

# Zed Sevcikova Sehyr, PhD

## Curriculum Vitae

Laboratory for Language and Cognitive Neuroscience  
School of Speech, Language and Hearing Sciences  
San Diego State University  
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[www.zedsehyr.com](http://www.zedsehyr.com)

### EDUCATION

PhD Cognitive, Perceptual, and Brain Sciences, University College London, 2013  
MA Applied Linguistics, Birkbeck College, University of London, 2007  
BA Human Sciences, Applied English Language and Linguistics, Kingston University London, 2005

### EMPLOYMENT

2023– Project Data Scientist  
ROCHESTER INSTITUTE OF TECHNOLOGY (RIT), National Technical Institute for the Deaf; Perception, Language & Attention in Youth (PLAY) Lab

2022– Lecturer  
SAN DIEGO STATE UNIVERSITY, Speech, Language and Hearing Sciences and Linguistics & Asian/Middle Eastern Languages

2015–2022 Research Scientist  
SAN DIEGO STATE UNIVERSITY, Laboratory for Language and Cognitive Neuroscience; Speech, Language and Hearing Sciences.

2013–2015 Postdoctoral Researcher  
SAN DIEGO STATE UNIVERSITY, Laboratory for Language and Cognitive Neuroscience; Speech, Language and Hearing Sciences.

2009–2013 Research and Teaching Assistant  
UNIVERSITY COLLEGE LONDON, Deafness Cognition and Language Research Centre (DCAL); Cognitive, Perceptual, and Brain Sciences.

2011–2013 Lecturer in English Language and Communication  
KINGSTON UNIVERSITY, Human Sciences.

2009 Visiting Assistant Professor in Sign Language Linguistics  
ROEHAMPTON UNIVERSITY, Media, Culture & Languages.

### PUBLICATIONS

Kezar, L., Thomason, J. & **Sehyr, Sevcikova Z.**, (2023). Improving Sign Recognition with Phonology. *Proceedings of the EACL: European Chapter of the Association for Computational Linguistics*.

**Sehyr, Sevcikova, Z.**, Midgley, K. J., Holcomb, P. J., & Emmorey, K. (2023, in press). Orthographic ERP priming effects between English print and American Sign Language fingerspelling fonts. *Neurobiology of Language*.

- Sehyr, Sevcikova, Z., & Emmorey, K. (2022).** Contribution of lexical quality and sign language skill to reading comprehension. *Journal of Deaf Studies and Deaf Education*. [doi.org/10.1093/deafed/enac018](https://doi.org/10.1093/deafed/enac018)
- Sehyr, Sevcikova, Z., & Emmorey, K. (2021).** The effects of multiple linguistic variables on picture naming in American Sign Language. *Behavior Research Methods*. [doi.org/10.3758/s13428-021-01751-x](https://doi.org/10.3758/s13428-021-01751-x)
- Sehyr, Sevcikova, Z., Caselli, N., Cohen-Goldberg, A., & Emmorey, K. (2021).** The ASL-LEX 2.0 Project: A Database of Lexical and Phonological Properties for 2,723 Signs in American Sign Language. *Journal of Deaf Studies & Deaf Education*, 26(2), 263-277. [doi.org/10.1093/deafed/enaa038](https://doi.org/10.1093/deafed/enaa038)
- Sehyr, Sevcikova, Z., Cohen-Goldberg, A., Emmorey, K., & Caselli, N. (2021).** An interactive visual database for American Sign Language reveals how signs are organized in the mind. *The Conversation*, April 6, 2021. [Online access: article 156741]
- Sehyr, Sevcikova, Z., Holcomb, P. J., Midgley, K. J., Emmorey, K., Plaut, D., & Behrmann, M. (2020).** Unique N170 signatures to words and faces in deaf ASL signers reflect experience-specific adaptations during early visual processing. *Neuropsychologia*, 141. [doi.org/10.1016/j.neuropsychologia.2020.107414](https://doi.org/10.1016/j.neuropsychologia.2020.107414)
- Schaller, F., Lee, B., **Sehyr, Sevcikova Z.**, O'Grady Farnady, C., & Emmorey, K. (2020). Cross-linguistic metaphor priming in ASL-English bilinguals: Effects of the Double Mapping Constraint. *Sign Language & Linguistics*, 23 (1/2) Special Issue in Memory of Irit Meir, 96-111. [doi.org/10.1075/sll.00045.sch](https://doi.org/10.1075/sll.00045.sch)
- Thompson, B., Perlman, M., Lupyan, G., **Sehyr, Sevcikova Z.**, & Emmorey, K. (2020). A Data-driven Approach to the Semantics of Iconicity in American Sign Language and English. *Language and Cognition*, 12, 182-202. [doi:10.1017/langcog.2019.52](https://doi.org/10.1017/langcog.2019.52)
- Sehyr, Sevcikova Z.** and Emmorey, K. (2019). The perceived mapping between form and meaning in American Sign Language depends on linguistic knowledge and task: Evidence from iconicity and transparency judgments. *Language and Cognition*, 11(2) Special Issue on Iconicity, 208-234. [doi.org/10.1017/langcog.2019.18](https://doi.org/10.1017/langcog.2019.18)
- Weisberg, J. Casey, S., **Sehyr, Sevcikova Z.**, & Emmorey, K. (2019) Second language acquisition of American Sign Language influences co-speech gesture production. *Bilingualism: Language and Cognition*, 23(3), 473-482. [doi.org/10.1017/S1366728919000208](https://doi.org/10.1017/S1366728919000208)
- Sehyr, Sevcikova Z.**, Giezen, M. R., & Emmorey, K. (2018). Comparing semantic fluency in American Sign Language and English. *Journal of Deaf Studies & Deaf Education* 23(4). [doi.org/10.1093/deafed/eny013](https://doi.org/10.1093/deafed/eny013)
- Sehyr, Sevcikova Z.**, Nicodemus, B., Petrich, J., & Emmorey, K. (2018). Referring strategies in American Sign Language and English (with co-speech gesture): The role of modality in referring to non-nameable objects. *Applied Psycholinguistics* 39(5). 961-987. [doi.org/10.1017/S0142716418000061](https://doi.org/10.1017/S0142716418000061)
- Emmorey, K., Midgley, K., Cohen, K., **Sehyr, Sevcikova Z.** & Holcomb, P. (2017) The N170 ERP component differs in laterality, distribution, and association with continuous reading measures for deaf and hearing readers. *Neuropsychologia*, 106, 298-309. [doi.org/10.1016/j.neuropsychologia.2017.10.001](https://doi.org/10.1016/j.neuropsychologia.2017.10.001)

- Meade, G., Midgley, K., **Sehyr, Sevcikova Z.**, Holcomb, P., & Emmorey, K. (2017) Implicit co-activation of American Sign Language in deaf readers: An ERP study. *Brain and Language* 170, 50-61. [doi.org/10.1016/j.bandl.2017.03.004](https://doi.org/10.1016/j.bandl.2017.03.004)
- Keane, J., **Sehyr, Sevcikova Z.**, Emmorey, K., and Brentari, D. (2017) A Theory-Driven Model of Handshape Similarity. *Phonology*, 34: *Thematic issue: Computational phonology*, 34(2), 221-241. [doi.org/10.1017/S0952675717000124](https://doi.org/10.1017/S0952675717000124)
- Caselli, N., **Sehyr, Sevcikova Z.**, Cohen-Goldberg, A., & Emmorey, K. (2017). ASL-LEX: A lexical database of American Sign Language. *Behavior Research Methods* 49(2). 784-801. [doi.org/10.3758/s1342](https://doi.org/10.3758/s1342) [ASL-LEX.org]
- Sehyr, Sevcikova Z.**, Petrich, J., & Emmorey, K. (2016). Fingerspelled and printed words are recoded into a speech-based code for short-term memory. *Journal of Deaf Studies and Deaf Education*, 22(1), 72-87. [doi.org/10.1093/deafed/enw068](https://doi.org/10.1093/deafed/enw068)
- Sehyr, Sevcikova Z.** & Cormier, K. (2015). Perceptual categorization of handling handshapes in British Sign Language. *Language and Cognition*, 8(4). 501-532. [doi.org/10.1017/langcog.2015.4](https://doi.org/10.1017/langcog.2015.4)
- Cormier, K., Smith, S., & **Sehyr, Sevcikova Z.** (2015). Rethinking Constructed Action, *Sign Language & Linguistics*, 18:2, pp. 167-204. [doi.org/10.1075/sll.18.2.01cor](https://doi.org/10.1075/sll.18.2.01cor)
- Sevcikova, Z.** (2013) Categorical versus gradient properties of handling handshapes in British Sign Language (BSL). *Doctoral dissertation*, University College London.
- Cormier, K., S. Smith & **Sevcikova, Z.** (2013) Predicate structures, gesture, and simultaneity in the representation of action in British Sign Language: Evidence from deaf children and adults. *Journal of Deaf Studies and Deaf Education*, 18 (3), 370-390. [doi: 10.1093/deafed/ent020](https://doi.org/10.1093/deafed/ent020)
- Cormier, K., Quinto-Pozos, D., **Sevcikova, Z.**, & Schembri, A. (2012). Lexicalization and de-lexicalization processes in sign languages: Comparing depicting constructions and viewpoint gestures. *Language and Communication*, 32 (4), 329–348. [doi: 10.1016/j.langcom.2012.09.004](https://doi.org/10.1016/j.langcom.2012.09.004)

## GRANTS AND FELLOWSHIPS

- 2023 National Science Foundation (NSF), BCS, Standard Grant, Collaborative Research: Quantifying sign reduction in American Sign Language using human pose estimation; Role: Primary Investigator; **\$319,633**
- 2022 Machine Learning Proof of Concept for Sign Language Recognition, Fourteen33 (F33), Inc.; Primary Investigator; **\$99,200**
- 2019–2022 National Science Foundation (NSF) Standard Grant, BCS-1918556: Quantifying Systematicity, Iconicity, and Arbitrariness in the American Sign Language Lexicon, Role: Co-Investigator; **\$552,162**
- 2010 University College London (UCL) Graduate School Conference Grant; **£235**
- 2010 Arts & Humanities Research Council (AHRC) Conference Travel Grant; **£170**
- 2008 University College London (UCL) Graduate School Research Training Grant; **£450**
- 2007–2010 Arts and Humanities Research Council (AHRC) Collaborative Doctoral Award & Graduate Stipend, 2006/136414; **£52,000**.

## Grants submitted

## AWARDS AND HONORS

- 2022 Department of Linguistics and Asian/Middle Eastern Languages Conference Travel Award, San Diego State University; \$500
- 2018 National Institutes of Health (NIH), Society for the Neurobiology of Language Conference Travel Award; \$500
- 2017 National Science Foundation (NSF) & Popular Science, The 15<sup>th</sup> Anniversary Vizzies People's Choice Award for ASL-LEX: A Visualization of American Sign Language, Interactive category. Co-Investigator. <https://www.popsoci.com/vizzies-winners-2017/>
- 2016 Early Career Researcher Award, Sign Language Linguistics Society (SLLS)
- 2010 Best Student Paper Award, 2<sup>nd</sup> place, International Society for Gesture Studies (ISGS), Gesture – Evolution, Brain & Linguistic Structures Meeting

## INVITED PRESENTATIONS

- Sehyr, Sevcikova, Z. (2022). *Mapping the signed language lexicon: How are signs organized in the mind?* Presented at the LPL/CNRS Speech and Language Laboratory, Aix-Marseille University, France. Invited by Dr. Kristof Strijkers.
- Sehyr, Sevcikova, Z. (2022). *Mapping the mental lexicon: How are signs organized in the mind?* Presented at the Edinburgh University Linguistics Society (EULingSoc).
- Sehyr, Sevcikova Z. (2021). *Give me a sign: Finding rhymes in ASL*. Presented at the “Peers’n’Pubs” Taste of Science Festival [online]. Recording available on: <https://www.youtube.com/watch?v=kJrhSt1QqGY>
- Sehyr, Sevcikova Z. (2018, 2019, 2020). *Sign Language Aphasia*. Department of Speech, Language & Hearing Sciences, San Diego State University. Invited by Dr. S. Ries.
- Sehyr, Sevcikova Z. (2017). *ASL-LEX: A Lexical database for American Sign Language*. Presented at the Linguistic Society of America (LSA) Summer Institute, Language Across Space and Time: Workshop on American Sign Language (ASL) Research Resources. University of Kentucky, Lexington. Invited by Dr. D. Lillo-Martin.
- Sehyr, Sevcikova, Z., Petrich, J., & Emmorey, K. (2017). *Fingerspelled and printed words are recoded into a speech-based code in short-term memory*. Presented at The Phonology of Sign Language Fingerspelling: Beyond Handshape Sequences Symposium, Linguistic Society of America (LSA) Annual Meeting, Austin, TX.
- Sehyr, Sevcikova Z. (2016). *Hemispheric lateralization of early ERP components in deaf and hearing individuals*. Presented at the Department of Linguistics Seminar Series, UBC, Vancouver, Canada. Invited by Dr. C. Hudson-Cam.
- Sehyr, Sevcikova Z. (2016). *Is the lateralization of early visual encoding of words and faces affected by sign language expertise and deafness?* Presented at the Visual Language and Visual Learning (VL2) Student Network webinar, Gallaudet University.
- Sehyr, Sevcikova Z. (2012). *Report on DCAL research activities and postgraduate study at UCL*. Presented at the Department of Deaf Studies, Faculty of Philosophy, Charles University Prague.
- Sevcikova, Z. (2010). *Categorical perception and production of handling handshapes in BSL: evidence from BSL signing and hearing gesture*. A plenary lecture presented at Gesture – Evolution, Brain, and Linguistic Structures Conference, ISGS, European University of Viadrina, Frankfurt (Oder), Germany.

Sevcikova, Z. (2011). *Handshapes in BSL and gesture*. Presented at the Language and Cognition Speaker Series, University of Birmingham, UK.

## CONFERENCE ACTIVITY

### Peer-reviewed stage presentations (selected)

- Sehyr, Sevcikova Z., Caselli, N., Cohen-Goldberg, A. & Emmorey, K. (2022). *The semantic structure of American Sign Language: Evidence from free sign associations*. Presented at The Psychonomic Society 63<sup>rd</sup> Annual Meeting, Boston MA, Nov17-20.
- Sehyr, Sevcikova Z. & Villwock, A. (2022). *How does knowledge of one sign language influence perception of iconicity in another sign language? Evidence from deaf signers of German and American Sign Languages*. Presented at the 13<sup>th</sup> Int. Colloquium on Iconicity in Language & Literature, Sorbonne University, Paris, France, Jun 1.
- Sehyr, Sevcikova Z., Terhune-Cotter, B. P., Farnady, L. & Emmorey, K. (2021). *Iconic Structure Mapping Between Semantic Features and Phonology in American Sign Language (ASL)*. Presented at the 62<sup>nd</sup> Annual Meeting of the Psychonomic Society, Nov 4-7.
- Sehyr, Sevcikova Z. (2021). *Mapping the semantic structure of American Sign Language lexicon using the ASL-LEX Database*. Presented at the Center for Research in Language Colloquium, University of California, San Diego, Feb 23.
- Sehyr, Sevcikova Z., & Emmorey, K. (2021). *Assessing the contribution of lexical quality and sign language variables to reading comprehension in deaf readers*. Presented at the 28<sup>th</sup> Annual Meeting, Society for the Scientific Study of Reading, Jul 13-16,online
- Sehyr, Sevcikova, Z., & Emmorey, K. (2018). *Assessing the contribution of lexical quality variables to reading comprehension in deaf and hearing readers*. Presented at the 59<sup>th</sup> Annual Meeting of the Psychonomic Society, New Orleans, LA, Nov 15-18.
- Sehyr, Sevcikova Z., (2019). *The nature of spelling errors in deaf and hearing adults*. Presented at the 60<sup>th</sup> Annual Meeting of the Psychonomic Society, Montréal, QC, Canada, Nov17.
- Sehyr, Sevcikova Z. and Emmorey, K. (2016). *Representation of print and fingerspelling in short-term memory*. Presented at The 12<sup>th</sup> International Conference on Theoretical Issues in Sign Language Research, Melbourne, Australia, Jan 4-7.
- Sehyr, Sevcikova Z. (2012). *Structural complexities of handling handshapes in BSL: experimental evidence from deaf signers and hearing gesturers*. 34<sup>th</sup> Meeting, Language as a Complex System; Experimental Studies in Sign Language workshop, Frankfurt, Mar 7 \* **Best Student Paper Award, International Society for Gesture Studies**

### Peer-reviewed poster presentations (selected)

- Sehyr, Sevcikova Z. Caselli, N., Cohen-Goldberg, A. & Emmorey, K. (2022). *Mapping the semantic structure of American Sign Language using the ASL-LEX Database*. Presented at the 14<sup>th</sup> International Conference on Theoretical Issues in Sign Language Research, Osaka, Japan, Sep 27-30 online.
- Sehyr, Sevcikova Z., & Emmorey, K. (2019). *Lexical factors that influence sign retrieval: A large-scale ASL picture-naming study*. Presented at the 13<sup>th</sup> Conference in Theoretical Issues in Sign Language Research, Hamburg, Germany, Sep 26-28.
- Sehyr, Sevcikova Z., Edinger, R. & Emmorey, K. (2019). *Quantifying the spatial and temporal properties of nouns and verbs in American Sign Language using Microsoft Kinect*.

Presented at the 13th Conference in Theoretical Issues in Sign Language Research, Hamburg, Germany, Sep 26-28.

Sehyr, Sevcikova Z., Renna, J., Osmond, S., Midgley, K.J., Holcomb, P.J., & Emmorey, K. (2018). *ERP priming effects between fingerspelled fonts and printed letters*. Presented at the 10<sup>th</sup> Annual Meeting of the Society for the Neurobiology of Language, Québec City, Canada, Aug 16–18. **\*Received National Institutes of Health Travel Award**

Sehyr, Sevcikova Z., Caselli, N., Cohen-Goldberg, A., & Emmorey, K. (2016). *ASL-LEX: A lexical database of American Sign Language*. Presented at the 12<sup>th</sup> International Conference on Theoretical Issues in Sign Language Research, Melbourne, Australia Jan 4-7. **\*Received Sign Language & Linguistics Society Early Career Award**

Sevcikova Sehyr, Z., Emmorey, K., Midgley, K., & Holcomb, P. (2016). *Hemispheric lateralization of early ERP components in deaf and hearing readers with low and high vocabulary size*. Presented at the 8th Annual Meeting for the Neurobiology of Language, London, UK, Aug 17-20.

Sevcikova Sehyr, Z. Midgley, K. J., Emmorey, K., Holcomb, P. J., Behrmann, M., Plaut, D. C. (2016). *Lateralization of the N170 for word and face processing in deaf ASL signers*. Presented at the Cognitive Neuroscience Society Annual Meeting, New York, Apr 2.

## **TEACHING EXPERIENCE**

SAN DIEGO STATE UNIVESITY, 2022–current  
Phonological Acquisition and Disorders  
Language Acquisition

KINGSTON UNIVERSITY LONDON, 2011–2013  
Systems of Language  
Analyzing English  
Language in Context  
Language and Gender  
Language and the Media  
Professional Skills for Linguists

BIRKBECK, UNIVERSITY OF LONDON, 2010-2011  
Academic English  
Research Methods (GTA)

UNIVERSITY COLLEGE LONDON, 2009-2010  
Introduction to Psychological Experiments

UNIVERSITY OF ROEHAMPTON, 2009  
Linguistics of Signed Languages

## **STUDENT SUPERVISION**

\*\*\*Denotes a graduate student I directly supervised in research; \*Denotes an undergraduate student I directly supervised in research.

- Saunders, E.\*\*\*, Sehyr, Sevcikova Z. (2021). *Examining spelling error patterns in ASL Fingerspelling and English*. Presented at the 28<sup>th</sup> Annual Meeting, Society for the Scientific Study of Reading (SSSR), Online, Jul 13-16.
- Edinger, R.\*, Emmorey, K., & Sehyr, Sevcikova Z. (2019). *Picture-naming project in ASL using the Microsoft Kinect*. Poster presented at International Conference on Theoretical Issues in Sign Language Research in Hamburg, Germany.
- Trussell, M.\* (2019). *Assessing the contribution of reading experience to reading comprehension in deaf readers*. Poster presented at the Student Research Symposium, SDSU.
- Manriquez, A.\* (2019). *Examining the nature of spelling errors in deaf and hearing readers using an English spelling production and spelling recognition tasks*. Poster presented at the Student Research Symposium, SDSU.
- Weber, J.\*\*\*(2015). *ASL-LEX: A resource for investigating effects of sign frequency and iconicity for American Sign Language (ASL)*. Poster presented at the 8<sup>th</sup> Annual Student Research Symposium, SDSU. **\*Received Provost's Award for Research and Scholarship.**

## **SERVICE TO PROFESSION**

### **Senior Reviewer Board:**

Journal of Deaf Studies & Deaf Education

### **Ad-hoc Reviewing Service:**

Applied Psycholinguistics

Brain and Language

Bilingualism: Language and Cognition

Cognition

Frontiers in Psychology

International Journal of Bilingualism

Journal of Deaf Studies & Deaf Education

Journal of Experimental Psychology: Human Perception, and Performance

Journal of Experimental Psychology: Learning, Memory, and Cognition

Journal of Psycholinguistic Research

Language

Language Learning

Memory and Cognition

Neuropsychologia

Second Language Research

Sign Language & Linguistics

Trends in Cognitive Science

### **Ad-hoc Conference Abstracts Reviewing:**

Architectures and Mechanisms for Language Processing (AMLaP)

Linguistic Society of America (LSA)

### **Conference and Symposia Organization**

2021      Reading and Visual Recognition Skills in Deaf and Hard-of-hearing Signers Symposium, 28<sup>th</sup> Annual Meeting, Society for the Scientific Study of Reading (SSSR), Jul 13-16. Role: Symposium Organizer and Chair.

2011 Current Issues in Sign Linguistics, Deafness and Cognition (CISLDC 2011)  
Postgraduate Conference; Supported by the Linguistic Association of Great Britain  
(LAGB). Role: Co-organizer & Scientific Committee.

### **PROFESSIONAL SOCIETY MEMBERSHIPS**

2021– Society for the Neurobiology of Language (SNL)  
2016– Psychonomic Society Fellow (FPsyS), Elected Fellow in 2018  
2016– LSA Linguistic Society of America, joined Committee on Endangered Languages  
and Their Preservation (CELP) in 2021  
2016– AAAS American Association for the Advancement of Science  
2010– SLLS: Sign Language Linguistics Society  
2012–2013 ISGS: International Society for Gesture Studies  
2011–2013 LAGB: Linguistic Association of Great Britain

### **PROFESSIONAL TRAINING**

2022 Grants Research and Enterprise Writing (GREW), San Diego State University  
2018 ERP Boot Camp, UC Davis Center for Mind and Brain, Birmingham, UK, 2018  
2014 American Sign Language Level Two, Interpret San Diego  
2008 British Sign Language Level Two, Signature, London

### **RESEARCH METHODS TRAINING**

Electroencephalography (EEG)/Event-related brain potentials (ERPs), UC Davis/SDSU  
Machine Learning (Google Vertex AI; Waffle ML)  
Motion-tracking (Microsoft Kinect), San Diego State University  
Standardized behavioral assessment testing, San Diego State University  
Eye-tracking (Eyelink), San Diego State University  
Magnetic Resonance Imaging (MRI) Safety and Operator Training, Birkbeck UCL Centre for  
NeuroImaging (BUCNI)

### **TECHNOLOGICAL SKILLS**

Multimedia Editing & Annotation: ELAN, Adobe Photoshop / Illustrator; FinalCutPro, iMovie.  
Motion Capture: Microsoft: Kinect Motion.  
Design, 3D Animation & Data Visualization: Poser™, Gephi Visualizations, Canva.  
Statistical Software & Programming: SPSS, R Studio, & learning Python!  
Experiment Software: EEGLAB/NeuroScan, PsyScope, Open Sesame, Amazon MTurk.  
Database & Workflow Management: FileMaker, EndNote, Slack, Knack, Google Cloud Platform.  
Instructional Technologies: Blackboard, Canvas, Canvas Studio.

### **OTHER SYNERGISTIC ACTIVITIES AND COMMUNITY OUTREACH**

2022 DEAFest; San Diego Deaf Community Services (DCS). Role: Exhibitor  
2020– *The Consilience Journal of Science Poetry*; Role: Reviewer, Content Curator  
2018– *Nerd Nite San Diego*; Role: Host and Organizer  
2018– *EcoLogik STEM Education Program*, Cabrillo Education, NPS; Role: Mentor  
2012– *PhD Tutors*, Educational Consultancy, Role: Tutor, Consultant (online)

### **LANGUAGES**

English, American Sign Language, British Sign Language, Czech, Turkish.