

Curriculum Vitae- February 2017

[Tali Leibovich]

Personal Details

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Languages: Hebrew, English

Education

2015-2017 **Postdoc Research Fellow**, Department of Psychology and the Brain and Mind Institute, the **University of Western Ontario**, under the supervision of Prof. Daniel Ansari

2014-2015: **Postdoc Research Fellow**, Department of Cognitive and Brain Sciences, **Ben-Gurion University** of the Negev, Beer-Sheva, under the supervision of Prof. Avishai Henik

2009-2013: **PhD in Brain and Cognitive Sciences**, Department of Cognitive and Brain Sciences, Faculty of Humanities & Social Sciences, **Ben-Gurion University** of the Negev, Beer-Sheva, under the supervision of Prof. Avishai Henik.
Dissertation Title: **What Do We Process When We Process Magnitudes?**

2007-2009: **MSc in Human Molecular Genetics**, Faculty of Health Sciences, **Ben-Gurion University** of the Negev, Beer-Sheva, under the supervision of Prof. Ruti Parvari.

2002-2005: **BSc in Medical Laboratory Sciences**, **Ben-Gurion University** of the Negev, Beer-Sheva, Israel.

Publications

IF = impact factor

Accepted for publication

Leibovich, T., Katzin, N., Salti, M., & Henik, A. (in press). The more the merrier: towards an integrative approach considering both number and continuous magnitudes to the development of numerical cognition.

Response article in Behavioral and Brain Sciences – BBS (IF = 20.41)

In press

Leibovich, T., Katzin, N., Harel, M., & Henik, A. From 'sense of number' to 'sense of magnitude' - The role of continuous magnitudes in numerical cognition. Target article in Behavioral and Brain Sciences – BBS (*IF = 20.41*).

Salti, M., Katzin, N., Katzin, D., **Leibovich, T.**, & Henik, A., One tamed at a time: A new approach for controlling continuous magnitudes in numerical comparison tasks. Behavioral Research Methods (*IF = 3.048*).

Henik, A., Gliksman, Y., Kallai, A & **Leibovich, T.** Size perception and the foundation of Numerical Processing. Current Directions in Psychological Science (*IF = 3.35*).

Published

Leibovich, T., Cohen, N., & Henik, A. Itsy bitsy spider? It depends... Frontiers for Young Minds – Frontiers for Young Minds. 4:29. doi: 10.3389/frym.2016.00029.

Leibovich, T., Cohen, N., & Henik, A. Itsy Bitsy Spider? Individual differences modulate mental representation of Size. *Biological psychology* 121(Part B):138–145. doi:10.1016/j.biopsycho.2016.01.009 (*IF = 3.4*).

Leibovich, T., Kallai, A., & Itamar, S., (2016) What Do We Measure When We Measure Magnitudes? A chapter in the book “Continuous issues in numerical cognition”, Elsevier press. Edited by Avishai Henik.

Gliksman, Y., Itamar, S., **Leibovich, T.**, Melman, Y & Henik, A. (2016) Automaticity of conceptual magnitudes. Scientific Reports 6: 21446 doi: 10.1038/srep21446. (*IF = 5.57*)

Leibovich, T. & Ansari, D., (2016) The Symbol-Grounding Problem in Numerical Cognition: a review of theory, evidence and outstanding questions. *Canadian Journal of Experimental Psychology* (*IF = 1.218*).

- Leibovich, T.,** Vogel, D., Henik, A., & Ansari, D. (2016). Asymmetric processing of numerical and non-numerical magnitudes in the brain: an fMRI study. *Journal of Cognitive Neuroscience*, 28 (1), 166-176. doi: 10.1162/jocn_a_00887 (IF = 5.357).
- Leibovich, T.,** Henik, A & Salti, M. (2015). Numerosity Processing Is Context Driven Even in the Subitizing Range: an fMRI Study. *Neuropsychologia* 77, 137-147. doi:10.1016/j.neuropsychologia.2015.08.016 (IF = 4.345).
- Leibovich, T.,** & Henik, A. (2014). Comparing performance in discrete and continuous comparison tasks. *The Quarterly Journal of Experimental Psychology*. 67 (5), 899-917. doi: 10.1080/17470218.2013.837940 (IF = 2.127).
- Leibovich, T.,** & Henik, A. (2013). Magnitude processing in non-symbolic stimuli. *Frontiers in Cognition*, 4. doi: 10.3389/fpsyg.2013.00375 (IF = 2.834).
- Leibovich, T.,** Diesendruck, L., Rubinsten, O., & Henik, A. (2013). The importance of being relevant: Modulation of magnitude representations. *Frontiers in Developmental Psychology*, 4. doi: 10.3389/fpsyg.2013.00369
- Leibovich, T.,** Ashkenazi, S., Rubinsten, O., & Henik, A. (2013). Comparative judgments of symbolic and non-symbolic stimuli yield different patterns of reaction times. *Acta Psychologica*, 144 (2), 308-315. doi: http://dx.doi.org/10.1016/j.actpsy.2013.07.010 (IF = 2.676)
- Gabay, S., **Leibovich, T.,** Henik, A., & Gronau, N. (2013). Size before numbers: conceptual size primes numerical value. *Cognition*, 129(1), 18-23. doi: 10.1016/j.cognition.2013.06.001 (IF = 3.634)
- Gabay, S.,* **Leibovich, T.,*** Ben-Simon, A., Henik, A. & Segev, R. (2013). Inhibition of return in the archer fish. *Nature Communications*, 4:1657. doi: 10.1038/ncomms2644 (*equal contribution) (IF = 11.47)
- Henik A., **Leibovich, T.,** Naparstek, S., Diesendruck, L., & Rubinsten, O. (2012). Quantities, amounts, and the numerical core system. *Frontiers in Human Neuroscience*, 5. doi: 10.3389/fnhum.2011.00186 (IF = 2.9)
- Leibovich, T.,** Yona, K., Ashkenazi, S., Rubinsten, O., & Henik, A. (2011). Time required for comparative judgment depends on dimensionality. In D. Algom, D. Zakay, E. Chajut, S. Shaki, Y. Mama, & V. Shakuf (Eds.), *Fechner Day 2011* (pp. 261-266). *Proceedings of the 27th Annual Meeting of the International Society for Psychophysics*. Raanana, Israel: The International Society for Psychophysics.
- Akiva-Kabiri, L.,* **Leibovich, T.,*** Azaria, G., & Henik, A., (2011). How does this sound? Differences in pitch processing between musicians and absolute pitch possessors. In D. Algom, D. Zakay, E. Chajut, S. Shaki, Y. Mama, & V. Shakuf (Eds.), *Fechner Day 2011* (pp. 287-292). *Proceedings of the 27th Annual Meeting of the International Society for*

Psychophysics. Raanana, Israel: The International Society for Psychophysics. (*equal contribution)

Submitted for publication

Leibovich, T. Al-Rubaiey, K-S & Ansari D. Beyond comparison: physical size affects non-symbolic but not symbolic number line estimation (*Acta Psychologica*: accepted pending minor revision).

Leibovich, T. & Ansari, D. Accumulation of non-numerical evidence during non-symbolic number processing in the brain: an fMRI study (*Human Brain Mapping*; Revision invited)

Karoubi, N, **Leibovich, T.** & Segev, R. Symbol-Value Association and Discrimination in the Archerfish (*Plos One* – Revision invited)

Leibovich, T., Lewis, D., Al-Rubaiey, K-S & Ansari D., A new method for calculating an Individual Subitizing Range (*Journal of Numerical Cognition*: revision invited)

Leibovich, T., Stein, E., Henik, A & Salti, M. Number and Continuous Magnitude Processing Depends on Task Context and Numerosity Ratio (*Psychological Research*: revision invited)

Melman, Y., **Leibovich, T.**, Stolowicz, D & Henik, A. Conceptual size and numerical value Interactions in picture-digit combined stimuli (*Attention Perception and Psychophysics*; under review).

In preparation

Leibovich, T. & Ansari, D. Influence of size on symbolic and non-symbolic number mapping – a developmental study

Leibovich, T., Gabay, S., Segev, R. & Henik, A. Executive functions without frontal cortex: A Stroop-like effect in The archer fish.

Scientific Presentations

Leibovich, T., Ansari, D. (2016). New method for calculating Individual Subitizing Range. Presented as poster at the 5th biannual conference of the International Mind, Brain and Education Society (IMBES), Toronto, Ontario, September.

Leibovich, T., & Ansari, D. (2016). Apples and watermelons: when size affects number estimation. Presented as an oral talk at the 3rd Conference on Cognition Research of the Israeli Society for Cognitive Psychology (ISCOp), Akko, Israel, February.

Leibovich, T. (2016). From “sense of number” to “sense of magnitudes”: How the brain understands numbers. Presented as an oral talk at “Typical and atypical development of numerical cognition: evidence from brain & behavior” workshop at the, Israel, April.

Leibovich, T. (2016). From “sense of number” to “sense of magnitudes”: How the brain understands numbers. Presented at the Institution of Information Processing and Decision Making (IIPDM), Haifa University, Israel, February.

Leibovich, T., Ansari, D. (2015). How does size affect small and large number estimation? Evidence from a line mapping task. Presented as poster at the 1st Inaugural Brain and Mind Institute Symposium (IBMIS), London, Ontario, September.

Leibovich, T., Salti, M., & Henik, A. (2014). What do we process when we process magnitudes? Presented as an oral talk at the 1st Conference on Cognition Research of the Israeli Society for Cognitive Psychology (ISCOp), Akko, Israel, February.

Leibovich, T., Katz, G., & Henik, A. (2013). Size matters! But which size? Presented as an oral talk at the 18th European Society for Cognitive Psychology (ESCoP) Conference, Budapest, Hungary, September.

Leibovich, T., & Henik, A., (2013). If you can't control them – study them! Poster presented at the Brain Plasticity, Learning and Education Conference, London, Canada, June.

Leibovich, T., Ben-Tov, M., Segev, R., & Henik, A. (2013). Confessions of a primitive mind. Interactive presentation at the 5th Israeli Presidential Conference, Jerusalem, Israel, June. (Part of an exhibit of ground-breaking studies in brain research in Israel).

Leibovich, T., & Henik, A., (2013). If you can't control them – study them! Poster presented at the 25th Association for Psychological Science (APS) Annual Convention, Washington, D.C., United States, May.

Leibovich, T., Yona, K., Ashkenazi, S., Rubinsten, O., & Henik, A. (2011). Time required for comparative judgment depends on dimensionality. Poster presented at the 27th Annual Meeting of the International Society of Psychophysics (ISP), Raanana, Israel, October.

Leibovich, T., Diesendruck, L., Rubinsten, O., & Henik, A. (2011). The importance of being relevant: Modulation of magnitude representations. Presented at the 18th Annual Meeting of the Cognitive Neuroscience Society (CNS), San-Francisco, CA, April.

Leibovich, T., Diesendruck, L., Rubinsten, O., & Henik, A. (2010). The importance of being relevant: Modulation of magnitude representations. Presented as an oral talk at the 16th Cognitive Science Association for Interdisciplinary Learning (CSAIL) Conference, Hood River, Oregon, August.

Leibovich, T., Diesendruck, L., Rubinsten, O., & Henik, A. (2010). The importance of being relevant. Presented as a poster at "Selection and Control Mechanisms in Perception and Action", Jerusalem, Israel, April.

Leibovich, T., Yona, K., Ashkenazi, S., Rubinsten, O., & Henik, A. (2009). Is a fly bigger than an elephant? Performance is modulated by the ratio of sizes. Presented as an oral talk at the 16th European Society for Cognitive Psychology (ESCoP) Conference, Krakow, Poland, September.

Honors and Awards

2017 – 2018: Haifa University Postdoctoral scholarship.

2015 – 2017: The Brain and Mind Institute postdoctoral scholarship, Western University.

2013 – 2014: "Prat" post-doctoral fellowship, Ben-Gurion University of the Negev.

2013: Competition Award, Israeli Presidential Conference of 2013 – awarded for ground-breaking research in brain sciences.

Invited Talks

Leibovich, T., Vogel, S., Ansari, D., & Henik, A. (2013). Size matters! But which size?: fMRI study. Presented at the Cognitive Neuroscience Lab supervised by Prof. Marlene Behrmann, Department of Psychology, Carnegie Mellon University, Pittsburgh, USA, May.

Leibovich, T., & Henik, A. (2012). Size matters! But which size? Presented at the Developmental Psychology Colloquium, Western University, London, CA, November.

Leibovich, T., & Henik, A. (2011). One system fits all? Presented at the Laboratory for Neural Coding, supervised by Prof. Ronen Segev, Department of Life Science, Ben-Gurion University of the Negev, Israel, June.

Other Noteworthy Activities and Skills

Review Editor

Frontiers in Cognition

Ad Hoc reviewer

Developmental Psychology

Psychological Research

Cerebral Cortex
Journal of cognitive psychology
Developmental science
Acta Psychologica
Quarterly journal of Experimental Psychology
Neuropsychologia

Workshops and internships

- 2015* **Workshop – Science communication**, Stony-Brook University, NY. This 5-day workshop was meant to improve skills in communicating science to people outside the scientist's own field, including students, funders, employers, policymakers, community members and scientists in other disciplines.
- 2014* **Workshop – Imaging genetics**, Radboud University, the Netherlands. This workshop was designed to gain insight into how neuroimaging and genetics data can be linked, and provided both theoretical and practical tools for such research.
- 2014* **Workshop – Genetic Polymorphisms Affecting Human Cognition**, Ben-Gurion University Of the Negev. The workshop included theoretical discussions regarding when to include genetic information in a study, and introduced talks by leading scientists in the field.
- 2012:* **Four-month fMRI study at Western University**, Canada, under the supervision of Prof. Daniel Ansari.
- 2004-2005:* **Internship and research project**, in the Soroka Medical Center genetics lab, Beer-Sheva, Israel. As part of B.Sc. requirements I conducted a genetic study of the p53 gene and its involvement in epithelial tumors, and completed 250 hours of internship in the clinical genetics lab.

Membership in Professional Societies

Cognitive Neuroscience Society (CNS)
European Society for Cognitive Psychology (ESCOP)
Association for Psychological Science (APS)
Israeli Society for Neuroscience (ISFN)
Israeli Society for Cognitive Psychology (ISCoP)

Military Service

Reserve Duty: officer in the IDF Medical core - blood services unit
2001-2002: Army Clinic Commander in the Intelligence Corps (level 09-Combat Medic)
2000-2001: Medic in the Reconnaissance Regiment, Medical Field Unit
1999-2000: Medic in the Southern Command Medical Corps Center

Volunteer work and leadership experience:

2009- present day	Volunteer in the " Bashaar " program as a lecturer in high schools to interest students in academia
2009-2011	Project leader in "perach"
2002-2006	Tutor in "Perach"
2001-2002	Army Clinic Commander
1996-2002	Medic in "Magan David Adom" (MADA)
1996-1999	Volunteer in after school youth centers (ages 6-12)

From the press

<http://www.hayadan.org.il/archer-fish-and-the-brain-100413>

<http://www.nrg.co.il/online/13/ART2/752/251.html>

<http://www.scientificamerican.com/video/what-makes-spiders-scary/>

<https://uk.news.yahoo.com/spiders-look-bigger-afraid-them-170505369.html>