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Linguistic prosody and comprehension of idioms and proverbs in subjects of school age

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Abstract

A crucial component of language is represented by the prosodic system because it provides essential elements to speaker about how a sentence should be interpreted or intended (Fodor, 2002). Increasing interest from researchers also relates to the understanding of figurative language (Levorato, & Cacciari, 2002). In the figures of speech that the speaker wants the listener intends something more or different than what is explicitly stated (Glucksberg, 2001)..

In particular, prosodic intonation is crucial in the resolution of syntactic ambiguity and structural features that constitute the complex messages, such as idioms and proverbs.

A crucial component of language, therefore, is represented by the prosodic system because it provides essential elements to talking about how a sentence should be interpreted or understood . The ability to relate to metalinguistic understanding the cognitive processes that allow you to reflect on language and manipulate its characteristics. These capabilities are essential to recognize and resolve the ambiguities of a complex message, you can control and plan the way we produce and understand language (Levorato, 2007).

The study demonstrates that an understanding prosodic correlates with the understanding of idioms and proverbs, which are crucial for the achievement of metalinguistic awareness, are influenced by the level of schooling and socio-cultural.

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1. Introduction

The most recent studies attribute a crucial role in understanding the prosodic component of the verbal message . Speech processing in natural contexts involves the perception and integration of both segmental (i.e., phonological) and supra segmental information.

The supra segmenatal information, or prosody, serves to cue emotional states (emotional prosody) and language structure (linguistic prosody). The latter includes information on sentence type (questions vs. statements), the occurrence of phrasal units within sentences and the likely boundaries of words within phrases. As such, prosodic information shapes how the linguistic information carried by sentences is parsed and interpreted. Furthermore, it can serve as the basis for processing unfamiliar units. For example, the stress patterns of the words habeus corpus, when spoken, suggest two words are present rather than some other number. This provides a rough idea of the units of meaning that are likely to be attached to these elements (Milotte, 2007).

The analysis of the literature shows that prosody is a robust linguistic phenomenon. Prosodic information is redundantly distributed over a broad range of the acoustic speech spectrum (Levorato, 2008)and adults are able to identify information carried through virtually any segment of the speech spectrum (Florit, 2008). Furthermore, physiologic data suggests that speech prosody is used to disambiguate meaning when the words of a sentence alone do not signal how the phrases should be parsed. When learners are in the process of acquiring language, prosodic cues are even more important.

Infants show evidence of speech preferences that appear to reflect prosodic information shortly after birth . Infants are capable of using this information to segment individual words from running speech at seven and a half months of age although they do not appear to use prosodic cues preferentially until somewhat later. By nine months, American infants show a clear bias towards the trochaic stress pattern that characterizes spoken English and this information takes precedence over segmental information as a cue to word boundaries . Although prosody alone is an imperfect cue to syntactic structure, there is evidence that infants at nine months are sensitive to the prosodic structure of sentences that they have heard (Levorato, 1988). Moreover, infants at this age can are sensitive to the specific prosodic structure of phrases they hear and show evidence of abstracting the underlying structure, allowing for generalization Glucksberg, & Keysar (1990). Thus there is evidence that very young children are not only sensitive to prosodic information, but are capable of using this information to evaluate new input.

Increasing interest among researchers concerns, in fact, the understanding of figurative language. Metaphor is at the nexus of mind and language. Since the time of Aristotle, scholars from many disciplines have struggled to define metaphor and understand its functions in language, thought, and culture. The late 20th century has witnessed an explosion in the study of metaphor, especially within cognitive science, where linguists, philosophers, and psychologists have offered a variety of proposals on metaphorical thought and language (Amanzio, 2008). Many of these theories aim to firmly establish metaphor as a ubiquitous part of both ordinary language and everyday cognition, contrary to the traditional view that metaphor is an ornamental aspect of speech and thought. Cognitive linguistic perspectives on metaphor have had an enormous, but still controversial, influence on the study of metaphor in many fields as scholars seek out the myriad ways that metaphor shapes human thought, as evident in the ways people speak about the world and their experiences. Contemporary research within cognitive linguistics even suggests that metaphor has its foundation in neural and bodily processes, and is not, as the traditional view argues, primarily a specific linguistic device (Amanzio, 2008).

Early cognitive linguistic analyses suggested that there are two kinds of metaphors (Levorato, 1988).metaphors provide a means of structuring one concept in terms of another. These metaphorical mappings give rise to a multidimensional gestalt: so that we are not dealing with an unspecified means of experiential information, but a ‘‘structured whole’’ (Glucksberg, & Keysar, 1990). Orientational metaphors, on the other hand, are cases in which a metaphorical concept organizes a whole system of concepts with respect to one another, especially in terms of understanding experience in terms of objects, actions as substances, and states as containers. More recent analyses talk of orientational metaphors as being ‘‘primary,’’ because of the image-schematic nature of the source domain Glucksberg, & Keysar, (1990).

The figurative competence consists of a number of different skills including the ability to understand the various meanings of a word and identify the primary meaning and the ability to use contextual information to achieve a comprehensive and coherent semantic representation. In fact, the correct interpretation of figurative involves the activation of processes of inference that enable you to disambiguate the inconsistency underlying metalinguistic skills that can be well controlled with the effect of schooling. Younger children, exhibit a cognitive rigidity that does not allow them to go beyond the mere literal meaning (Glucksberg, & Keysar, 1990).

In other terms, in figures of speech that the speaker wants the listener intends something more or different than what is explicitly stated. Examples are the metaphorical expressions (Anna is a pearl), and idioms (be mute like a fish, take the bull by the horns) The topic of idiomaticity has always been of interest to metaphor scholars, in fact The cognitive linguistic perspective on idioms has served as the basis for a large body of work in experimental psycholinguistics that demonstrates how conceptual metaphors serve as partial motivation for how people learn, produce, and understand many idioms. Thus, people appear to use their tacit knowledge of conceptual metaphors as underlying motivations for why various idioms have the figurative meanings they do, but also may recruit conceptual metaphors during their immediate processing of some idioms. Furthermore, A relevance theory view of idiom processing assumes that idioms are processed just like any other linguistic expression where listeners seek to find optimally relevant interpretations following a path of least effort (Forceille, 2008).

The analysis of the processes involved in the recognition and resolution of ambiguity in a complex message focuses on the ability to control and plan the production and comprehension of verbal language, in particular aspects of figurative language, used daily in the socio-educational exchanges. idiomatic expressions are considered different from the literal language, especially because their meaning is not the 'whole of a composition of the meanings of the parts of speech (Cain, Oakhill, 2007), but the significance is assigned to the string idiomatic as a whole. In this perspective, the meanings of idioms are therefore conventionally assigned a set of words that have lost their individual meaning and their syntactic features (Levorato &Cacciari, 1992). The figurative competence is the result of a construction which proceeds slowly and gradually over the course of language development. From examination of the literature shows that up to now studies on the analysis of linguistic prosody and comprehension of idioms and proverbs have been conducted but this paper aims to investigate the relationship between these two components in children of school age, belonging to two distinct socio-cultural levels.

2. Objectives

Based on these theoretical considerations, we investigated the relationship between linguistic prosody and comprehension of idioms and proverbs in subjects aged children of different socio-cultural contexts In particular, the purpose of this study was to test the effect of schooling and socio-cultural level in the comprehension linguistic prosody and comprehension of idioms and proverbs.

3. Method

3.1. Participants

Participated in study 160 subjects with normal language skills divided into two age groups: 80 children attending first grade (mean age 6 years and 3 months; range 6;3 – 7;2) and 80 children attending the third grade (mean age 8 years and 4 months; range 8;3 – 9;1) allocated equally to the socio-cultural level (average high and low average). The criteria for inclusion are to have had enough of the performance tests of nonverbal intelligence and CPM tests (Coloured Progressive Matrices), (Raven, 1996) of language comprehension and production BVLB (Battery for the Assessment of language in children aged 4 to 12 years) (Marini, 2010).

3.2. Materials and procedure

All subjects was administered the test of linguistic prosodic comprehension and idioms and proverbs comprehension , specially constructed and exactly two sub-tests that are part BVLB (Battery for the Assessment of language in children), (Marini 2010).

Each subject was individually, in an environment away from those distractors from interfering with the presentation of the test. In tests of linguistic prosody, delivery was to explain to the child who would listen to the sentences previously recorded, using audio and should indicate if they were questions, order statements **Figure 1**. In tests of idioms and proverbs, the delivery was to read the sentences and ask the child to indicate three possible meanings of what they consider most appropriate **Figure 2**.

Some sample items from the extrapolated sub tests of understanding of Linguistic Prosody and Comprehension of idioms and proverbs . Battery for the Assessment of language in children aged 4 to 12 years (Marini, 2010).

Figure 1

UNDERSTANDING THE LINGUISTIC PROSODY
The procedure is:
Now hear the words and I say if you are: questions commands assertions

Figure 2

COMPREHENSION OF IDIOMS AND PROVERBS	
Now I will read the sentences and ask you to tell me what they mean. To help you read three possible meanings and you must choose the one that you think is right. " Here we go.	ANSWER
What does it mean "to be dumb as a fish"?(0 1 2 3 (1. Being dumb as a fish, 2. Speak little, 3. Do not say anything)	
What does "Take the bull by the horns"?(0 1 2 3) (1. Tackling a problem, 2. Grabbing a bull; 3. Be scared)	
What do you mean "get lost in a glass of water"? (0 1 2 3) (1. Do not know how to face a little difficulty, 2. Do not know how to swim 3. to have a very large glass)	
What does "Take a crab"? (0 1 2 3) (1. Err; 2. Take a crab with your hands 3. Go to the sea)	
What does it mean to "be a hard nut to crack"? (0 1 2 3) (1. Be a difficult person to talk 2. Be thin, 3. Eat a tough steak)	

4. Results

The results suggest an improvement in performance in either sub-tests, with increasing age **(Figure 3 and Figure 4),** in particular, the data show in the first grade as the children get good performance only to the sub test understanding of linguistic prosody rather, in the third grade will have more good performance in either sub-tests, this result shows an improvement in relation to the level of schooling and socio-cultural level.

The results indicate that the mean scores of linguistic prosody comprehension and understanding of idioms and proverbs, grow according to age (both $p < 0.001$). In particular, in the first grade was obtained a positive correlation of only ($r = 0.16$), while in the third grade, was obtained a positive correlation ($r = 0.22$). Regarding the correlations between total scores of the two scales, taking away the effect of age and socio-cultural context, we obtained a value $r = 0.23$ ($p < 0.01$). I dati confermano la relazione tra componente prosodica del linguaggio e la comprensione di modi di dire e proverbi.

Subjects belonging to an medium high socio-cultural level are accustomed to receiving complex messages and processed the interpretation of meaning involves the activation of inferential processes required to construct a "mental mapping".

Metaphor is not merely a figure of speech, but a specific mental mapping and a form of neural coactivation that influences a good deal of how people think, reason, and imagine in everyday life (Lakoff, in press; Lakoff and

Johnson, 1999). Verbal metaphors do not only exist as ornamental, communicative devices to talk about topics that are inherently difficult to describe in literal terms.

Instead, verbal metaphors, including conventional expressions based on metaphor, reflect underlying conceptual mappings in which people metaphorically conceptualize vague, abstract domains of knowledge (e.g., time, causation, spatial orientation, ideas, emotions, concepts of understanding) in terms of more specific, familiar, and concrete knowledge (e.g., embodied experiences).

Figure 3

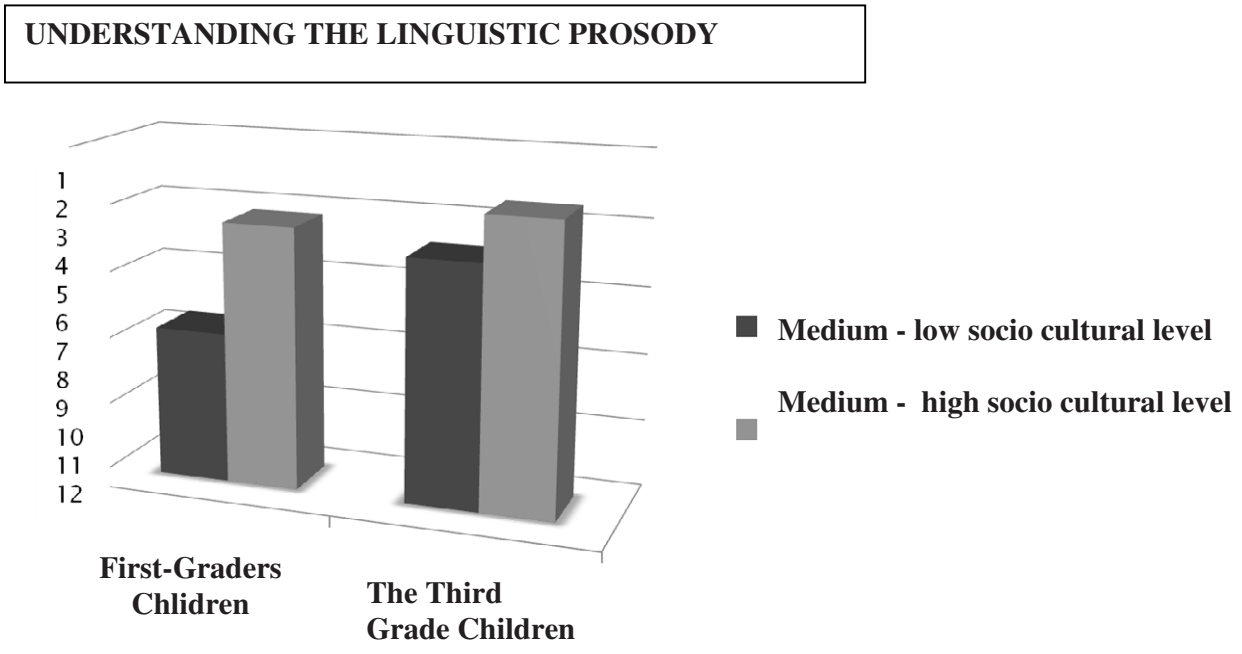
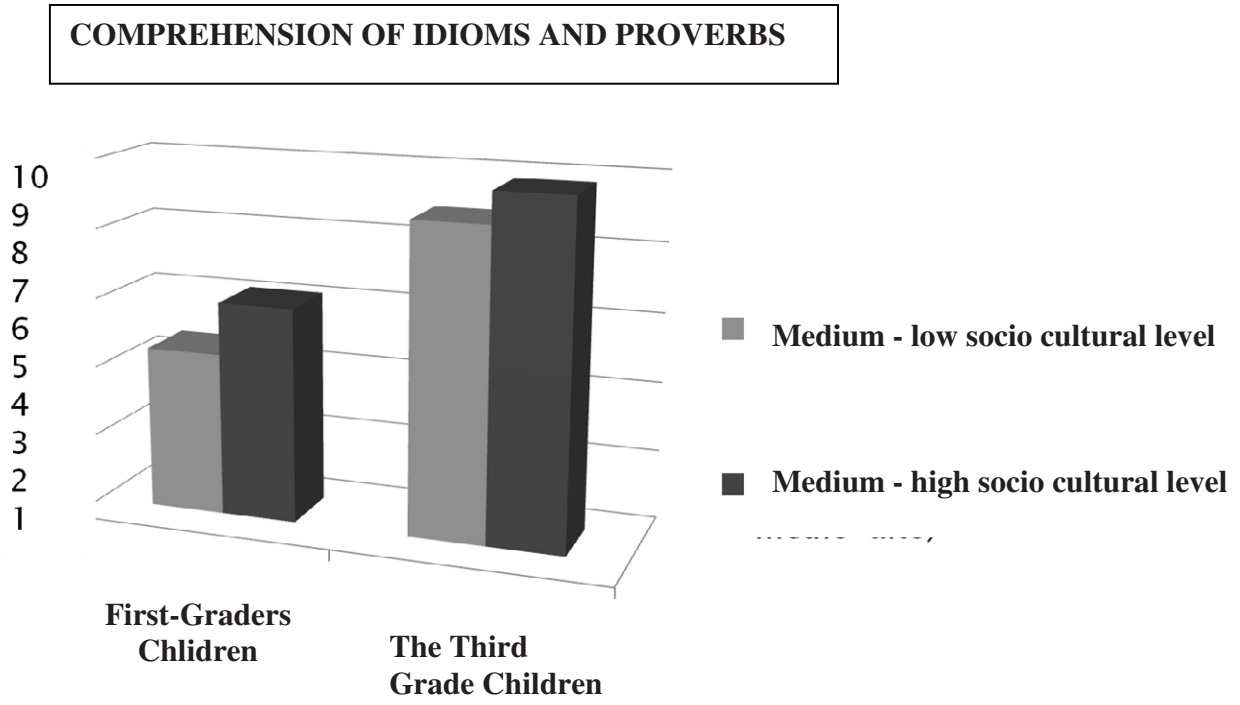


Figure 4



5. Discussion

As part of this research include considerations of prosodic aspects that covering more than phone segments, are closely linked to factors studied by other disciplines such as psycholinguistics and psychology of language (Amanzio, 2008). The prosody is a linguistic phenomenon investigated by science only in recent years because they are difficult to study for many reasons. The first is certainly the fact that all the physical variables that determine the time (the time and intensity for the rhythm, the frequency for the intonation) are arranged along a continuum not segmented, as it is, thanks to the writing, in the case segmental traits, such as phonology, morphology, vocabulary and, in part, syntax (Levorato & Cacciari, 2002).

A segment intonational prosody detached from its context is totally devoid of meaning and function, because the values that determine the prosody, the intonation and therefore, are always all totally relevant, measurable and interpretable only in relation to what precedes and what followed inside the 'prosodic units considered. Thus, a segment of the vowel itself, which we can measure the height, duration and intensity (as well as the stamp), we can not say whether linguistically acute or severe, long or short, strong or weak (Lundgren, 2006). Research on idiomaticity in cognitive linguistics and relevance theory are motivated by different concerns. linguistic theory aims to explain why certain idioms come into being and typically convey some of the metaphorical meanings they do, while relevance theory provides more details on the specific cognitive effort and effects involved with understanding idioms and their variants. We see no reason why aspects of both approaches cannot be readily combined to determine the conceptual and communicative forces behind the creation and use of idioms, why idioms

have the specific lexical and syntactic properties they do, and how the specific pragmatic meanings of idioms are communicated in context.

The study presented emphasizes strategies that help solve the ambiguity of the messages (Maltese, 2012) . Disambiguation to take part and suprasegmental linguistic elements but also the situational context and reference. The literature on ambiguity and disambiguation is very wide and has invested in various fields for decades, with studies largely interdisciplinary (Levorato & Cacciari, 2002)..

Relevance theory suggests that metaphor acquisition is best understood in terms of a child's developing theory of mind and metarepresentational abilities. Thus field of study particularly relevant for research on learning disabilities and autism. For example, people who have a theory-of-mind impairment, most notably autistic people, cannot communicate in normal ways because they cannot take into account speakers' intentions. Although autistic individuals may be able to use language as a code, this form of communication cannot be compared to the degree of creativity that normal interlocutors put to use even in very ordinary interchanges, not to mention in figurative uses of language.

References

Amanzio, M., Geminiani, G., Leotta, D., & Cappa, S. (2008). Metaphor comprehension in Alzheimer's disease: Novelty matters. Brain and Language, 107, 1–10.

Berman, R.A.,&Ravid,D.(2010).Interpretationandrecallofproverbsinthreeschool-agepopulations. First Language,30(2), 155–173.

Boucher, J. (1988). Word fluency in high-functioning autistic children. Journal of Autism and Developmental Disorders, 18, 637–645.

Bowdle, B. F., & Gentner, D. (2005). The career of metaphor. Psychological Review, 112, 193–216.

Cain, K., Oakhill, J. (1999), Inference-making ability and its relation to comprehension failure in young children, . Reading and writing ., 11, pp. 489-503.

Cain, K., Oakhill, J. (2006), Profiles of children with specific reading comprehension difficulties, .British Journal of Educational Psychology ., 76, pp. 683-696.

Cain, K., Oakhill, J. (2007), Children's comprehension problems in oral and written language, New York-London, The Guilford Press.

Cain, K., Oakhill, J. V., Barnes, M. A., Bryant, P. E. (2001), Comprehension skill, inferencemaking ability, and their relation to knowledge, . Memory & Cognition ., 29, 6, pp. 850-859.

Cain, K., Oakhill, J. V., Bryant, P. (2000), Investigating the causes of reading comprehension failure ; The comprehension-age match design, . Reading and Writing : An Interdisciplinary Journal ., 12, pp. 31-40.

Cain, K., Oakhill, J., Bryant, P. (2004), Children's reading comprehension ability : Concurrent prediction by working memory, verbal ability, and component skills, . Journal of Educational Psychology ., 96, 1, pp. 31-42. Millotte S, Wales R, Christophe A. Phrasal prosody disambiguates syntax. Language and Cognitive

Camaioni, L., Ercolani, A., Lloyd, P.P., 1995, PCR: Prova di Comunicazione Referenziale (PCR: Referential Communication Test). (Florence: O. S. Organizzazioni Speciali)

Cutting, L., Materek, A., Cole, A. S., Levine, R., & Mahone, M. (2009). Effects of fluency, oral language, and executive function on reading comprehension performance. Dyslexia, 59, 34–54.

Defeyter,M.A.,Russo,R.,&McPartlin,P.L.(2009).Thepicturesuperiorityeffectinrecognitionmemory:Adevelopmentalstudyusingtheresponse signal procedure. Cognitive Development,24(3), 265–273.

del testo orale, Firenze, Organizzazioni Speciali.

Florit, E., Levorato, M. C., Roch, M. (2008), Verba volant scripta manent : Cambiamenti evolutivi nella comprensione del testo scritto e orale, . Giornale Italiano di Psicologia ., 3, pp. 639-660.

Fodor J. Prosodic disambiguation in silent reading. Proceedings of the Annual Meeting in the North East

Forceville, C.(2008).Metaphorinpicturesandmultimodalrepresentations.InA.Ortony(Ed.), Metaphor andthought (pp. 462–482).NewYork,NY,US:Cambridge University Press.

Glucksberg, S. (2001). Understanding figurative language: From metaphors to idioms. Oxford: Oxford University Press.

Glucksberg, S.(2008).How metaphors createcategories–Quickly.InA.Ortony(Ed.), Metaphor andthought (pp.67 83).NewYork,NY,US:CambridgeUniversity Press. Adams BC, Clifton C, Mitchell DC. Lexical guidance in sentence processing. Psychonomic Bulletin and Review 1998;5:265–270.

Glucksberg, S., & Keysar, B. (1990). Understanding metaphorical comparisons: Beyond similarity. Psychological Review, 97, 3–18.

Kave´ , G., Kigel, S., & Kochva, R. (2008). Switching and clustering in verbal fluency tasks throughout childhood. Journal of Clinical and Experimental Neuropsychology, 30, 349–359.

Kave´ , G., Kukulansky-Segal, D., Avraham, A., Herzberg, O., & Landa, J. (2010). Searching for the right word: Performance on four word-retrieval tasks across childhood. Child Neuropsychology, 16, 549–563.

Kerbel, D., & Grunwell, P. (1998). A study of idiom comprehension in children with semantic-pragmatic difficulties. Part II: Between-groups results and discussion. International Journal of Language and Communication Disorders, 33, 23–44.

Levorato, M. C. (1988), Racconti, storie e narrazioni. I processi di comprensione dei testi, Bologna, Il Mulino.

Levorato, M. C., & Cacciari, C. (2002). The creation of new figurative expressions: Psycholinguistic evidence in Italian children, adolescents and adults. Journal of Child Language, 29, 127–150.

Levorato, M. C., Cacciari, C. (1995), The effects of different tasks on the comprehension and production of idioms in children, . Journal of Experimental Child Psychology ., 60, pp. 261- 283.

Levorato, M. C., Nesi B., Cacciari C. (2004), Reading Comprehension and under standing idioms : A developmental study, . Brain and Language ., 202, pp. 4-16.

Levorato, M. C., Nesi, B. (2001), Imparare a comprendere e produrre testi, in Psicologia dello sviluppo del linguaggio, a cura di L. Camaioni, Bologna, Il Mulino.

Levorato, M. C., Roch, M. (a cura di) (2007), TOR 3-8 : Test per la valutazione della comprensione

Levorato, M. C., Roch, M. Nesi, B. (2007), Idiom understanding in first graders : a follow-up study on less skilled comprehenders, . Journal of Child Language ., 34, 3, pp. 473-494.

Levorato,M.C.(1993).Theacquisitionofidiomsandthedevelopmentoffigurativecompetence.InC.Cacciari&P.Tab i(Eds.), Idioms. Processing,structureand interpretation (pp. 105–128).

Lundgren, K., Brownel, H., Soma, R., & Cayer-Meade, C. (2006). A metaphor comprehension intervention for patients with right hemisphere brain damage: A pilot study. Brain and Language, 99, 60–70.

Maltese, A., Pepi, A., Scifo, L. (2012) The Relationship between Inferential Processing and Text Processing: a Developmental Study. Problem of psychology. 22, 285-300

Millotte S, Wales R, Christophe A. Phrasal prosody disambiguates syntax. Language and Cognitive Processes 2007;22:898–909.

Raven, J., Court, J.H. e Raven, J.C. (1998). *Raven Manual, Section 1 (General overview) and Section 2 (Coloured Progressive Matrices)*. Oxford, UK: Oxford Psychologist Press.