NetWordS Final Report

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0. Executive summary of the RNP

The NetWords ESF Research Networking Programme (May 2011 - April 2015) involved over **40 laboratories** in **16 European countries**, representative of leading institutions in research on word structure and processing, covering a wide range of knowledge areas (including but not limited to Theoretical Linguistics, Cognition, Brain Sciences and Computing), methodological approaches and theoretical inclinations. Objectives of the programme are:

(i) advancement of current awareness of theoretical, typological, psycholinguistic, computational and neurophysiological evidence on the structure and processing of words in European languages

(ii) establishment and consolidation of a multidisciplinary European scientific community focusing on consensual research questions and developing common methodological protocols, data repositories and research agendas in Language Sciences

(iii) make preliminary assessment of the potential impact of interdisciplinary synergy and trans-disciplinary objectives on fundamental research, education, health and social and cultural integration in Europe.

NetWordS received manifestations of interest from Greece, Serbia, Turkey, Poland, Czech Republic, Portugal and Bulgaria. It involved continuous collaboration and smooth information exchange with UK, the Netherlands, Canada and Israel. The programme chiefly pursued knowledge sharing and knowledge transfer in targeted domains, and was implemented with the following instruments: exchange and short visit grants, summer schools, workshops and conferences, scholarly publications, advertisement and infrastructural support of related events, educational programmes, doctoral, post-doc and academic positions and on-going research projects. Special attention and a large amount of financial and organisational resources were devoted to educational initiatives bringing up a new generation of interdisciplinary young researchers, particularly in those European countries where traditional academic boundaries hinder progress of interdisciplinary cross-fertilisation.

All programme activities were carried out in tight consultation with NetWordS Steering Committee members, in a spirit of friendly and proactive cooperation. The programme made a special effort to be as inclusive as possible, involving the largest possible number of European countries that were not members of the network, as well as non-European countries. The full list of *NetWordS*' initiatives (see Appendix d for more detail) includes 3 international workshops, 2 Summer Schools, 1 final conference, 5 calls for grants, 4 Journal special issues, 1 on-line proceedings and 1 open-access edited volume.

NetWordS' initiatives involved over 360 scholars across Europe and beyond, including non-European countries such as Australia, South Africa, Ethiopia and Iran (see plot in Annex e). It made a significant impact on scholarly awareness of the potential of synergy and interdisciplinary cooperation in Language Sciences, with particular emphasis on lexical and morphological domains of inquiry. It

successfully established the largest European community of scholars and labs focusing on word representation and processing issues from a wide range of complementary perspectives. It promoted coordinated efforts, and directly and indirectly spawned other European initiatives in the field, including summer schools, workshops, project proposals and research partnerships.

It is felt of paramount importance that the current momentum be maintained and capitalised on in Europe, through consolidation and enlargement of the existing *NetWordS* community, enactment of infrastructural services for provision and sharing of scientific information, software and data, integration of knowledge through project proposals addressing trans-disciplinary objectives.

1. RNP objectives

NetWordS built on a solid, traditional vocation for data analysis and problem-driven inquiries in cognitive and lexical studies in Europe, to offer a stable forum for **multidisciplinary** discussion on fundamental issues at the intersection of several knowledge domains, and to increase scholarly awareness of the added scientific value of drawing on knowledge from different domains. The enthusiastic response to *NetWordS*'s events such as workshops and calls for short visit grants, the level of interest they raised and the sheer number of scholars involved provide strong evidence that the programme was addressing a real need, and that the European research scenario is now mature to take further steps in the same direction.

Multidisciplinarity runs the risk of remaining within mono-discplinary boundaries if no effort is made to integrate different perspectives into a coherent and coordinated research agenda. An additional goal of *NetWordS*' programme was to catalyse **interdisciplinarity** in the European research scenario, to favour exchange of data and methodologies, and to reconceptualise domain-specific notions and categories on the basis of evidence from other domains. In particular, the programme aimed to accelerate interdisciplinary synergy through training and mentoring initiatives such as cross-disciplinary Summer schools or exchange visit and short visit grants. In both *NetWordS* Summer schools (Dubrovnik 2012, and Trondheim 2014), a particular care was taken to offer courses where scholars of different backgrounds were discussing issues of common interest and assessing alternative approaches to the same issues. The perspective also forms the basis of the main editorial initiative of the programme, i.e. the collective volume "Word Knowledge and Word Usage: a Cross-disciplinary Guide to the Mental Lexicon" edited by V. Pirrelli, I. Plag and W.U. Dressler. In the volume, chapters are structured along the lines of a NetWordS Summer school programme (in some cases providing the written record of real courses), and interdisciplinarity is interpreted as implying convergence of knowledge from many domains into a shared comprehensive view.

Taken together, all programme objectives were successfully met, although the extent to which this was achieved changed depending on geographic areas, cultural traditions and academic boundaries. Overall assessment may also depend on disciplines, with brain sciences currently playing the role of technological drive and scientific catalyst of progress in the whole area (a role arguably played by cognitive sciences only a few years ago). In particular, the advent and exponential growth of neuroimaging technology in neurophysiological studies allowed in-vivo investigation of the connection between brain data and psychological evidence, establishing a level of continuity between observations and hypotheses in the two domains that was simply impossible before its advent. In this context, computational modelling appears to play the important role of interface between language disciplines. At our current level of understanding of the way language works in the brain, there appears to be no **direct correspondence** between modular components of language architecture (reflecting a traditional split between lexical and grammatical knowledge), their computational correlates (storage vs. processing) and low-level principles and localisations of brain functions (e.g. pre-frontal vs. temporo-parietal perisylvian areas). Computational models can build a bridge between high-level, global and language-specific knowledge and the low-level language-aspecific cognitive functions implemented in human brain-ware. It is reasonable to expect countries where both neurosciences and computer sciences have grown deeper roots to play a major role in promoting research synergy in this direction in the years to come.

Although time has not yet come for this interdisciplinary effort to transcend each of the traditional boundaries of individual disciplines and radically transform the current research scenario, there is

growing awareness that progress in the near future will considerably benefit from convergence of different efforts onto shared, well-focused objectives. This will be a major goal for a NetWordS follow-up initiative.

2. RNP activities: scientific quality and impact

The overall impact of NetWordS is assessed here by examining the respective contribution of each type of activities implemented by the programme:

a) <u>Meeting or exchange activities (conferences, workshops, schools, short and exchange visits)</u>
Exchange and short visit grants have been successful in providing fundamental support to PhD students and junior scholars willing to learn more about interdisciplinary approaches in leading research institutions. Eastern, Southern and Central European students particularly benefited from this. The location of the first *NetWordS* Summer School (Dubrovnik, Croatia) addressed a clear need for Eastern European students to take active part in the programme. Decision to hold the second Summer school in Trondheim (Norway) raised the level of involvement of Scandinavian students. A generous financial contribution of local organisers made it possible to support participation of students from less privileged countries, thus broadening the impact of the event across Europe and beyond.
The programme also supported scientific meetings and visits for bilateral cooperation between research groups. In many cases, this led to joint work and new partnerships for project proposals. The NetWordS final conference (Pisa, Italy) provided a unique opportunity for taking stock of current research efforts, assessing their level of integration and cross-disciplinarity, mapping out possible lines of development for more converging efforts.
Taken together, the initiatives promoted Europe-wide circulation of both young and senior scholars as well as of innovative ideas and methodologies, thereby increasing awareness of on-going work in the field, and making the European scientific community more inclusive and cohesive.

b) <u>Activities linked to the establishment of databases, registries or similar infrastructures</u>
Sharing and cross-fertilisation of research methodologies lie at the core of *NetWordS* vision and long-term objectives, with a view to their integration and application on common sets of empirical and experimental data. Establishment of new data infrastructures, however, was clearly beyond the programme's reach. NetWordS advertised and supported national initiatives to develop open-access collaborative databases (like the *openlexicons* project), promoted merge of national activities into transnational efforts, and liaised with on-going European programmes for data sharing such as Clarin and Meta-Share. There is, however, a clear need for multidisciplinary efforts to be coordinated and integrated into a comprehensive programme. Admittedly, understanding more about individual disciplinary standards and requirements and appreciating the added value of converging development and integration are only preliminary steps in this direction. Further progress will require agreement on consensual representation standards and protocols for multimodal data collection, as well as software tools for time-alignment and automated mark-up of neuro-physiological evidence, behavioural data and language data. Finally, for interdisciplinary standards to be enforced and data collection to be effectively pursued, considerable efforts should be put into development of hardware multisensory platforms for data elicitation, storage and sharing. Such an ambitious programme is deemed to represent an essential intermediate stage on the way from multidsciplinarity to intrinsic methodological interdisciplinarity in language sciences.

c) <u>Other activities</u>
A *NetWordS* website (http://www.networds-esf.eu/) was developed and constantly updated through the programme's lifetime, with call for grants, call for papers and reports of scientific events. In addition, teaching materials produced for the two Summer schools were made openly available through a simple notification protocol. Number of downloads and their geographical distribution are provided in Annex h. The web site also contains an updated list of the main publications produced by the project partners in the period of interest. Although only some of these publications were actually enabled by the programme, they are intended to show the level and scope of multidisciplinary interests and approaches within the purview of NetWordS, Prospectively,

the initiative should be conducive to a European open-access repository of interdisciplinary literature on the mental lexicon.

Several academic positions, based in Norway, France, Sweden, Italy and Switzerland, were advertised through the NetWordS website. The programme also played a proactive role in making academic supply meet demand.

Under the *NetWordS* umbrella, RNP partners have been fairly successful in promoting interdisciplinary projects at both national and international levels. To mention only few of them, the StaViCTA project "Advances in the description and explanation of STAnce in discourse using VIsual and Computational Text Analytics", funded by the Swedish Research Council and co-chaired by Carita Paradis, is the result of a joint venture between Lund University and Gavagai AB, developed through contacts fostered by NetWordS. The LangPercept project is a Marie Curie Initial Training Network promoting an interdisciplinary approach to understanding the bidirectional relationships between language and perception. Coordinated by Mila Vulchanova from Trondheim University, the network involves 8 academic partners and 2 private sector partners. An open collaborative effort (the *openlexicons* project) was spearheaded by the Center for Reading Research of the Department of Experimental Psychology of Ghent University, that aims to reduce the time taken to develop tools required for experimental linguistic research in languages for which these resources are not yet available (e.g., validated word frequencies, tests for lexical knowledge, pseudo-word generators). For this purpose, external collaborators were co-opted through the NetWordS funding schema.

A few project proposals were facilitated through funding of bilateral actions. Among them, the LangEqual project proposal ("Early language development: Language input's impact on (un)equal educational opportunities"), submitted by Wolfgang U. Dressler and Mila Vulchanova to the Norface funding programme, appears, in our view, to address one of the most central cultural and societal issues in Europe, setting methodological standards for interdisciplinary language-centred research in the years to come.

3. European added value and RNP visibility

In four years, NetWordS endorsed and, in a few cases, actively promoted the following scientific events, all over Europe and beyond:
- "Morphological Complexity", British Academy, London, UK, 14th-15th January 2012
- 15th International Morphology Meeting, Vienna, Austria, 9th-12th February 2012
- Les Décembrettes 8, Bordeaux, France, 6th–7th December 2012
- International Workshop on "Computational Approaches to Morphological Complexity", Paris-Sorbonne University, France, 22nd February 2013
- International Conference "New Territories in Word Formation", University of Sofia, 30th–31st May 2013
- 1st international symposium, Morphology and its interfaces, Université Lille 3, France, 12th–13th September 2013
- 9th Mediterranean Morphology Meeting: Morphology and Semantics, Dubrovnik, Croatia, 15th-18th September 2013
- 10th International Workshop on Natural Language Processing and Cognitive Science (NLPCS) 2013, Marseille, France, 15th-16th October 2013.
- International Conference "Pronouns in development" 20th-23rd March 2014, NTNU, Trondheim – Norway
- International Workshop "Arabic Natural Language Processing: Models, Systems and Applications" Tetuan – Morocco, 21st-22nd October 2014,
- Summer School of Scientific Communication Publishing Research for Multidisciplinary Audiences, Split, Croatia, 30 June - 3 July 2015.
- First International Quantitative Morphology Meeting, Belgrade Serbia, 11st-12nd July, 2015

- SALC V 2015, The Fifth Conference of the Scandinavian Association for Language and Cognition, Norwegian University of Science & Technology (NTNU) - Trondheim, 19th-21st August 2015
- 10th Mediterranean Morphology Meeting, Haifa, Israel, September 7-10, 2015
- Les Décembrettes 9, Toulouse, France, December 3–4, 2015
- 17th International Morphology Meeting: "Competition in Morphology", Vienna – Austria, 18th-21th February 2016
- Workshop on Computational methods for descriptive and theoretical morphology, Seventeenth International Morphology Meeting, Vienna, Austria, 18th-21st February 2016.

A number of joint research programmes and collaborative initiatives were spawned by the programme. To mention but few of them only, NetWordS fostered joint initiatives and collaborative work with Gary Libben (Brock University, Canada), Christina Gagné and Thomas Spadling (both from University of Alberta, Canada) from the Canadian Mental Lexicon project. A letter of intent was signed by the NetWordS chair to endorse Gary Libben's 2015 application "Words in the World", for a Partnership Grant from the Social Sciences and Humanities Research Council of Canada, with a special focus on the goals of tutoring and mentoring students and post-doctoral researchers, organizing joint scientific events, and launching interdisciplinary editorial and educational initiatives. An Austro-Canadian partnership between Vienna University and Brock University involved prof. Dressler and prof. Libben in a joint investigation of "Top-down vs. bottom-up processing of English and German compounds". In June 2015, Christina Gagné and Thomas Spalding visited the ComPhys lab at the Institute of Computational Linguistics in Pisa to pursue collaborative research work in the domain of compound vs. pseudo-compound processing. NetWordS received a request for a joint research and exchange programme from the prospective Israeli Centre of Excellence "Determinants and consequences of multilingualism", proposed by prof. Ram Frost, from the Hebrew University Jerusalem. A three-year Franco-Italian programme for scientific cooperation (PICS) was initiated in 2013, focusing on "Distributional Morphological Distances: Models and Evaluations (DiMo)". Another three year cooperation programme between Vienna University and Toulouse University is currently focusing on human behaviour and machine simulation in the processing of (mor)phonotactics. Vienna University has developed further connections with Scuola Normale Superiore of Pisa and University of Pisa on issues of morphonotactic processing and morphosemantic transparency of German and Italian diminutives. Strong interdisciplinary initiatives are currently being pursued by the Centre for languages and literature at Lund University (Sweden) on: manner of motion in English and Spanish verbs; autism, ADHD, OCD and Tourette syndrome; contraries in perception, language, reasoning and emotion. University College Dublin (Ireland) launched collaborative work with Stockholm University (Sweden) on lexicalization of visual objects, and with University of Montpellier (France) on the conceptual-semantic structure of Greek compound nouns. The Department of Knowledge Technologies of the Jožef Stefan Institute in Ljubljana (Slovakia) provided a connection between NetWordS and two related COST actions: "Parsing and multi-word expressions" and the "European Network of e-Lexicography". An application for the Italo-Serbian cooperation programme "Biologically motivated, psycho-computational modelling of associative word learning and processing" between the ILC-CNR Comphys Lab (Italy) and the Department of Psychology at the University of Novi Sad (Serbia) is currently under evaluation.

4. RNP management and finances

Increase of ESF administrative costs and lack of financial support to the programme fourth year by Germany, caused the programme annual budget to drop from 128 Keuros in 2011 to about 100 Keuros in 2014 (see Appendix c). The negative trend was not entirely predictable and prompted a cautious spending policy, with a progressively decreasing reserve of unspent money. In the end, the unspent budget amounted to about 70 Kueros.

Already allocated in the final approved budget but yet unspent funds at the end of NetWordS lifetime will cover publication costs for the collective volume "Word Knowledge and Word Usage: a Cross-disciplinary Guide to the Mental Lexicon" edited by V. Pirrelli, I. Plag and W.U. Dressler, an edited

selection of papers presented at the NetWordS Final Conference, to appear in Italian Journal of Linguistics, vol. 1, 2016, and in Lingue e Linguaggio, vol. 1, 2016 (see Appendix g). Some additional funds – yet unallocated – will cover, where necessary, expenditure related to these publications, namely editorial meetings and scientific meetings.

5. Publicity and publications: scientific quality and impact

Many dissemination activities contributed to the overall goal and impact of NetWords during its lifetime:

a) A NetWords brochure, both in printed version and online readable pdf, was edited at the very beginning of the RNP, and distributed to participants on NetWordS scientific initiatives, and any relevant national scientific event, by each member of the NetWords Steering Committee.

b) Through the NetWords website (http://www.networds-esf.eu/), constantly updated through the programme's lifetime, calls for grants, calls for papers, reports of scientific events, and teaching materials produced for the two Summer schools were made openly available.

c) Journal special issues, Proceedings, Edited Books, and many other relevant publications have been enabled by NetWordS. A detailed list is given in Annex g, which also contains the NetWordS publication plan and a full book synopsis.

6. Future perspectives

The current international research scenario presents us with two important discontinuities with the past: an exponentially growing rate of technological innovation and an increasing demand for focus-oriented interdisciplinarity. Language Sciences make no exception, but seem to be lacking a coordinated European framework fostering methodological convergence and cost-effective integration. NetWordS proved that language-oriented disciplines can cross-talk and quickly converge, but more efforts are needed to turn "sequential" multidisciplinarity (whose efforts stay within the boundaries of single knowledge domains) into more focused, boundary-shifting interdisciplinarity. Losing the momentum gathered over four years of NetWordS activities would not only be a waste but a strategic mistake. Consolidation and enlargement of the current NetWordS community can and should be pursued with a shaper focus on three main objectives: a) development of integrated knowledge across language sciences promoting emergence of novel research paradigms, b) interdisciplinary data collection and sharing, c) transdisciplinary goal-oriented policy.

NetWordS SC members share the view that a **Cost action**, networking a more inclusive set of European countries and labs, can offer continuity of methodological and research policy objectives in a more integrated framework. Interdisciplinary education and tutoring should also be in the purview of the action, with NetWordS Summer schools being organised regularly and collaborative trans-European initiatives with similar programmes (e.g. the Canadian project "Words in the world") being launched. The NetWordS Final conference proved to be an important occasion for thought-provoking discussion and knowledge exchange. It is to be hoped that a European conference be institutionalised as a biannual event in the near future, complementing more traditional and established scientific meetings such as the International Morphology Meeting, the Mediterranean Morphology Meeting and the Mental Lexicon. Likewise, infrastructural initiatives are required for data integration and sharing, paralleling similar efforts (e.g. Clarin and Meta-Share) in other neighbouring domains. Last but not least, transdisciplinary efforts should be supported through Horizon 2020, addressing fundamental societal issues such as multilingualism, cultural identity and cultural integration, scholastic language teaching/learning, assistive technology for language disorders and language and cognitive well-being.

Appendix a: Complete list of the RNP Steering Committee members and, if relevant, of external corporate collaborators (networks, organisations, associations, etc.)

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Appendix b: List of the supporting ESF MOs (and any other financially contributing organisations)

Fonds zur Förderung der Wissenschaftlichen Forschung in Österreich (FWF)
Austrian Science Fund, AUSTRIA

Fonds voor Wetenschappelijk Onderzoek-Vlaanderen (FWO)
Research Foundation Flanders, Belgium

Hrvatska zaklada za znanost (HRZZ)
Croatian Science Foundation, CROATIA

Det Frie Forskningsråd – Kultur og Kommunikation (FKK) The Danish Council for Independent
Research – Humanities, DENMARK

Suomen Akatemia Academy of Finland
Research Council for Culture and Society, FINLAND

Centre National de la Recherche Scientifique (CNRS)
National Centre for Scientific Research, FRANCE

Deutsche Forschungsgemeinschaft (DFG)
German Research Foundation, GERMANY

Országos Tudományos Kutatási Alapprogramok (OTKA)
Hungarian Research Fund, HUNGARY

Irish Research Council for the Humanities and Social Sciences (IRCHSS)
IRELAND

Consiglio Nazionale delle Ricerche (CNR)
National Research Council, ITALY

Norge Forskningsråd (NCR)
Research Council of Norway, NORWAY

Slovenská akadémia vied (SAV)
Slovak Academy of Sciences, SLOVAKIA

Javna agencija za raziskovalno dejavnost Republike Slovenije (SRA)
Slovenian Research Agency, SLOVENIA

Departmento de Educacion, Universidades e Investigacion
País Vasco, SPAIN

Forskningsradet för arbetsliv och socialvetenskap (FAS)
Swedish Research Council, SWEDEN

Swiss National Science Foundation (SNF)
SWITZERLAND

Appendix c

Income and Expenditure Overview - Final Report

Income

Income	2011	2012	2013	2014	2015	GRAND TOTAL
TOTAL CONTRIBUTIONS	162 000 €	162 000 €	162 000 €	127 000 €	0 €	613 000 €

situation @ 14.09.2015

Expenditure

Expenditure		2011	2012	2013	2014	2015 Cashed-out	2015 Committed	GRAND TOTAL
Science Events & Activities	**TOTAL SCIENCE EVENTS & ACTIVITIES**	**28 842 €**	**99 002 €**	**42 466 €**	**94 085 €**	**47 603 €**	**42 000 €**	**353 998 €**
	* Workshops, Conferences, Schools	20 172 €	44 795 €	21 888 €	54 000 €	27 851 €	0 €	168 706 €
	* Exchange Grants, Short Visits		52 207 €	18 578 €	38 085 €	19 751 €	0 €	128 621 €
	* Database Preparation, Computing							0 €
	* Publication, Publicity, Website	8 670 €	2 000 €	2 000 €	2 000 €	0 €	0 €	14 670 €
	Publication Plan Outsourced to Chair						*42 000 €*	*42 000 €*
Scientific Coordination & Administration	**TOTAL COORDINATION & ADMINISTRATION**	**38 132 €**	**46 095 €**	**46 742 €**	**40 663 €**	**8 397 €**	**0 €**	**180 030 €**
	* Steering Committee costs	7 392 €		638 €	636 €	387 €	0 €	9 053 €
	* External Programme Coordinator costs	7 250 €	14 500 €	14 500 €	15 250 €	8 010 €	0 €	59 510 €
	* ESF Administrative costs	23 490 €	31 590 €	31 590 €	24 765 €	0 €	0 €	111 435 €
	* Miscellaneous costs		5 €	14 €	12 €			32 €
Unpaid contributions	**TOTAL WRITTEN-OFF CONTRIBUTIONS**	**0 €**	**0 €**	**0 €**	**9 000 €**	**0 €**	**0 €**	**9 000 €**
	* Doubtful debts				9 000 €			9 000 €
	* Written-off contributions							0 €
TOTAL USE OF FUNDS		**66 974 €**	**145 098 €**	**89 208 €**	**143 748 €**	**98 000 €**		**543 028 €**

EXPECTED BALANCE AT PROGRAMME-END	**69 972 €**

Appendix d: List of RNP activities undertaken (science meetings, short and exchange visits, etc)

Main Editorial activities

Journal special issues
- Marzi Claudia, Pirrelli Vito (eds.) (2012). Understanding the Architecture of the Mental Lexicon. Lingue e Linguaggio, XI, vol.2, Bologna: il Mulino, ISSN: 1720-9331
- Ida Raffaelli, Pirrelli Vito (eds.) (2014). Special Issue. Suvremena Lingvistika (Contemporary Linguistics), 78, vol.40, p.127-235, Zagreb: Croatian Philological Society, ISSN: 1847-117X (Online)
- Edited selection of papers presented at the NetWordS Final Conference, to appear in Italian Journal of Linguistics, vol. 1, 2016
- Edited selection of papers presented at the NetWordS Final Conference, to appear in Lingue e Linguaggio, vol. 1, 2016

Proceedings
- Pirrelli Vito, Marzi Claudia, Ferro Marcello (eds.) (2015). "Proceedings of the NetWordS Final Conference on Word Knowledge and Word Usage: Representations and Processes in the Mental Lexicon", vol. 1347, pp. 1 - 189, CEUR Workshop Proceedings, 2015 (http://ceur-ws.org/Vol-1347/).

Edited Books
- Pirrelli Vito, Plag Ingo, Dressler Wolfgang U. (eds.) to appear. Word Knowledge and Word Usage: a Cross-disciplinary Guide to the Mental Lexicon. De Gruyter.

Science Meetings
- 1st NetWordS Workshop: "Understanding the Architecture of the Mental Lexicon: Integration of Existing Approaches", Pisa (Italy), 24th - 26th November 2011. [37 participants
- 2nd NetWordS Workshop: "Perspectives on Synergy", Toulouse (France), 3rd - 4th December 2012. [27 participants]
- 3rd NetWordS Workshop: "Variation and Adaptation in Lexical Processing and Acquisition", Dubrovnik (Croatia), 19th - 20th September 2013. [30 participants]
- Final NetWordS Conference: "Word Knowledge and Word Usage - Representations and
- Processes in the Mental Lexicon", Pisa (Italy), March 30th – April 1st 2015. [87 participants]

Summer Schools
- 1st NetWordS Summer School: "Interdisciplinary approaches to exploring the mental lexicon", Dubrovnik (HR), 2nd - 6th July 2012. [76 attending students]
- 2nd NetWordS Summer School: "Words: structure, meaning, acquisition, processing", Trondheim (N), 4th - 9th August 2014. [86 attending students]

Calls for short visit and exchange grants
- **First call for grants.** Submission deadline: October 30, 2011. 17 short visits, 9 exchange grants approved
- **Second call for grants.** Submission deadline: February 22, 2013. 12 short visits, 4 bilateral actions approved
- **Third call for grants.** Submission deadline: January 6, 2014. 23 short visits approved
- **Fourth call for grants.** Submission deadline: September 30, 2014. 18 short visits approved
- **Fifth call for grants.** Open Submission for contributors to NetWordS volume only. 7 short visits approved

Exchange Visits

o Simone Sulpizio, from University of Trento – Italy to University of Athens –Greece: "Word suffixes and stress assignment in reading".

o Geraldine Walther, from University Paris Diderot – France to University of Surrey - UK "Towards a formal model for Canonical Typology".

o Maria Bronk, from Westfälische Wilhelms Univ - Germany to University of Helsinki –Finland: "Compound processing - a cross-linguistic perspective".

o Katja Poellmann - from Max Planck Institute - The Netherlands to Universität Tübingen – Germany, "Recognizing morphologically complex words: challenge of stylistic and regional variation".

o Amir Kapetanović, from Inst. of Croatian Language and Linguistics - Croatia to M. P. Institute/Gutenberg Univ – Germany: "Medieval conceptions of time and old Croatian verb lexical aspect in the slavic context".

o Valeria Bandecchi, from University College Dublin - Ireland to ISTC-CNR – Italy: "Manner of Motion as Embodied concept: Evidence in Italian and English".

o Bernadet Jager - University of Aberdeen - UK University of Turku - Finland Word length effects on eye movement of Finnish speakers reading compounds exchange visit

o Yael Weiss, from University of Haifa – Israel to ISTC-CNR – Italy: "A behavioural and neuroimaging study of the effects of orthographic transparency and morphological structure on reading in adults with and without dyslexia".

o Rok Zaucer, from University of Nova Gorica – Slovenia to University of Patras – Greece: "Internal and external prefixation: approaching theoretical postulates through a psycholinguistic experiment".

Short Visits

o Alessandro Lenci, from University of Pisa - Italy to University of Stuttgart - Germany "Distributional models of paradigmatic semantic relations"

o Basilio Calderone, from CNRS/ Université de Toulouse –France to Chiara Celata - Scuola Normale Superiore – Italy "Phonotactic effects on morphological structure - psycho-computational studies on Italian, French, English and German"

o Anne Przewozny, from CLLE-ERSS, Toulouse II University - France to University of Manchester - UK "Language, urban life, work and identity in Manchester

o Philip Carr, from CLLE-ERSS, Toulouse II University - France to University of Manchester - UK "Language, urban life, work and identity in Manchester

o Steven Moore, from CLLE-ERSS, Toulouse II University - France to University of Manchester - UK "Language, urban life, work and identity in Manchester"

o Dirk Koester, from Bielefeld University - GERMANY to University of Sussex - UK "The neural basis of internal word structure: integrating temporal and neuroanatomical characteristics of compound word processing"

o Martin Schäfer - Universität Jena - Germany Anglia Ruskin University -UK Complex words and semantic transparency short visit

o Davide Crepaldi, from University of Milano Bicocca – Italy to Ghent University - Belgium "A cross-linguistic topographic map of the human lexicon"

o Harald Hammarström, from Radboud Universiteit - The Netherland to LLACAN- CNRS Paris - France "Empirical Research on word structure across languages"

o Anne-Katharina Ochsenbauer, from München University – Germany to Academy of Sciences Vienna- Austria "Morpho-syntax and semantics of spatial expression: typological and developmental perspective"

o Cristina Soriano, from University of Geneva, Switzerland to Lund University - Sweden "Meaning structure in emotion words"

o Laila Kjærbæk, from University of Southern Denmark – Denmark to Austrian Academy of Sciences - Austria "Emergence of noun plurals in children acquiring Danish and German as L1"

- Mark Lindsay, from Stony Brook University - USA to CLLE-ERSS-Univ Toulouse - France Investingation of Morphological productivity using the www"
- Marie-Aude Lefer, from Collège Erasme – Belgium to University of Geneva - Switzerland "Negative affixes in English, French and Italian: a corpus-based contrastive approach"
- Sabine Laaha, from Academy of Sciences - Austria to University of Antwerp - Belgium "Plural formation in typical vs handicapped acquisition"
- Maja Andel, from University of Zagreb – Croatia to University of Novi Sad -Serbia "The role of inflectional complexity in language processing"
- Manuel Perez, from Université de Toulouse - France UNSW to Australia "Can ITCs take place in the handwriting learning? Graphic norms and orthographic forms acquisition"
- Alexandra Bagasheva, from Department of English and American Studies, Sofia University – Bulgaria to Austrian Academy of Sciences, Austria "Homonymous or polysemous affixes: semantic constraints on affix ordering"
- Alice Blumenthal-Dramé, from English Department, Albert-Ludwigs-Universität Freiburg – Germany to Laboratoire CLLE-ERSS –France, "Modelling brain connectivity data on morphological processing"
- Simone Sulpizio   University of Trento –Italy to Basque Center on Cognition, Brain and Language –Spain "Early access of phonology in visual word recognition and reading: A cross-linguistic investigation"
- Luigi Talamo, from Scuola Normale Superiore - Italy to Institute for Corpus Linguistics and Text Technology Austria "Extending the derivatario annotation system"
- Stela Manova, from   Austrian Academy of Sciences, Institute for Corpus Linguistics and Text Technologies - Austria   to Scuola Normale Superiore – Italy "Suffix ordering in Italian and Russian: A cognitive approach"
- Gerhard Van Huyssteen, from North-West University - South Africa to University of Antwerp – Belgium "Integrating different perspectives for processing compound semantics"
- Andrea Ravignani, from University of Vienna - Dep of Cognitive Biology -Austria to Psycholinguistics Research Center, University of Antwerp- Belgium "Grammar Induction and Corpus Methods to Unveil Rhythmic Lexicon and Syntax"
- Daniela Katunar, from Department of Linguistics, Faculty of Humanities and Social Sciences, University of Zagreb -Croatia to University of Copenhagen –Denmark "Constructional effects on prepositional antonymy"
- Vedran Galetić, from University of Zagreb -Croatia to   Lund   University   –Sweden "Prototypicality quantification by combining conceptual space theory and corpus analysis"
- Katharina Korecky-Kröll, from University of Vienna -Austria to Scuola Normale Superiore – Italy "New experimental methods in research on morphonotactic processing"
- Susanne Borgwaldt, from   Universität Siegen -Germany to Université Lumière Lyon- France "Novel-object naming in French"
- Kevin Tang, from University College London - United Kingdom to Center for Reading Research, Department of Experimental Psychology, Ghent University –Belgium "Openlexicons project"
- Maria del Rosario Caballero Rodriguez, from Universidad de Castilla-La Mancha –Spain to Lund University Sweden, "Recontextualising sensory perceptions into knowledge through language "
- Jana Klaus, from University of Leipzig – Germany to Radboud University –Netherlands, "A foreign language in the planning: How do first and second language speakers produce sentences? "
- Francesco Gardani, from Institut für Romanische Sprachen, Wien -Austria to Romanisches Seminar, Universität Zürich –Switzerland, "Animacy and its reflexes in grammar—Romance and beyond "
- Miguel Lázaro from Universidad de Castilla la Mancha – Spain to Institute of Cognitive Sciences and Technologies –Italy, "Affix processing in children with different reading abilities "

- Elisa Mattiello, from Department of Economics and Management, University of Pisa – Italy to Austrian Academy of Sciences, Institute for Corpus Linguistics and Text Technology –Austria, "Analogy in English Neologisms "
- Francesca Postiglione, from Fondazione Marica De Vincenzi ONLUS – Italy to BCBL_ Basque Center on Cognition, Brain and Language – Spain, "The specific word frequency effect during the recognition of Spanish noun/verb homographs. "
- Susanne Brouwer, from Utrecht University –Netherlands to Koç University- Turkey, "Prediction in language comprehension in monolingual and bilingual children "
- Antoni Oliver, from Universitat Oberta de Catalunya -Spainto University of Zagreb – Croatia, "Enlargement of the Croatian Wordnet using the WN-Toolkit "
- Verginica Mititelu, from Romanian Academy Research Institute for Artificial Intelligence – Romania to Eberhard Karls University – Germany, "Romanian Derivational Morphology – A Quantitative Approach "
- Noemi De Pasquale, from Università degli Studi di Palermo -Italy to University of Vienna - Institut für Sprachwissenschaft – Austria, "A contrastive analysis of the linguistic encoding of boundary crossing in Ancient Greek, Italian and French".
- Imma Miralpeix, from University of Barcelona – Spain to University of Nottingham - United Kingdom, "The effects of multiple input modalities on word processing and acquisition "
- Cynthia Siew, from University of Kansas - United States to Polytechnic University of Catalonia, Barcelona - Spain, "Multiplex language network of phonological and orthographic representations"
- Tatiana Iakovleva, from CNRS,laboratory "Structures Formelles du Langage", Paris – France to Institute for Brain, Cognition and Behaviour, Centre for Cognition, Radboud University – Netherlands, "How orthographic overlap in script affects cognate recognition in Russian-English bilinguals "
- Maja Kelić, from Interdisciplinary Scientific Postgraduate Study Language and Cognitive Neuroscience- Croatia to Institute of Cognitive Neuroscience and Psychology, Research Centre for Natural Sciences – Hungary, "Phonological processing in dyslexia"
- Ivana Bianchi, from Department of Humanities, University of Macerata – Italy to Centre for Languages and Literature, Lund University – Sweden, "Are you lethargic or peppy? Neither, I'm somewhere in the middle "
- Sara Giulivi, from Dipartimento Formazione e Apprendimento - SUPSI – Locarno – Switzerland to Istitute for Computational Linguistics - CNR, Pisa –Italy, "Investigating the relation between bilingualism and reading skills through the use of TSOMs"
- Damián Blasi, from Max Planck Institute - Germany to Language Evolution and Computation - University of Edinburgh - United Kingdom, "Learnability traces in word structure: a computational and experimental approach"
- Julien Mayor, from University of Geneva –Switzerland to University of Göttingen – Germany, "Probing the impact of the infant lexicon on her speech perception with a dual approach: computational modelling and empirical study "
- Nicola Del Maschio, from Center for Neurocognition and Theoretical Syntax, IUSS, Pavia – Italy to UCL Division of Psychology and Language Sciences, Faculty of Brain Sciences, London - United Kingdom, "When form reproduces meaning: A psycholinguistic approach to onomatopoeia in Italian and English "
- Jesús Fernández-Domínguez, from University of Valencia -Spain to University of Patras – Greece, "A psycholinguistic insight into the semantics of English N+N compounds "
- Martin Schäfer, from Friedrich-Schiller-Universität Jena – Germany to Anglia Ruskin University - United Kingdom, "Semantic detail in the computation of compound meanings and its influence on semantic transparency "
- Natalie Boll-Avetisyan, from University of Potsdam – Germany to Leiden University Centre for Linguistics – Netherlands, "Acquiring phonological categories: The role of motherese input "
- Alexis Dimitriadis, from Utrecht institute of Linguistics –Netherlands to University of Potsdam – Germany, "Learnability of fusional and agglutinative morphology: Insights from artificial language learning "

- Francesco Gardani, from Wirtschafts Universität Wien – Austria to Universiteit Leiden - Centre for Linguistics –Netherlands, "Morphological Borrowing"
- Debela Tesfaye Gemechu, from Addis Ababa University - Ethiopia to Lund University Centre for Languages and Literature, - Sweden "Identifying lexical semantic structures in big data using distributional hypothesis (N-gram)"
- Iraide Ibarretxe-Antuñano, from University of Zaragoza – Spain to Lund University English Studies. Centre for Languages and Literature – Sweden, "Quantitative analysis of metaphorical motion"
- Karla Orihuela, from University Toulouse – France to University of Colorado Boulder - United States, "Electrophysiology of bilingual morphological processing during visual word recognition"
- Maria Del Rosario Caballero, from Universidad De Castilla La Mancha – Spain to Lund University, Centre for Languages and Literature – Sweden, "Representing Verbal Interaction through Verbs Of Communication. A Contrastive English-Spanish Study"
- Bartosz Brzoza, from Adam Mickiewicz University in Poznan – Poland to University of Vienna – Austria, "The analysis of the derivational suffix combinations in Polish"
- Francesco-Alessio Ursini, from English Department, Stockholm University - Sweden to University College Dublin – Ireland, " Ireland Roots, nouns and the objects they name"
- Anja Hasse, Department of German, University of Zurich – Switzerland to Department of Human Studies, University of L'Aquila – Italy, "Overabundance: theoretical and empirical approaches"
- Jesús Fernández-Domínguez, from University of Valencia -Spain to Université Paris – France, "Cross-linguistic properties of blend phonotactics"
- Martin Schäfer, Friedrich-Schiller-Universität Jena –Germany to Anglia Ruskin University Cambridge - United Kingdom, "Modelling semantic transparency"
- Matea Srebacic, from University of Zagreb –Croatia to The Open University of Catalonia Barcelona –Spain, "Enlargement of Croatian WordNet: exploring new methods"
- Krešimir Šojat, from Faculaty of Humanities and Social Sciences, Zagreb –Croatia to The Open University of Catalonia, Barcelona – Spain, "Enlargement of Croatian WordNet: exploring new methods"
- Fabio Montermini, from CNRS and Université de Toulouse – France to Linguistics Department Stony Brook University - United States, "Large scale observation of morphological competition"
- Sascha Alexeyenko, from Institute of Cognitive Science, University of Osnabrück- Germany to Department of Language and Linguistics, University of Tromsø – Norway, "Constraints on Adverb Formation: Morphology Meets Semantics"
- Michael Zock, from AMU-LIF, CNRS - France to Istituto di Linguistica Computazionale Pisa – Italy, "Building a resource to help authors to overcome the tip of the tongue problem"
- Paula Orzechowska, from Faculty of English, Adam Mickiewicz University (AMU) in Poznan – Poland to University of Vienna, Dep. of Philosophy – Austria, "Phonological aspects of affix ordering in German and Polish"
- Vittorio Maria Iacullo, from Psychology Department, Sapienza University – Italy to Universidad de Salamanca, Spain, "International Association Norms Database: DRM International Database"
- Carmen Portero Muñoz, from University of Córdoba –Spain to Anglia Ruskin University Cambridge - U.K. "A distributional approach to English Adjective-Noun sequences"
- Paolo Acquaviva, Alessandro Lenci, Ida Raffaelli visited Carita Paradis at Lund University – Sweden "Structural, cognitive and distributional issues in Lexical semantics" - book chapter
- Dorit Ravit, Emmanuel Keuleers visited Ulrich Wolfgang Dressler, Wien, "Acquisition of lexicon morphology" - book chapter
- Nemanja Vaci visited Jacolien van Rij, Tübingen University "Alternative quantitative methods in psycholinguistics" – book chapter
- Petar Milin visited Vito Pirrelli, Claudia Marzi, Marcello Ferro Pisa – Italy "Computational and algorithmic modelling of the mental lexicon "- book chapter

Short Visiting Bilateral Actions

o Mila Vulchanova, NTNU –Norway, and Wolfgang Dressler, Vienna University – Austria: "The role of input in dominant language acquisition by immigrant children ages 4-6 years"
o Soonja Choi, Vienna University – Austria, and Paolo Acquaviva, University College Dublin – Ireland: "Motion as a Fundamental Construct of Mind and Language"
o Claudia Marzi, Institute for Computational Linguistics - National Research Council – Italy, and Emmanuel Keuleers, Center for Reading Research - Department of Experimental Psychology, Ghent University – Belgium: "Lexical acquisition in bilingual contexts: aspects of (extra)linguistic and psycholinguistic modelling"
o Marcello Ferro, Institute for Computational Linguistics - National Research Council – Italy, and Walter Daelemans, University of Antwerp – Belgium: "Lexical acquisition in bilingual contexts: aspects of computational modelling"

Appendix e: Statistics showing the distribution of participants by country and gender in each activity (whenever data is available)
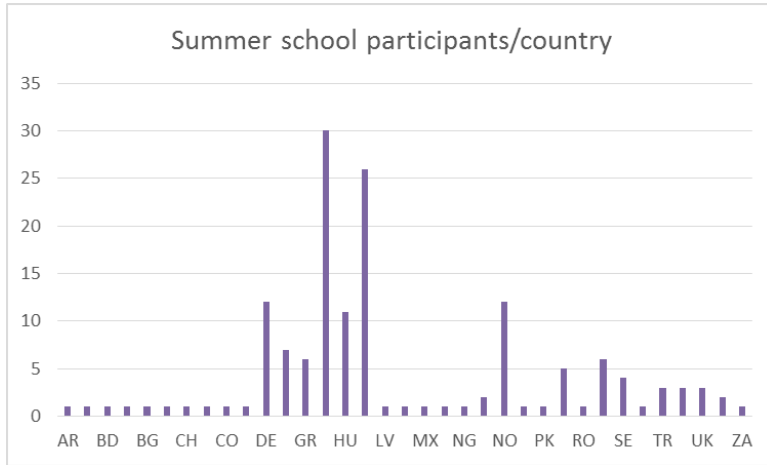
Overall distribution of participants by countries and gender in NetWordS activities
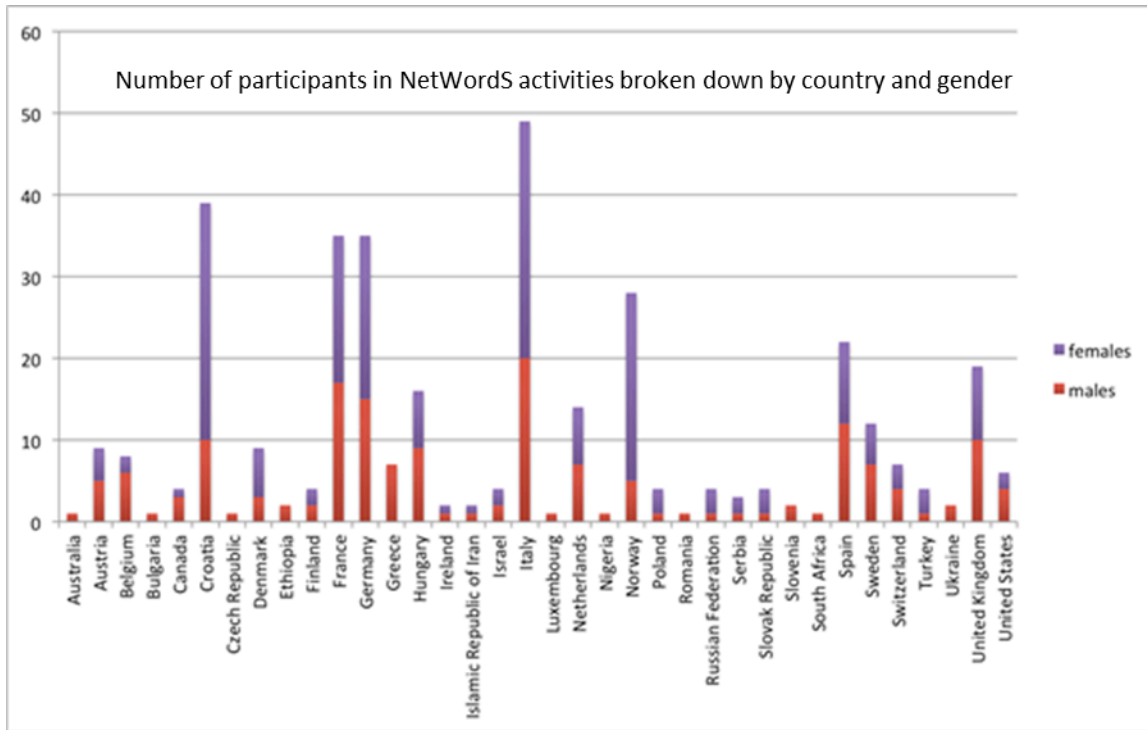

Science Meetings (3 workshops) participants/speakers: 38 female, 56 male participants/speakers from 22 different countries
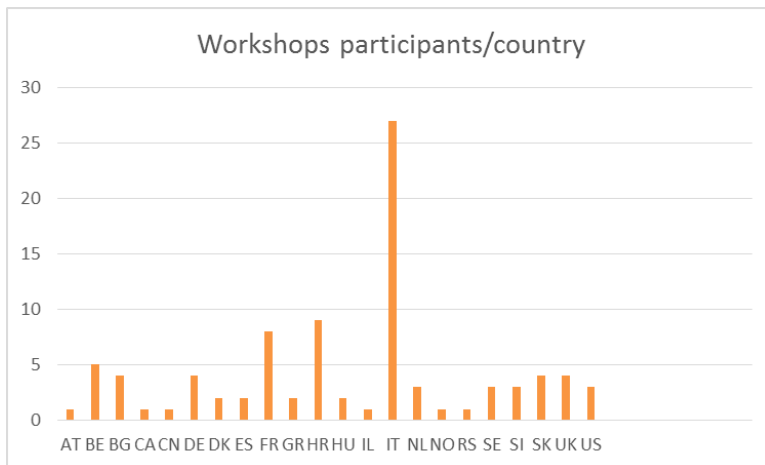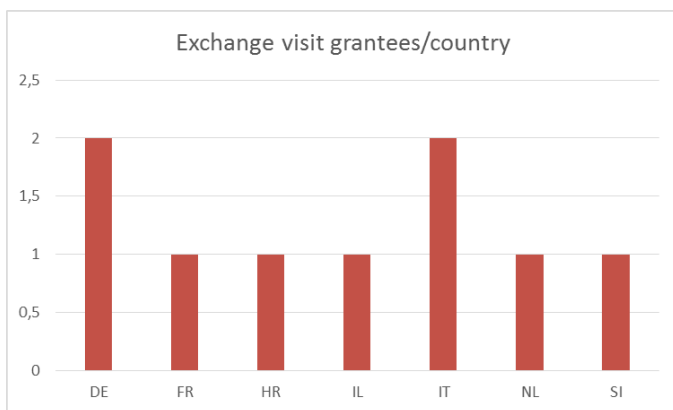
Summer School (2) participants: 118 female, 44 male participants from 35 different countries
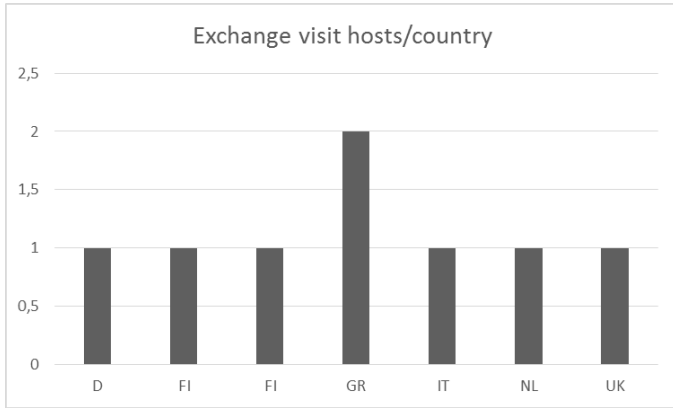

Summer school participants/country

Summer School teachers: 12 female, 27 male teachers from 13 different countries

Summer school teachers/country
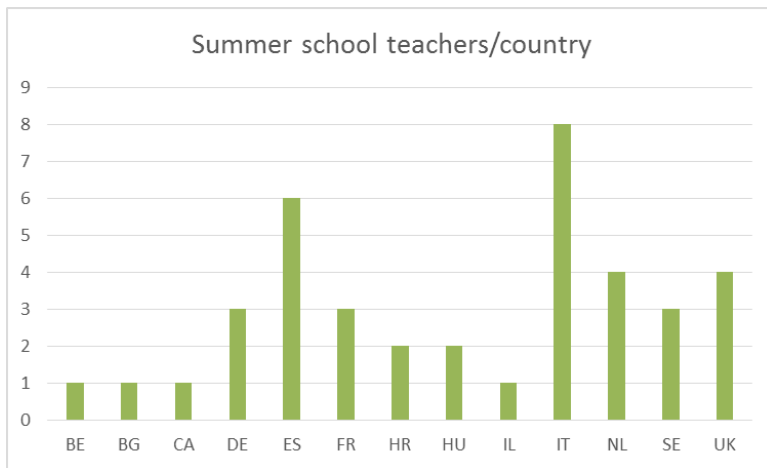
Exchange Visit grantees: 6 female, 3 male grantees from 8 different countries

Exchange visit grantees/country

Exchange Visits hosts: 5 female, 3 male hosts from 7 different countries

Exchange visit hosts/country

Short Visit grantees: 39 female, 44 male grantees from different countries

Short visit grantees/country
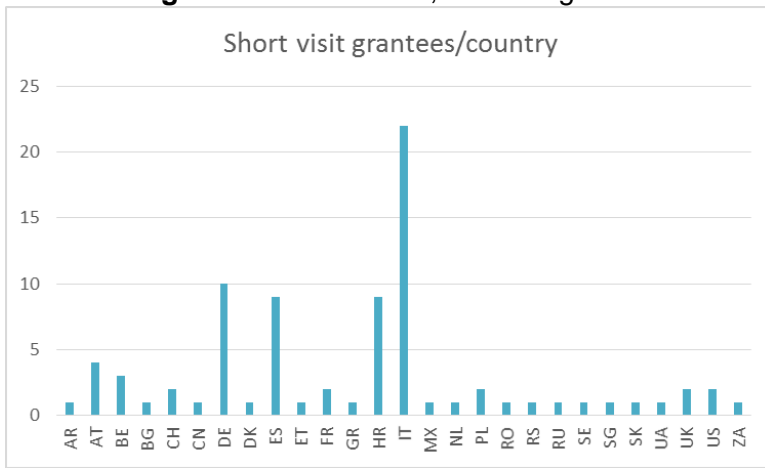
Short Visits hosts: 30 female, 44 male hosts from 20 different countries

Short visit hosts/country
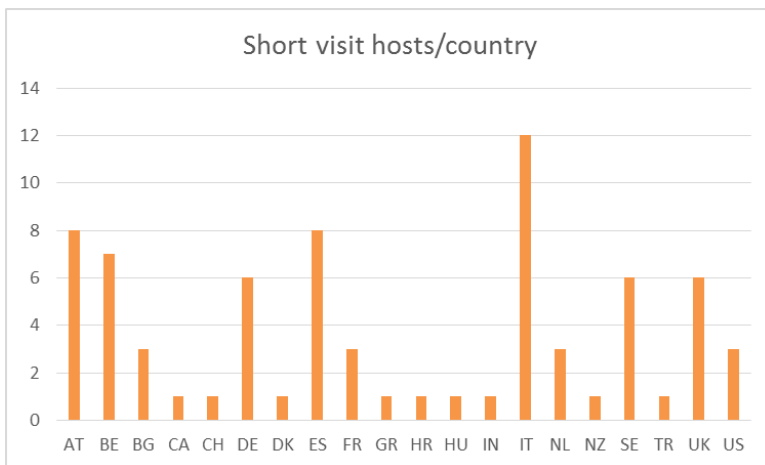
Final Conference participants/speakers: 46 female, 41 male participants/speakers from 28 different countries

Final Conference participants/country
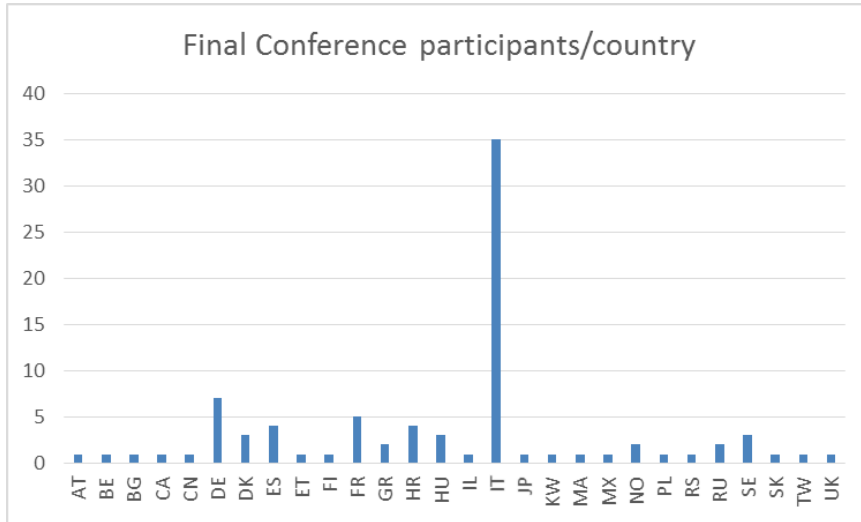
Appendix f: Databases/digital infrastructures (if applicable): summary information on scope, access policy (open to scientific community or not), number of users, documentation (e.g. methodology on data acquisition, documentation on compliance to technical standards, etc.) and dissemination activities (e.g. training)

NOT APPLICABLE

Appendix g: List of outreach actions and of RNP publications containing a visible reference to / acknowledgement of the ESF;

Optional: Hardcopies of the main RNP publications (scientific papers / books / conference proceedings, etc.) if not provided to ESF before

Budget and Schedule of Publications in Euro - NETWORS-

Title book + Editors	Allocated funds (€)	Planned publication date (month/year)
Word Knowledge and Word Usage: a Cross-disciplinary Guide to the Mental Lexicon Vito PIRRELLI, Ingo PLAG, Wolfgang U. DRESSLER (eds) (De Gruyter, Berlin Germany)	30000 (budget includes coverage of expenditures for editorial and scientific meetings)	July 2016
Lingue e Linguaggio, special issue, edited collection of contributions to NetWordS 2015 Final Conference, Volume I 2016 (il Mulino, Bologna Italy)	6000	May-June 2016
Italian Journal of Linguistics, special issue, edited collection of contributions to NetWordS 2015 Final Conference, Volume I 2016 (Pacini, Pisa Italy)	6000	May-June 2016
GENERAL TOTAL - Total approved budget	42000 (€)	

The Steering Committee of the NETWORDS Research Networking Programme has approved this publication plan and budget during the Steering Committee meeting held on March 30, 2015

Signature of the Chair

Section 1: Articles (Scientific/Research, Review…)

Author(s)	Title	Type of Publication	If Other, specify	In (journal title…)	Volume, pages, year…	Peer-reviewed	ESF acknow-ledged	Open Access (OA)	
P. Acquaviva	The categories of Modern Irish verbal inflection	article		Journal of Linguistics	50.3, 537-586 (2014)	YES	YES	NO	NO
I. Raffaelli	patterns in the description of lexical architecture	article		Lingue e Linguaggio	12.1 (2013)	YES	YES	YES	NO
Libben, N. Stempfer, J. Wiesinger, E. Reinisch,	German plurals: children's online judgment of actual, potential and	article		Morphology	22.1, 35-65 (2012)	YES	NO	NO	NO
Weijer, C. Willners, M. Lindgren	Evaluative polarity of antonyms	article		Lingue e Linguaggio	11.2, 199-214 (2012)	YES	YES	NO	NO
P. Acquaviva, P. Panagiotidis	Lexical decomposition meets conceptual atomism	article		Lingue e Linguaggio	11.2, 165-180 (2012)	YES	YES	YES	NO
W.U. Dressler, S. Laaha	The impact of types of analogy on first language acquisition	article		Lingue e Linguaggio	11.2, 107-121 (2012)	YES	YES	YES	NO
W. U. Dressler	On the acquisition of inflectional morphology: introduction	article		Morphology	22.1, 1-8 (2012)	YES	NO	NO	NO
Libben, N. Stempfer, J. Wiesinger, E. Reinisch,	German plurals: children's online judgment of actual, potential and	article		Morphology	22.1, 35-65 (2012)	YES	YES	NO	NO
Geert, K. Korecky-Kröll, I. Maillochon, S.Laaha,	Dynamic adaptation in child-adult language interaction	article		Language Learning	63.2, 243-270 (2013)	YES	NO	NO	NO
J. Durand, A. Przewozny	contemporain : usages, variétés et structure	article		Revue Française de linguistique appliquée	17.1, 25-36 (2012)	YES	YES	NO	NO
M. Pérez, H. Giraudo, A. Tricot	cognitifs impliqués dans l'écriture manuscrite : dictée vs. copie	article		ANAE	24.3 (2012)	YES	NO	NO	NO
W.U. Dressler, S. Laaha	The impact of types of analogy on first language acquisition	article		Lingue e Linguaggio	11.2, 107-121 (2012)	YES	YES	YES	YES
A. Anastassiadis-Symeonidis	within second group Modern Greek verbs	article		Lingue e Linguaggio	11.2, 215-233 (2012)	YES	YES	YES	YES
C. Marzi, V. Pirrelli	Understanding the Architecture of the Mental Lexicon	article		Lingue e Linguaggio	11.2, 101-104 (2012)	YES	YES	YES	YES
C. Marzi, M. Ferro, V. Pirrelli	Word Alignment and Paradigm Induction	article		Lingue e Linguaggio	11.2, 251-274 (2012)	YES	YES	YES	YES

Author(s)	Title	Type of Publication	If Other, specify	In (journal title...)	Volume, pages, year...	Peer-reviewed	ESF acknow-ledged	Open Access (OA)
H. R. Baayen	computational modelling of the costs of letter transpositions and	article		Lingue e Linguaggio	11.2, 123-146, (2012)	YES	YES	YES
I. Hanique, M. Ernestus	The role of morphology in acoustic reduction	article		Lingue e Linguaggio	11.2, 147-164, (2012)	YES	YES	NO
Vulchanov, D. Sarzhanova, H. Eshuis	The role of input in early bilingual lexical development	article		Lingue e Linguaggio	11.2, 181-198, (2014)	YES	YES	NO
C. Manouilidou, A. Ralli, K. Kordouli	Greek: lexical access and representation	article		Lingue e Linguaggio	11.2, 235-250, (2014)	YES	YES	NO
Perea, C. Gil-López, R. Abu Mallouh, E.	abstract letter processing in Roman and Arabic scripts	article		Journal of Cognitive Neuroscience	25.11, 1975-1985 (2013)	YES	NO	NO
M. Perea, R. Abu Mallouh, M. Carreiras	representations in developing readers: Evidence from masked	article		Developmental Science	16.4, 564-573, (2013)	YES	NO	NO
S. Arndt-Lappe, I. Plag	The role of prosodic structure in the formation of blends	article		English Language and Linguistics	17.3, 537-563, (2013)	YES	NO	NO
M. J. Bell, I. Plag	Compound stress, informativity and analogy	article		Word Structure	6.2, 129-155. (2013)	YES	NO	NO
K. Kösling, G. Kunter, H. Baayen, I. Plag	compounds: Pitch contours and linguistic theory	article		Language and Speech	57.1, 529-554, (2013)	YES	NO	NO
C. Marzi, M. Ferro	Adaptive strategies in lexical acquisition	article		Lingue e Linguaggio	12.1, 307-328. (2013)	YES	YES	NO
F. Montermini, O. Bonami	Stem sapces and regularity in verbal inflection	article		Lingue e Linguaggio	12.1, 171-190, (2013)	YES	YES	NO
G. Booij	architecture of grammar: a Construction Morphology	article		Suvremena lingvistika	78.40, 193-21, (2014)	YES	YES	YES
C. Gagné. T. Spalding	Adaptation Effects in Lexical Processing	article		Suvremena lingvistika	78.40, 127-149, (2014)	YES	YES	YES
C. Marzi , M. Ferro, E. Keuleers	lexicon: wordlikeness, lexical density and morphonotactic	article		Suvremena lingvistika	78.40, 171-191, (2014)	YES	YES	YES
D. Katunar	Prepositional antonymy in Croatian: a corpus approach	article		Suvremena lingvistika	78.40, 151-169, (2014)	YES	YES	YES
V. Bandecchi, M.T. Keane	Understanding Italian and English Motion Verb	article		Suvremena lingvistika	76.39, 107-125, (2013)	YES	YES	YES
Celata, C., K. Korecky-Kröll, W.U. Dressler	morphonotactics: Evidence from German	article		Language Sciences	46, 59-70, (2014)	YES	YES	NO

Author(s)	Title	Type of Publication	If Other, specify	In (journal title...)	Volume, pages, year...	Peer-reviewed	ESF acknow-ledged	Open Access (OA)
Dressler, E.M. Freiberger, E. Reinisch,	processing in German-speaking adults	article		Language Sciences	46, 48-58, (2014)	YES	YES	NO
C. Marzi, V. Pirrelli	to understanding the mental lexicon	article		Journal of Cognitive Science	forthcoming	YES	YES	YES
C. Paradis	perceptions across laguages and cultures	article		Functions of Language	22.1, 1-19, (2015)	YES	NO	NO
J. van de Weijer, C. Willners	Semantic profiles of antonymic adj	article		Linguistics	53.1, 153-191, (2015)	YES	NO	NO
Paradis. C. Willners, M. Lindgren	Antonym canonicity: temporal and contextual manipulations	article		Brain and Language	128.1, 1-8, (2014)	YES	NO	NO
S. Dal Maso. H. Giraudo	Italian L2: Evidence from masked priming	article		Linguisticae Investigationes	37.2, 322-337, 2014	YES	YES	NO
Anastassiadis-Symeonidis, H. Giraudo	processing? Two masked priming experiments with Greek speakers	article		Linguisticae Investigationes	37.2, 338-352, 2014	YES	YES	NO

Section **2**: Proceedings, Special Issues...

Conference papers are not fully listed here, but only pointed to through proceedings

Editor(s)/Guest Editor(s)	Title	Type of Publication	If Other, specify	In (journal title...) / By (publisher...)	Ref/Volume, year...	Peer-reviewed	ESF acknow-ledged	Open Access (OA)	If OA, enter web address
C. Marzi, V. Pirrelli	Understanding the Architecture of the Mental Lexicon	special issue		Lingue e Linguaggio	11.2, 101-274 (2012)	YES	YES	NO	
I. Raffaelli, V. Pirrelli	Variation and Adaptation in Lexical Processing and Acquisition	special issue		Suvremena Lingvistika (Contemporary Linguistics)	78.40, 127-235, (2014)	YES	YES	YES	http://hrcak.srce.hr/index.php?show=toc&id_broj=10635&lang=en
V. Pirrelli, C. Marzi, M. Ferro	the Mental Lexicon. Proceedings of the NetWordS Final Conference on Word Knowledge and Word ~~~~~~~~~~~~~~~~~~~	proceedings		CEUR Workshop Proceedings	1347, pp. 1 - 189, 2015	YES	YES	YES	http://ceur-ws.org/Vol-1347
B. Calderone, C. Celata, B. Laks	approaches to phonotactics and morphonotactics ~~~~~~~~~~~~~ presented at the Final NetWordS	special issue		Language Sciences	46 (A), 2014	YES	YES	NO	
to be decided	Conference in Pisa ~~~~~~~~~~~~~~~~~~ presented at the Final NetWordS	special issue		Lingue e Linguaggio	forthcoming	YES	YES	NO	
to be decided	Conference in Pisa	special issue		Italian Journal of Linguistics	forthcoming	YES	YES	NO	

Section 3: Books, book chapters...

This section contains the bulk of on-going editorial activities of the RNP

Author(s) or Editor(s)	Role	Title	Type of Publication	If Other, specify	By (publisher...)	Ref/Volume, year...	Peer-reviewed	ESF acknow-ledged	Open Access (OA)
V. Pirrelli, I. Plag, W.U. Dressler	editor(s)	Word Knowledge and Word Usage: a Cross-disciplinary Guide to the Mental Lexicon	book		Mouton De Gruyter	forthcoming	YES	YES	YES
R. Caballero, C. Paradis	author(s)	Perceptual landscapes from the perspective of cultures and genres	book chapter		Mouton De Gruyter	In: Sensuous Cognition - Explorations into human sentience - Imagination,	YES	YES	NO
C. Paradis	author(s)	Conceptual spaces at work in sensuous cognition: Domains, dimensions and distances	book chapter		Springer Verlag	Conceptual Spaces: Geometric Knowledge Representation, C.	YES	YES	NO
V. Pirrelli, M. Ferro, C. Marzi	author(s)	Computational Complexity of Abstractive Morphology.	book chapter		Oxford University Press	Measuring Morphological	YES	YES	NO
J. Durand, A. Przewozny	author(s)	Le Programme PAC e la variation	book chapter		Presses Universitaires du Mirail	forthcoming	YES	YES	NO

Scientific/scholarly publications enabled by the RNP - Summary data

Section 1: Articles (Scientific/Research, Review...)

		of which peer reviewed	of which acknowledging ESF	of which "open access"
Total number of Articles	39	39	24	11
Total number of Review Articles	0	0	0	0
Total number of Reports	0	0	0	0
Total number of "Other" publications	0	0	0	0
Grand total	**39**	**39**	**24**	**11**

Section 2: Proceedings, Special Issues...

		of which peer reviewed	of which acknowledging ESF	of which "open access"
Total number of Proceedings	1	1	1	1
Total number of Special Issues	5	5	5	1
Total number of "Other" publications	0	0	0	0
Grand total	**6**	**6**	**6**	**2**

Section 3: Books, book chapters...

		of which peer reviewed	of which acknowledging ESF	of which "open access"
Total number of Books	1	1	1	1
Total number of Book chapters	4	4	4	0
Total number of "Other" publications	0	0	0	0
Grand total	**5**	**5**	**5**	**1**

| **Grand Totals** | **50** | **50** | **35** | **14** |

Section 1: Scientific Outreach - RNP brochure, website, mailing list, newsletter...

Type of Activity	Target group	Description of activity	Circulation/distribution (Nbr of subscribers/ prints etc.)	Monitored/ maintained by	ESF acknow- ledged	web/email address if applicable
RNP brochure	RNP research community	the brochure, edited by the RNP SC provides general information about the structure, objectives, planned initiatives and co-option scheme of the project; available in print and downloadable in a non-printable format from the RNP website	over 1000	maintained by the Institute for Computational Linguistics of the Italian National Research Council	YES	http://www.networds-esf.eu/uploads/NetWordS/NetWordS_brochure_no_printing.pdf
RNP website	RNP research community	the website, hosted by the Institute for Computational Linguistics of the Italian National Research Council, provides general information about the structure, objectives and activities of the RNP; news of academic and general interest; pointers to websites hosting relevant labs and institutions; downloadable material connected with NetWordS-related events (such as workshops and Summer Schools); publications either funded by the RNP or simply relevant to the research promoted by the programme.	na	locally maintained	YES	http://www.networds-esf.eu/
mailing list	RNP research community	mailing list of the NetWordS Steering Committe, including the External Coordinator	17	maintained by the Institute for Computational Linguistics of the Italian National Research Council	YES	steering-networds@ilc.cnr.it
other	broad scientific community	email address providing information of general interest about on-going initiatives and co-option scheme		maintained by the Institute for Computational Linguistics of the Italian National Research Council	YES	info-networds@ilc.cnr.it

Type of Activity	Target group	Description of activity	Circulation/distribution (Nbr of subscribers/ prints etc.)	Monitored/ maintained by	ESF acknow-ledged	web/email address if applicable
				maintained by the Institute for Computational Linguistics of the Italian National Research Council		http://www.networds-esf.eu/uploads/NetWordS/NetWordS%20leaflet_form%20screen.pdf
other	broad scientific community	leaflet containing general information about the project; available and downloadable from the RNP website		maintained by the Institute for Computational Linguistics of the Italian National Research Council	YES	
other	RNP research community	email address of External Coordinator		maintained by the Institute for Computational Linguistics of the Italian National Research Council	YES	coordination-networds@ilc.cnr.it
mailing list	broad scientific community	collection of mailing lists used to advertise RNP initiatives targeted at scholars, PhD students, post-docs, etc.		maintained by the Institute for Computational Linguistics of the Italian National Research Council	YES	http://www.esf.org/coordinating-research/research-
RNP website	general public	website containing general information about the RNP		maintained by ESF	YES	http://www.networds-esf.eu/index.php?page=results
RNP website	broad scientific community	website repository of all teaching materials produced by the RNP freely downloadable through a simple notification protocol		maintained by the Institute for Computational Linguistics of the Italian National Research Council	YES	
RNP brochure	general public				YES	
RNP brochure	general public				YES	
RNP brochure	general public				YES	

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RNP website	RNP research community	the website, hosted by the Institute for Computational Linguistics of the Italian National Research Council, provides general information about the structure, objectives and activities of the RNP; news of academic and general interest; pointers to websites hosting relevant labs and institutions; downloadable material connected with NetWordS-related events (such as workshops and Summer Schools); publications either funded by the RNP or simply relevant to the research promoted by the programme.	na	locally maintained	YES	http://www.networds-esf.eu/
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mailing list	broad scientific community	collection of mailing lists used to advertise RNP initiatives targeted at scholars, PhD students, post-docs, etc.		maintained by the Institute for Computational Linguistics of the Italian National Research Council	YES	
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RNP brochure	general public				YES	
RNP brochure	general public				YES	
RNP brochure	general public				YES	

Word Knowledge and Word Usage:
a Cross-disciplinary Guide to the Mental Lexicon

(a NetWordS editorial project)
Vito PIRRELLI, Ingo PLAG, Wolfgang U. DRESSLER

Foreword
This editorial project stems from 4 years of intense interdisciplinary research networking and cooperation funded by the **European Science Foundation** within the framework of the **NetWordS** project (May 2011- April 2015). The NetWordS' mission is to bring together experts of various research fields (from brain sciences and computing to cognition and linguistics) and of different theoretical inclinations, to advance our current awareness of theoretical, typological, psycholinguistic, computational and neurophysiological evidence on the structure and processing of words, with a view to promoting novel methods of research and assessment for grammar architecture and language usage. The unprecedented cross-disciplinary fertilisation prompted by NetWordS scientific and educational initiatives (three international workshops, two summer schools, four coordination meetings, one main conference and over a hundred grants supporting short visits and multilateral exchanges) spawned the idea of a highly innovative handbook, where a range of central topics on the mental lexicon are dealt with by teams of authors with different backgrounds. We believe that this handbook, published as an **open-access volume**, will significantly sharpen our current understanding of issues of word knowledge and usage, while promoting novel research paradigms and bringing up a new generation of language scholars.

The book
How are words processed in working memory? Are they stored in long-term memory as a whole and/or rather composed 'on-line' in working memory from stored sub-lexical constituents? What is the role played in this by both knowledge-based factors, such as formal regularity and semantic transparency, as well as usage-driven factors, such as word length and frequency? Does word-level knowledge require parallel development of form and meaning representations, or do the latter develop independently at a different pace? How do word meanings function and combine in daily communicative contexts and evolve through learning? What types of lexical knowledge affect on-line processing? Do the dramatic differences in word structure across world languages impact on processing? And how will a thorough investigation of such differences change lexical models worked out on the basis of a single language? What neurobiological patterns of connectivity sustain word processing and storage in the brain?
Any serious effort to address these questions must be based upon recognition that word storage and processing define a multi-factorial domain of scientific inquiry, whose thorough investigation requires synergic integration of a wide range of disciplines. A few independent lines of scientific inquiry appear to lend support to an integrative approach to the study of the mental lexicon:

- in line with a view of word knowledge as an **interface domain**, the architecture of the mental lexicon is better understood as resulting from the dynamic integration of multiple levels of information, whose correlation, albeit indirect and possibly non-linear, enforces constraints and mutual dependencies that are not justified on single-level grounds; this view is not incompatible with a principle of representational modularity, segregating linguistic information according to levels of representation; nonetheless, it conceives of lexical knowledge as emerging from the unique, distributed network of stored associations among fragments of disparate representations.
- word processing requires a two-way **interactive perspective**, whereby the speaker can anticipate what the hearer needs to be provided with in order to obtain the intended perlocutionary effects, and, in turn, the hearer can predict what may be offered in the on going spoken or written communicative

interaction; communicative factors include Theory-of-Mind states, contextual embedding and transparency of words (especially neologisms and occasionalisms), choice between synonyms, lexical and morphological differences between child-directed and adult-directed speech, paraphrases, and simultaneous top-down and bottom-up processing strategies;

- accordingly, word processing is modelled as the task of optimal resolution of multiple, parallel and possibly conflicting constraints on complex lexical structures, where top-down expectations, based on past experiences and entrenched memory traces, combine, in on-line processing, with the bottom-up requirements of input stimuli;

- this is in keeping with a **maximisation of opportunity Principle** for word processing: different processing strategies are applied simultaneously, and preference for one strategy over another is opportunistically given on the basis of task-based requirements, or compensatory mechanisms offsetting contingent failures caused by language impairments or production/perception errors;

- all these perspectives are compatible with the hypothesis of an i**ndirect correspondence** between low-level principles of word processing/organisation and their brain localisation; on this view, complex language functions are not localized in specific brain regions, but are rather the emergent property of the interaction of parallel distributed networks of densely interconnected regions. In this context, the functional anatomy of language cannot be deduced from a high-level conceptualisation of the way language is understood to work in the brain, but it requires a deep understanding of the functional interaction of concomitant low-level processing principles and associative mechanisms.

- over the last 20 years, the anatomy of language has been investigated with functional neuroimaging techniques (PET, fMRI) and brain areas associated with language processing have been identified consistently; future studies will undoubtedly be able to improve the spatial and temporal precision with which functional regions can be located; assuming that our current understanding of the general picture is correct, the main task for future research will be to specify the details of the inter-region organisation and computational operations.

Goals and intended readership
In the handbook, experts of various disciplines will put considerable effort into looking at common topics from complementary standpoints, to discuss and understand what can be learned from integrating different approaches into converging perspectives.
To give but few examples, authors of chapter 2, on computational and algorithmic models of the mental lexicon, will try to establish possible connections between word frequency distributions and information theoretical measures for word families, statistical correlations over elicited behavioural evidence (e.g. wordlikeness ratings and reaction times), principles of Bayesian learning and integrative mechanistic models of word storage and processing. However highly correlated, this range of evidence has traditionally been in the purview of distinct domains of scientific inquiry such as corpus linguistics, psycholinguistics, machine language learning, computational linguistics and serial cognition.
In dealing with inflection as a central component of morphological competence, the authors of chapter 7 set themselves the ambitious goal of focusing on the role of formal contrast in marking functional differences in the syntactic distribution of inflected words. They discuss the way storage of frequent forms can interact with generalisation strategies that compensate for lack of input evidence in the low-frequency range. Both morphological and constructional information are assumed to be stored in long-term memory, in keeping with a view of lexical representations as highly context-sensitive and fine-grained memory traces. This is in line with recent psycholinguistic evidence reported in chapter 6, showing how much information is actually accessible in the mental lexicon, both in terms of the phonetic details stored for each word, and in terms of how many morphologically-complex words are

actually stored as independent lexical units. The theoretical implications of this evidence on the linguistic view of the lexicon are examined in more detail in chapter 11.

To our knowledge, no other book, either published or planned, covers, in such varied interdisciplinary way, as many areas of the mental lexicon. We are deeply grateful to all contributing authors for sharing with us the view that interdisciplinary cross talk is indeed possible, and for taking much of their time and effort to prove its merits.

The book is intended to be beneficial for diverse types of readers: i) young researchers who feel the need to develop a truly interdisciplinary curriculum and see a clear advantage in the synergic integration of traditionally segregated competences; ii) single-domain specialists who are willing to pursue interdisciplinary cooperation and would like to understand more about how their expertise can contribute to understanding issues of common interest when approached by other disciplines; and (iii) both specialist and non-specialist readers who want to be offered an easily accessible, state-of-the-art information in connected areas of the mental lexicon.

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CHAPTER SUMMARIES

NetWordS: Word knowledge in a cross-disciplinary world
Wolfgang DRESSLER, Vito PIRRELLI, Ingo PLAG

The chapter will provide an overview of the scope and main objectives of the book, to argue in favour of the interdisciplinary methodological approach illustrated in the various chapters and highlight some of their major contributions.

Computational and algorithmic modelling of the mental lexicon
Vito PIRRELLI, Claudia MARZI, Marcello FERRO, Petar MILIN, Harald R. BAAYEN

Over the last decades, a growing body of evidence on the mechanisms governing lexical storage, access, acquisition and processing has questioned traditional models of language architecture and word usage based on the hypothesis of a direct correspondence between modular components of grammar competence (lexicon vs. rules), processing correlates (memory vs. computation) and neuro-anatomical localisations (prefrontal vs. temporo-parietal perisylvian areas of the left hemisphere). A new view appears to support a considerably more distributed and integrative picture, whereby words in the mental lexicon are emergent properties of the functional interaction between different brain regions. Some of these regions are known to be associated with specific processes and structures (e.g. sensory and motor areas), while some others provide the neuro-anatomical substrate for more domain-general processing micro-functions (e.g. serial activation, co-activation, competition, selection and storage), which participate in multiple high-level linguistic functions such as phonological and orthographic processing. In this chapter, we will assess the respective contributions that computational and algorithmic models (according to Marr's classical distinction) of the mental lexicon can give to a deeper understanding of how words are organised and function in the brain, and we will broach fruitful prospects for their possible integration.

Alternative quantitative methods in psycholinguistics: Implications for theory and design
Jacolien van RIJ, Nemanja VACI, Laurie Beth FELDMAN

Analysis of variance (ANOVA) compatible designs in reaction time studies have dominated the analytic landscape for years in psycholinguistics as well as in other domains of inquiry (for a review, see Van Zandt, 2002). Although some were aware of its short comings (e.g., Clark, 1973), many did and still do believe that only an experiment with a factorial design allows for hypothesis testing and causal inference and that therefore an experiment with a correlational design is necessarily inferior because it describes only an association. These assumptions motivate a common research practice in the domain of psycholinguistics that is to treat measures dichotomously, by sampling at two point (ranges) along a continuum, and then matching the means of those groups on other relevant factors. For example two sets of words that differ on semantic transparency of a morphological relative (e.g., XX and XX) might be formed and matched on target frequency, number of form similar words (neighbors) word length and productivity of the stem and affix. Materials constructed in this way fall to consider the relation between the measures of interest and may even sample atypical words. In this example, apparent

effects of frequency are likely to be contaminated by, or even attributable to differences from associated measures. The severity of the consequences depends on the strength of the correlation between measures but it tends to be more problematic for factorial than for regression analyses although the solution of residualizing to reduce collinearity introduces its own set of issues. Limitations of ANOVA and factorial treatments are further exaggerated when experiments are underpowered because of too few participants or items or when factors behave nonlinearly when they interact.

In recent years the benefit of alternative quantitative methods have allowed many to digress from the orthodoxy of factorial designs. These include analyses over individual, as distinguished from averaged RTs, linear mixed effect modeling and a Bayesian approach to hypothesis formation. In the present chapter, we describe recent developments in these domains and demonstrate their value by providing a series of coordinated alternative analyses of the same data.

Neuroscientific protocols for exploring the mental lexicon: evidence from aphasia
Paola MARANGOLO, Costanza PAPAGNO

Research over the past 30 years has developed several protocols to investigate the anatomo-functional architecture of the mental lexicon. The first is the neuropsychological approach, based on anatomo-clinical correlations in selected groups of brain-damaged patients and on single case studies, in which association but especially dissociation between the damaged brain region and a defective function are deeply investigated: this approach has produced relevant insight in the organization of semantic categories. The instrumental approaches studying perfusion and metabolism, such as PET scan and fMRI, have supported these data extending our knowledge on the neural substrates of word comprehension and production. Results from studies using TMS, which creates so-called "virtual lesions" in subjects who can be their own controls, have contributed to confirm and refine previous data. Very recently, intraoperative direct electrical stimulation in patients with brain tumours has been proposed in order to make critical surgical decisions on which area cannot be removed due to its crucial role in language processing. Right now, the most promising innovative approach suggests to combine different neuroimaging methods in order to overcome the limitations of each technique.
In the present chapter, we will present the main achievements obtained through these different approaches.

Infrastructural resources for data sharing and mining
Emmanuel KEULEER, Marco MARELLI

In this chapter we will discuss the publicly available data and methods for researchers interested in the mental lexicon. Our first aim is to provide an overview of the existing resources. We will focus on two broad categories of data, depending on whether the data-production was initiated for research purposes or not. Uncontrolled data, i.e. data that is produced without the researchers intention consists mostly of corpora, and its derivatives such as word frequencies, information theoretical measures, and semantic vector spaces. Controlled data consists of direct behavioral measures such as ratings, or reaction times to experimental stimuli, and data from other instruments such as eye-trackers, EEG, and fMRI. Our second aim is to provide the reader with research strategies for re-using existing data,

sharing new data, and exploiting relationships between existing data sets to test or cross-validate theoretical questions.

The morphology-phonology interface
Sabine ARNDT-LAPPE, Mirjam ERNESTUS

The article addresses morphology-phonology interaction from an interdisciplinary perspective. The focus is on the question of phonological representation in the mental lexicon and its relation to morphological complexity. From a theoretical linguistic perspective, the representational issue is of paramount importance, for example, for models of morphological productivity, meaning approaches to explaining the phonological shape of new, morphologically complex words. From a psycholinguistic perspective, the representational issue is crucial, for example, for the status attributed to morphological structure in models of speech production. Theoretical debates in both disciplines are divided over the relation between morphological decompositionality, actual (de-)composition, and the pronunciation of (new) complex words.

We see a particularly interesting development in that we learn from much recent psycholinguistic work that storage is more prevalent than often thought, both in terms of the details that are stored of words (e.g. phonetic detail) as well as in terms of the extent to which morphologically complex words are stored. At the same time, formal models of grammatical competence (or 'productivity' in the above-described sense) have taken this fact into account to different degrees, depending on what they think how stored material is actually relevant for online productive language behaviour.

We will take stock of existing pertinent evidence and discuss its theoretical implications.

Inflection at the morphology-syntax interface
James BLEVINS, Geert BOOIJ, Petar MILIN

Inflection lies at the morphology-syntax 'interface' in the sense that it provides the linkage between form classes and distribution classes in a language. Contrasts in form between the inflected variants that make up the traditional paradigm of an item correlate with contrasts in the syntagmatic distribution of these variants. Conversely, the classes of forms that realize the same 'cell' of different items contrast paradigmatically at a given point in a syntagmatic expansion. The inflectional exponents that distinguish variants of an item likewise function primarily as markers of correlated distribution classes and only secondarily as realizations of the grammatical properties associated with the elements of that class. Much the same is ultimately true of inflectional features, which directly characterize form classes and distribution classes and indirectly characterize the semantic properties associated with those classes.

Derivational morphology: an integrative perspective
Ingo PLAG, Laura WINTHER BALLING

This chapter discusses some central questions in the study of derivational morphology: What kinds of data can inform us about the phenomena we want to investigate? What are the units of analysis? What are the mechanisms that underlie the creation, as well as the syntagmatic and paradigmatic

relationships, of derived words? For each of these questions we discuss a wide variety of approaches in different subdisciplines of linguistics (phonetics, theoretical linguistics, psycholinguistics, neurolinguistics and computational linguistics), and see what evidence the diverse approaches have brought forward to support their ideas. Finally, we will look at some specific issues in the study of derivational morphology (segmentability, productivity, blocking, and affix ordering) to see how an integrative approach may help to solve long-standing problems.

The representation and processing of compounds words: conceptual, typological, and morphological perspectives.
Gary LIBBEN, Christina GAGNÉ, Wolfgang U. DRESSLER

Compounds offer special insight into the representation and processing of multimorphemic words across languages. Compound words are prevalent across languages, they often play an important role in the creation of new words within a language, and the major constituents of compound words are typically easily identified by native speakers. These properties make compound words ideal candidates for the cross-linguistic investigation of the effects of positional, morphological, and semantic factors in lexical representation and processing. In this chapter, we examine these factors with special emphasis on the need for a typology of compounding, the role of positional effects within compounds, the role of conceptual combination, matters of transparency, and the fundamental nature of compound constituents.

Structural, cognitive and distributional Issues in lexical semantics
Paolo ACQUAVIVA, Alessandro LENCI, Carita PARADIS, Ida RAFFAELLI

This chapter examines the semantic content of lexical items in the context of broader considerations about the flexibility of meaning in language and how this can be modelled and explained. An approach in terms of a mental lexicon is contrasted to approaches which view words as cues to conceptual structure. We assess the advances, the possibilities, and the limitations of the application of textual and experimental data, statistical methods, distributional semantic models, to questions about the components of lexical content, their crosslinguistic stability, their mental representation, the relation between words and concepts, the role of context, and the lexicon-grammar continuum.

Morpho-pragmatics (deixis/indexicality, affective and evaluative morphology, context-sensitive sense extension/coercion)
Milena ŽIC-FUCHS, Wolfgang U. DRESSLER

Morphological constructs can have a secondary pragmatic meaning via meaning extension, such as in the pluralis maiestatis and in excessives, but some have also a primary pragmatic meaning (which contains a necessary indication of speech acts and/or speech situation), such as personal pronouns in Japanese and hypocoristics. This is also true for evaluatives (diminutives, augmentatives, pejoratives) in most languages where they occur, including emotive meaning shades. For diminutives it has been shown that this pragmatic meaning is also basic in first language acquisition and in aphasic impairments. The above phenomena found in morphological constructs will be viewed from different

theoretical perspectives, primarily from the point of view of linguistics, but also taking into account contributions from other disciplines, which in some cases may provide deeper insights.

Word storage and computation
Martina PENKE, Antonio FÁBREGAS

One of the current debates in morphology refers to the question of whether derived and inflected words are built by the addition of discrete units, called 'morphemes', or have to be treated as undecomposable wholes which relate to each other through connections with other words. The problem is further complicated by the question of whether irregular forms are decomposable at some level of analysis or must be stored as fully built forms, and the possibility that some complex forms are accessed both as wholes and as structured sets of morphemes. This gives four logical options: i. Regular forms are decomposed, irregular forms are not; ii. Both regulars and irregulars are decomposed at some level of analysis, with irregulars possibly being undecomposable at a morphophonological level; iii. Neither regulars nor irregulars are decomposed (cf. amorphous morphology); iv. Decomposition and access to the full form happen simultaneously in regulars. Inside this debate, arguments are typically built over economy and theoretical considerations, ignoring in most cases the psychological plausibility of the models proposed. The goal of this chapter is to assess the psycholinguistic evidence currently available in order to determine which one of the existing models is more straightforwardly compatible with experimental results.

Cognates and borrowings in bilingualism
Hélène GIRAUDO, Francesco GARDANI, Madeleine VOGA

Historical Linguistics and Psycholinguistics use the term 'cognate' in different ways. In the former, a cognate is a word inherited from an ancestor; in the latter, it is a word that formally and semantically matches another word, regardless of the existence of a relation of inheritance or borrowing between them. In this paper, we discuss how cognates are represented of in the mental lexicon of the bilingual. We draw evidence from both experimental Psycholinguistics and contact-induced language change.

In language contact research, Parallel System Borrowing (Kossmann 2010) refers to cases where borrowed words and inherited words along with their respective native paradigms co-exist in one and the same language (cf. English alumnus – alumni vs. pupil – pupils). For similar cases occurring at the level of individual bilingualism, Matras (2015: 48) speaks of 'morphological compartmentalization' and claims that this occurs "in situations in which speakers embrace and flag a bilingual identity". That would point to a sensitivity of the bilingual speaker towards a word's origin and to different morphological structures. From Psycholinguistics we know that cognates prime better than non-cognates (De Groot & Nas, 1991; Van Hell & De Groot, 1998, Voga, 2005), at least when unrelated controls are used, and that the two directions of priming (L1 to L2 and L2 to L1) tend to show asymmetric effects (e.g. Gollan, Forster & Frost, 1997, although there are studies that do not find asymmetry, e.g. Duyck & Warlop, 2009). This, too, could mean that L1 and L2 do not work in the same way. Is this asymmetry related to the morphological organization of the lexicon? In a masked priming

study with Greek-French bilinguals, Voga (2014) has found that the effects of etymologically Greek cognates and those of etymologically French cognates differ, mainly in the L2 to L1 direction (the one in which the asymmetry is observed).

The chapter will discuss research on Parallel System Borrowing in a number of languages worldwide (e.g., Adamou & Granqvist 2014 and Bodnárová 2014 on varieties of Romani; Kossmann 2013 on Northern Berber) and the cognitive effects produced by various types of cognates (e.g. Dijkstra, Grainger & van Heuven, 1999) in the mental lexicon, with a view to investigating to what extent cognates constrain both lexical organization (i.e. a separate lexicon for each language versus a unified lexicon) and lexical operations (i.e. selective versus non selective access). Experimental data coming from same- and cross-script masked priming studies (e.g. Sánchez-Casas & García-Albea, 2005; Voga, 2014) will shed light on the possible involvement of morphological cues in the cognate effect. If the cognate effect depends on shared meaning and shared form, morphological factors will play a role, as suggested by Bybee (1985, 1988). This evidence will allow us to explore the bridges between Hhstorical linguistic and psycholinguistic approaches to bilingualism by comparing cross-linguistic data drawn from empirical and experimental evidence.

Reading morphologically complex words: experimental evidence and learning models
Marco MARELLI, Daniela TRAFICANTE, Cristina BURANI

The study of complex word processing has been centred on the notion of morpheme as a processing unit. Evidence from psycholinguistics and cognitive neuropsychology has been taken as suggestive of symbolic morphemic representations at the lexical level, on a par with words. However, several phenomena observed in morphological processing suggest a more complex picture. The crucial role played in reading by the distributional properties of both the complex word and its morphemic constituents (e.g., family size, morphological entropy, orthography-semantics consistency) highlights the limits of the 'morpheme-as-unit' assumption. Moreover, results from the developmental literature show that morphology is an age-related emergent aspect of written word processing, exploited to overcome reading challenges. A unitary account for this complex scenario may be offered by learning models that focus on form-to-meaning mapping.

Acquisition of lexicon and morphology
Wolfgang U. DRESSLER, Emmanuel KEULEERS, Dorit RAVID

This chapter will start with a critical survey of major theories and computational modeling of the early and the later development of the lexicon and the rise of morphology and their respective parts, plus their interaction with the development of phonology and syntax. This will be put both into cognitive frameworks (including the quest for universals and generalities) and into a typological perspective contrasting different languages and interindividual variation. The chapter will end with a survey of impaired and delayed acquisition.

# Word structure and word processing in developmental disorders
Mila VULCHANOVA, David SALDAÑA, Joel B. TALCOTT

Developmental disorders offer a rare view into properties of language that might go unnoticed in typically developing individuals. Quite often such cases are used to demonstrate dissociations between language and the rest of cognition. Yet, detailed recent research suggests that the picture is more complex and nuanced. For instance in high-functioning autism, we find a dissociation between vocabulary skills and the acquisition and processing of figurative expressions, suggesting that bigger size stored units (such as e.g., idioms or conventional metaphors) are probably stored and processed differentially than word-size items. Other populations, such as children with language impairment, have problems with units of a smaller size, namely morphemes, and how they are used to indicate relations of agreement in grammar. Children suffering from dyslexia experience problems in cracking the orthographic code and how it maps onto the sound structure of oral language. Finally, some children will only experience problems in understanding text and what individual words in this text mean, but not decoding itself. This chapter will provide an overview of developmental deficits that affect language, with a focus on how lexical items are acquired, stored and processed in atypical populations.

Appendix h: Any other relevant information

1st Summer School teaching material downloads
2029 course material files have been downloaded through 74 registrations, from 28 countries.

REGISTRATION TO COURSE MATERIAL DOWLOAD
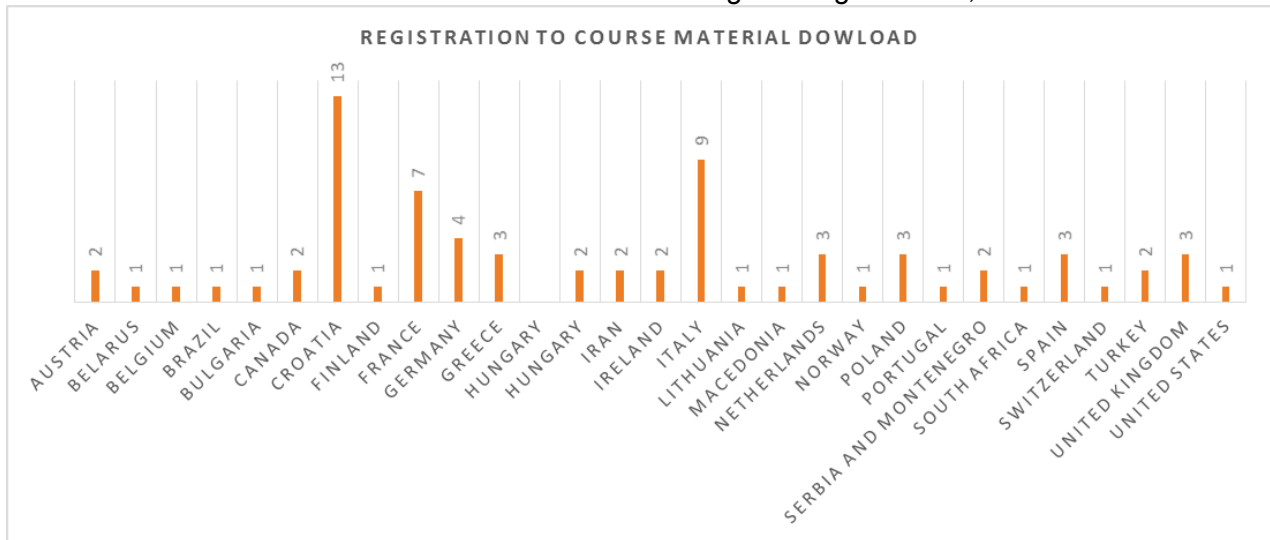
2nd Summer School teaching material downloads
2558 course material files have been downloaded through 117 registrations, from 25 countries.

REGISTRATION TO COURSE MATERIAL DOWLOAD