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Holly E. A. Sutherland
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Personal Profile

Doctoral candidate with an interdisciplinary focus on communication between autistic people, and a strong research background using both quantitative and qualitative methods and analyses. I am interested in an academic career doing high-quality research with real-world impact to improve the lives of neurodivergent people.

Education

PhD at the Centre for Clinical Brain Sciences, University of Edinburgh   2020-2024
Funded by Medical Research Scotland/Scottish Autism. Thesis joint supervised by Dr. Fletcher-Watson and Dr. Crompton of the University of Edinburgh, and Dr. Long of Scottish Autism, with working title "Reducing health inequalities for autistic people by understanding interactional rapport".

MPhil in Applied & Theoretical Linguistics (Distinction), University of Cambridge 2017-2018
Modules included psycholinguistics, computational linguistics, experimental pragmatics, syntax, semantics, phonology, language death, and multiple statistics training courses. Experimental thesis supervised by Dr. Katsos, titled "The link between executive functioning deficits and impaired metaphor comprehension in high-functioning autistic spectrum disorders" (see appendix for abstract).

BA Hons in Linguistics (1st), University College London   2014-2017
Modules included neurolinguistics, semantics, pragmatics, child language acquisition, programming in Java, introduction to AI, syntax, morphology, phonetics, phonology. Thesis supervised by Dr. Breheny, titled "Impaired metaphor comprehension in individuals with autistic spectrum disorder as symptom of impaired interhemispheric coordination and functional connectivity" (see appendix for abstract).

Berkhamsted School   2012-2014
A levels: Biology (A*), Maths (A), Physics (A)
Other: EPQ Dissertation (A*), 2 IGCSEs (A*A), AS-level Chemistry

American School of Warsaw   2010-2012
Advanced Placement: Comparative Government (5/5)

Aylesbury High School   2007-2010

Research Employment

Research Assistant, Usher Institute, University of Edinburgh   2020-2021
Co-designed online surveys, and conducted semi-structured interviews, surveying Medical School staff and student experiences with/opinions on equality, diversity, and inclusion at the

university. Analysed survey data, and focus group/interview transcripts using thematic analysis, including developing a coding scheme. Produced a literature review on student equality, diversity, and inclusion in university medical departments. Managed a team of 10 undergraduate students to assist with literature review and running focus groups.

Research Assistant, Winton Centre, University of Cambridge   2019-2020
Ran two large-scale online studies assessing risk matrix designs for improved communication of risk; my improved design was used by the Cabinet Office in the 2020 UK National Risk Register. Produced a systematic literature review on communication of quality of scientific evidence to the public. Assisted with public engagement activities including talks and workshops.

Research Assistant, Department of Informatics, University of Sussex   2018-2019
Developed a cognitive profiling measure to assess individual differences in diagram comprehension, and deployed it via online survey. Assisted in the development of a behavioural coding scheme for people's diagram production when problem solving. Produced a literature review on individual differences in diagram comprehension. Developed a novel diagram taxonomy.

Administrative, Teaching, & Service Activities

- Lab manual co-manager for the DART lab   2022
- 3 peer reviews for the journal Autism   2021-
- Events Organiser for the UCL Sci-Fi & Fantasy Society   2016-2017
- President of the UCL Harry Potter Society   2015-2016
- Private tutor for GCSEs   2013

Research & Technical Skills

- Qualitative methods (developing interview guides; structured and semi-structured interviews; focus groups; participant observation; ethnographic and autoethnographic methods) and analysis (thematic analysis, framework analysis, grounded theory).
- Quantitative methods (running online surveys & questionnaires; cognitive testing batteries; 1-to-1 participant testing; repurposing/modification of existing tests; designing novel tests; developing behavioural coding schemes) and analysis (descriptive statistics; data visualisation; linear modelling; non-parametric tests).
- Working with diverse participant populations, including autistic people and people with learning/intellectual disability.
- Strong computer skills. Proficiency with Microsoft Office suite, R Studio, Stata, E-Prime, Qualtrics, LaTeX, and the Adobe Creative suite.
- Experience with coding. Proficient in R, some experience with HTML, CSS, and Java.
- Performing literature reviews and systematic literature reviews.
- Writing/contributing to academic papers, posters, lay research summaries, and lay/academic research talks.

- Open science/reproducibility skills, including preregistration, preparing data and analysis code for open-access sharing.
- Collaborative online/remote working, including running online studies.

Relevant Training

- "Qualitative research methods in health" (KCL; 5 days)   2022
- "Observational & ethnographic methods" (NCRM; 1 day)   2022
- Active bystander training   2021

Publications

- Sutherland, H., Recchia, G., Dryhurst, S., & Freeman, A. L. (2022). How People Understand Risk Matrices, and How Matrix Design Can Improve their Use: Findings from Randomized Controlled Studies. *Risk Analysis*, *42*(5), 1023-1041.
- Stockdill, A., Raggi, D., Jamnik, M., Garcia, G.G., Sutherland, H.E.A., Cheng, P.C.H., & Sarkar, A. (2020). Correspondence-based analogies for choosing problem representations. In *2020 IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC)* (pp. 1-5). IEEE.
- Raggi, D., Stockdill, A., Jamnik, M., Garcia, G.G., Sutherland, H.E.A., & Cheng, P.C.H. (2020). Dissecting representations. In *International Conference on Theory and Application of Diagrams* (pp. 144-152). Springer, Cham.
- Stockdill, A., Raggi, D., Jamnik, M., Garcia, G.G., Sutherland, H.E.A., Cheng, P.C.H., & Sarkar, A. (2020). Cross-domain Correspondences for Explainable Recommendations. In *ExSS-ATEC@ IUI*.
- Raggi, D., Stockdill, A., Jamnik, M., Garcia, G.G., Sutherland, H.E.A., & Cheng, P. C. H. (2019). Inspection and selection of representations. In *International Conference on Intelligent Computer Mathematics* (pp. 227-242). Springer, Cham.

Invited Speaker

- Sutherland, H.E.A. (2023). *Title TBC*. It Takes All Kinds Of Minds (ITAKOM) Conference, Edinburgh, UK.
- Sutherland, H.E.A., Crompton, C.J., Long, J., & Fletcher-Watson, S. (2022) *'I was brought up in an NT-speaking household': autistic perspectives on autistic communication.* BPS Seminar Series on Double Empathy and Autism, online.
- Sutherland, H. E. A. (2021, November). *Neurodiversity: similarities vs. differences panel discussion.* Salvesen Lecture, Edinburgh, UK.

Talks & Presentations

- Sutherland, H.E.A., Crompton, C.J., Long, J., & Fletcher-Watson, S. (2022, October). *Understanding (and accommodating) an autistic social communicative 'style' to support*

autistic wellbeing. [Poster presentation]. Autism-Europe International Congress, Krakow, Poland.

- Sutherland, H. E. A., Ropar, D., Fletcher-Watson, S., Axbey, H., Sharp, M., Crompton, C. (2022, October). *Are social difficulties in autism context-dependent? Investigating how conversational partners affect the accuracy of observers' judgements about a person's autistic diagnostic status*. [Poster presentation]. Autism-Europe International Congress, Krakow, Poland.

- Sutherland, H.E.A., Crompton, C.J., Long, J., & Fletcher-Watson, S. (2022, July). *Autistic social communication: 'a minefield of problems', or 'a difference in typical values'?* [Poster presentation]. Autistica Research Festival, online.

- Sutherland, H. E. A., Ropar, D., Fletcher-Watson, S., Axbey, H., Sharp, M., Crompton, C. (2022, July) *Investigating (non-)autistic success at identifying (non-)autistic people in videos and pictures.* [Poster presentation]. Autistica Research Festival, online.

- Sutherland, H.E.A., Crompton, C.J., Long, J., & Fletcher-Watson, S. (2022, May). *The key is acceptance: Exploring autistic adults' social communicative wants, needs, and expectations*. [Speaker presentation.] KCL ArCH Showcase, London, UK

- Sutherland, H.E.A., Crompton, C.J., Long, J., & Fletcher-Watson, S. (2022, May). *An 'autistic communicative style'? Exploring autistic people's social communication preferences.* [Poster presentation.] INSAR, Texas, USA.

- Sutherland, H. E. A., Ropar, D., Fletcher-Watson, S., Axbey, H., Sharp, M., Crompton, C. (2022, July). *Investigating the accuracy of people's judgements about social dyads' autistic diagnostic status from videos of social interaction*. [Poster presentation.] INSAR, Texas, USA.

- Finikarides, L., Sutherland, H.E.A. (2019). *Communicating risks and benefits in numbers and words.* [Workshop]. Patient Information Forum's Health Literacy Training Workshop, London, UK.

Awards & Prizes

- Medical Research Scotland 4-year PhD studentship   2019
- Dean's List (top attaining 5% of students)   2017

References

Available on request.

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Appendix

MPhil Thesis Abstract

Studies in neurotypical populations and various clinical populations have implicated executive functioning as playing a pivotal role in the metaphor comprehension process. However, though executive functioning and metaphor comprehension deficits are well attested in autistic spectrum conditions, there is little research on the link between the two in this population. The present study assessed a range of executive function cognitive domains (generativity, set shifting, inhibition, and working memory) as well as tasks examining the ability to identify and explain metaphors in 10 autistic participants without intellectual disability (mean age 24.10 years, 5 females) and 13 non-autistic participants (mean age 26.50 years, 7 females). Results showed significant response inhibition and metaphor identification impairments in the autistic group. Near-significant group differences were also found on the metaphor explanation task, with autistic participants numerically but not significantly more likely to given concrete or incorrect explanations. Higher generativity and response inhibition scores correlated positively and significantly with faster and more accurate metaphor identification, and with a higher quality of metaphor explication in both groups. The effect of group interaction on these correlations was not significant – indicating that both autistic and non-autistic groups had the same profile of executive functioning contribution to metaphor comprehension. The study points to executive functioning deficits as explaining the impairment of and variance in metaphor comprehension in autistic individuals without intellectual disability.