Foreword

This international conference "Word Knowledge and Word Usage: Representations and processes in the mental lexicon" is the final outcome of 4 years of intense multi-disciplinary research networking and cooperation funded by the European Science Foundation within the framework of the NetWordS programme (May 2011 - April 2015).

NetWordS' mission was to bring together experts of various research fields (from brain sciences and computing to cognition and linguistics) and of different theoretical inclinations, to advance the current awareness of theoretical, typological, psycholinguistic, computational and neurophysiological evidence on the structure and processing of words, with a view to developing novel research paradigms and bringing up a new generation of language scholars. The conference was intended to provide a first forum for assessing current progress of cross-disciplinary research on language architecture and usage, and discussing prospects of future synergy.

People are known to memorise, parse and access words in a context-sensitive and opportunistic way, by caching their most habitual and productive processing patterns into routinized behavioural schemes. Speakers not only take advantage of token-based information such as frequency of individual, holistically stored words, but they are also able to organise stored words through paradigmatic structures (or word families) whose overall size and frequency is an important determinant of ease of lexical access and interpretation. Accordingly, lexical organisation is not necessarily functional to descriptive economy and minimisation of storage, but to more performance-oriented factors such as efficiency of memorisation, access and recall. Usage-based approaches to word processing lend support to this view, to promote explanatory frameworks that aim to investigate the stable correlation patterns linking distributional entrenchment of lexical units with productivity, internal structure and ease of interpretation. Ultimately, this is intended to establish a deep interconnection between performance-oriented, low-level lexical functions such as memorisation, rehearsal, access and recall, and their neuroanatomical correlates.

The impressive wealth of data and approaches reported in 23 oral presentations and 19 posters (selected from 84 original submissions), and the broader perspectives broached by Wolfgang U. Dressler, Marta Kutas, Gabriella Vigliocco and Michael Zock, provided compelling evidence that the time has now come for this area to make a significant methodological leap towards tighter and targeted synergy. The overall conference message was clear. Interdisciplinarity should be coupled with both theoretical modelling and quantitative analysis of empirical evidence. Any truly interdisciplinary effort must take advantage of the many methodological caveats that psycholinguists, neurolinguists, theoretical and cognitive linguists, historical linguists, typologists and computational linguists have developed over many years of relatively independent work. Integration of their data and approaches will necessary mean more complex models, far more constrained, explanatory and comprehensive than any other account put forward so far. There is general consensus that joining forces in this research area will not only lead to considerable progress in our theoretical understanding of the physiology of communication, but will also be conducive to more effective ways to help real people engaged in their daily communicative exchanges.

The conference was held in Pisa at the Scuola Normale Superiore, between March 30th and April 1st 2015, and benefited from the invaluable support and advice of Prof. Pier Marco Bertinetto and his team, to whom our warmest thanks go.

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