

VERBAL COMPREHENSION-LEXICALLY AND GRAMMATICALLY MEDIATED

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ABSTRACT. This research presents three different perspectives on morphological processing. The third perspective establishes a relation between the first two, it being the basis of the developed study. Thus, this article tries to establish the relation between morphologic and lexical processing, this relation being emphasized at the level of verbal comprehension (in an expressive task of defining a wordlist and in an receptive task of identifying the suitable picture for a certain sentences where the focus was on derivative morphemes and the comprehension of the derivate resulted word). In this research 204 participants completed the above mentioned tasks, their results being correlated, thus statistically confirming the significant relation between morphological and lexical processing in Romanian language. A case study is also presented with the aim of strengthening the collected data.

Keywords: *verbal comprehension, morphology, lexical processing, pre-lexical processing, derivative morphemes*

ZUSAMMENFASSUNG. Dieser Studie „Das mündliche Verständnis- lexikalisch und grammatikalisch vermittelt“ zeigt drei verschiedene Perspektiven an morphologischen Entwicklung. Die dritte Perspektive ist ein Vergleich zwischen die ersten zwei, dieser ist dann der Basis der ausgearbeiteten Studie. Dieser Studie versucht eine Beziehung zu begründen zwischen morphologischen und lexikalischen Entwicklung, dieser Studie ist dann betont durch das mündliche Verständnis (in einer ausdrücklichen Aufgabe von Bestimmung einer Wortliste und in einer empfänglichen Aufgabe von Bestimmung das korrekte Bild zu verschiedene Sätze, wo der Svhwerpunkt an den abgeleiteten Morphemen und das Verständnis des abgeleiteten Wortes). In dieser Studie 204 Teilnehmer haben die Aufgaben bearbeitet, ihre Resultate waren sich entsprechend, statistisch zeigten diese die wichtige Beziehung zwischen morphologischer und lexikalischer Entwicklung in der Rumänischen Sprache. Es gibt auch eine Studie um diese gesammelte Daten zu verstärken.

Schlüsselwörter: *das mündliche Verständnis, Morphologie, lexikalische Entwicklung, vor lexikalische Entwicklung, abgeleitete Morpheme*

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1. Verbal comprehension - the morphologic competence (theoretical and experimental perspectives)

Morphologic competence is approached in terms of theories which underline the modularity and the innate features of the morphologic processing disorders (Bishop; Norbury; Briscoe, 2002; Bishop; Adams; Norbury, 2006). Theoretic and experimental aspects are structured from two main distinctive, antagonist perspectives on the morphologic competence. The third perspective establishes a relation between the main two, this perspective representing the basic background of the research:

1. Taft's theory (1975) emphasizes the fact that the representation of morphologic words depends on the central lexical level, their accessing being done based on the word root. Thus, according to this theory, the roots are the coded elements; therefore accessing the morphologic levels is done by prior decomposition. This aspect also explains the fact that the time allotted for prefix processing is greater than the time allotted to the processing of pseudo-prefixes. (e.g.: "prevoir" (to foresee) and "prefet" (perfect)).

2. The second theory emphasizes the fact that the morphologic aspects are coded as separate lexical entries (Fowler; Lieberman, 1995; Schriefers; Friederici; Graetz, 1992). Each form has its own lexical entry, the flexible forms, and to a smaller extent, the derivative forms being related and connected at the basis.

3. It is possible that the issue of pre-lexical or lexical treatment of morphologic words depend on the type of words (frequency, length, prefixes, suffixes etc.) (Serenio; Jongman, 1997). Therefore decomposition is not necessary. According to this theory, the linguistic processing capacity must be much extended, the cognitive resources involved in this type of processing being greatly increased. Surely this theory can be contradicted by the cognitive approach on the storage of linguistic information.

Having into consideration the third theory we decided to conduct a study meant to prove that the relation between morphologic and lexical processing is very tight, they being in fact two different aspects of the same reality-verbal comprehension.

2. Research design

2.1. Objective

- underlining the relationship between the morphologic level and the lexical level of the language.
- assessing verbal comprehension as a way of revealing data about morphologic and lexical processing.

2.2. Hypothesis

- the relationship between morphology and semantics lies in the identification of a correlation between the abilities for processing the derivative morphemes and the verbal comprehension.
- word's definition task reveals data about morphological and lexical structuring.

2.3. Participants in the research

The group of participants is heterogeneously selected as we consider that the relation between lexical and morphologic abilities is very strong, it being less dependent on age, diagnosis or bilingualism presence.

Thus, the 204 participants in the research can be described on the following coordinates:

- the age of the participants (6-11 years, corresponding to the first school cycle, I-IV grades);
- the diagnosis of the participants (were selected valid children, children with low mental disability, children with moderate mental disability, children with hearing disability and children with learning difficulties related to the language structuring, of the dyslexia - dysgrafia type);
- the presence or the absence of bilingualism situations.

2.4 Assessing tools

2.4.1. Probe for morphologic categories reception in Romanian language

During this research a part from *Probe for morphologic categories reception in Romanian language -PMCRRL* was used, just the part with the derivative block of variables. This instrument was elaborated within the doctoral thesis research (Hațegan, 2009) it assessing morphological abilities at receptive level, thus, this probe being a verbal comprehension task.

The derivative block of variables focused on prefix consists five items as it follows in the Table 1.

Table 1. Blocks of derivative variables-prefixes

The items	The focused prefix (This prefixes are specific for Romanian language)
1. Dopul este deșurubat/destrâns. (The bung is screw off).	des-
2. Foaia este dezdoită. (The sheet of paper is unfolded).	dez-
3. Haina este încheiată. (The coat is closed).	în-
4. Băiatul se încălță. (The boy takes his shoes).	în-
5. Sfoara este deznodată. (The rope is untied).	dez-

It can be seen the fact that when selecting the prefixes, the consonant alternation s/z. Based on co-articulation laws, the voiceless fricative consonant “s” is voiced and it becomes “z”, the paired voiced fricative, when it is followed by a voiced sound from which it takes the voiced character (Vasiliu, 1965, 1974). This aspect is important from a phonological point of view as the voiced sound facilitates the auditory reception of the given sound. The prefixes “des-” and “în-” can be mainly attached to the verbs and they are considered to be paired prefixes. In the case of the pairs “deșuruba/înșuruba (screw off/screw on”, “deznoda/înoda (untied/tied)”, “descheiat/încheiat (open/close)” the lexical base can be easily identify : “șurub (screw)”, “nod (tie)”, “cheie (key)”; while in the case of the pairs “încalță/descalță (take on/off the shoes)”; “îndoaie/dezdoită (fold/unfold)”, the lexical base is not identifiable (Coteanu; Bidu-Vrânceanu, 1974; Coteanu; Forăscu; Bidu-Vrânceanu, 1985). This aspect gives us more arguments that verbal comprehension is either morphological or lexical mediated, the two different types of mediation being dependent on the features of the focused words.

2.4.2. The Wordlist

For data collection, a list made up of 20 words has also been used, these words being introduced in the linguistic structures of the probe. The aim was to determine the children’s lexical abilities, according to the model suggested by the Crichton Task (Anca, 2007). The children’s task is to define orally the words presented, orally as well, by the assessor. The usage of this wordlist is important also for the elaboration of a study that would render the relation between the level of the lexical acquisition and the level of the morphological structuring, especially at derivative level, an aspect which is emphasized in the literature dedicated to this subject (Taft, 1975; Lecocq, Leuwers, Casalis, Watteau 1996).

3. Correlation study between the morphologic and the semantic level of the language- the relation between the abilities to receipt prefixes and the verbal comprehension level

3.1. Global results

This study brings forth the morphologic-semantic relation, both quantitatively, through the calculation of a correlation between the participants’ performance at the level of the blocks of variables of derivative morphemes and at the level of the probe which requires the definition of the twenty words, and qualitatively, as the case study method is being used.

The quantitative data can be found in the following table:

Table 2. Correlation coefficient between the performances related to the number of defined words and the derivative morphemes

Correlations

		Number of defined words	Derivative morphemes
Number of defined words	Pearson Correlation	1	.421(**)
	Sig. (2-tailed)		.000
	N	204	204
Derivative morphemes	Pearson Correlation	.421(**)	1
	Sig. (2-tailed)	.000	
	N	204	204

** Correlation is significant at the 0.01 level (2-tailed).

The correlation coefficient obtained by calculation is .421, the correlation being strongly significant from a statistic point of view, $p < .01$. This confirms the stated hypothesis, so that at the level of subjects included in this study, irrespectively of their diagnosis classification, the abilities of reception of derivative morphemes are correlated positively with those of verbal comprehension. Therefore, it can be concluded that the relation between the morphologic aspect and the lexical one is interdependent, especially when the prefix processing abilities are assessed at the morphologic level.

The delimitation of these levels of the morphologic/ lexical language has as reference point studies and researches from the international specialized literature (Taft, 1981; Cole et al., 1989; Laudanna; Cermele; Caramazza, 1997), studies which underlined differences in the organization of flectional morphemes which are exclusively connected to the morphologic level and the derivative morphemes, which are exclusively connected to the lexical level.

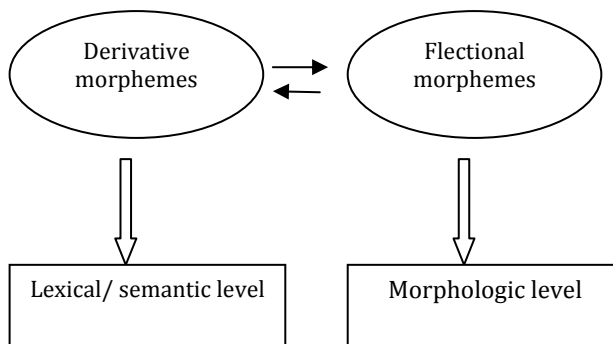


Figure 1. The relation between the types of morphemes and the language levels

Also, considering the results, new research directions are suggested, starting from those underlined in this study- the implementation of MLU *Mean Length of Utterance* with the aim of proving the interdependent relation among morphologic language level and other levels-lexical level, syntactical level, pragmatic level.

In order to provide a qualitative perspective on the way the structuring of morphologic abilities relates itself to the structuring of lexical abilities a case study will be presented.

3.2. Case study report

Participant in the research: P.A.

Age: 9 years old;

Education: II-nd grade;

Diagnose: reading/writing learning difficulties, epilepsy;

Linguistic acquisition level:

- low lexical and syntactical levels; the child does not use complex sentences when defining words or when speaking; this aspect is also underlined by poor abilities of receiving linguistic structures that consists in relational morphological elements, such as conjunctions and prepositions;

- linguistic structures are processed with difficulty as he proves limited cognitive resources, reduced memory span. This aspect can be a result of the drugs prescribed for epilepsy.

- instrumental abilities-poor spatial/temporal orientation abilities. This leads to facing difficulties in the case of the items through which verbal time, prepositions or adverbial structures are assessed;

- when being given a task for enumerating the name of the days, of the seasons or of the months, the child proves severe difficulties.

- the child has poor abilities in using comparison; he can't identify spatial locations (especially when using adverbial structures);

- he correctly uses the nouns number and gender;

- the child also presents low auditory discriminatory abilities just in the case of resembling words and not in the case of isolated sounds (for example: when being asked what "a nota (to write)" means, the child gives the definition for the verb "a înota (to swim)").

The child's above mentioned abilities were collected after using *PMCRRL*, giving pedagogical tasks of transforming nouns from singular to plural or even backwards, by giving tasks of differentiating resembling sounds (from articulator points of view); by indicating the number and the gender of the following nouns: *câine (dog)*, *pisică (cat)*, *berbec (buck)*, *oaie (sheep)*, *Ioan (John)*, *Ioana (Joanna)*; by using the above describe wordlist.

In PMCRRL probe the child faces difficulties in 11 morphological blocks from those 20 reunited in the probe: verb/time, verb/mode, verb diathesis, adverbs, adverbs/means of comparison, adjectives/means of comparison, prepositions, coordinating conjunctions, subordinating conjunctions, derivative morphemes and homographs.

In the following we will present a brief presentation and interpretation of the data collected by defining the 20 words from the above described wordlist. Quantitatively just 11 words were correctly defined, while for the other 9 words the child either gives inadequate definitions or gives partially correct definitions.

Quantitatively appreciating child's morphologic ability is similar with child's lexical one, this case reinforcing the tight relation between morphology and lexicology when verbal comprehension task are given.

Table 3. The presentation and interpretation of the definition given by P.A.

<i>Words</i>	<i>Given definitions and interpretations</i>
1. <i>pian (piano)</i>	"it sings"- this definition is given for both the two singing instruments mentioned in the wordlist, this is considered to be a correct definition, even if the child can't differentiate between the two singing instruments. The definition is considered to be correct this time, it being a functional contextualization of the word.
2. <i>biblioteca (library)</i>	"a house with books"-this is a concrete definition, the stress is put on the institution that gathers the books. The linguistic structure through which the definition is formulated is verb elliptic, but it also proves poor lexical abilities.
3. <i>maimuță (monkey)</i>	"animal"- the definition is limited to indicating the generic category. In the case of the children facing learning difficulties, this feature is common (Pruthi, 2007).
4. <i>lac (lake)</i>	"water"- this definition is also given for the word "dank", it being considered correct just once. This definition indicates a higher verbal comprehension level than the level of the expressive abilities.
5. <i>lesă (leash)</i>	"it is put in dogs"- this definition stresses on what we can do with the object, this definition has functional value.
6. <i>cușcă (cage)</i>	"where dogs stay"-the definition also indicates the utility of the mentioned object by particularizing (mentioning the dogs as the main beneficiary).
7. <i>șurub (screw)</i>	"object"-this definition is considered to be incorrect, the child does not know the semantic content of the word.
8. <i>sfoară (rope)</i>	"a rope for putting cloths"-this is not a correct definition as the child just exemplifies how we can use the object.
9. <i>chitară (guitar)</i>	"singing"-the definition is very general.
10. <i>plic (envelop)</i>	"to put papers"-this definition has functional value, it indicating the utility of the mentioned object.
11. <i>îndemn/sfat (advise)</i>	-no definition, the child mentions that he does not know the word
12. <i>scund (little)</i>	-no definition, the child mentions that he does not know the word

<i>Words</i>	<i>Given definitions and interpretations</i>
13. <i>curios (curious)</i>	"serious"-the child offers as definition a single rhyming word. This error can be explained through child's poor differentiating abilities.
14. <i>notat/ nota (written down/ to put down)</i>	"to move legs"- this is an incorrect definition, the child proving poor auditory differentiating abilities as it offers a definition for the word "a înota/to swim"
15. <i>înșuruba (to screw on)</i>	"to do something"-this is a very general definition. This definition proves functional morphological, the child has the intuition of a verbal structure. Even so, having into consideration the definitions given for the related words "șurub (screw)", "deșuruba (to screw off)", we can conclude that P.A. does not know the meaning of these words.
16. <i>deșuruba (to screw off)</i>	-no definition, the child mentions that he does not know the word
17. <i>antrena (to train)</i>	"to get trained"-this is a circular definition, it being considered to be incorrect. Child's functional morphological are also proven.
18. <i>umed (dank)</i>	"water"-this is a generic definition, it being considered incorrect.
19. <i>înnorat (cloudy)</i>	"as it is going to rain"-this definition explains the cause for a cloudy sky. This is considered a correct definition.
20. <i>însorit (sunny)</i>	"clear"-this definition has a stylistic value, the child being able to underline the main characteristic of a sunny day.

The final three words from the list are treated based on specific features, without being able to give definitions; descriptions of the mentioned words, this indicating poor lexical abilities in language expressive field.

The definitions that this child with learning difficulties offered are more complex than the definitions recorded in the case of cognitive disabled children, even if they were diagnosed with low cognitive disability.

Expressive abilities are similarly developed with receptive abilities, this underlining a holistic language development, the intervention being required to be proposed in the same way. This similarity proves a functional level of vocabulary and ability to over-generalize the acquired structure in communication contexts, mainly based through morphological patters.

Thus, this case study proves a very tight relation between morphological and lexical abilities, these abilities being reunited when the child was asked to prove verbal comprehension. The definitions he gave underline what the third generation of theories emphasized regarding lexically or pre-lexically morphological processing-linguistic material, linguistic experience, communication needs, communication context, language development are just a few from the variables that have to be taken into consideration when processing language. Thus, generic invariants are less likely to establish, especially in the case of children with atypical language development.

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