Introduction

Lexico-semantic processing in metaphoric language comprehension has frequently been discussed in the monolingual context. Although a traditional perspective on figurative meaning processing (the Standard Pragmatic View; Grice 1975) claims that nonliteral language comprehension is delayed relative to the literal meaning, more recent approaches emphasize that metaphor comprehension is modulated by such factors as contextual cues (Frisson and Pickering 2001; Katz and Ferretti 2001) or meaning conventionality (Gentner 1983; Sperber and Wilson 1986; Bowdle and Gentner 2005). For instance, the Career of Metaphor Model (Bowdle and Gentner 2005) claims that specific cognitive mechanisms engaged in metaphor processing are influenced by metaphor conventionality, with novel (unfamiliar) metaphors requiring comparison processes involved in meaning construction, and conventional (familiar) metaphors preferentially involving categorization mechanisms engaged in meaning retrieval, which has been supported in previous monolingual experiments (Bowdle and Gentner 2005; Shibata et al. 2012).

However, little attention has been devoted to examining metaphor comprehension in the context of bilingualism. Previous bilingual studies into various other types of figurative utterances (e.g., irony, proverbs, and idioms) have suggested that bilingual speakers are less sensitive to nonliteral expressions presented in their non-native tongue (Danesi 1992; Littlemore and Low 2006). Experiments conducted thus far have, nonetheless, rarely focused on examining whether meaning conventionality modulates metaphor comprehension also in the non-native tongue. Consequently, specific mechanisms engaged when processing novel metaphors and conventional metaphoric utterances in bilingualism remain under-investigated. Importantly, examining metaphor comprehension can provide valuable insights into how bilingual speakers compute meanings of different semantic complexity, as semantically simple meanings (e.g., literal) can be contrasted with meanings that are semantically complex (e.g., metaphoric). Consequently, this can show how semantic complexity modulates bilingual language processing.

The main objective of the experiment described in the book was to extend monolingual research into metaphor comprehension to the context of bilingualism. To this end, the experiment aimed to examine behavioral as well as

electrophysiological correlates of novel and conventional metaphor comprehension in the native (Polish; L1) and non-native language (English; L2).

This book is divided into three parts: a theoretical part (Chapters 1-3), an experimental part (Chapters 4), and a general discussion (Chapter 5). Chapter 1 provides an overview of selected off-line and on-line methods that can be employed when studying language comprehension. The following two chapters discuss metaphoric meaning processing (Chapter 2) and bilingual lexico-semantic processing (Chapter 3). The experimental part of the book includes the description of the design as well as the results obtained from the experiment (Chapter 4). Finally, a general discussion (Chapter 5) provides an interpretation of the results obtained from the study, and relates them to the theoretical frameworks previously discussed in the theoretical chapters.

Chapter 1 discusses three quantitative research methods that can be used in studies on both figurative and bilingual language processing, pointing to their advantages as well as limitations. First, survey research is presented as an off-line measure used to investigate the perception of various types of linguistic stimuli. A special emphasis is placed on rating scales, which allow for a quantitative analysis of survey results. Next, reaction time (RT) measures are discussed as one of the most widely employed methods for studying real-time language processing. Finally, an electroencephalographic (EEG) measure is presented, with a special focus on event-related potentials (ERPs) as a type of an analysis that can be performed based on the recorded EEG signal. In addition, two language-related ERP components that have been frequently analyzed in studies on lexico-semantic processing are discussed: the N400 and the late positive complex (LPC). Importantly, Chapter 1 provides a background on how to interpret results obtained from RT and ERP experiments, which the two following chapters extensively refer to when discussing previous studies on metaphoric (Chapter 2) and bilingual (Chapter 3) language processing. The research methods discussed in Chapter 1 were employed in the experiment reported in this book (Chapter 4).

Chapter 2 discusses metaphoric meaning comprehension in monolingual speakers. It presents both traditional and contemporary approaches aimed at explicating mechanisms engaged in metaphor and simile comprehension (Grice 1975; Sperber and Wilson 1986; Frisson and Pickering 2001; Katz and Ferretti 2001; Giora 2002; Lakoff and Johnson 1980; Bowdle and Gentner 2005; Kintsch 2001; Gentner 1983). Importantly, Chapter 2 identifies specific factors that have been postulated to modulate processes involved in nonliteral language processing, such as contextual cues as well as meaning conventionality. Following the sections devoted to the literature review, Chapter 2 presents both behavioral (RT) and electrophysiological (ERPs) research that has thus far been conducted with a view to elucidating mechanisms behind metaphor and simile

comprehension, with a special focus on the role of metaphor conventionality in figurative meaning processing.

Chapter 3 focuses on bilingual lexico-semantic processing. It provides a review on the most prominent models of bilingual visual word processing (Weinreich 1953; Paivio and Desrochers 1980; de Groot 1992; Kroll and Stewart 1994; Dijkstra and van Heuven 1998; Dijkstra and van Heuven 2002), and presents studies that have tested the tenets proposed within each model. Chapter 3 also discusses bilingual figurative language comprehension, and identifies gaps in research on bilingual metaphor comprehension, which the experiment discussed in Chapter 4 was aimed to fill in.

The experimental part of this book (Chapter 4) is devoted to reporting on an experiment on lexico-semantic processing in bilingual figurative language comprehension. Chapter 4 presents an ERP experiment that was aimed at examining whether metaphoric meaning comprehension is modulated by metaphor conventionality also in the context of bilingualism. The experimental materials used in the study included novel metaphoric, conventional metaphoric, literal, and anomalous word dyads, which were presented in Polish (L1) and English (L2). The word pairs were all paired pre-experimentally, and were pretested by means of employing rating scales with a view to evaluating the experimental stimuli in terms of their predictability, meaningfulness, familiarity, and metaphoricity. Based on the obtained results, it was possible to ensure that experimental materials were adequate representatives of categories ascribed to them. In the EEG experiment, late proficient unbalanced Polish-English bilinguals performed a semantic decision task in response to L1 and L2 novel metaphoric, conventional metaphoric, literal, and anomalous word pairs. Data analyses were based on behavioral results (reaction times and accuracy rates) and event-related brain potentials.

Finally, Chapter 5 provides a general discussion based on the results obtained from the experiment, and reflects on the formulated hypotheses. Furthermore, it presents the implications of the results with reference to the theoretical accounts previously discussed in the theoretical chapters, provides possible limitations of the experiment, and offers potential future research directions.