Ronen Hershman

Born:	January 17, 1985; Israel
Military Service:	2003-2006
E-mail:	ronenhe@post.bgu.ac.il
Work Address:	Department of Brain and Cognitive Science
	Ben-Gurion University of the Negev (BGU)
	Beer-Sheva, Israel 84105
Work Phone Number:	+972(0)86477209

EDUCATION

2008-2012	BSc	Ben-Gurion University of the Negev, Physics and Computer Science
2015-2017	MA	Ben-Gurion University of the Negev, Department of Brain and Cognitive Sciences
		Advisor: Prof. Avishai Henik
		Title: Measuring Pupil Size in Numerical Cognition Tasks
2017-current	PhD	Ben-Gurion University of the Negev, Department of Brain and Cognitive Sciences
		Advisor: Prof. Avishai Henik
		Title: Cognitive Control and Pupil Dilation

EMPLOYMENT HISTORY

2015 - 2017	Teaching Assistant, Department of Psychology, Ben-Gurion University of the Negev
2016 - 2018	Teaching Assistant, Department of Brain and Cognitive Sciences, Ben-Gurion University of the Negev
2020	Teaching Assistant, Department of Brain and Cognitive Sciences, Ben-Gurion University of the Negev

RESEARCH INTERESTS

I am interested in the relationship between cognitive mental load and pupil dilation and how their regulatory interactions are influenced by different conditions. Understanding of these interactions and relationships is an essential and necessary tool for efficiently studying preverbal (e.g., infants) and nonverbal participants (e.g., neurological patients). My research thus far has included behavioral and psychophysiological (mainly eye-tracking) methods that were applied on healthy populations. Some of

those methods (like CHAP –Open-Source Software for Processing and Analyzing Pupillometry Data) were created for this purpose.

METHODS

I have expertise in programming and analyzing behavioral and psychophysiological (eye-movement) paradigms. I have worked with various software programs including MATLAB, Psychtoolbox, SPSS, STATISTICA and JASP. I am also familiar with the Linux environment and with various programming languages.

SOCIETY MEMBERSHIP

2015-2020	Israel Society of Cognitive Psychology – ISCoP
2015-2018	European Society of Eye Movement - ECEM
2017-2023	European Society of Cognitive Psychology - ESCoP
2017-2021	Vision Sciences Society - VSS
2018-2020	Mathematical Cognition and Learning Society - MCLS
2019-2020	Psychonomic Society

EDUCATIONAL ACTIVITIES

Teaching Assistant in Courses: Introduction to Statistics, Probability, Linear Algebra and Calculus, Cellular Basis of Neuroscience

AWARDS AND FELLOWSHIPS

August 2016	The Zlotowski Neuroscience Center - Travel Grant (500 USD)
May 2017	The Zlotowski Neuroscience Center - Travel Grant (500 USD)
2017	Dean's Award for MA, Ben-Gurion University of the Negev, Israel
April 2018	The Zlotowski Neuroscience Center - Travel Grant (500 USD)
2018	The Inter-Faculty Brain Sciences School - Tuition Scholarship
2019	The Ministry of Science & Technology, Israel - Travel Grant (10,000 NIS)
2019-2021	Mid way Negev - Tsin Scholarships for Excellence PhD
September 2019	The Zlotowski Neuroscience Center - Travel Grant (500 USD)
2020	The Ministry of Science & Technology, Israel - Travel Grant (10,000 NIS)
2020	Zlotowski Best Research Project of 2020 Academic Year (500 USD)

Ad Hoc Reviewer:

- Behavior Research Methods
- PloS One
- Journal of Experimental Psychology: Human Perception and Performance
- Springer Series on Studies in Singapore Education Research, Innovation and Practice
- Memory & Cognition
- Scientific Reports
- Psychological research
- Experimental Psychology

SCIENTIFIC PUBLICATIONS

Articles in scientific journals:

Hershman, R., Henik, A., & Cohen, N. (2018). A novel blink detection method based on pupillometry noise. *Behavior Research Methods, 50*(1), 107-114. https://doi.org/10.3758/s13428-017-1008-1

Hershman, R., Henik, A., & Cohen, N. (2019). CHAP: Open-source software for processing and analyzing pupillometry data. *Behavior Research Methods* 51(3), 1059-1074. https://doi.org/10.3758/s13428-018-01190-1

Hershman, R., & Henik, A. (2019). Dissociation between Reaction Time and Pupil Dilation in the Stroop Task. *Journal of Experimental Psychology: Learning, Memory, and Cognition.* 45(10), 1899-1909. https://dx.doi.org/10.1037/xlm0000690

Hershman, R. & Henik, A. (2020). Pupillometric contributions to deciphering Stroop conflicts. *Memory & Cognition. 48(2), 325-333* https://dx.doi.org/10.3758/s13421-019-00971-z

Hershman, R., Levin, Y., Tzelgov, J., & Henik, A. (2021). Neutral Stimuli and Pupillometric Task Conflict. Psychological Research. *85*(3), 1084–1092 https://dx.doi.org/10.1007/s00426-020-01311-6

Hershman, R., Levin, Y., Tzelgov, J., & Henik, A. (in press). The Contribution of Meaning to the Detection of Task Conflict. Quarterly Journal of Experimental Psychology. https://doi.org/10.1177/17470218211001331

Sapir, A.*, **Hershman, R.,*** & Henik, A. (in press). Top-Down Effect on Pupillary Response: Evidence from Shape from Shading. Cognition. https://doi.org/10.1016/j.cognition.2021.104664

Under review:

Hershman, R., Milshtein, D., & Henik, A. (under review). The Contribution of Temporal Analysis of Pupillometry to Deciphering Cognitive Conflicts.

Gliksman, Y., Berebbi, S., **Hershman, R.**, & Henik, A. (under review). BGU-MF: Ben-Gurion University Math Fluency Test.

In preparation:

Hershman, R., Sapir, A., & Henik, A. (in preparation). Illusory Size Perception of Jastrow Ring-Segments: Evidence from Pupillometry

Hershman, R., Dadon, G., Kiesel, A., & Henik, A. (in preparation). The Resting Stroop Task: Evidence of Task Conflict in Trials with No Required Response.

Hershman, R.*, Beckmann, L.,* & Henik, A. (in preparation). Automaticity of Numerical Processing: Evidence for Task Conflict in the Numerical Stroop Task.

Milshtein, D.*, **Hershman, R.,*** & Henik, A. (in preparation). Attention to Intention: Pupillometry as Temporal Measure for Intentional Component during Emotional Imagery.

Hershman, R., Gozansky, E., Keha, E., Kalanthroff, A., & Henik, A. (in preparation). Pupillometric Comparison between Vocal and Manual Color-Word Stroop task.

Hershman, R., Devyatko, D., Wagner, M., Kimchi, R., & Henik, A. (in preparation). When the brain fools your eyes: Pupil response in motion-induced blindness.

Taitelbaum-Swead, R., Lifshitz- Ben-Basat, A., **Hershman, R**., & Fostick, L. (in preparation). Assessing Listening effort with Pupillometry: Temporal Analysis

CONFERENCE PRESENTATIONS

Oral presentations:

Hershman, R., Cohen, N., & Henik, A. (2017, August). CHAP: An Open Source Software for Processing and Analyzing Pupillometry Data. Presented at the 19th European Conference on Eye Movements (ECEM), Wuppertal, Germany.

Hershman, R. & Henik, A. (2018, February). Disassociation between Reaction Time and Pupil Dilation in Stroop Task: Evidence of Task Conflict. Presented at the Zlotowski Annual Retreat, Sde Boker, Israel.

Hershman, R. & Henik, A. (2018, February). Disassociation between Reaction Time and Pupil Dilation in Stroop Task: Evidence of Task Conflict. Presented at the 5th Israeli Society for Cognitive Psychology (ISCOP) Conference, Akko (Acre), Israel.

Hershman, R. & Henik, A. (2019, February). Semantic and response conflicts in the Stroop task: Evidence from a Pupillometry Study. Presented at the 6th Israeli Society for Cognitive Psychology (ISCOP) Conference, Akko (Acre), Israel.

Hershman, R. & Henik, A. (2019, September). Dissociation between reaction time and pupil dilation in the color-word Stroop task. Presented at the 21st European Society for Cognitive Psychology (ESCoP) Conference, Tenerife, Spain.

Hershman, R., & Henik, A. (2020, February). The Contribution of Temporal Analysis of Pupillometry to Deciphering Cognitive Conflicts. Presented at the Zlotowski Annual Retreat, Ein Gedi, Israel.

Presentation of posters at conferences:

Hershman, R., Cohen, N., & Henik, A. (2016, February). CHAP: An Open Source Software for Processing and Analyzing Pupillometry Data. Presented at the 3rd Conference on Cognition Research of the Israeli Society for Cognitive Psychology (ISCOP), Akko (Acre), Israel.

Hershman, R., Cohen, N., & Henik, A. (2016, August). CHAP: An Open Source Software for Processing and Analyzing Pupillometry Data. Presented at the 39th European Conference on Visual Perception (ECVP), Barcelona, Spain.

Hershman, R., Cohen, N., & Henik, A. (2017, February). Blink Detection Based on "Noise" in Pupillometry Data. Presented at the 4th Israeli Society for Cognitive Psychology (ISCOP) Conference, Akko (Acre), Israel.

Hershman, R., Cohen, N., & Henik, A. (2017, May). CHAP: An Open Source Software for Processing and Analyzing Pupillometry Data. Presented at the 17th Annual Meeting of the Vision Sciences Society (VSS), St. Pete Beach, FL, United States.

Hershman, R., Henik, A., & Cohen, N. (2017, August). Blink Detection Based on "Noise" in Pupillometry Data. Presented at the 40th European Conference on Visual Perception (ECVP), Berlin, Germany.

Hershman, R., Cohen, N., & Henik, A. (2017, September). CHAP: An Open Source Software for Processing and Analyzing Pupillometry Data. Presented at the 20th European Society for Cognitive Psychology (ESCoP) Conference, Potsdam, Germany.

Hershman, R., Beckmann, L., & Henik, A. (2018, April). The Dissociation between Pupil Dilation and Reaction Time in the Numerical Stroop Task. Presented at the 1st Mathematical Cognition and Learning Society (MCLS) Conference, Oxford, United Kingdom.

Hershman, R., Henik, A., & Cohen, N. (2018, May). Novel Blink Detection Method Based on Pupillometry Noise. Presented at the 18th Annual Meeting of the Vision Sciences Society (VSS), St. Pete Beach, FL, United States.

Hershman, R., & Henik, A. (2018, August). Disassociation between Reaction Time and Pupil Dilation in the Stroop Task. Presented at the 41th European Conference on Visual Perception (ECVP), Trieste, Italy.

Hershman, R., Devyatko, D., Wagner, M., Kimchi, R., & Henik, A. (2019, February). When the brain fools your eyes: Pupil response in motion-induced blindness. Presented at the 6th Israeli Society for Cognitive Psychology (ISCOP) Conference, Akko (Acre), Israel.

Hershman, R., & Henik, A. (2019, March). Dissociation between Reaction Time and Pupil Dilation in the Stroop Task. Presented at the 15th Karniel Computational Motor Control Workshop (CMCW), Beer-Sheva, Israel.

Hershman, R., & Henik, A. (2019, November). Top-down effect on pupillary response: evidence from shape from shading. Presented at the 60th Annual Meeting of the Psychonomic Society, Montréal, Canada.

Hershman, R., & Henik, A. (2019, November). The Contribution of Temporal Analysis of Pupillometry to Deciphering Cognitive Conflicts. Presented at the 27th Object Perception, Attention, & Memory (OPAM) conference, Montréal, Canada.

Hershman, R. & Henik, A. (2020, February). The Resting Stroop Task: Evidence of Task Conflict in Trials with No Required Response. Presented at the 7th Israeli Society for Cognitive Psychology (ISCOP) Conference, Akko (Acre), Israel.

Hershman, R. & Henik, A. (2020, June). The Contribution of Temporal Analysis of Pupillometry to Deciphering Cognitive Conflicts. Presented at the virtual 20th Annual Meeting of the Vision Sciences Society (VVSS).

Hershman, R. & Henik, A. (2020, October). Cognitive Control and Pupil Dilation. Presented at the 2020 Zlotowski Best Research Winners seminar, Beer-Sheva, Israel.

Hershman, R. Milshtein, D. & Henik, A. (2020, November). The Contribution of Temporal Analysis of Pupillometry to Deciphering Cognitive Conflicts. Presented at the virtual 61th Annual Meeting of the Psychonomic Society.

Hershman, R., Sapir, A., & Henik. (2021, February). Top-down effect on pupillary response: evidence from shape from shading. Presented at the virtual 8th Israeli Society for Cognitive Psychology (ISCOP) Conference.