**Topics
in Applied Psycholinguistics**

In memory of
Professor Janusz Arabski

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Introduction: The scope of applied psycholinguistics

One is tempted to wonder whether there is a difference between the two domains: psycholinguistics and applied psycholinguistics. Indeed, it is not easy to separate these near-synonymous (or just plain-synonymous) disciplines, in terms of their research focus. Psycholinguistics has traditionally been seen as concerned with the three major processes involved in human verbal communication, language comprehension, language production and language acquisition, and so too has applied psycholinguistics. The only academic organization of applied psycholinguists, *ISAPL* (The International Society of Applied Psycholinguistics), founded in 1982 at its first Congress in Milan, defines its main aim as: "Stimulating and promoting activity in the domain of teaching psycholinguistics and applied psycholinguistics, of research and publications in these fields" (ISAPL www). Although no clear distinction is made between psycholinguistics and applied psycholinguistics, it can be assumed that, as Mininni and Manuti (2012) state in their introduction to the ISAPL Congress Proceedings published after the Bari Congress in 2010, applied psycholinguistics focuses on "how research can encourage communication processes among people, groups and cultures" (Mininni & Manuti, p. 10). Additionally, the psycholinguist Maria da Graça Pinto emphasizes "the mission" of applied psycholinguistics by stating: "[…] I underline the word *applied*. I believe that society in general expects from us effective approaches to the different aspects of language behaviour and communication, aspects which constitute integral parts of everyday life" (Pinto, 1999, p. 2).

Psycholinguistics draws on the findings primarily of psychology but also those from linguistics, neurosciences, anthropology, and more recently, from computer sciences. A general definition of psycholinguistics might describe it as a psychology of language based on how certain psychological and neurobiological factors interact in humans at the level of communication, on the comprehension and production of verbal messages in an interaction act, but also in the brain of an individual language user. Apart from the above-enumerated founding

domains of psycholinguistics, it also embraces the findings of such disciplines of study as biology and cognitive sciences. Psycholinguistics originally investigated first language acquisition but with the development of applied linguistics or more precisely, of second/foreign language acquisition/learning, it expanded its purview to investigate these different contexts. The major dimensions of psycholinguistic interest lie in what language knowledge is needed to be able to function verbally (tacit/implicit knowledge *versus* explicit knowledge) and what cognitive processes are involved in language comprehension and production. For example, psycholinguistic studies take up issues associated with perception, memory, thinking, and learning. As psychology constitutes the major source--domain for psycholinguistics, more recently it has started to turn its attention to affective aspects of language functioning, both on the level of comprehension and production, and with regard to interaction between people. This belief in the role of affectivity derives, among other sources, from findings in neurosciences demonstrating the primacy of affective processing over cognitive processing, or at least its important filtering role (Schumann, 1997; Paradis, 2000). Hence the topics investigated by psycholinguists range from speech comprehension and production, child language acquisition and bilingualism to language instruction and education, language disorders and issues in verbal and nonverbal communication, as well as speech technologies, human communication models and mass-media psycholinguistic analysis, more recently extended to the study of human emotionality. Applied psycholinguistics employs the practical results of this research in studying communication contexts in their entirety.

What therefore is the vital connection between educational issues and studying the teacher and learner, and research in applied psycholinguistics? Research in education can be carried out in a classical and scientific way by focusing on quantifying data and measuring different forms of behavior. A second type of approach relies on socio-cultural-historical aspects and their measurement. A third, phenomenological and interpretive, one looks at qualitative data and offers interpretation by examining for example people's perceptions. This is a psycholinguistic dimension of the researched issue, precisely because it involves thinking, feeling, and their verbal expression. This approach is critical in nature and looks at human experience as problem-oriented, as something which needs to be questioned and interpreted (Kincheloe & Steinberg, 1998). Studying teachers' perceptions of their own affectivity is important in understanding their instructional style, not so much in terms of applied teaching methods and techniques, but more in terms of classroom (and beyond) communication and interaction with the learners. As affective processing is primary over its cognitive analogue (Schumann, 1997), it affects teacher language processing and performance, and in some way shapes the manner a teacher will verbally (and nonverbally) interact with his/her class. Therefore, it is clearly an issue to be studied in applied psycholinguistics.

From the very beginning, applied psycholinguistics naturally developed its own research methodology. In the heyday of behaviorist theories, behavioral tasks dominated, and thus researchers would expose their subjects to stimuli and measure for example reaction times in lexical decision tasks by their respondents (Forster & Chambers, 1973; Fischler, 1977). Language processes were (and still are) investigated by means of studying language production errors through error analysis (Corder, 1981), but more recently also by simultaneous introspection tasks and think-aloud protocols analysis (Krings, 1986; Zimmermann & Schneider, 1986; Gabryś-Barker, 2005). Technological development has facilitated the expansion of methodologies investigating language processing both in comprehension and production contexts of language use. Keith Rayner was already using eye-movement data in 1978 to discuss reading processes, thus pioneering eye-tracking, a method that very quickly gained recognition and now numerous experiments in online language processing are carried out with the use of an eye-tracker. Also, neuroimaging techniques, which were first implemented only in clinical therapy with brain-damaged patients, are now used in psycholinguistic projects (e.g. Hagoort et al., 1996). These include PET (positron emission tomography), which allows us to localize different neural functions, fMRI (functional magnetic resonance imaging), which shows which areas of the brain are activated at any given moment, ERP (event related potential), which focuses on the timing aspect of brain activation rather than the areas activated, and EEG (electroencephalogram), which is a recording of the natural rhythms of the brain, giving evidence that the timing of neural processing can be a response to a certain external stimulus (e.g. visual). Developments in the area of information technology on the other hand, have brought into being computational modeling employed by Coltheart et al. (1993) in word-recognition tasks or McClelland and Elman's (1986) example of a speech perception model, TRACE.

To see applied psycholinguistics as a research domain in its own right is to emphasize application of psycholinguistic research results. This pragmatic aspect is demonstrated in the contributions to this volume. Each of the Authors works in the Section of Applied Psycholinguistics, with the single exception of Joanna Nykiel, who was invited to contribute to this volume because of her research experience with fairly novel eye-tracking technologies in applied psycholinguistic research.

This volume is predominantly meant for undergraduate (B.A.), post-graduate (M.A.) and Ph.D. students of foreign languages, as well as for prospective teachers and translators/interpreters, for whom applied psycholinguistic issues constitute a fundamental knowledge base for exercising future professional activity. In the case of foreign language teachers, this knowledge will contribute to their understanding of language acquisition/learning processes, and communication and interaction between people to make them more effective communicators (e.g. in

the classroom context). For future translators and (conference) interpreters, the knowledge of language processing will make them more aware, for example, of how they can use their memories more effectively in simultaneous or consecutive interpreting or how to develop comprehension of a spoken text.

The volume should by no means be regarded as a course-book in (applied) psycholinguistics because of its limited scope in topic choice, but rather as supplementary reading, presenting the individual research interests of each contributing Author. Each chapter looks at a different aspect of language processing—either verbal (language perception and production) or nonverbal (group forming, affectivity). The studies presented apply to different contexts of language use—from natural to formal instruction of a FL classroom. They demonstrate a whole variety of research methods: from quantitative ones, where analyses are based on statistical measures to eye tracking, to qualitative content analysis of narrative texts.

The volume opens with the article "Acquiring meaning of foreign vocabulary" by Janusz Arabski (the current Vice-President of ISAPL) on foreign language vocabulary learning, an area of study which features quite prominently in psycholinguistic research. The article by Andrzej Porzuczek and Arkadiusz Rojczyk, is entitled "The phonological functions of segmental and subsegmental duration" and looks at phonological processing and production in EFL learners' performance. The two papers to follow, by Joanna Nykiel on "Language production and online language comprehension behavior" and by Agnieszka Solska and Arkadiusz Rojczyk on "Appreciation of purposive ambiguity: The relevance of puns in city promotional slogans" both discuss, theoretically and empirically, comprehension processes in different contexts and using different methods. The following article by M. Krzysztof Szymczak, on "Verbal dominance vs. temperamental and anxiety variables of FL University Students," examines verbal interaction patterns in a FL class, linking them to individual learner differences. In the subsequent article, "'We are human beings, not robots': On the psychology of affect in education," I introduce the construct of emotional and affective processing in the brain and look at perceptions of EFL pre-service teachers of their own affectivity. Dagmara Gałajda, in her paper entited "Group cohesiveness," looks at group dynamics as a psychologically--grounded dimension of group interaction, emphasizing the role of a teacher in developing it. The closing article, "Psycholinguistic aspects of acquisition of Chinese character by beginner students" by Katarzyna Bańka, goes beyond studying second language acquisition processes by introducing a multilingual context and one of the areas of difficulty (the writing system) in learning Chinese as an L3.

We believe that the papers in this volume will be of interest and use to B.A., M.A., and Ph.D. students, preparing their own empirical projects in second language acquisition, which constitutes an important sub-domain in (applied)

psycholinguistics. We are also hoping it will be of some interest to other applied psycholinguists and to educationalists in general.

The Editor
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References

Coltheart, M., Curtis, B., Atkins, P., Haller, M. (1993). Models of reading aloud: Dual-route and parallel-distributed-processing approaches. *Psychological Review 100*(4), 589–608.

Corder, P. (1981). *Error analysis and interlanguage*. Oxford: Oxford University Press.

Fischler, I. (1977). Semantic facilitation without association in a lexical decision task. *Memory and Cognition 5*(3), 335–339.

Forster, K., & Chambers, S. (1973). Lexical access and naming time. *Journal of Verbal Learning and Verbal Behaviour 12*(6), 627–635.

Hagoort, P., Brown, C.M., & Swaab, T.Y. (1996). Lexical-semantic event-related-potential effects in patients with left hemisphere lesions and aphasia, and patients with right hemisphere lesions without aphasia. *Brain 119*, 627–649.

Krings, H., 1986. The use of introspective data in translation. In K. Faerch, G. Kasper (Eds.), *Introspection in second language research* (pp. 159–176). Philadelphia: Multilingual Matters.

Mininni, G., & Manuti, A. (Ed.). (2012). *Applied psycholinguistics: Positive effects and ethical perspectives* (Vol. 1). Milano: Franco Angeli s.r.l.

McClelland, J., & Elman, J. (1986). The TRACE model of speech perception. *Cognitive Psychology 18*(1), 1–86.

Paradis, M. (2000). The neurolinguistics of bilingualism in the next decades. In *Brain and Language 71*, 178–180.

Pinto, M. da Graça (1999). *15th International Congress of the International Society of Applied Psycholinguistics. Proceedings*. Porto. Facultade de Letras da Universidade do Porto.

Rayner, K. (1978). Foveal and parafoveal cues in reading. In J. Requin (Ed.), *Attention and perofrmance* (vol. VIII, pp. 144–161). Hillside, NJ: Erlbaum.

Schumann, J. (1997). *The neurobiology of affect in language*. Oxford: Blackwell Publishers.

Zimmermann, R., & Schneider, K. (1986). The collective learner tested: Retrospective evidence for a model of lexical search. In K. Faerch, G. Kasper (Eds.), *Introspection in second language research* (pp. 177–196). Philadelphia: Multilingual Matters.

Internet sources

International Society of Applied Psycholinguistics, http://isapl.psycholing.org.

Suggested reading in applied psycholinguistics

Journals

Applied Psycholinguistics. Cambridge: Cambridge University Press.
Cambridge Monographs and Texts on Applied Psycholinguistics. Cambridge: Cambridge
  University Press.

Books

Arabski, J. (Ed.). (2007). *Challenging tasks for psycholinguistics in the new century. Pro-ceedings of the 7th ISAPL Congress.* Katowice: University of Silesia Press
Berko-Gleason, J., & Bernstein Ratner, N. (Eds.). (1998). *Psycholinguistics* (2nd ed.).
  Forth Worth, Texas: Harcourt Brace.
Drevillon, J. (Ed.). (2004). *Psycholinguistics: A multidisciplinary science.* Paris: Europia.
Scovel, T. (1998). *Psycholinguistics*. Oxford. Oxford University Press.

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