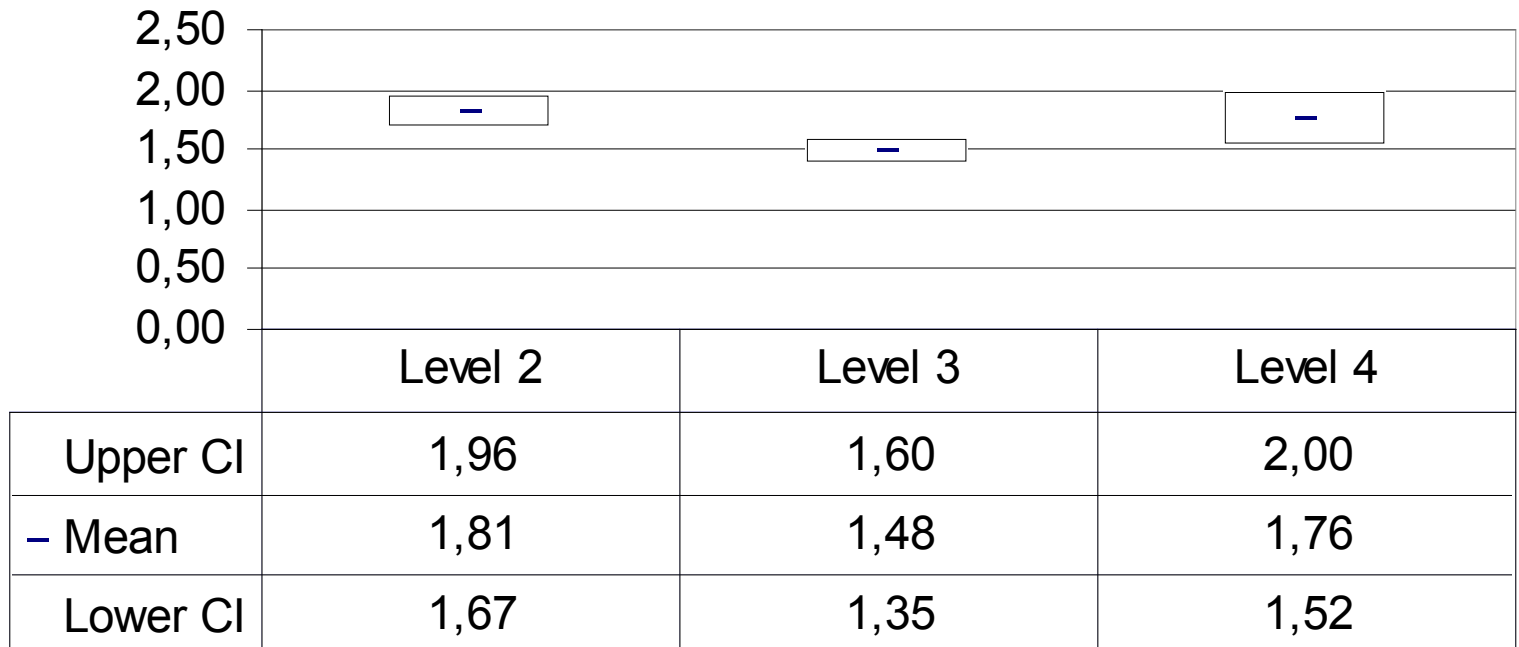
Development of circumstances (mean)



Circumstances III

Development of no. of circumstances per process

**number of circumstance
per process**

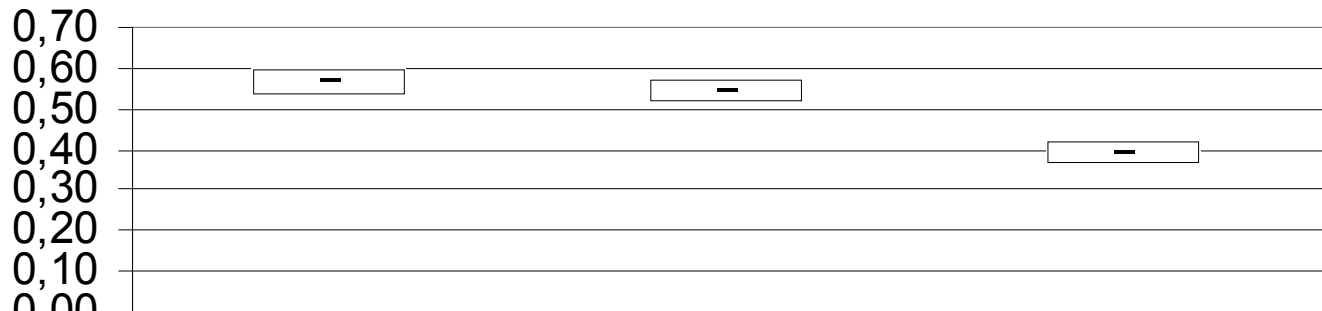


level

Circumstances IV

location as percentage of
total no. of circumstances

Development of location



	Level 2	Level 3	Level 4
Upper CI	0,60	0,57	0,42
- Mean	0,56	0,54	0,39
Lower CI	0,53	0,51	0,36

level

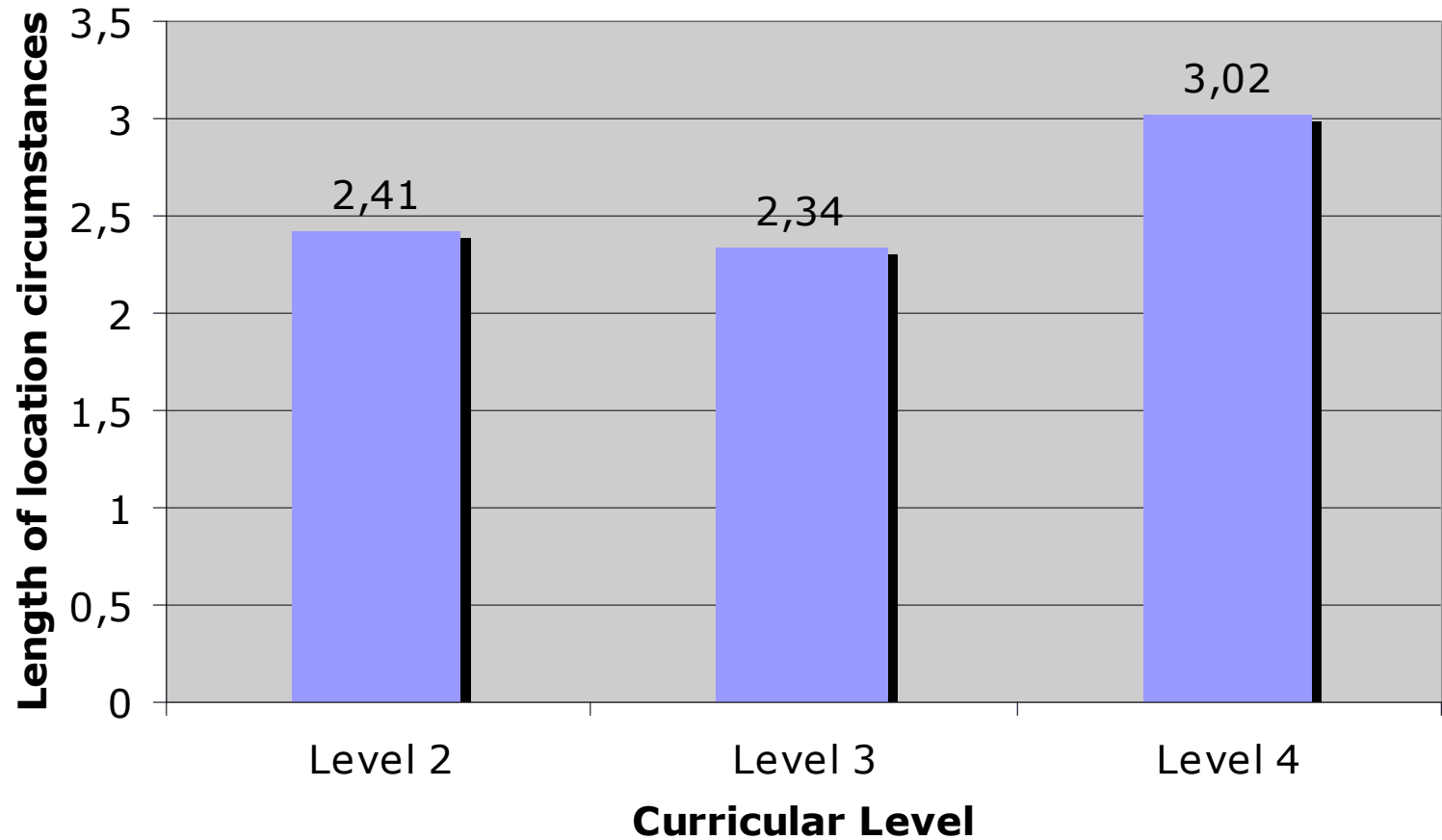
Circumstances V

Types of location circumstances: Examples from learner 2106

Level 2	Level 3	Level 4
<ul style="list-style-type: none">•2 types (temporal and spatial)•Spatial adverbs and adverbial prepositional phrases that describe places in the first-person narrator's immediate, personal, familiar world<ul style="list-style-type: none">–<i>im Dorf</i> (in the town)–<i>am Ufer</i> (on the lake's edge)–<i>nach Hause</i> (homeward)•Temporal adverbs that organize the chronology of events<ul style="list-style-type: none">–<i>dann</i> (then)–<i>später</i> (later)–<i>endlich</i> (finally)	<ul style="list-style-type: none">•2 types (temporal and spatial)•Spatial adverbial phrases that describe societal phenomena and locations affecting foreign residents<ul style="list-style-type: none">–<i>auf dem Schwarzmarkt</i> (on the black market)–<i>in einer freien Gesellschaft</i> (in a free society)–<i>zurück nach Vietnam</i> (back to Vietnam)•Temporal adverbs and adverbial phrases that refer to historical moments relevant to foreign residents<ul style="list-style-type: none">–<i>nach der Wende</i> (after the Fall of the Wall)–<i>heute</i> (today)–<i>jetzt</i> (now)	<ul style="list-style-type: none">•2 types (temporal and spatial)• Spatial adverbial phrases that thematize locations important in this public debate<ul style="list-style-type: none">–<i>in der EU</i> (in the EU)–<i>in NATO</i>–<i>in den neuen westlichen Gebieten</i> (in the new western areas)–<i>in seinem Artikel</i> (in his article)•Temporal adverbial phrases that thematize relevant historical periods<ul style="list-style-type: none">–<i>im 19. Jahrhundert</i> (in the 19th century)–<i>in der Zukunft</i> (in the future)–<i>nach der Gründung der USA</i> (after the founding of the USA)

Circumstances VI

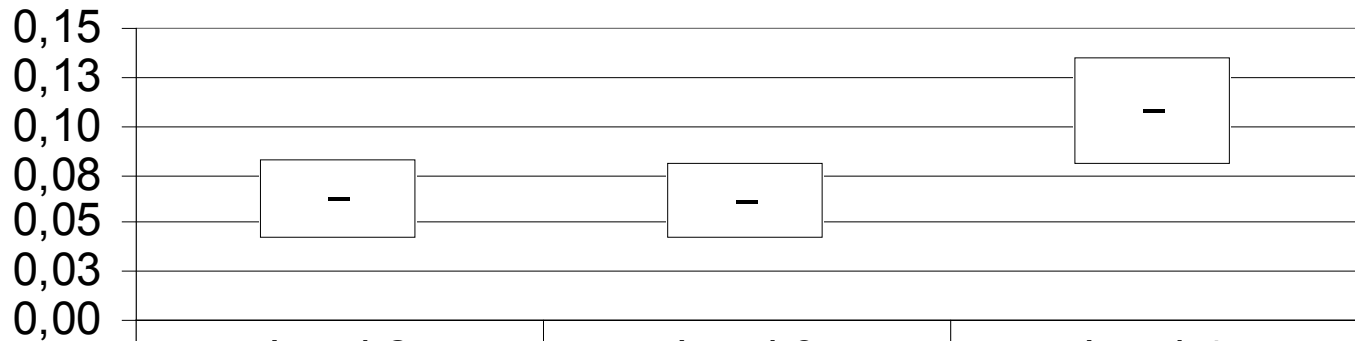
Mean length of location circumstances for learner 2106



Circumstances VII

matter as percentage of total no. of circumstances

Development of matter



	Level 2	Level 3	Level 4
Upper CI	0,08	0,08	0,14
- Mean	0,06	0,06	0,11
Lower CI	0,04	0,04	0,08

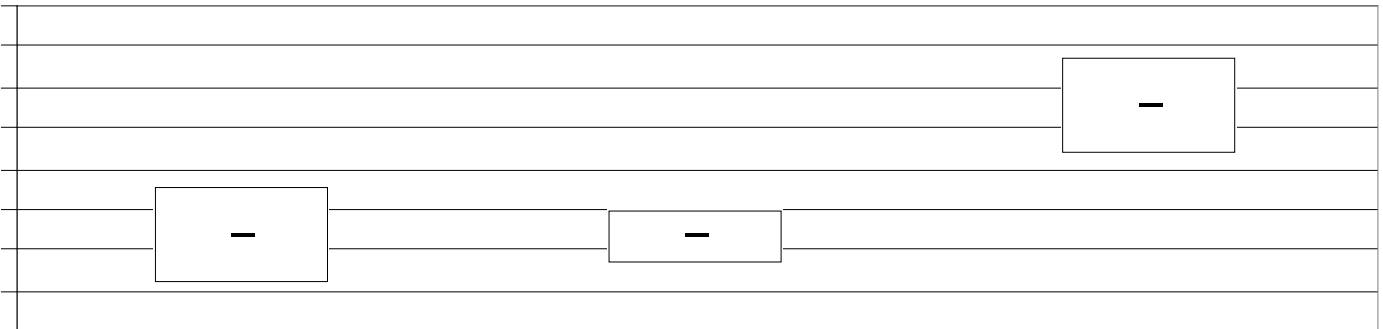
level

Circumstances VIII

Development of cause

Cause as percentage of total no. of circumstances

0,16
0,14
0,12
0,10
0,08
0,06
0,04
0,02
0,00



	Level 2	Level 3	Level 4
Upper CI	0,07	0,06	0,14
- Mean	0,05	0,05	0,11
Lower CI	0,02	0,03	0,09

Level

Circumstances IX

Examples of intraclausal causal expansion:

Deshalb (Cc) war (Pi) dieser Konflikt (Cr) sowohl wirtschaftlich (At) als auch politisch (At).

Therefore the conflict was both economic and political

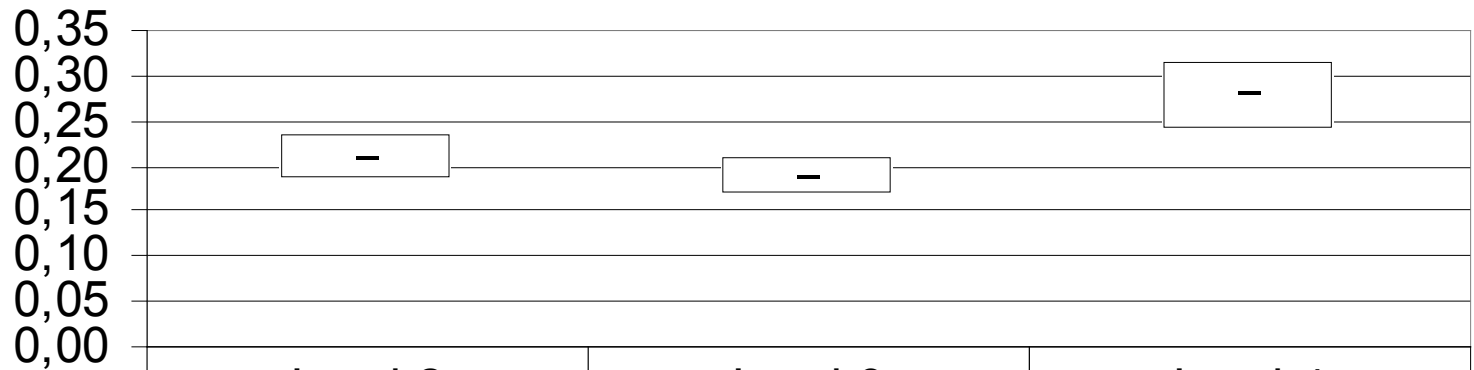
Es (Cr) ist (Pi) besonders (Cm) schwer (At), {{die neuen ostlichen Mitgliedstaaten (G) zu integrieren (Pm)}} **wegen des Gefühls im Osten (Cc), dass die Westeuropäer (S) sie (Ph) nicht verstehen (Pme).**

It is particularly difficult to integrate the new eastern member states **due to the feeling in the East that the west Europeans don't understand them**

Circumstances X

Development of manner

**manner as percentage of
total no. of circumstances**



	Level 2	Level 3	Level 4
Upper CI	0,24	0,21	0,32
- Mean	0,21	0,19	0,28
Lower CI	0,18	0,16	0,24

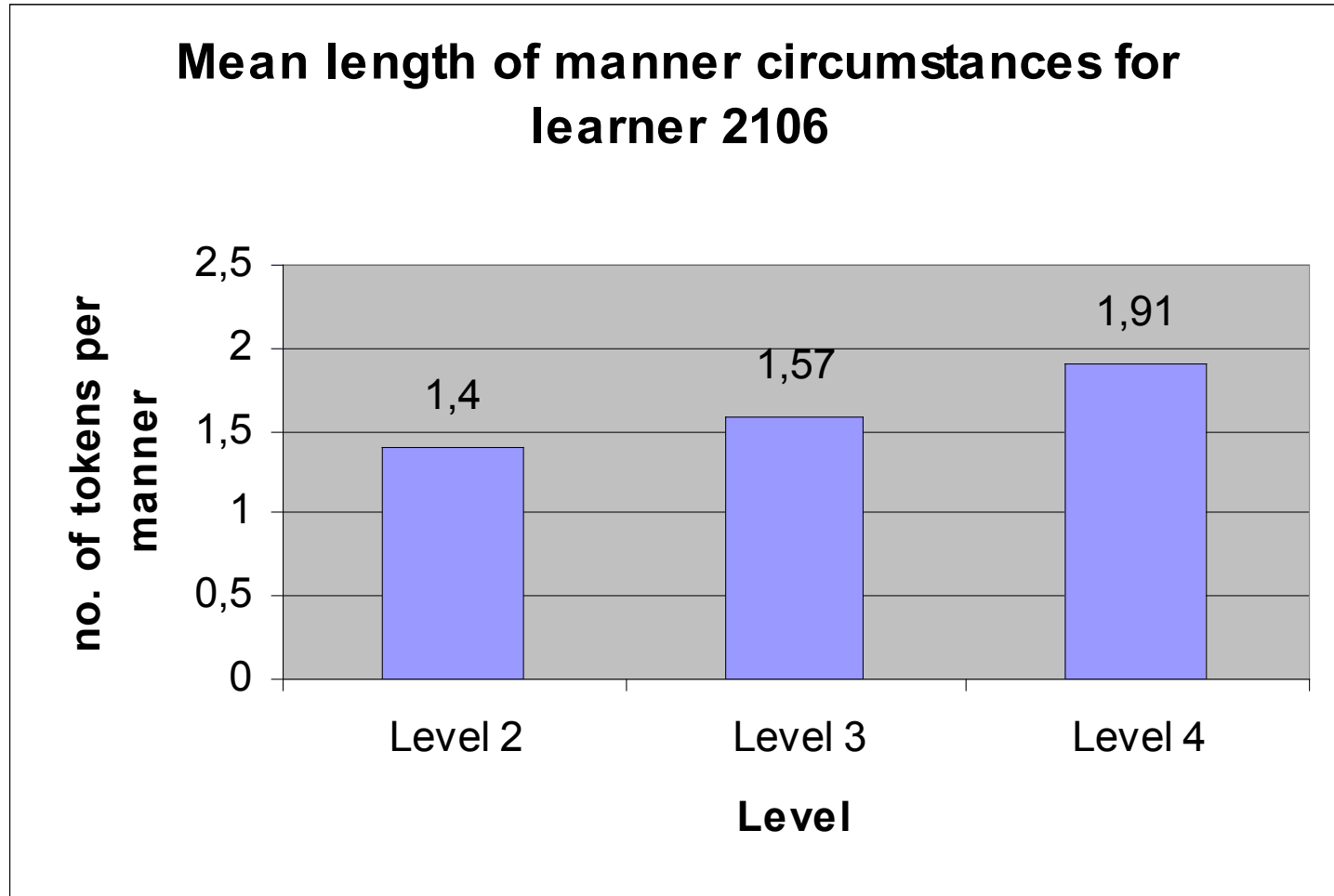
level

Circumstances XI

Types of manner circumstances: Examples from learner 2106

Level 2	Level 3	Level 4
<ul style="list-style-type: none">•2 types (quality and degree)•Mostly adverbs describing the quality of immediate physical human actions (speed, sound) <p>Examples: Geräuschlos Langsam Nachdenklich Plötzlich</p>	<ul style="list-style-type: none">•4 types (quality, degree, means, comparison) -> greater range than level 2• Adverbs and adverbial phrases that describe the quality and extent of human actions that take place over longer stretches of time (integrate, live) and describe the qualities of cognitive processes. <p>Examples: Ganz völlig (integrieren) Höflich wie eine Vietnamesin (benehmen) Gegen ihren Willen (abschieben) Frei (denken)</p>	<ul style="list-style-type: none">•2 types (quality and degree)• adverbs and adverbial phrases that describe the quality of actions typically associated with taking part in society politically (ways of constructing democracy, ways of confronting problems, degrees of overcoming problems, ways of identifying oneself). <p>Examples: Horizontal (demokratisieren) Mit ähnlichen herausforderungen (konfrontieren) Politisch, wirtschaftlich und kulturell (integrieren).</p>

Circumstances XII



Manner: means, quality, comparison, degree

5. Discussion:

Toward advancedness

- Texts organized in terms of ideas, reasons, causes, not in terms of actors
 - Increased hierarchical organization of information through increased hypotaxis & decreased parataxis
 - Increased complexification at the phrasal, rather than at the clausal, level (longer, denser, yet fewer, clauses) ⇒ increase in intraclausal activity & decrease in interclausal activity through
 - Increased use of circumstances of manner and cause
 - Increased use of intraclausal projection through circumstances of matter coupled with decreased use of interclausal projection
 - Increased incidence of relational processes, rather than clauses, to link ideas/reasons
 - Decreased use of mental and verbal processes ⇒ writer as authority
 - Decreased use of behavioral processes ⇒ reduced role of physiologically-dominant participants
 - Increased use of clausal elaboration and circumstantial enhancement (i.e., manner & cause) and decreased use of clausal extension ⇒ increased need to establish how & why rather than where and when
 - Increased use and length of circumstances of manner and cause ⇒ text's field focus on reasons and explanations
 - Increased use and length of circumstances of location that refer to time, space, location outside the personal sphere

Discussion:

Curriculum-supported learner trajectory

- Articulated, theoretically grounded learner pathway
- Attainable curricular goals
- Accountable learning environment

Needs analysis

- Theoretically grounded notions of advancedness
- Programmatic, curricular thinking to support development of advancedness
- Programmatic, curriculum-embedded longitudinal research to examine learner development

Works Cited

- Developing multiple literacies: A curriculum renewal project of the German Department at Georgetown University, 1997-2000. (2000). <http://www1.georgetown.edu/departments/german/programs/undergraduate/curriculum/>.
- Byrnes, H., Maxim, H. H., Norris, J. M., & Ryshina-Pankova, M. (2005). Revisiting writing development: A curriculum-based study of syntactic complexity. Symposium presented at the 14th World Congress of Applied Linguistics (AILA) . Madison, WI.
- Eggins, S. (2004). *An Introduction to Systemic Functional Linguistics* (2nd ed.). New York: Continuum.
- Halliday, M. A. K., & Matthiesen, C. M. I. M. (2004). *An Introduction to Functional Grammar* (3rd ed.). London: Hodder Arnold.
- Ortega, L., & Iberri-Shea, G. (2005). Longitudinal research in second language acquisition: Recent trends and future directions. *Annual Review of Applied Linguistics*, 25, 26-45.
- Steiner, E., & Teich, E. (2004). Metafunctional profile of the grammar of German. In A. Caffarel, J. R. Martin & C. M. I. M. Matthiessen (Eds.), *Language Typology: A functional perspective* (pp. 139-185): John Benjamins.

Thank you!

Contact information:

Hiram Maxim: hmaxim@emory.edu

Lone Petersen: lp249@georgetown.edu

Presentation available on <http://userwww.service.emory.edu/~hmaxim/>

