BARBARA BOKUS, PIOTR KAŁOWSKI
University of Warsaw

EDITORIAL REMARKS: BEYOND LITERAL MEANING. METAPHORS

Following up on the previous special issue of Psychology of Language and Communication, devoted to irony, the current one concerns metaphors – another major form of non-literal language. The authors of the presented papers examine metaphor use and understanding in a wide variety of contexts, both in adult and child, as well as normal and abnormal populations. The result is a comprehensive survey of the current state of research, which opens further avenues of potentially fruitful inquiry.

Key words: psycholinguistics, nonliteral language, metaphor, metaphor processing, metaphor comprehension

The present special issue of *Psychology of Language and Communication* is devoted to psycholinguistic research on metaphors, thus concluding the overview of new directions in studies on non-literal language begun with issue 3 (vol. 20, 2016) which focused on verbal irony. The authors of the papers in the current issue offer a multi-faceted approach to the processing and use of metaphors, taking into account a wide range of factors that could come into play. This means their papers contribute significantly to the development of this area of psycholinguistics.

In psychology, metaphors are considered in terms of establishing a connection between two separate areas of knowledge (Bowdle & Gentner, 2005, p. 1). Five patterns of metaphorical sentences can be distinguished (cited here after Bartczak & Bokus, 2013, pp. 73-74): (a) X means Y (e.g. Sadness means…; Lakoff & Johnson, 1980), (b) X is Y (e.g. The future is…; Dobrzyńska, 1994), (c) X is like Y in terms of Z (e.g. Happiness is like… in terms of…;

Address for correspondence: Piotr Kałowski, Faculty of Psychology, University of Warsaw, Stawki 5/7, 00-183 Warsaw, Poland. E-mail: piotr.kalowski@psych.uw.edu.pl

End, 1986), (d) When I imagine X, I see Y (e.g. When I imagine the past, I see…; Stępnik, 1988) and (e) You could say that X is not X but Y (e.g. You could say that joy is not joy but…; Wierzbicka, 1971). Just like verbal irony, metaphors occur extremely frequently in speech. Analyzing TV programming samples, Graeser, Long & Mio (1989) showed that one new, creative metaphor appears every 25 seconds on average, which proves just how useful this form of expression is. Raymond Gibbs (2002) lists three functions of metaphor: (a) speaking of complicated things in a simple manner, (b) making communication quicker and more efficient, and (c) describing internal states and experiences accurately and expressively. Meanwhile, the influential theory of George Lakoff and Mark Johnson (1980) states that metaphors not only enrich language but also, through their form, affect our understanding of the world. One example of this is the evolution of metaphors of the mind used in psychology, and the way they defined (and continue to define) the directions of research: "the mind as a living being", "the mind as the nervous system", "the mind as a computer", "the mind as a network" (Gentner & Grudin, 1985).

Therefore, metaphors are a fundamental part of everyday cognition (Gibbs, Lima, & Francozo, 2003). The studies collected in this issue tried to show how our personal experience affects metaphor use and comprehension through a number of personal factors as well as how metaphors determine the way we conceptualize a uniquely human domain: morality.

The issue opens with the paper "Talking about the non-literal: internal states and explanations in child-constructed narratives" by Edy Veneziano (Paris Descares University – CNRS). The paper presents the short conversational interaction (SCI), a method facilitating consideration of internal states (thoughts and emotions) in the narratives of seven-year-old children. In SCI, children produce short verbal stories based on picture stories. Then, questions about the pictures are used to draw the children's attention directly to the characters' motives, after which the children are asked to tell their stories again. Incorporating individually created, subjective cause-and-effect explanations and interpretations of a character's motivation, beliefs, and feelings – elements that are not directly obvious, that is, are non-literal – is a skill that appears in developed form around nine years of age. The author's study shows, however, that SCI supports the development of this skill: after it was applied, seven-year-old children's stories more often included references to characters' internal states and beliefs related to their mutual intentions (e.g. "he thought he'd pushed him deliberately"). As the paper's author points out, these kinds of second-order beliefs require the highest degree of independent reasoning and concluding. The results are additionally confirmed by the fact that the increased complexity of the stories retold as part of SCI could not be ascribed solely to the repetition of the content, and that this increase could be observed in the children a week after the procedure had been used.

The next two papers deal with metaphors describing morality and how their form affects our perception of this area of life. Martyna Sekulak and Józef Maciuszek (Jagiellonian University, Cracow) studied the "Macbeth effect", describing situations in which a feeling of moral threat triggers a desire to clean oneself (Zhong & Liljenquist, 2006). Referencing Lakoff and Johnson (1980), the authors of the paper "Metaphorical association between physical and moral purity in the context of one's own transgressions and immoral behavior of others" report that thinking about an imagined transgression did not cause a greater focus of the attention (operationalized as a slower response time) on semantic stimuli related to bodily cleansing, while thinking about helping someone avoid the consequences of their transgression focused subjects' attention on words suggesting purification of the external world. An identical effect was also observed when the experimental stimulus was recalling someone else's real transgression. It was only recalling one's own real transgression that led to a stronger focus on words linked to bodily cleansing (i.e., a slower response time to these words). The results show that the metaphor "morality is purity" has a significant effect on this area of life. It shapes our understanding of morality, including ritually "cleansing" society of "infected" members, further translating into automatic cognitive processes. It was an interesting result, however, that longer response times to words related to cleansing did not cause those words to be remembered better in recalling one's own or someone else's immoral behavior. Despite this discrepancy, the authors' study presents a fascinating phenomenon: metaphors shaping the understanding and perception of human experience.

The paper by Ewa M. Dryll (University of Warsaw), "Metaphorical descriptions of wrongdoers", which continues the theme of metaphors about morality, was written as part of a bigger project on a developmental approach to the production of metaphors describing people (cf. Dryll & Bokus, 2016). In the present paper, Dryll describes a pilot study in which she distinguished 26 metaphors referring to four aspects of human characteristics: good/evil, smart/stupid, beautiful/ugly, and strong/weak. The paper focuses on the domain of evil and offers an exhaustive semantic analysis of the networks that adults created around four metaphors of evil and the most frequent associations with them: a swamp (unpleasant, dirty, bad), a knife (sharp, dangerous, sharp-tongued), a snake (treacherous, cunning, smart) and a nettle (malicious, hurtful). The author also cites the preliminary results of a study involving children, which has allowed her to show a significant difference in the way these two groups (adults and children) use metaphors to conceptualize evil: to adults, evil is above all related to social threats like criticism, exploitation, and betrayal, whereas children associate evil with physical violence.

The next paper, "Metaphor comprehension and interpretation in cleft palate children aged 6-9" by Katarzyna Konopka, Ewa Pisula, Emilia Łojek (University of Warsaw), and Piotr Fudalej (University of Bern, Palacký University Olomouc), similarly to Edy Veneziano's work, approaches what is beyond the literal meaning

from a developmental perspective, taking into account a problem little-researched so far: cleft palate and how it affects children's language development. The authors studied a group of children with cleft palate and a control group, carefully chosen, taking into account metaphor comprehension and interpretation. Their results suggest that cleft palate children understand metaphors at a statistically similar level to the control group but do less well in explaining them. The authors conclude that these results are not necessarily evidence for poorer processing of non-literal language, but could be the effect of general inhibition and lesser spontaneity of utterances in this group of children. This conclusion is supported by the fact that cleft palate children in the study achieved lower results than the control group on those scales of the Polish adaptation of the Wechsler Intelligence Scale for Children (WISC-R, Matczak, Piotrowska & Ciarkowska, 2008) which were related to vocabulary but not those for memory and knowledge. This indicates impairment at the level of communicating – but not producing – a response. An additional observation from this study was that children understand metaphors better in context. In all, this paper is a valuable contribution to research on how cleft palate affects children's cognitive development.

The paper by Agnieszka Pawełczyk (Medical University of Łódź), Emilia Łojek (University of Warsaw), and Tomasz Pawełczyk (Medical University of Łódź) also considers how a disorder can affect metaphor comprehension, focusing on the population of people suffering from schizophrenia. In the paper "Metaphor processing in schizophrenia patients: a study of comprehension and explanation of metaphors" the authors present an exhaustive list of references on impairment of language skills, including metaphor processing and comprehension, in schizophrenia, but emphasize that most of those studies ignored the content of responses provided by schizophrenia patients and did not consider the impact of the stimulus modality (visual/verbal). The authors decided to factor this into their research plan, additionally analyzing the correlations between metaphor processing and schizophrenia symptom intensity. The results of their research showed that people with schizophrenia and healthy subjects from the control group understood metaphors (i.e., correctly assigned them to interpretations) presented visually and verbally at a similar level; in both groups, subjects did better on visual metaphors than on verbal ones. However, schizophrenia patients had bigger problems than the control group with interpreting both types of metaphor on their own. They more often provided literal or abstract and incorrect explanations of the metaphors, or were unable to offer any explanation at all. Finally, a correlation between metaphor comprehension and symptom intensity was observed at the statistical trend level. Invoking the aforementioned theory of Lakoff and Johnson (1980), the authors underline the legitimacy of studying metaphor processing in patients suffering from schizophrenia – deficits in these language skills can lead to considerable problems with communication and general functioning. Therefore, the authors' analysis of the content of the subjects' responses, going beyond the correct/incorrect classification, provides valuable

input into developing research on metaphor processing in the clinical population, and any data thus obtained could contribute to a more complete cognitive and phenomenological perspective on schizophrenia, potentially leading to more effective neuropsychological and therapeutic interventions.

The review by Marlena Bartczak (University of Warsaw) presented in the paper that concludes the issue, "Processing of metaphors in the elderly: does valence matter?", adds the life-span psychology approach to the discussion on metaphors in a developmental perspective, focusing on factors affecting the way the elderly process metaphors. Many theories and research results suggest that the elderly have trouble processing metaphorical content. Researchers usually associate this with the working memory and cognitive inhibition deficits observed in this age group, since these functions play a key role in efficient processing of metaphors. However, research on metaphor comprehension in the elderly is inconclusive. Bartczak's paper offers an overview of studies showing that a number of complex factors are responsible for metaphor processing, which could explain why existing research has been inconsistent. Compensatory changes in neuropsychological functions occur in the brains of elderly people, enabling them to continue to process metaphors efficiently, but this costs them more effort. Therefore, statistically similar results in experimental tasks do not necessarily mean an identical level of function. Furthermore, working memory management skills deteriorate with age, especially inhibition of the activation of irrelevant associations, which could impair the process of interpreting new, unconventional metaphorical expressions. Also, worsening ability to understand speech has a negative impact on the ability to use context in interpreting non-literal language. Some disorders occurring frequently in the elderly population also negatively affect language skills.

Recognizing the influence of inter-individual factors (varied cognitive skill levels among the elderly), the author places emphasis on the features of the metaphorical stimuli themselves, especially conventionalization and valence, that could affect language metaphor processing in the elderly.

In summary, in this special issue of *Psychology of Language and Communication* we have tried to offer a cross-section of research on metaphors – a broad area of human language and experience. We present innovative studies on metaphors in a developmental as well as a clinical perspective. We hope this issue can serve as inspiration for further in-depth studies on what lies beyond the framework of literal language.

References

Bartczak, M., & Bokus, B. (2013). *Rozumienie pojęć w depresji* [*Understanding Notions in Depression*]. Piaseczno: LEXEM

Bowdle, B. F., & Gentner, D. (2005). The career of metaphor. *Psychological Review*, *112*(*1*), 193-216.

Dobrzyńska, T. (1994). *Mówiąc przenośnie... Studia o metaforze* [*Figuratively Speaking... Studies on Metaphor*]. Warszawa: Wydawnictwo Instytutu Badań Literackich PAN.

Dryll, E. M., & Bokus, B. (2016). *Zrozumieć metaforę: Studium z psycholingwistyki rozwojowej*. [*Understanding Metaphors: A Study in Developmental Psycholinguistics*]. Piaseczno: LEXEM.

End, L. (1986). Rozumienie metafor: Torowanie podłoża [Understanding metaphors: Laying the foundation]. In: I. Kurcz, J. Bobryk, D. Kądzielawa (eds.), *Wiedza a język: Ogólna psychologia języka i neurolingwistyka* [*Knowledge and Language: General Psychology of Language and Neurolinguistics*] (pp. 253-267). Wrocław: Ossolineum.

Gentner, D., & Grudin, J. (1985). The evolution of mental metaphors in psychology: A 90-year retrospective. *American Psychologist*, *40*(*2*), 181-192.

Gibbs, R. (2002). *The poetics of mind. Figurative thought, language, and understanding*. Cambridge: Cambridge University Press.

Gibbs, R. W., Lima, P. L. C., & Francozo, E. (2004). Metaphor is grounded in embodied experience. *Journal of Pragmatics*, *36*(*7*), 1189-1210.

Graesser, A., Long, D., & Mio, J. (1989). What are the cognitive and conceptual components of humorous texts? *Poetics*, *18*, 143-164

Lakoff, G., & Johnson, M. (1980). *Metaphors we live by*. Chicago, IL: The University of Chicago Press.

Matczak, A., Piotrowska, A., & Ciarkowska, (2008). *Skala inteligencji D. Wechslera dla dzieci – wersja zmodyfikowana (WISC-R). Podręcznik*. [*The D. Wechsler Intelligence Scale for Children – Modified Version (WISC-R). Textbook*] Warszawa: Pracownia Testów Psychologicznych Polskiego Towarzystwa Psychologicznego.

Stępnik, K. (1988). *Filozofia metafory* [*The Philosophy of Metaphor*]. Lublin: Wydawnictwo Lubelskie.

Wierzbicka, A. (1971). Porównanie – gradacja – metafora [Comparison – gradation – metaphor]. *Pamiętnik Literacki*, *4*, 127-148.

Zhong, C. -B., & Liljenquist, K. (2006). Washing away your sins: Threatened morality and physical cleansing. *Science*, *313*, 1451-1452.