WIM POUW

Associate Principal Investigator
Donders Center for Brain, Cognition, and Behaviour, Radboud University Nijmegen

@ wim.pouw@donders.ru.nl   ☎ +31 (0) 6 300 300 71   ◉ Amsterdam, The Netherlands

○ WimPouw   ⓜ @wimpouw@social   ● wimpouw.com   ● envisionbox.org/

RESEARCH INDICES

Citations: 1910
h-index: 22
i10-index: 32
#Publications total: 53
#Pubs. (Journal only): 38
#Pubs. 1st author: 34
#Pubs. last/senior author: 8

GRANTS

- 2022 XS Open Comp. NWO
  (PI: 50k)
- 2022 DFG VICOM
  (co-PI: 453k)
- 2022 Donders Postdoc fund
  (PI: 1k)
- 2021 Erasmus+ Staff training grant
  (PI: 5k)
- 2021 Language in Int.
  (PI: 73k)
- 2020 NWO VENI
  (PI: 250k)
- 2017 NWO Rubicon
  (PI: 134k)
- 2016 Erasmus Support Programme
  (PI: 3k)
- 2015 Erasmus Support Programme
  (PI: 1k)

AWARDED FELLOWSHIPS

Donders Fellowship (2yrs)

RECOGNITIONS

Passed the interview round
ERC-Stg 2024
Shortlisted for a Max Planck
Research Group 2023

ABOUT ME

I am a cognitive scientist (age 37) at the Radboud University Nijmegen studying sound production and its coordination with body movements. My overall research program is about understanding how these multiple bodily systems can come to coordinate (e.g., synchronize) in a way that allows for novel or more stable communicative behavior to emerge. My expertise lies in quantitative approaches of body movement analysis (e.g., motion tracking methodology, time series analysis) which I combine with acoustic analyses. I combine a wide range of theoretical (4E, dynamical systems, human movement science, phonetics, psychology) and methodological (e.g., experimental psychology, data science, open science and computational reproducibility) interests in my research.

ACADEMIC WORKING EXPERIENCE

Radboud University Nijmegen | Donders Center for Brain, Cognition, and Behaviour

📅 Sep 2021 - Mar 2026   ◉ Nijmegen, The Netherlands

- Associate PI, supported by VENI grant & Donders
- Concentrations: Multimodal Communication; Vocalization; Respiration; surface EMG; Movement science & Biomechanics

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Language and Interaction consortium

📅 Dec 2022 – Jun 2024   ◉ Nijmegen, The Netherlands

- Principal Investigator
- Concentrations: Motion analyses; Multimodal Alignment in Conversation

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Radboud University Nijmegen | Donders Center for Brain, Cognition, and Behaviour

📅 Nov 2019 - Sep 2021   ◉ Nijmegen, The Netherlands

- Postdoctoral Fellow, funded by a Donders fellowship
- Concentrations: Large-scale Quantification of Multimodal Language Patterns; Multimodal Alignment in Conversation
- Supervisor: Asli Ozyurek, PhD

University of Connecticut | Center for the Ecological Study of Perception and Action

📅 Sep 2017 - Sep 2021   ◉ Storrs, USA

- Visiting Postdoctoral Researcher, self-funded (Rubicon grant)
- Concentrations: Multimodal communication, Gibsonian Psychology, Perception & Action, Complex Systems
- Supervisor: James Dixon, PhD

Erasmus University Rotterdam | Institute of Psychology

📅 Jun 2016 - Sep 2017   📍 Rotterdam, The Netherlands

- Postdoc, self-funded (Rubicon grant)
- Concentrations: Gesture & Learning, Embedded and Embodied Cognition
- Supervisor: Fred Paas, PhD

VISITING FELLOWSHIPS AND RESEARCH STAYS

Institute for Advanced Studies of the Goethe University Frankfurt | Forshungskolleg Humanwissenschaften

📅 Nov 2023 - Dec 2023   📍 Bad Homburg, Germany

- Visiting Fellow
- Concentrations: Theoretical issues in linguistics and psychology
- Senior Collaborator: prof. Cornelia Ebert

Leibniz-Zentrum Allgemeine Sprachwissenschaft (ZAS)

📅 Sep 2021 - Dec 2021   📍 Berlin, Germany

- Visiting researcher
- Concentrations: Bioacoustics and the respiratory foundations of speech
- Senior Collaborator: Susanne Fuchs, PhD

University of Wollongong | Early Start Research Institute (ESRI)

📅 Feb 2015 - Jul 2015   📍 Wollongong, Australia

- Visiting Associate Fellow
- Concentrations: Human Movement and Learning, Radically Embodied, Embedded, Enactive Cognition
- Supervisor Movement & Learning Track: Fred Paas, PhD
- Supervisor Philosophy Track: Daniel Hutto, PhD

EDUCATION

Erasmus University Rotterdam | Institute of Psychology

📅 Oct 2012 – June 2016   📍 Rotterdam, The Netherlands

- PhD Candidate
- Concentrations: Embodied/Embedded/Extended Cognition, Learning & Instruction, Instructional Animations
- Promoters: Tamara van Gog, PhD, Fred Paas. PhD, Rolf Zwaan, PhD
- Dissertation title: The cognitive function of manual activity in learning and problem solving
- Date Approved Defense Committee: 7th Oct. 2016
- Date of Defense: 16th March 2017

VU University Amsterdam | Theoretical Psychology

📅 Sep 2011 – Jul 2012   📍 Amsterdam, The Netherlands

- 1yr Master (Msc)

REVIEWS CONFERENCES

- Concentrations: Theoretical Psychology, Philosophy of Mind, Situated and Embodied Cognition, Embodied Simulation, Ecological Psychology, Phenomenology, Enactivism
- M-Thesis: Rethinking Situated and Embodied Social Psychology (grade: 9.0) – Published in *Theory and Psychology*
- Supervisor: Huib Looren de Jong, PhD
- *m*ean grade [weighted]: 8.6

VU University Amsterdam | Social Psychology

📅 Sep 2009 – Jul 2011   📍 Amsterdam, The Netherlands

- 2yr Research Master Social Psychology (Msc)
- Concentrations: Social perception; Group Dynamics; Social Neuroscience; Agency; Embodiment
- Research project: Embodiment of warmth in interpersonal relations – Published in *Acta Psychologica* (Supervisor: Hans IJzerman, PhD)
- *Cum Laude*, mean grade [weighted]: 8.4

VU University Amsterdam | Psychology

📅 Sep 2006 – Jul 2009   📍 Amsterdam, The Netherlands

- 3yr Bachelor of Science

UNDERGRADUATE ACADEMIC WORKING EXPERIENCE

VU University Amsterdam | Department of Sociology

📅 Sep 2010 – Jul 2012   📍 Amsterdam, The Netherlands

- KNAW student assistant
- Project: Collective action in emerging neighborhoods – Published in *Journal of Social en Political Psychology*
- Supervisor: Jacqueline van Stekelenburg, PhD

VU University Amsterdam | Development Psychology

📅 Sep 2010 – Jul 2012   📍 Amsterdam, The Netherlands

- Test coordinator
- Supervisor: Barbara Menting

TEACHING EXPERIENCE & CODING WORKSHOPS

Master Class Visual Communication - interactive lectures on theoretical linguistics and applications of social signal processing in signed and spoken language | Goethe University, Theoretical Linguistics

📅 2023 – 2024   📍 Frankfurt, Germany

2nd year Bachelor course Theoretical Psychology - workgroups and advisory role course content | Radboud Faculty of Social Science, Psychology

📅 2023 – 2024   📍 Nijmegen, The Netherlands

Supervisor Master Theses | Donders Center for Brain, Cognition, and Behavior

REVIEWS GRANT AGENCIES

Agence de Nationalle de La Recherche (ANR)

SERVICE

Editorial Board Member Radboud University Press (upcoming)

Labs Committee Member Donders

Coordinator ViCom Data Network (current)

Organizer GESPIN2023 (current)

Vice-chairman student union SRVU (2010-2011)

📅 2022 – 2023   📍 Nijmegen, The Netherlands

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Summerschool 2023 | Donders Center for Brain, Cognition, and Behavior

📅 2022 – 2023   📍 Nijmegen, The Netherlands

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Co-coordinator Envision Bootcamp 2-day workshop | Hasso Plattner Institute

📅 2021   📍 Potsdam, Germany

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Supervisor Master Theses | Donders Center for Brain, Cognition, and Behavior

📅 2022 – 2023   📍 Nijmegen, The Netherlands

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Workgroup Tutor Msc Course 'Applied Multivariate Data Analysis' | Erasmus University Rotterdam

📅 2016 – 2017   📍 Amsterdam, The Netherlands

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Co-coordinator Bsc Course 'History and Philosophy of Science' | Erasmus University Rotterdam

📅 2014 – 2015   📍 Rotterdam, The Netherlands

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Workgroup Tutor Bsc Course 'History and Philosophy of Science' | Erasmus University Rotterdam

📅 2013 – 2015   📍 Rotterdam, The Netherlands

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Supervisor Bachelor and Master Theses | Erasmus University Rotterdam

📅 2013 – 2017   📍 Rotterdam, The Netherlands

INVITED LECTURES & RECORDED TALKS (SELECTED)

🖥 'Biophysics of multimodal communication and its relevance for ecological psychology' Invited keynote at 'Annual Groningen Lectures on Ecological Psychology'

📅 2023   📍 Groningen, NL

🖥 'Movements of significance.' Invited presentation at 'Human Interactivity and Language Lab Seminars'

📅 2023   📍 Online

'Multimodality in speech' Invited seminar at summer school 'Coping with the complexity in speech production and perception'

📅 2022   📍 Chorin, Germany

🖥 'Biomechanics as the primordial basis of co-speech gesture.' Presentation at The 7th International Conference "Ways to Protolanguage" (Protolang7)

📅 2021   📍 Online

🖥️ 'Multimodal Language Production' Invited lecture Mind, Technology, and Society lecture Series | University of California Merced

📅 2019   📍 Merced, USA

PUBLICATIONS

1. Leonetti, S., Ravignani, A., Pouw, W. (2024) A cross-species framework for classifying sound-movement couplings.
Neuroscience & Biobehavioral Reviews. 10.1016/j.neubiorev.2024.105911

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2. Eigsti, I., Pouw, W. (2024). Deliberate synchronization of speech and gesture: Effects of neurodiversity and development. **Language and Cognition.** doi: 10.1371/journal.pcbi.1012222

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3. Burchardt, L. S., Van de Sande, Y., Kehy, M., Gamba, M., Ravignani, A., Pouw. W (2024). A toolkit for the dynamic study of air sacs in siamang and other elastic circular structures.
PLOS Computational Biology. doi: 10.1371/journal.pcbi.1012222

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4. Van de Sande, Pouw*, W., Southern*, L. (accepted). Automated recognition of grooming behavior in wild chimpanzees. **In: Proceedings of the Annual Meeting of the Cognitive Science Society 2024.** *shared supervision

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5. Kadavá, Š., Cwiek, A., Fuchs, S., Pouw, W. (accepted). What do we mean when we say gestures are more expressive than vocalizations? An experimental and simulation study. **In: Proceedings of the Annual Meeting of the Cognitive Science Society 2024.**

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6. Ghaleb, E., Rasenberg, M., Pouw, W., Holler, J., Toni, I., Özyürek, A., Fernández, R. (accepted). Analysing cross-speaker convergence through the lens of automatically detected shared linguistic constructions. **In: Proceedings of the Annual Meeting of the Cognitive Science Society 2024.**

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7. Werner, R., Selen, L., Pouw, W. (2024). Arm movements increase acoustic markers of expiratory flow. **In: Proceedings of International Conference of Speech Prosody (Speech Prosody 2024).**

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8. Pouw, W., Burchardt, L. S., Werner, R., Selen, L. (accepted). Movement-related muscle activity and kinetics affect vocalization amplitude. **In: Proceedings of the International Conference on the Evolution of Language (Evolang2024).**

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9. Weston, H., Pouw, W., Fuchs. S. (in press). On the relation between leg-motion rate and speech tempo during submaximal cycling exercise. **Journal of Speech, Hearing, and Language Research.** doi: 10.1044/2023_JSLHR-23-00178

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10. Ghaleb, E., Burenko, I., Rasenberg, M., Pouw, W., Uhrig, P., Holler, J., Toni, I., Ozyurek, O., Fernández, R. (2023). Co-Speech gesture detection through multi-phase sequence labeling. **In: IEEE/CVF Winter Conference on Applications of Computer Vision (WACV).** doi: 10.48550/arXiv.2308.10680
⬇️ Open Access (preprint)

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11. Gregori, A., Amici F., Brilmayer, I., Cwiek, O., Fritzsche L., Fuchs, S., Henlein, A., Herbort, O., Kügler, F., Lemanski, J., Liebal, K., Lücking A., Mehler, A., Nguyen, K. T., Pouw. W., Prieto, P., Rohrer, P., Sanchez-Ramon, P.G., Schulte-Rüther, M., Schumacher, P., Schweinberger, S., Struckmeier, V., Trettenbrein P., von Eiff, C. (2023). A roadmap for technological innovation in multimodal communication research. **In: Duffy, V.G. (eds) Digital Human Modeling and Applications in Health, Safety, Ergonomics and Risk**

Management. HCII 2023. Lecture Notes in Computer Science, vol 14029. pp. 402-438. Springer, Cham.
doi: 10.1007/978-3-031-35748-0_30
⬇ Open Access (Author Copy)

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12. Jenkins**, T., Pouw**, W. (2023). A kinematic-acoustic analysis of gesture-speech coupling in aphasia. **Journal of Experimental Psychology: General.**
doi: 10.1037/xge0001346 **Shared first author
🗄 Open Data & Code OSF | ⬇ Open Access (Author Copy)

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13. Kadavá, Š., Cwiek, A., Fuchs, S., Pouw, W. (2023). Is gesture-speech physics at work in rhythmic pointing? Evidence from Polish counting-out rhymes. **Proceedings of the 20th International Congress of Phonetic Sciences (ICPhS),** Prague, 7-8 August 2023.
🗄 Open Data & Code OSF | ⬇ Open Access (Postprint)

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14. Owoyele, B., Trujillo, J., De Melo, G., Pouw, W. (2022). Masked-Piper: Masking personal identities in visual recordings while preserving multimodal information. **SoftwareX** . doi: 10.1016/j.softx.2022.101236
⌨ Code Github | ⬇ Open Access

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15. Pouw, W., Fuchs, S. (2022). Origins of vocal-entangled gesture. **Neuroscience and Biobehavioral Reviews.** doi: 10.1016/j.neubiorev.2022.104836
🗐 Press coverage| ⬇ Open Access

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16. Eijk, L., Rasenberg, M, Arnese, F., Blokpoel, M., Dingemanse, M., Doeller, C., Ernestus, M., Holler, J., Milivojevic, B., Ozyurek, A., Pouw, W., van Rooij, I., Schriefers, H., Toni, I., Trujillo, J., Bogels, S. (2022). The CABB dataset: A multimodal corpus of communicative interactions for behavioural and neural analyses. **NeuroImage.**
doi: 10.1016/j.neuroimage.2022.119734
⬇ Open Access

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17. Pouw, W., Harrison, S. J., Dixon, J. A. (2022). The importance of visual control and biomechanics in the regulation of gesture-speech synchrony for an individual deprived of proprioceptive feedback of body position.
Scientific Reports. doi: 10.1038/s41598-022-18300-x
🗄 Open Code OSF | ⬇ Open Access

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18. Pouw, W., Dixon, J. A. (2022). What you hear and see specifies the perception of a limb-respiratory-vocal act (commentary Bosker & Peeters, 2022). **Proceedings of the Royal Society B.** doi: rspb.2022.1026
⬇ Open Access

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19. Pearson**, L. , Pouw**, W.(2022). Gesture-vocal Coupling in Karnatak Music Performance: A Neuro-bodily Distributed Aesthetic Entanglement. **Annals of the New York Academy of the Sciences.** doi: 10.1111/nyas.14806 **Shared first author
🗄 Open Data & Code OSF | ⬇ Open Access

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20. Pouw, W. Dingemanse, M., Motamedi, Y., Ozyurek, A. (2022). A systematic investigation of gesture kinematics in evolving manual languages in the lab.
Cognitive Science. doi: 10.1111/cogs.13014
⌨ Open Data & Code Github | Ⓜ R-Markdown Notebook | ⬇ Open Access

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21. Pouw, W., Proksch, S., Drijvers, L., Gamba, M., Holler, J., Christopher, K., Scheafer, R., Wiggins, G. (2021). Rhythm interaction when communication goes multimodal. **Transactions of the Royal Society B: Biological Sciences.** doi: 10.1098/rstb.2020.0334

⬇ Open Access (Postprint)

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22. Pouw, W., de Wit, J., Bögels, S., Rasenberg, M., Milivojevic, B., Ozyurek, A. (2021). Semantically related gestures move alike: Towards a distributional semantics of gesture kinematics. **In: Duffy V.G. (eds) Digital Human Modeling and Applications in**

Health, Safety, Ergonomics and Risk Management. Human Body, Motion and Behavior. HCII 2021. Lecture Notes in Computer Science, vol 12777. Springer, Cham. doi: 10.1007/978-3-030-77817-0_20
🛢 Open Data & Code OSF | ⬇ Open Access (Author Copy)

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23. Brown, A., Pouw, W., Brentari, D., Goldin-Meadow, S. (2021). When hands are used to communicate they are less susceptible to illusion than when they are used to estimate. **Psychological Science.** doi:10.1177/0956797621991552
🛢 Open Data & Code OSF | ⬇ Open Access (Author Copy)

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24. Pouw, W., de Jonge-Hoekstra, L., Harrison, S., J., Paxton, A., Dixon, J. A. (2021). Gesture-speech physics in fluent speech and rhythmic upper limb movements. Annals of the New York Academy of the Sciences .doi: 10.1111/nyas.14532
🛢 Open Data OSF | M↓R-Markdown Notebook | ⬇ Open Access

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25. Pouw, W., Paxton, A., Harrison, S. J., Dixon, J. A. (2020). Reply to Ravignani and Kotz: Physical impulses from upper-limb movements impact the respiratory-vocal system (reply to Ravignani & Kotz, 2022). **PNAS.** doi: 10.1073/pnas.2015452117
⬇ Open Access

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26. Pouw, W., Harrison, S. J., Esteve-Gibert, N., Dixon, J.A. (2021). Energy flows in gesture-speech physics: The respiratory-vocal system and its coupling with hand gestures. **The Journal of the Acoustical Society of America** . doi: 10.1121/10.0001730
📄 Pre-registration | 🛢 Open Data & Code OSF | ⬇ Open Access (Author Copy)

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27. Hostetter, A., Pouw, W., Wakefield, E. (2021). Learning from gesture and action: An investigation of memory for where objects went and how they got there. **Cognitive Science** . doi: 10.1111/cogs.12889
📄 Pre-registration | 🛢 Open Data & Code OSF | ⬇ Open Access


28. Pouw, W., Jaramillo, J., Dixon, J.A., Ozyurek, A. (2020). Quasi-rhythmic features of hand gestures show unique modulations within languages: Evidence from bilingual speakers. **Proceedings of the 7th meeting of Gesture and Speech in Interaction - GESPIN2020** .
⬇ Open Access (Author Copy)

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29. Dowell, C., Hajnal, A., Pouw, W. , Wagman, J. (2020). Visual and haptic perception of affordances of feelies. **Perception** . doi: 10.1177/0301006620946532
⬇ Open Access (Author Copy)

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30. Pouw, W., Paxton, A., Harrison, S. J., Dixon, J. A. (2020). Acoustic information about upper limb movement in voicing. **PNAS** . doi: 10.1073/pnas.2004163117
📄 Pre-registration | 🛢 Open Data & Code OSF | ⬇ Open Access

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31. Pouw**, W., Trujillo**, J.P., Dixon, J.A. (2020). The quantification of gesture-speech synchrony: An overview and validation of video-based motion tracking. Behavior Research Methods . doi: 10.3758/s1342 **Shared first author
🛢 Open Data OSF | ⬇ Open Access

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32. Pouw, W., Dixon, J. A. (2020). Gesture networks: Introducing dynamic time warping and network analysis for the kinematic study of gesture ensembles. **Discourse Processes** . doi: 10.1080/0163853X.2019.1678967
🛢 Open Data and Code OSF | ⬇ Open Access

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33. Pouw, W., Harrison, S. J., Dixon, J. A. (2020). Gesture–speech physics: The biomechanical basis for the emergence of gesture-speech synchrony. **Journal of Experimental Psychology: General** . doi: 10.1037/xge0000646
📄 Pre-registration | 🛢 Open Data and Code OSF | ⬇ Open Access (Author Copy)

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34. Pouw, W., Dixon, J. A. (2020). Entrainment and modulation of gesture-speech synchrony under delayed auditory feedback. **Cognitive Science** . doi: 10.1111/cogs.12721
📄 Pre-registration | 🗄 Open Data and Code OSF | ⬇ Open Access (Author copy)

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35. Pouw**, W., Rop**, G., de Koning, B., Paas, F. (2019). The cognitive basis for the split-attention effect. **Journal of Experimental Psychology: General** .
doi: 10.1037/xge0000578 **Shared first authorship
📄 Pre-registration (exp. 2) | 🗄 Open Data and Code OSF | ⬇ Open Access (Institute Repo)

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36. Kamermans, K. L.**, Pouw**, W., Fassi, L., Aslanidou, A., Paas, F, Hostetter, A. (2019). Reinterpretation in multimodal imagery and the role of manual enactment. **Acta Psychologica** . doi: 10.1037/xge0000578 **Shared first authorship
🗄 Open Data OSF | ⬇ Open Access (Institute Repo)

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37. Pouw, W., Dixon, J. A. (2019). Quantifying gesture-speech synchrony. **Proceedings of the 6th meeting of Gesture and Speech in Interaction - GESPIN6** .
doi: 10.17619/UNIPB/1-815
📄 Corrigendum | ⬇ Open Access

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38. Kamermans**, K., Pouw**, W., Mast, F. W., Paas, F (2019). Reinterpretation in Visual Imagery Is Possible without Visual Cues: A Validation of Previous Research. **Psychological Research** . doi: 10.1007/s00426-017-0956-5 **Shared first authorship
🗄 Open Data OSF | ⬇ Open Access

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39. Pouw, W.**, Wassenburg, S.**, de Koning, B., Hostetter, A., Paas, F (2018). Does gesture strengthen sensorimotor knowledge of objects? The case of the size-weight illusion. **Psychological Research.** . doi: 10.1007/s00426-018-1128-y **Shared first authorship
📄 Pre-registration | 🗄 Open Data & Code OSF | ⬇ Open Access

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40. Eielts**, C., Pouw**, W., Ouwehand, K., Van Gog, T., Zwaan, R. A., Paas, F (2018). Co-thought gesturing supports more complex problem solving in subjects with lower visual working-memory capacity. **Psychological Research** . doi: 10.1007/s00426-018-1065-9 **Shared first authorship
🗄 Open Data OSF | ⬇ Open Access

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41. Pouw, W. Gog, T., Zwaan, R. A., Agostinho, S., Paas, F (2018). The role of co-thought gestures, visual working memory, and task complexity in problem-solving: A replication study with children (8-12 yrs). **Applied Cognitive Psychology** . doi: 10.1002/acp.3380
📄 Pre-registration | 🗄 Open Data OSF | ⬇ Open Access (Postprint)

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42. Pouw, W., Aslanidou, A., Kamermans, K., Paas, F (2017). Is ambiguity detection in haptic imagery possible? Evidence for enactive imaginings. **In G. Gunzelmann, A. Howes, T. Tenbrink, & E. J. Davelaar (Eds.), Proceedings of the 39th Annual Conference of the Cognitive Science Society (pp. 2925-2930). Austin, TX: Cognitive Science Society.**
🗄 Open Data OSF | ⬇ Open Access

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43. Pouw, W. T. J. L., Van Gog, T., Zwaan, R. A., Paas, F (2017). Are gesture and speech mismatches produced by an integrated gesture-speech system? A more dynamically embodied perspective is needed for understanding gesture-related learning (Commentary Goldin-meadow & Brentari, 2017) **Behavioral and Brain Sciences** .
doi: 10.1017/S0140525X15003039
⬇ Open Access (Author Copy)

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44. Van Wermeskerken, M., Fijan, N., Eielts, E. C., Pouw, W. (2016). Co-thought gesturing supports more complex problem solving in subjects with lower visual working-memory capacity. **Applied Cognitive Psychology** . doi: 10.1002/acp.3256
⬇ Open Access (Postprint)

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45. Pouw, W., van Gog, T., Zwaan, R. A., Paas, F. (2016). Augmenting Instructional Animations with Sensori-motor Information to Help Children Learn about Physical Systems **Frontiers in Psychology** . doi: 10.3389/fpsyg.2016.00860
⬇ Open Access)

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46. Pouw, W. T. J. L. Hostetter, A. (2016). Gesture as predictive action. **Reti, Saperi, Linguaggi: Italian Journal of Cognitive Sciences** . doi: 10.12832/83918
⬇ Open Access (Postprint)

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47. Pouw, W., Eielts, E. C., van Gog, T., Zwaan, R. A., Paas, F. (2016). Does (non-)meaningful sensori-motor engagement promote learning with animated physical Systems? **Mind, Brain & Education** . doi: 10.1111/mbe.12105
⬇ Open Access (Postprint)

48. Pouw, Mavilidi, M., Van Gog, T., Paas, F. (2016). Gesturing during mental problem solving reduces eye movements, especially for individuals with lower visual working memory capacity. **Cognitive Processing** . doi: 10.1007/s10339-016-0757-6 ⬇ Open Access

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49. Pouw, W. T. J. L., de Jong, H (2015). Rethinking situated and embodied social psychology. Gesturing during mental problem solving reduces eye movements, especially for individuals with lower visual working memory capacity. **Theory and Psychology** . doi: 10.1177/0959354315585661 ⬇ Open Access (Postprint)

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50. Pouw, W., De Nooijer, J. A., Van Gog, T., Zwaan, R. A., Paas, F. (2014a). Toward a more embedded/extended perspective on the cognitive function of gestures. **Frontiers in Psychology** . doi: 10.3389/fpsyg.2014.00359 ⬇ Open Access

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51. Pouw, W., Van Gog, T., Paas, F. (2014b). An embedded and embodied cognition review of instructional manipulatives.
Educational Psychology Review . doi: 10.1007/s10648-014-9255-5 ⬇ Open Access

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52. Van Stekelenburg, J., Petrovic, I., Pouw, W., Limburg, N., Nederlof, N. (2013). From correlation to causation: The cruciality of a collectivity in the context of collective action. **Journal of Social and Political Psychology** . doi: 10.5964/jspp.v1i1.38
⬇ Open Access

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53. IJzerman, H., Gallucci, M., Pouw, W., Weissgerber, S. C., Van Doesum, N. J., Williams, K. D. (2012). Cold-blooded loneliness: Social exclusion leads to lower finger temperatures. **Acta Psychologica** . doi: 10.1016/j.actpsy.2012.05.002
🗄 Open Data & Code OSF | ⬇ Open Access (Postprint)