

Martijn Baart

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Scopus ID 25723032500; 126 citations, h-index of 8
Researcher ID L-2910-2013; 114 citations, h-index of 7
ResearchGate; 178 citations, h-index of 9
Google Scholar; 216 citations, h-index of 9

References available upon request

RESEARCH INTERESTS

Cognitive psychology, speech and language perception and processing, multisensory integration, cognitive development

EMPLOYMENT & EXPERIENCE

2016 –	Postdoctoral researcher (with Jean Vroomen) Tilburg University, dept of Cognitive Neuropsychology Tilburg, the Netherlands
2012 – 2017	Postdoctoral researcher (with Arthur Samuel) Basque Center on Cognition, Brain and Language Donostia/San Sebastián, Spain
2007 – 2011	PhD. student (with Jean Vroomen) Tilburg University, dept of Medical psychology and Neuropsychology Tilburg, the Netherlands Thesis: Phonetic recalibration in audiovisual speech
Fall 2010	Visiting scholar (with Heather Bortfeld) University of Connecticut & Haskins Laboratories Storrs & New haven, CT, USA

EDUCATION

2012	PhD. in Psychology Tilburg University, Tilburg, the Netherlands
2007	MSc. in Psychology and Mental Health (Cum Laude) Tilburg University, Tilburg, the Netherlands
2006	BSc. in Cognitive Neuroscience & Clinical Psychology Tilburg University, Tilburg, the Netherlands

PUBLICATIONS

Journal articles

14. **Baart, M.**, Lindborg, A., & Andersen, T. S. (2017). Electrophysiological evidence for differences between fusion and combination illusions in audiovisual speech perception. *European Journal of Neuroscience*, *46*(10), 2578-2583.
doi: 10.1111/ejn.13734 (Q1 journal, 2-year impact factor: 2.941)
13. **Baart, M.**, Armstrong, B. C., Martin, C. D., Frost, R., & Carreiras, M. (2017). Cross-modal noise compensation in audiovisual words. *Scientific Reports*, *7*:42055.
doi: 10.1038/srep42055 (Q1 journal, 2-year impact factor: 5.228)
12. **Baart, M.** (2016). Quantifying lip-read-induced suppression and facilitation of the auditory N1 and P2 reveals peak enhancements and delays. *Psychophysiology*, *53*(9), 1295-1306.
doi: 10.1111/psyp.12683 (Q1 journal, 2-year impact factor: 3.074)
11. **Baart, M.**, & Samuel, A. G. (2015). Turning a blind eye to the lexicon: ERPs show no cross-talk between lip-read and lexical context during speech sound processing. *Journal of Memory and Language*, *85*, 42-59.
doi: 10.1016/j.jml.2015.06.008 (Q1 journal, 2-year impact factor: 4.237)
10. Shaw, K., **Baart, M.**, Depowski, N., Bortfeld, H. (2015). Infants' preference for native audiovisual speech dissociated from congruency preference. *PLOS ONE*, *10*(4): e0126059.
doi: 10.1371/journal.pone.0126059 (Q1 journal, 2-year impact factor: 3.534)
9. **Baart, M.**, & Samuel, A. G. (2015). Early processing of auditory lexical predictions revealed by ERPs. *Neuroscience Letters*, *585*, 98-102.
doi: 10.1016/j.neulet.2014.11.044 (Q2 journal, 2-year impact factor: 2.055)
8. **Baart, M.**, Bortfeld, H., & Vroomen, J. (2015). Phonetic matching of auditory and visual speech develops during childhood: Evidence from sine-wave speech. *Journal of Experimental Child Psychology*, *129*, 157-164.
doi: 10.1016/j.jecp.2014.08.002 (Q1 journal, 2-year impact factor: 2.635)
7. **Baart, M.**, Stekelenburg, J. J., & Vroomen, J. (2014). Electrophysiological evidence for speech specific audiovisual integration. *Neuropsychologia*, *53*, 115-121.
doi: 10.1016/j.neuropsychologia.2013.11.011 (Q1 journal, 2-year impact factor: 3.477)
6. **Baart, M.**, Vroomen, J., Shaw, K., & Bortfeld, H. (2014). Degrading phonetic information affects matching of audiovisual speech in adults, but not in infants. *Cognition*, *130*, 31-43.
doi: 10.1016/j.cognition.2013.09.006 (Q1 journal, 2-year impact factor: 3.523)
5. **Baart, M.**, de Boer-Schellekens, L., & Vroomen, J. (2012). Lipread induced recalibration in Dyslexia. *Acta Psychologica*, *140*, 91-95.
doi: 10.1016/j.actpsy.2012.03.003 (Q2 journal, 2-year impact factor: 2.246)
4. **Baart, M.**, & Vroomen, J. (2010). Phonetic recalibration does not depend on working memory. *Experimental Brain Research*, *203*, 575-582.
doi: 10.1007/s00221-010-2264-9 (Q2 journal, 2-year impact factor: 2.195)
3. **Baart, M.**, & Vroomen, J. (2010). Do you see what you are hearing? Cross-modal effects of speech sounds on lipreading. *Neuroscience Letters*, *471*, 100-103.
doi: 10.1016/j.neulet.2010.01.019 (Q2 journal, 2-year impact factor: 2.200)
2. Vroomen, J., & **Baart, M.** (2009). Recalibration of phonetic categories by lipread speech: Measuring after-effects after a twenty-four hours delay. *Language and Speech*, *52*, 341-350.
doi: 0.1177/0023830909103178 (Q1 journal, 2-year impact factor: 0.757)
1. Vroomen, J., & **Baart, M.** (2009). Phonetic recalibration only occurs in speech mode. *Cognition*, *110*, 254 - 259.
doi: 10.1016/j.cognition.2008.10.015 (Q1 journal, 2-year impact factor: 3.481)

Books & chapters

2. **Baart, M.** (2012). Phonetic Recalibration in audiovisual speech (Doctoral dissertation). Tilburg University, the Netherlands. Printed by Ridderprint BV, Ridderkerk, ISBN: 978-90-5335-511-4.

1. Vroomen, J., & **Baart, M.** (2012). Phonetic recalibration in audiovisual speech. In M. M. Murray and M. T. Wallace (Eds.), *The neural bases of multisensory processes.* (pp. 363-379). Boca raton (FL): CRC Press.

Published Proceedings

3. Zouridakis, G., **Baart, M.**, Stekelenburg, J. J., & Vroomen, J. (2013). Speech perception: single trial analysis of the N1/P2 complex of unimodal and audiovisual evoked responses. Proceedings of the 13th IEEE International Conference on Bioinformatics and Bioengineering (paper ID 165), Chania, Greece.
2. **Baart, M.**, Vroomen, J., Shaw, K., & Bortfeld, H. (2013). Phonetic information in audiovisual speech is more important for adults than for infants; preliminary findings. In S. Ouni, F. Berthomier, & A. Jesse (Eds.). Proceedings of the 12th International Conference on Auditory-Visual Speech Processing (pp. 61 - 64), Annecy, France.
1. Vroomen, J., van Linden, S., & **Baart, M.** (2007). Lipread aftereffects in auditory speech perception: Measuring aftereffects after a twenty-four hours delay. In J. Vroomen, M. Swerts & E. Krahmer (Eds.). Proceedings of the 7th International Conference on Auditory-Visual Speech Processing (paper P05), Hilvarenbeek, the Netherlands.

GRANT SUPPORT

Personal

2016 –	Veni The Netherlands Organization for Scientific Research (NWO) Grant ID: 275-89-027, Speech perception driven by context (245 K€)
2014 – 2016	Ayuda Formación Posdoctoral Spanish Ministry of Economy and Competitiveness (MINECO) Grant ID: FPGI-2013-15661 (50 K€)
2012 – 2014	Rubicon The Netherlands Organization for Scientific Research (NWO) Grant ID: 446-11-014, Unraveling the time-course of phonetic binding (121 K€)
2010	Fulbright visiting scholar (September – November) Fulbright Center, the Netherlands/America Commission for Educational Exchange Grant ID: Infants' speech mode (2 K€)

Other

2015 – 2017	Subprograma Estatal de Generación de Conocimiento, with Marie Pourquié (co-PI) Spanish Ministry of Economy and Competitiveness (MINECO) Grant ID: PSI2014-51874-P, El cerebro hablante: sano y multisensorial (57 K€)
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TEACHING

Graduate courses

2012 – 2016	Quantitative Methods: Basic Statistical Concepts Basque Center on Cognition Brain and Language & the University of Pais Vasco, Donostia/San Sebastián, Spain
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Undergraduate courses

2017 –	Academic Skills (Course ID 500182) Tilburg University, Tilburg, the Netherlands
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	Experimental Psychology (Course ID 530038) Tilburg University, Tilburg, the Netherlands
2007 – 2009	Research Practical in Psychology Tilburg University, Tilburg, the Netherlands

Workshops/Tutorials

Summer 2016	ERP processing and theory (with Nicola Molinaro & Sendy Caffarra) Basque Center on Cognition Brain and Language, Donostia/San Sebastián, Spain
January 2014	ERP processing and analysis (with Sendy Caffarra & Wing Yee Chow) Basque Center on Cognition Brain and Language, Donostia/San Sebastián, Spain

PROFESSIONAL ACTIVITIES AND SERVICES

Invited talks

2. Baart, M. Perceiving non-speech as speech based on a moving mouth. Findings from infants, children, and adults. Beyond Language Learning Workshop, September 29 - 30, 2016, Barcelona, Spain.
1. Baart, M. Hearing with our eyes. Brain Awareness Week, March 9 - 13, 2015, Donostia/San Sebastián, Spain.

Editorial

2014 – Frontiers in Human Neuroscience; Member of editorial board (Review editor)

Ad hoc reviewer for

Journals	Attention, Perception, & Psychophysics Brain Sciences Cerebral Cortex Developmental Science European Journal of Neuroscience Experimental Brain Research Frontiers in Psychology Journal of Cognitive Neuroscience Journal of Cognitive Psychology Journal of Experimental Child Psychology Journal of Memory and Language Journal of Phonetics Journal of the Acoustical Society of America Language Learning (Cognitive Neuroscience Series) Learning and Individual Differences Phonetica Scientific Reports
Funding bodies	2016 NSF; The National Science Foundation, Division of Behavioral and Cognitive Sciences: Linguistics
	2012 NSF; The National Science Foundation, Division of Behavioral and Cognitive Sciences: Perception, Action & Cognition
Conferences	2017 CogSci; The annual meeting of the Cognitive Science Society SNL; The annual meeting of the Society for the Neurobiology of Language
	2016 AMLaP; Architectures and Mechanisms for language processing SNL; The annual meeting of the Society for the Neurobiology of Language

- 2015 CogSci; The annual meeting of the Cognitive Science Society
- 2014 ISIS; International Conference on Infant Studies (communication and Language panel)

Conference contributions

- 36. Baart, M., & Vroomen, J. (2017). Hearing an emotional face: Visual emotion recalibrates auditory perception. Poster at the NVP Winter Conference, December 14 - 16, Egmond aan Zee, the Netherlands.
- 35. Guediche, S., Baart, M., & Samuel, A. G. (2017). Effects of Semantic Context and Crosslinguistic Interactions on Non-Native Word Recognition in Noise. Poster at the Annual Meeting of the Psychonomic Society, November 9 - 12, Vancouver, Canada.
- 34. Kartushina, N., Baart, M. & Martin, C. D. (2017). The role of stimulus variability in nonnative sound production learning: evidence from behavioral and neuronal measures. Poster at the 20th Conference of the European Society for Cognitive Psychology (ESCoP), September 3 - 6, Potsdam, Germany.
- 33. Bortfeld, H., Shaw, K. E., & Baart, M. (2017). Infant sensitivity to audiovisual timing driven by articulator-speech sound relationship. Poster at the 18th International Multisensory Research Forum (IMRF), May 19 - 22, Nashville, USA.
- 32. Baart, M. (2016). Quantifying early electrophysiological effects of audiovisual speech integration. Poster at the 22nd conference on Architectures and Mechanisms for Language Processing (AMLaP), September 1 - 3, Bilbao, Spain.
- 31. Lindborg, A., Baart, M., & Andersen, T. (2016). Speech specific audiovisual integration suppresses induced theta-band oscillations. Poster at the 17th International Multisensory Research Forum (IMRF), June 15 - 18, Suzhou, China.
- 30. Baart, M. (2015). Digitizing the electrophysiological N1 and P2 to reveal general effects of audiovisual speech integration. Poster at the 16th International Multisensory Research Forum (IMRF), June 13 - 16, Pisa, Italy.
- 29. Baart, M., & Samuel, A.G. (2014). The N200 Lexicality Effect is Unaffected by Lip-read context. Poster at the 55th Annual Meeting of the Psychonomic Society, November 20 - 23, Long Beach, USA.
- 28. Shaw, K., Gaafar, J., Baart, M., & Bortfeld, H. (2014). Infants perceptually tune to multisensory speech. Poster at the 55th Annual Meeting of the Psychonomic Society, November 20 - 23, Long Beach, USA.
- 27. Baart M., & Samuel, A.G. (2014). Early robust auditory lexical processing revealed by ERPs. Poster at the 6th Annual Meeting of the Society for the Neurobiology of Language, August 27 - 29, Amsterdam, the Netherlands.
- 26. Bortfeld, H., Shaw, K., & Baart, M. (2014). Infants can perceive audiovisual speech asynchrony (if it's asynchronous enough). Poster at the 6th Annual Meeting of the Society for the Neurobiology of Language, August 27 - 29, Amsterdam, the Netherlands.
- 25. Molnar, M., Quiñones, I., Baart, M., Caballero-Gaudes, C., Peña, M., & Carreiras, M. (2014). Neural specialization for native speech processing in young Basque-Spanish monolingual and bilingual infants. Talk at the 2nd Basque Neuroscience Meeting (Neurogune), July 9, Donostia/San Sebastián, Spain.
- 24. Shaw, K., Baart, M., & Bortfeld, H. (2014). Infants can perceive asynchronies in audiovisual speech. Talk at the 15th International Multisensory Research Forum, June 11 - 14, Amsterdam, the Netherlands.
- 23. Baart, M., & Samuel, A. G. (2014). Audiovisual speech integration is not modulated by the lexicon. Poster at the 15th International Multisensory Research Forum, June 11 - 14, Amsterdam, the Netherlands.

22. Zouridakis, G., Baart, M., Stekelenburg, J. J., & Vroomen, J. (2013). Speech perception: single trial analysis of the N1/P2 complex of unimodal and audiovisual evoked responses. Talk at the 13th IEEE International Conference on Bioinformatics and Bioengineering, November 10 - 13, Chania, Greece.
21. Molnar, M., Peña, M., Caballero, C., Baart, M., Quiñones, I., & Carreiras, M. (2013). Different neural specializations support native speech processing of young monolingual and bilingual infants. Talk at the 5th Annual Meeting of the Society for the Neurobiology of Language, November 6 - 8, San Diego, USA.
20. Bortfeld, H., Baart, M., Shaw, K., & Vroomen, J. (2013). Infants' audiovisual speech integration does not hinge on phonetic knowledge. Poster at the 5th Annual Meeting of the Society for the Neurobiology of Language, November 6 - 8, San Diego, USA.
19. Molnar, M., Peña, M., Quiñones, I., Baart, M., Caballero, C. & Carreiras, M. (2013). Monolingual and bilingual infants follow different developmental patterns in neural specialization of native speech processing. Poster at the 38th Annual Boston University Conference on Language Development (BUCLD), November 1 - 3, Boston, USA.
18. Molnar, M., Peña, M., Quiñones, I., Baart, M., Caballero, C. & Carreiras, M. (2013). Native speech processing is supported by different neural specialization in young monolingual and bilingual infants. Talk at the International Conference on Multilingualism, October 24 - 25, Montreal, Canada.
17. Molnar, M., Peña, M., Gervain, J., Baart, M., Quiñones, I., & Carreiras, M. (2013). Language discrimination abilities of young Basque-Spanish bilingual infants. Talk at the VIIth International Conference on Language Acquisition (AEAL), September 4 - 6, Bilbao, Spain.
16. Baart, M., Vroomen, J., Shaw, K., & Bortfeld, H. (2013). Phonetic information in audiovisual speech is more important for adults than for infants; preliminary findings. Talk at the International Conference on Auditory-Visual Speech Processing, August 29 - September 1, Annecy, France.
15. Molnar, M., Gervain, J., Peña, M., Baart, M., Quiñones, I., & Carreiras, M. (2013). Language discrimination in monolingual and bilingual infants of Spanish and Basque. Talk at the Workshop on Infant Language Development, June 20 - 22, Donostia/San Sebastián, Spain.
14. Baart, M., Vroomen, J., Shaw, K., & Bortfeld, H. (2013). Infants' audiovisual speech integration does not hinge on phonetic knowledge. Poster at the Workshop on Infant Language Development, June 20 - 22, Donostia/San Sebastián, Spain.
13. Baart, M., de Boer-Schellekens, L., & Vroomen, J. (2013). Lipread-induced phonetic recalibration in Dyslexia. Poster at the International Workshop on Reading and Developmental Dyslexia, May 30 - June 1, Donostia/San Sebastián, Spain.
12. Shaw, K. E., Bortfeld, H., Baart, M., & Vroomen, J. (2013). Infants' audiovisual speech integration hinges on underlying temporal dynamics: Evidence from sine wave speech. Poster at the Biennial Meeting of the Society for Research in Child Development, April 18 - 20, Seattle, USA.
11. Baart, M., Vroomen, J., Shaw, K., & Bortfeld, H. (2013). Infants' audiovisual speech integration does not hinge on phonetic knowledge. Poster at the 5th Workshop on Speech in Noise, January 10 - 11, Vitoria/Gasteiz, Spain.
10. Baart, M., Vroomen, J., Shaw, K., & Bortfeld, H. (2012). Adults rely on phonetic cues when processing audiovisual speech, infants do not. Or do they? Talk at the Annual Meeting of the Psychonomic Society, November 15 - 18, Minneapolis, USA.
9. Shaw, K., Depowski, N., Baart, M., & Bortfeld, H. (2012). Relative influence of language familiarity and congruency in early audiovisual integration. Poster at the Annual Meeting of the Psychonomic Society, November 15 - 18, Minneapolis, USA.
8. Baart, M., Vroomen, J., Shaw, K., & Bortfeld, H. (2012). Infants do not benefit from phonetic information in audiovisual speech; Evidence from Sine-wave speech. Talk at the Workshop on word recognition in monolingual and bilingual infants and adults, November 12, Donostia/San Sebastián, Spain.

7. Depowski, N., Gruenbaum, B., Shaw, K., Baart, M., & Bortfeld, H. (2012). Language specific tuning of audiovisual integration in early development. Poster at the XVIII Biennial International Conference on Infant Studies, June 7 - 9, Minneapolis, USA.
6. Baart, M., Bortfeld, H., & Vroomen, J. (2012). Preferential looking to audiovisual (sine wave) speech in infants. Talk at the Symposium on Auditory Cognition, March 2, Tilburg, the Netherlands.
5. Baart, M., & Vroomen, J. (2010). Phonetic recalibration does not depend on working memory. Poster at the 11th International Multisensory Research Forum, June 16 - 19, 2010, United Kingdom.
4. Vroomen, J., & Baart, M. (2009). Phonetic recalibration only occurs in speech mode. Poster at the 10th International Multisensory Research Forum, June 29 - July 2, New York, USA.
3. Baart, M., & Vroomen, J. (2008). Recalibration of phonetic categories by lipread speech: measuring aftereffects after a twenty-four hours delay. Poster at the 9th International Multisensory Research Forum, July 16 - 19, Hamburg, Germany.
2. Vroomen, J., & Baart, M. (2008). Lipread induced recalibration of phonetic categories: 'speech mode' vs. non-speech mode'. Talk at the Dag van de Perceptie (Perception Day), June 20, TNO, Soesterberg, the Netherlands.
1. Vroomen, J., van Linden, S. & Baart, M. (2007). Lipread aftereffects in auditory speech perception: measuring aftereffects after a twenty-four hours delay. Poster at the Auditory-Visual Speech Processing Conference, August 31 - September 3, Hilvarenbeek, the Netherlands.

Academic mentor

2017 – Tilburg University, Tilburg, the Netherlands

Member of internal training committee

2014 – 2017 Basque Center on Cognition, Brain and Language, Donostia/San Sebastián, Spain

Member of ombudsman team

2014 – 2017 Basque Center on Cognition, Brain and Language, Donostia/San Sebastián, Spain

Labmeeting coordinator

2015 – 2017 Basque Center on Cognition, Brain and Language, Donostia/San Sebastián, Spain

STUDENTS

Supervision

Graduate	2017 –	Faezeh Pourhashemi (primary supervisor: Jean Vroomen) PhD thesis on multisensory speech perception Department of Cognitive Neuropsychology, Tilburg University, Tilburg, the Netherlands
	2016 – 2017	Maria Modelska (co-supervisor: Marie Pourquié) Master thesis on speech aftereffects, self versus others Basque Center on Cognition Brain and Language & the University of Pais Vasco, Donostia/San Sebastián, Spain
	2015 – 2016	Pedro Margolles (co-supervisor: Blair Armstrong) Master thesis on orthographic and phonological interactions Basque Center on Cognition Brain and Language & the University of Pais Vasco, Donostia/San Sebastián, Spain
	Fall 2015	Alma Lindborg (primary supervisor: Tobias Andersen)

		Research internship on oscillatory activity in audiovisual speech perception Technical University of Denmark, Lyngby, Denmark
	July 2015	Janneke van Roy Introductory research internship on psycholinguistic research Tilburg University, Tilburg, the Netherlands
Undergraduate	2017 – 2018	Jorie van Haren Bachelor thesis on speech perception in context Department of Cognitive Neuropsychology, Tilburg University, Tilburg, the Netherlands

Evaluation

Graduate	2017	Ana Alves Francisco (PhD thesis) Radboud University, Nijmegen, the Netherlands
	2016	Sarah Perret, Elizabeth Hall (Master thesis)
	2014	Asier Zarraga, Saúl Villameriel, Paula Ríos (Master thesis)
	2013	Lei Zhang, Aina Casaponsa (Master thesis)