MultiplEYE

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MULTIPLEYE NEWSLETTER

ISSUE no. 6 - November 2026

Scan this QR code or click the link below to watch our new informative video.

MultiplEYE -Video

Newsletter compiled by

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Uendi Çerma *Newsletter Design*

www.multipleye.eu

Dear reader,

Welcome to the sixth edition of the MultiplEYE newsletter. We're excited to share the latest developments, activities and research highlights from our action. In this issue, you'll find updates on the ongoing **data collection** as well as key events, including the **MultiplEYE workshops and meetings**, **recent Short-Term Scientific Mission (STSM) experiences**, and **the MultiplEYE final conference**.

As most of you know, the COST Action has been **extended until the end of March 2027** (the funding, however, has not been extended). Even though the official COST Action period is winding down, the work continues, and our entire network is still abuzz with activity with new data coming in every week.

As you read this newsletter, we hope you feel as proud of what we are accomplishing together as we do.

Warm regards,
The MultiplEYE Core Team

MultiplEYE

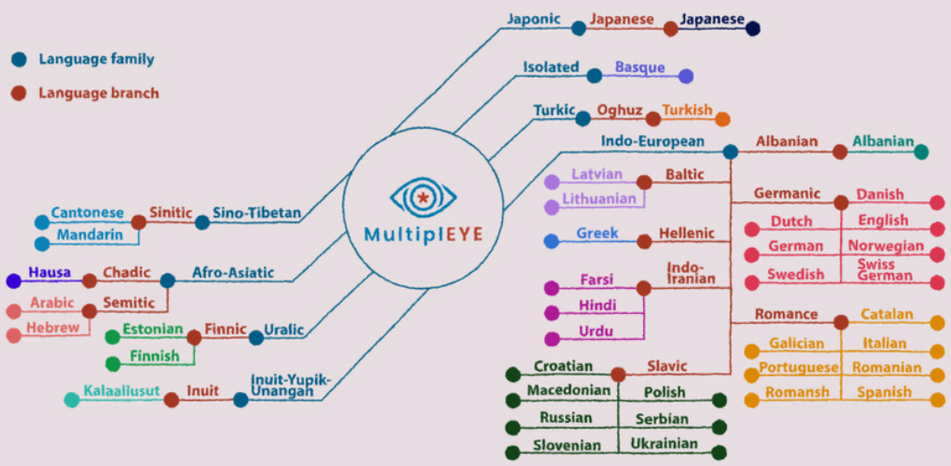
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* Data collection update

22 laboratories have completed data collection across **17 languages**! Data collection is ongoing for **20 more laboratories** covering an **additional 14 languages**.





Stimulus materials have been prepared for **39 languages across eight language families** - with more to come!

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* MultiplEYE recognised

MultiplEYE Presentation at the COST Conference 2026: The Role of Networks in European Research

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CA21131 — Enabling Multilingual Eye-Tracking data Collection for Human and Machine Language Processing Research

Understanding how we read is fundamental to **linguistics, language technology and AI, and education**. Studying reading across languages requires data that reflect Europe's linguistic diversity and a shared method for comparing reading behaviour across languages.

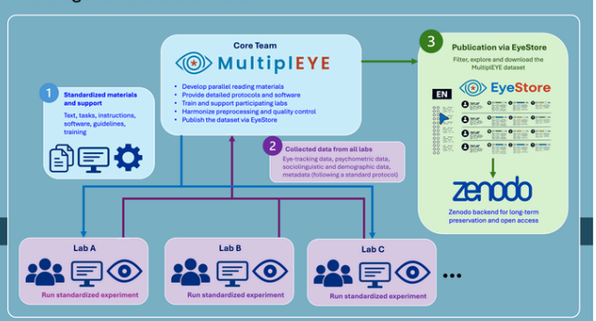
MultiplEYE is a large-scale eye-tracking-while-reading study spanning **40+ languages**. Its **fully parallel design** enables direct comparison of reading behaviour across languages: participants read the same texts, while laboratories follow a **shared experimental protocol** and use harmonised frameworks for preprocessing, quality control, and data storage. This creates a uniquely large and comparable resource for studying reading across languages.

Collaboration

Building capacity through knowledge and skills transfer

Achievements

- Built a **novel, multilingual, fully parallel, open eye-tracking corpus** through cross-country collaboration.
- **Shared eye-tracking expertise** in data collection, analysis, software development, and data management, with a strong focus on **training junior researchers**.
- Combined **local linguistic expertise** with rigorous **cross-site standardisation.**
- Joint development of **software, training resources, publications, and follow-up projects.**



Advancing Standards through Shared Infrastructure

Embracing diversity, ensuring consistency

Achievements

- Developed **shared experimental software and protocols** for lab setup, data collection, documentation, and quality control.
- Developed **training and troubleshooting resources**, complemented by researcher exchanges to share expertise and **train junior members**.
- Developed **standardised multilingual cognitive and reading-comprehension assessments**.
- **Harmonised data structures**, **meta-data ontologies**, and **standardised documentation**.
- Developed **training and troubleshooting resources**, complemented by researcher exchanges to share expertise and **train junior members**.

Desired Additional Support from COST

- Support for the **long-term maintenance** of open-science resources and website(s)
- Support for **research data management**.
- Funding for **dedicated personnel** supporting the central goals of the Action, including **data stewards**, **research software developers**, and **scientific coordinators**.
- Support for **dissemination of collected data and research results**, including the development and maintenance of databases and data-sharing platforms.
- Funding for **legal expertise** to address legal uncertainties in large-scale international collaborations.



Open Science

Developing Tools and Standards for Transparent and Reproducible Research

Achievements

- Made all the resources FAIR-compliant.
- Established **open-science best practices** and **metadata schemes** for eye-tracking-while-reading research, enabling transparent data sharing and informed data reuse.
- Developed **open-source data-processing infrastructure** (peyepline, pymovements) enabling transparent, configurable, and reproducible workflows.
- Developed **EyeStore** – the first large-scale platform for freely sharing and sustaining eye-tracking-while-reading data.

Future Use & Sustainability

Foundation for Continued Impact

- A large-scale, multilingual **eye-tracking resource** available for continued reuse and expansion.
- **Open-science best-practices** for eye-tracking-while-reading research.
- Domain-specific **infrastructure for sharing reading data**.
- **Open-source tools and workflows** for continued data collection, processing, and analysis.



Potential

- Expansion with **new languages** and **participant groups** (e.g., ageing, multilingual, and clinical populations).
- Advancement of **linguistic, psychological, and language-technology research** using the MultiplEYE corpus.
- **Reuse** and **further development** of **software** and data-sharing **infrastructure**.

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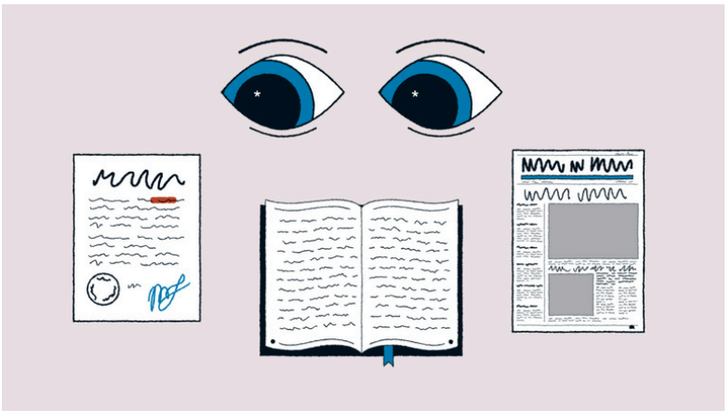
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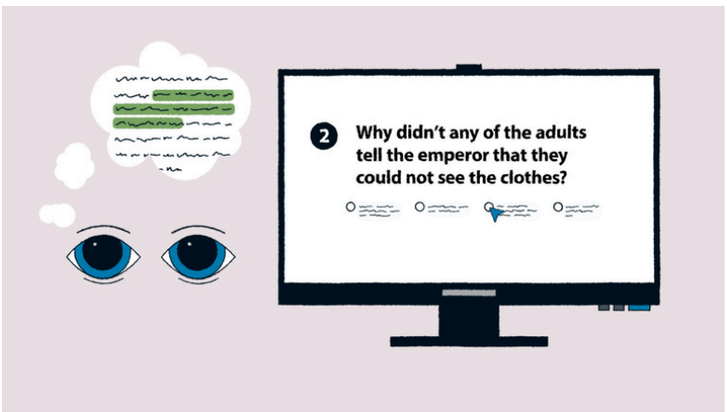
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* New video about MultiplEYE

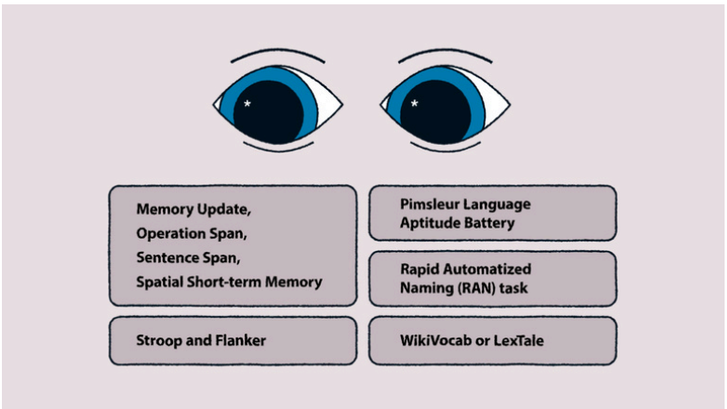
In collaboration with Adventure Films, we have produced a new animated video covering (among other things)...



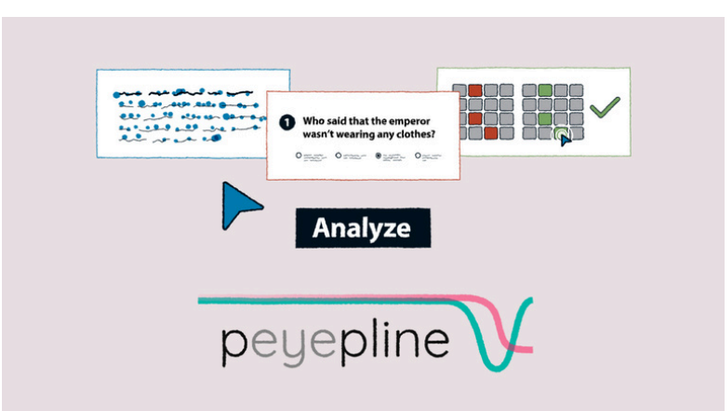
The stimulus materials



The comprehension assessment



The psychometric tests



The open source software



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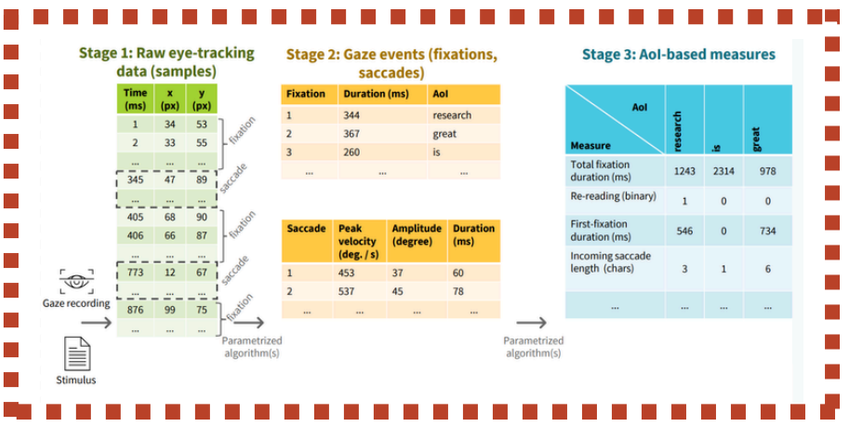
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* EyeStore

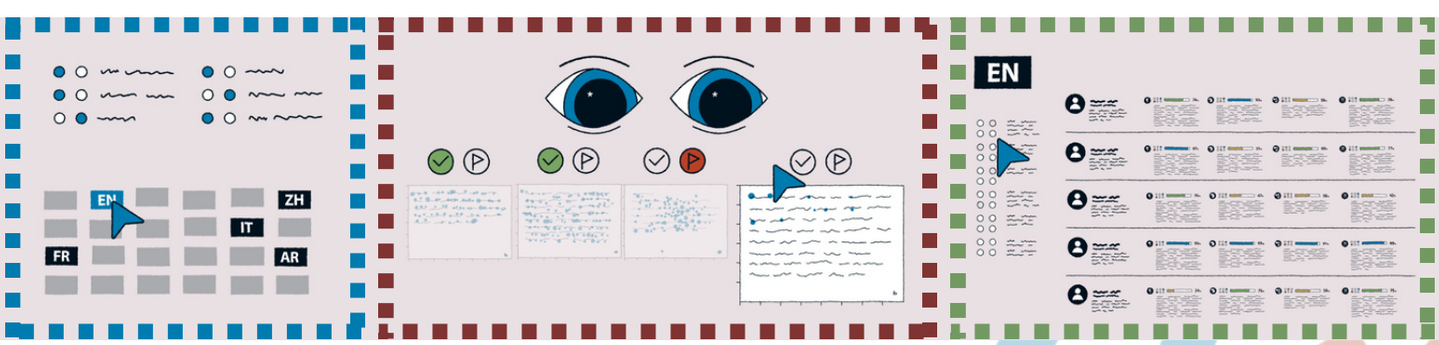
In early 2027, we plan to launch EyeStore, a living, open repository of the MultiplEYE data featuring extensive metadata and filtering options.

Datasets include documentation, metadata, quality reports, and a transparent, reproducible, standardized **preprocessing pipeline**



EyeStore will be hosted on zenodo and will rely on the open source python packages pymovements and peyepline which are developed and maintained by MultiplEYE members!

On EyeStore, you will be able filter by **language**, text genre, eye-tracker, while accessing detailed session-level participant data: **calibration quality**, session interruptions, and **comprehension scores**



OVERVIEW OF PAST ACTIVITIES

Preprocessing pipeline meeting in Potsdam (Germany), February 17-20 2026

"Participating in the recent workshop in Potsdam was a highly valuable professional experience. During the event, we conducted an in-depth review of the data preprocessing pipeline for the MultiplEYE project.
I would like to express my sincere appreciation to the organizing team, led by Deborah Jakobi. Despite my limited background in Python programming, the structured guidance and comprehensive support allowed me to navigate the process with confidence.
The training materials were prepared with attention to detail, that all project members, regardless of their technical proficiency, will be able to preprocess their data independently. This standardization is a vital step toward ensuring the highest level of data quality and consistency across the entire MultiplEYE project."
- Zofia Maciąg

WG1&3 Meeting on the Multilingual Psychometric Test Battery in Tartu (Estonia), May 6-8 2026

During the meeting, participants discussed the structure of the test battery, the processing pipeline, and the data collected so far. A practical part of the programme included the presentation of already analysed data from four countries, mainly in the form of graphs and visual summaries. This allowed participants to see the current structure of the collected data, compare preliminary results, and discuss possible directions for further analysis. The meeting also included discussions on the validation study, literature review, and possible analytical approaches.



Gaze4NLP workshop at LREC in Palma (Spain), May 12 2026



The workshop focused on the intersection of eye-tracking methodologies and natural language processing. Presentations were invited to explore how eye movement data can enhance our understanding of language processing, improve NLP models, and lead to more human-centered language technologies. The organisers particularly encouraged submissions exploring the relationship between eye-tracking data and large language models, as well as multimodal approaches combining gaze, text, and other signals.

The Third ETRA-MultiplEYE Workshop in Marrakech (Morocco), June 4 2026



The workshop was organized to gather researchers working in a broad area concerning the analysis of the way people move their eyes while reading. The aim of the workshop was to bring together data scientists, psychologists, and linguists and give them an opportunity to exchange their ideas.
Talks were given by **Roberto Manduchi, Kristina Cergol, Daniel G. Krakowczyk, Dan Zhang, Muhammed Milani, Mircea Mihai Marin,** and **Sabbir Hossain**.

4th Workshop on Eye Movements and Reading Comprehension in Koblenz (Germany), June 18-20 2026

Around 40 researchers from eleven countries across North America, the Middle East, Asia and Europe gathered to present and discuss their work on eye movements in reading and on the cognitive processes involved in understanding written language, and to develop it further together. Topics included the use of webcam-based eye tracking to study reading, reading in specific populations such as deaf children and expert readers, and the prediction of reading comprehension from eye-movement data.

Three invited speakers shaped the program. Ido Roll (Technion – Israel Institute of Technology) spoke on assessing cognitive abilities from process data, Kate Nation (University of Oxford) highlighted how the language input gained from reading books influences reading development, and Sascha Schroeder (University of Goettingen) addressed the relationship between developing readers' eye movements and reading comprehension. A lively panel discussion brought the scientific program to a close.

Beyond the talks, the workshop offered ample opportunity for informal exchange and for starting new research collaborations. Among the social activities was an excursion to Boppard on the Rhine, including a hike and a cable car ride.



Preprocessing pipeline meeting in Zürich (Switzerland), July 20-22 2026

This workshop laid the groundwork for upcoming releases of the pymovements library. Work centered on fixation drift correction, event visualization, BIDS conformity, and improving the existing reading measures, with a new background AOI measure.



THE MULTIPLEYE FINAL CONFERENCE

Skopje (North Macedonia), August 20-21 2026

During two very hot days in Skopje, the conference participants were spoiled with both high-quality scientific content and thoughtful planning by the local organizers, Sasho Gramatikov and Zorica Karapancheva. Even though it was the final conference, it did not feel like the end of MultiplEYE – instead, the atmosphere was energizing, and there was both a great sense of achievement and momentum.

The talks and posters – and especially the excellent keynote talks by Elizabeth Schotter, Noam Siegelman, Ekta Sood, and Jochen Laubrock – expanded what we know about eye-tracking-while-reading and its applications. The topics of the keynote talks were at the methodological and theoretical cutting edge of research and spanned from insights from the reading behaviour of deaf readers over statistical learning as applied to eye-tracking to the integration of NLP and eye movements and the operationalization and use of predictability in reading.

In two dedicated MultiplEYE sessions, members of MultiplEYE presented various aspects of our collective project. The enormous efforts poured into MultiplEYE were awe-inspiring, as was the rich output in terms of resources, data, and infrastructure. The MultiplEYE session talks covered the multilingual annotation of the texts, the development and implementation of the comprehension questions, the psychometric test battery, the preprocessing pipeline, and EyeStore, an open repository where all the data and metadata from the MultiplEYE labs will be made accessible to interest researchers. It was very clear how much thought and discussion went into every single decision, from distractor spans to filtering options to co-reference annotations.






Even with the focus on the MultiplEYE project, the variety of the other talks and posters was also inspiring – covering as diverse topics as reading in aphasia, coherence illusions, modelling of eye movement data, fNIRS measurements-while-reading, text simplification, irony processing, and much more. Notably, several talks and posters presented analyses of MultiplEYE data, and it was wonderful to see all these fruits of our collective efforts over the last years!

Overall, the MultiplEYE final conference felt like a family reunion even though some had only met virtually before the conference. The local organisers treated us to a walking tour of the city and a lovely conference dinner at a traditional tavern with a Macedonian band – and dancing!

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Tenth Summer School on Statistical Methods for Linguistics and Psychology in Potsdamn (Germany), August 24-28 2026



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SHORT TERM SCIENTIFIC MISSIONS (STSM)

Short term scientific missions (STSMs) consist of a visit of a host organization located in a different country than the country of affiliation by a Researcher or Innovator for the specific work to be carried out and for a determined period of time (please read the COST ANNOTATED RULES). These Missions are aimed at strengthening the existing networks by allowing scientists to go to an institution or laboratory in another COST Country to foster collaboration, to learn a new technique or to take measurements using instruments and/or methods not available in their own institution/laboratory.

SOME TESTIMONIALS

Ema Marušić is a first-year PhD student at the University of Zagreb, with a Master's degree in psychology, currently focusing on psycholinguistics. She has been involved in the MultiplEYE data collection in Zagreb for over a year and has completed two STSMs as part of the project, helping other labs with data collection as well.



I visited Lugano from 15–22 February 2026 to help the lab there join the data collection for MultiplEYE. This included helping with the experiment setup, preparing the room and equipment, resolving technical and logistical issues, as well as training the experimenters and sharing everything I have learned during my experience in the project.
I would like to thank Prof. van der Plas for being a wonderful host, and Prajit, Rossella and Diego for being great company and colleagues for the week. Best of luck to the whole team with the data collection!
Lugano is a beautiful city, as is the University, and the people I met were a pleasure to work with. I am hoping to stay in touch with them for future projects, and I am really grateful to the MultiplEYE team for making this STSM possible, it was both enjoyable and fruitful!



Solvej Wilbrandt Jæger recently finished her MA in Linguistics at the University of Copenhagen and is currently employed as a research assistant collecting MultiplEYE eye-tracking data for Kalaallisut and Danish.

This spring, I spent three weeks in Nuuk, Greenland, as part of a MultiplEYE STSM. The purpose of the STSM was to collect eye-tracking data from native speakers of Kalaallisut (Greenlandic).

With the support of my collaborator Ivalo Mathiassen at Ilisimatusarfik, the University of Greenland, I recruited participants and conducted eye-tracking experiments using the MultiplEYE protocol. Thanks to a dedicated office space at the university, we had great conditions for data collection.

Beyond the data collection itself, the visit was a great opportunity to connect with colleagues in Greenland. Between sessions, I got to enjoy Nuuk's stunning landscape and the beautiful setting of Ilisimatusarfik, which offers wonderful views of the surrounding mountains and fjords.

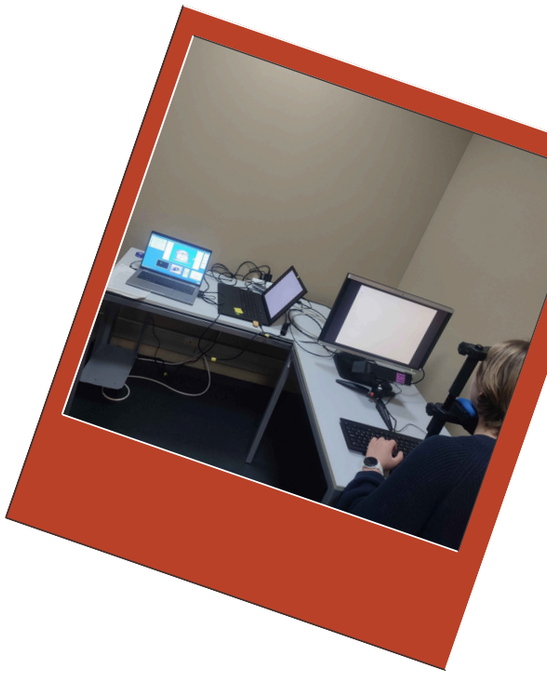
A big thank you to everyone who helped make the trip a success!

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Anna Bondar is a PhD student in the Department of Computational Linguistics at the University of Zurich. Her PhD project lies at the intersection of natural language processing and cognitive science. It explores how signals of human attention—captured via eye-tracking during reading—can serve as implicit supervisory feedback to train and evaluate large language models.
During her research stay in Galicia (April 2026), she mainly helped kick-start the eye-tracking data collection for the Galician language.





Johan Hennert is a first-year PhD student at the University of Potsdam, Germany, and works on computational modeling of eye-movement control during reading. During his STSM, he worked on setting up the MultiplEYE experiment to collect Japanese eye-tracking data.



This fall I spent three week with the group of Kentaro Nakatani at Konan University in Kobe, Japan, in order to help start the collection of Japanese eye-tracking data.

Although we ran into a number of challenges during both setup and pilot data collection, I was surrounded by a great and motivated team that was with me every step of the way, and I am deeply grateful for their patience and commitment. A big thank you goes out to Hinata, Taichi, Seinosuke, and Professor Nakatani!

In addition to working on the data collection I got to do some sightseeing, touring both Kobe and Nara, and going to Osaka for the Kansai Circle of Psycholinguistics. I've also used this trip to explore everything Japan has to offer food-wise!

All in all, I am incredibly grateful to the MultiplEYE team for this opportunity, and for all of their support during my trip!

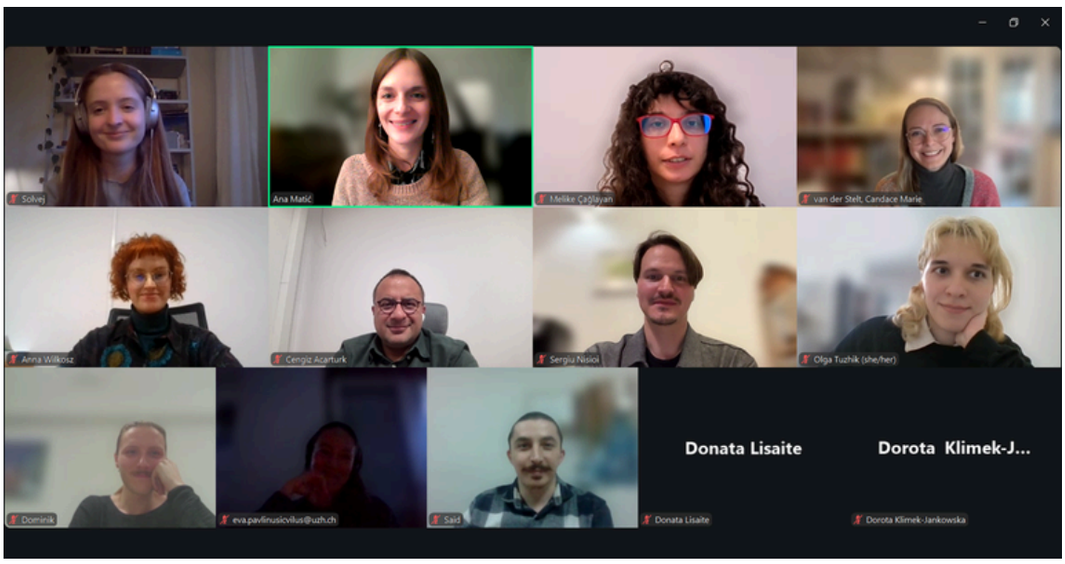
GETTING INVOLVED WITH FUTURE ACTIVITIES

*Aging Subcorpus

A group of MultiplEYE members who are interested in how reading changes with age (65+ years) have been meeting regularly to plan data collections for **the first supplementary MultiplEYE dataset**.

The group now includes around **10 languages**: the **Polish** team is collecting data, the **Danish** team just started piloting, and **Romanian** and **Russian** data collections will start soon, too, as these labs recently preregistered their data collection. Others are in different stages - they are finding ways to recruit participants, organizing their specific language materials or preparing for piloting.

The group has prepared a detailed checklist for all labs who wish to collect data, and the first publication is already under way! If you would like to **contribute**, please reach out to Ana Matić, Vice-Chair of the Action and the leader of the Aging Subcorpus group via **ana.matic@erf.unizg.hr**.



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GETTING INVOLVED WITH FUTURE ACTIVITIES CONT'D

Comprehension questions validation study

The MultiplEYE comprehension questions will be turned into a validated **multilingual MultiplEYE Reading Assessment** that estimates difficulty and reading ability with Item Response Theory. The validation will take approximately **60 minutes**, **175 adult native speakers** (that did not participate in the core eye-tracking collection) are needed, and data collection should be finished before the end of March 2027. Please write to **multipleye.project@gmail.com** or **stegenwa@uni-koblenz.de** if you are interested in contributing to this part of MultiplEYE for your language.

Linguistic annotations

Core linguistic annotations, Named Entity Recognition, and Co-reference coding of the MultiplEYE texts (see the progress here)
If you are interested in helping with this, please contact the language coordinator for your language or email ***multipleye.project@gmail.com***

Psychometric test battery validation

Data collection completed in 16 labs for 13 languages. The included teams are currently conducting analyses and preparing a manuscript.
If you have collected psychometric data for you language, the psychometric team will reach out to you soon.
Moreover, for this study, documenting the contributors to translation of the materials and data collection is very important - please review the information you shared with the support team or reach out to Ana Matić (ana.matic@erf.unizg.hr) or Eva Pavlinušić Vilus (eva.pavlinusicvilus@uzh.ch) if you have any questions.

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OVERVIEW OF HOW TO CONTRIBUTE

Topic	Contact person	Contact
Data collection for the Aging subcorpus	Ana Matić	ana.matic@erf.unizg.hr
MultiplEYE psychometric test battery validation study	Ana Matić Eva Pavlinušić Vilus	ana.matic@erf.unizg.hr eva.pavlinusicvilus@uzh.ch
MultiplEYE Comprehension Question Validation study	Maja Stegenwallner-Schütz	multipleye.project@gmail.com stegenwa@uni-koblenz.de
Linguistic annotations	Sasha Kuvshynova Mircea Marin	sashetta.ku@gmail.com mmmircea07@gmail.com
Experimenter Session Documentation Sheet - developing the coding scheme	Lena A. Jäger	lenaann.jaeger@uzh.ch
Leading and preparing data collections for new subcorpora	MultiplEYE support team	multipleye.project@gmail.com
Activating Working Group 3: psycholinguistic research questions based on the MultiplEYE datasets	Kaidi Lõo	kaidi.loo@ut.ee