Prof. Yair Neuman - yneuman@bgu.ac.il March. 2020

CURRICULUM VITAE AND LIST OF PUBLICATIONS

Personal Details

Name: Yair Neuman

Date and place of birth: December 5 1968, Petach-Tikva, Israel

Marital status: Married + 3 (Yiftach, Yaara & Tamar)

Address and telephone number: The Department of Cognitive and Brain Sciences, Ben-Gurion University of the Negev, Beer-Sheva, Israel. 84105. Tele.: 052-838-2111

Address at home: Vardit 13, Lehavim.

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Affiliations

2017- Full Prof.
Ben-Gurion University of the Negev (The Department of Cognitive and Brain Sciences)

2018 – Member, **The Data Science Center**, BGU

2017 - **Head**, **The Humphrey Institute**, Ben-Gurion University of the Negev, Israel

2016 - Visiting Professor
Department of Neurobiology (Hosted by Prof. R. Malach)
Weizmann Institute of Science, Israel

2016 - Visiting Professor
Computational Neuroscience Lab (Hosted by Prof. N. Howard)
University of Oxford

2013 – co-Director

The Behavioral Insights Research Laboratory (Headed by Prof. M. Danesi)

Victoria College

University of Toronto, Canada

2013 – Present

PI and Member

The I-CORE Center for the Study of Conversion and Inter-Religious Encounters

Ben-Gurion University of the Negev

2012 – Present

Member – Fields Cognitive Science Network

Fields Institute for Research in Mathematical Sciences

Univ. of Toronto, Canada

2012 – Present

Member, **Homeland Security Institute**

Ben-Gurion University of the Negev

Education

B.A. - 1988-1991 – Bar-Ilan University – **Psychology** (Major) and Philosophy (Minor)

M.A. - 1991-1993 – Hebrew University – **Cognition** - School of Education

Name of advisor: Prof. Y. Kareev

Title of thesis: "The Effect of Learned Helplessness on the Detection of Covariation between Categorical Variables"

Ph.D. 1993-1998 – Hebrew University - **Cognition** - School of Education

Name of advisor: Dr. Baruch Schwartz and Prof. Elite Ollstein

Title of thesis: "Self-Explanation and Problem Solving"

Employment History

2017-

Full Professor, The Department of Cognitive and Brain Sciences, BGU

2013-2017
Full Professor, The Department of Education, BGU

2012 (July)
Visiting Scholar
MIT (Synthetic Intelligence Lab)

2010 (July-September)
Visiting Academic, Sabbatical Leave, Program of Semiotics, **University of Toronto**

2007- 2013
Associate Professor, Department of Education, BGU

2003-2007
Senior Lecturer, Department of Education, Ben-Gurion University of the Negev

1999-2003
Lecturer, Department of Education, Ben-Gurion University of the Negev

Professional Activities

Positions in academic administration (departmental, faculty and university)

2013 - 2015 Member of the Rector's committee for evaluating new applicants to the university. The committee is in charge of approving the recruitment of new academic staff to Ben-Gurion University of the Negev.

2011- 2012 Member, Alon Prize Faculty Committee - BGU

2010 – 2014, Head, Department of Education - BGU

2009-2012 – Head, the University Distinguished Visitors Program (DVP) committee - BGU

2008 – Member, the University Distinguished Visitors Program (DVP) committee - BGU

2008 - Member, the Department's Faculty Committee - Department of Education, BGU

2007 – Head, the Department's Graduate Studies Committee Program - Department of Education, BGU

2005-2006 – Member, Faculty Teaching Committee, BGU

2005-2006 – Head of the "Educationalists" program - Department of Education, BGU

2005-2006 – Head, Faculty Teaching Committee – BGU

2005-2006 – Founder and Head, the Program for the Learning Sciences - Department of Education, BGU

2005-2006 – Member of the Department of Communication Teaching Committee, BGU

2004-2006 – Member, Department's Governing Board, Department of Education, BGU

2004-2006 – Head, Program for Learning, Teaching and Curriculum - Department of Education, BGU

2004-2005 – Member, Faculty Teaching Committee – BGU

2002-2004 –The organizer of the Department's Colloquium - Department of Education, BGU

2001 - Chairman of the BA committee – Department of Education, BGU

Professional functions outside universities/institutions

2014 - Member - Program Committee for The 2nd Workshop on Metaphor in NLP in 2014. Meta4NLP 2014, Baltimore, Maryland, USA, June 26, 2014.

2011 – 2014
Member- Mandel Program Grant Committee, Mandel Leadership Institute

2010 – 2014

Member – The Israeli Forum of Chairs, Universitys' Schools of Education

2009 – 2014

Member – Steering Committee, The Karev Program for Educational Involvement

Editor or member of editorial board of scientific or professional journal/book series

2019- Editorial board, **Subject, Action & Society: Psychoanalytical Studies and Practices**.

2019 – Editorial board, Brill New Book series on **Mathematics in the Arts and Humanities** (MIAH)

2018 – Book review for Springer's book series **Mind in Mathematics**

2017-Present

Editorial board, **Human Arenas** (A new Springer journal)

2016-Present

Editorial board, **Mind in Mathematics**, a new book series by Springer

2015 – 2017

Editorial board, **Scientific Reports** (**Nature Group**, Impact Factor of the journal = 5.57)

2011 – Present

Editorial board, **Culture and Psychology**

Membership in professional/scientific societies

2013 - IEEE

Research students

2019 – Yoav Lev Ran, MA

2011 - Hadar Netz - Kreitman Post-Doc student - BGU

2011 – 2014 Moti Benita - PhD student - BGU

2011 - 2016 Yariv Orgad - PhD student - BGU

2012 - Danny Lifshitz – MA - BGU

2011 - Yariv Orgad – MA - BGU

2011 - Eran Dolev - MA - BGU

2011 - Michael Milner – MA - BGU

2008 - Einav Argaman - Ph.D. - BGU

2008 - Perry Zilbershatz – MA - The Open University

2008 - Amir Viner – MA - BGU

2004 – Yael Bessor – MA - BGU

2003 - More Levi – MA - BGU

2003 - Tzorit Brishanski – MA - BGU

2003 – Erez Weizman – MA - BGU

2002- Abigail Ben-Shitrit – MA - BGU

2002 - Tali Chatzor – MA - BGU

1999 - Liat Leibowitz – MA - Hebrew University

Scientific Publications

Authored books

1. Neuman, Y. (2003). *Processes and Boundaries of the Mind: Extending the Limit Line.* N.Y.: Springer – 170 Pages.

Published reviews:

The International Journal of General Systems, 2006, 35, 471-505

Journal of Pragmatics, 2006, 38, 2235-2237

Semiotica, 2005, 154-1/4, 401-403

Studies in Philosophy and Education, 2005, 24(5), 411-424

Systems Research and Behavioral Sciences, 2004, 21(3), 31-312

2. Neuman, Y. (2008). *Reviving the Living: Meaning making in Living Systems*

Oxford: Elsevier – 289 Pages.

Published reviews:

Angewandte Chemie International Edition, 2009, 48, 5237-5238
Computing Reviews, 2009, July 13.
Perspectives in Biology and Medicine, 2009, 52, 612-616
Artificial Life, 2011, 17, 145-146

3. Neuman, Y. (2014). *Introduction to Computational Cultural Psychology*. Cambridge: Cambridge University Press.

Published reviews:
Eur. J. Psyc. 2014, 1841-0413.

4. Neuman, Y. (2016). *Computational Personality Analysis: Introduction, Practical Applications and Future Directions*. N.Y.: Springer.

5. Neuman, Y. (2016). *Shakespeare for the Intelligence Agent: Toward Understanding Real Personalities*. N.Y.: Rowman and Littlefield.

6. Neuman, Y. (2018). *Mathematical Structures of Natural Intelligence*. N.Y.: Springer.

7. Neuman, Y. (in press). *Conceptual Mathematics and Literature*. Brill.

Chapters in collective volumes - Conference proceedings, Festschrifte, etc. - _
Neuman, Y. (1996). "Explanandum, explanans and what is between them: Some reflections on the self-explanation effect." In S.Vosniadou., E. Matsagouras., K. Maridaki-Kassotaki., and S. Kostanis (Eds.), *Proceedings of the 7th Conference of the European Association for Research in Learning and Instruction*, p. 65. Goteborg University Publications.

Neuman, Y. (1997). Substituting one mystery for another: The role of "self-explanation" in solving algebra word problems In M. G. Shafto & P. Langley (Eds.), *Proceedings of the 19th Annual Conference of the Cognitive Science Society*, p. 998. Hillsdale, NJ: Erlbaum

Neuman, Y. (1999). Have you stopped beating your spouse?" Informal reasoning fallacies and schemes of argumentation In S. Vosniadou., E. Matsagouras., K. Maridaki-Kassotaki., and S. Kostanis (Eds.), *Proceedings of the 8th Conference of the European Association for Research in Learning and Instruction*, p. 373. Goteborg University Publications

Neuman, Y. (1999). Self-explanation patterns during problem solving: A sequential analysis In S. Vosniadou., E. Matsagouras., K. Maridaki-Kassotaki., and S. Kostanis (Eds.), *Proceedings of the 8th Conference of the European Association for Research in Learning and Instruction*, p. 374. Goteborg University Publications

Neuman, Y. et al. (2006). Strategic intelligence analysis: From information processing to meaning-making. *Intelligence and Security Informatics*, *Lecture Notes in Computer Science*, *3975/2006*, 473-478.

Neuman, Y. (2007). Immune self codes: From correspondence to complexity. *The Codes of Life*, Editor(s) – M. Barbieri, Springer – 247-262

Neuman, Y. Kedma,G., Cohen, Y., & Nave, O. (2010). Using web-intelligence for excavating the emerging meaning of target-concepts. *IEEE/WIC/ACM International Conference on Web Intelligence and Intelligent Agent Technology*. Toronto, ON, August 31- September 3, (pp. 22-25)

Turney, P., Neuman, Y. Assaf, D., & Cohen, Y. (2011). Literal and metaphorical sense identification through concrete and abstract context. *Proceedings of the 2011 Conference on Empirical Methods in Natural Language Processing*, pages 680–690, Edinburgh, Scotland, UK, July 27–31.

Neuman, Y. (2011). Why do we need signs in biology? *Towards a Semiotic Biology: Life is the Action of Signs* Editor(s) – Kalevi Kull & Claus Emmeche. Imperial College Press – 195-213.

Neuman, Y. (2013). A novel generic conception of structure: Solving Piaget's riddle. *Mathematical Models for Research on Cultural Dynamics*, Editor(s) – L. Rudolph & J. Valsiner, Routledge (pp. 255-279).

Neuman, Y. (2012). Semiotics, mathematics and information technology: The future is already here, In *Semiotics and Cognitive Science: Essays on the Nature of Mathematics.* Editor(s) – M. Bockarova, M. Danesi & R. Nunez. Munchen: Lincom Europa Academic Publishers (pp. 153-165).

Neuman, Y. (2012). Long live the homunculus. *Festschrift for the Honor of Kalevi Kull.* Editor – T. Maran, Tartu University Press (39-47).

Orgad, Y., & Neuman, Y. (2015). Children's dreams: A new conceptualization, *Making our Ideas Clear: Pragmatism in Psychoanalysis*, Editor(s) – P. Rosenbaum & J. Valsiner, Information Age Publishers

Neuman, Y. (2015). Semiotics as an interdisciplinary science, *Handbook of Semiotics*, Editor(s) – P. Trifonas, Springer (pp. 123-134).

Neuman, Y. (2015). AI in public health surveillance and research. In D. Luxton (Ed.). *Artificial Intelligence in mental health practices*. Elsevier (pp. 231-252).

Neuman, Y. (2015). On concrete cats and abstract minds. In *M. Bockarova, M. Danesi, D. Martinovic and R.Nunez (Eds.), Mind in Mathematics: Essays on mathematical cognition and mathematical method*. Munchen: Lincom (pp. 108-114).

Neuman, Y. (2015). On generalities. In J.Valsiner, G. Marsico, N. Chaudhary, T. Sato and V.Dazzani (Eds.), Psychology as the Science of Human Being. *Annals of Theoretical Psychology*, 13 Springer (pp. 279-287).

Neuman, Y. Assaf, D & Cohen, Y. (2016). Automatic identification of the splitting defense mechanism in texts. In Mike Arntfield & Marcel Danesi (Eds.), *The Criminal Humanities: An Introduction*. Peter Lang.

Neuman, Y. (2018). "I Get Along Without You...": On Billie Holiday, Clichés and Psychological Truth. In de Luca Picciona et al, (Eds.), Idiographic Approaches to Health. Charlotte, NC: Information Age Publishing.

Neuman, Y. (2019). Why a Duck? A Three-Part Essay on the Mathematics of Cognition.
In M. Danesi (Ed.,), "Interdisciplinary Perspectives on Math Cognition". N.Y.: Springer

Neuman, Y. (in press). Automatic Diagnosis and Screening of Personality Dimensions and Mental Health Problems. In Lenca Marcelo, Mingyu Liang, Fabrice Jotterand (Eds.,) *Ethics of Artificial Intelligence in Brain and Mental Health* (Springer)

H-Index = 26

i10 index = 56

Total citations = 2716

Refereed articles and refereed letters in scientific journals

1. Neuman, Y., & Schwarz, B. (1997). The effect of "self-explanations" on analogical problem-solving. *Psychologia, 6*, 30-38. In Hebrew.

2. Neuman, Y., & Schwarz, B. (1998). Is self-explanation while solving problems helpful? The case of analogical problem solving. *The British Journal of Educational Psychology, 68*, 15-25.

3. Neuman, Y. (1999). A difference that makes a difference: Reflections on artifact-mediated-consciousness. *Cybernetics and Human Knowing, 6*, 57-64.

4. Neuman, Y., & Bekerman, Z. (1999). Organic versus symbolic pedagogy: Against commercialization of knowledge. *Education and Society, 17*, 53-63.

5. Neuman, Y., & Bekerman, Z. (2000). Where a blind man ends: Five comments on context, artifacts, and the boundaries of the mind. *Systems Research and Behavioral Science, 17*, 315-319.

6. Neuman, Y., Leibowitz, L., & Schwarz, B. (2000). Patterns of verbal mediation during problem solving: A sequential analysis of self-explanations. *Journal of Experimental Education, 68*, 197-213.

7. Neuman, Y., & Schwarz, B. (2000). Substituting one mystery for another: The role of "self-explanation" in solving algebra word problems. *Learning and Instruction, 10*, 203-220.

8. Bekerman, Z., & Neuman, Y. (2001). Joining their betters rather than their own: The postmodern rhetoric of Jewish fundamentalism. *Journal of Communication Inquiry, 25*, 184-199.

9. Neuman, Y. (2001). On Turing's carnal error: Some guidelines for a contextual inquiry into the embodied mind. *Systems Research and Behavioral Science, 18,* 557-565.

10. Neuman, Y. (2001). Existing as "a difference that makes a difference": On Cybernetic, semiotics, and being. *Cybernetics and Human Knowing, 8*, 25-35. **[**Special issue: New Directions in Cybersemiotics**].**

11. Neuman, Y. (2001). Can the Baron von Munchhausen phenomenon be solved? An activity oriented solution to the learning paradox. *Mind, Culture, and Activity, 8,* 78-90.

12. Neuman, Y., & Bekerman, Z. (2001). Cultural resources and the gap between educational theory and practice. *Teachers' College Record, 103*, 471-484.

13. Neuman, Y, Lurie, Y., & Rosental, M. (2001). A watermelon without seeds: A case study in rhetorical rationality. *Text, 21*, 543-565.

14. Schwarz, B., Neuman, Y., & Biezuner, S. (2001). Two wrongs may make it right…If they argue together! *Cognition and Instruction, 18*, 461-494.

15. Neuman, Y. (2002). A co-generic perspective on problems involving a shift between systems' different levels of analysis. *International Journal of General Systems, 31*, 111-118.

16. Neuman, Y., Bekerman, Z., & Kaplan, A. (2002). Rhetoric as the contextual manipulation of self and non-self. *Research on Language and Social Interaction, 35*, 93-112.

17. Schwarz, B, Neuman, Y, Gil, Y., & Ilya, M. (2002). Construction of collective and individual knowledge in argumentative activities: An experimental study. *Journal of the Learning Sciences***,** *12*, 219-256.

18. Neuman, Y. (2003). Mobius and paradox: On the abstract structure of boundary events in semiotic systems. *Semiotica, 147*, 135-148.

19. Neuman, Y. (2003). Turtles all the way down: Outlines for a dynamic theory of epistemology. *Systems Research and Behavioral Sciences, 20,* 521-530.

20. Neuman, Y. (2003). How deep is the surface? A framework for understanding meaning-making in living systems. *Foundations of Science, 8,* 393-415.

21. Neuman, Y. (2003). Go ahead prove that God does not exist! On student's ability to deal with fallacious arguments. *Learning and Instruction, 13,* 367-380. IF = 1.3 JR = 8/92 Q1 [EDUCATION & EDUCATIONAL RESEARCH]

22. Neuman, Y. (2003). Co-generic logic as a theoretical framework for the analysis of communication in living systems. *Semiotica, 144,* 49-65.

23. Neuman, Y., & Ben-Asher, S. (2003). Individual and collective consciousness in testimonies of navy divers. *Social Semiotics, 13,* 321-341.

24. Neuman, Y., & Levi, M. (2003). Blood and chocolate: A rhetorical approach to fear appeal. *Journal of Language and Social Psychology, 29,* 29-46.

25. Neuman, Y., & Tabak, I. (2003). Inconsistency as an interactional problem: A lesson from political rhetoric. *Journal of Psycholinguistic Research, 32,* 251-267.

26. Neuman, Y., & Weitzman, E. (2003). The role of text representation in students' ability to identify fallacious arguments. *The Quarterly Journal of Experimental Psychology, 56,* 849-865.

27. Neuman, Y. (2004). What does pain signify? A hypothesis concerning pain, the immune system and unconscious pain experience under general anesthesia. *Medical Hypotheses, 63,* 1051-1053.

28. Neuman, Y. (2004). The brain and the carrot: Meaning making and symmetry restoration. *Semiotica, 149,* 213-222.

29. Neuman, Y. (2004). Meaning making in the immune system. *Perspectives in Biology and Medicine, 47*, 317-328. IF = 0.89 JR = 3/32 Q1 [HISTORY & PHILOSOPHY OF SCIENCE]

30. Neuman, Y. (2004). Mirrors mirrored: Is that all there is? *S.E.E.D (Semiotics, Evolution, Energy, Development) Journal, 4*, 58-69. [Special issue: Gregory Bateson]

31. Neuman, Y., Glassner, A., & Weinstock, M. (2004). The effect of a reason's truth-value on the judgment of a fallacious argument. *Acta Psychologica, 116*(2), 173-184.

32. Liebersohn, Y., Neuman, Y., & Bekerman, Z. (2004). Oh baby, it's hard for me to say I'm sorry: Public apologetic speech and cultural rhetorical resources. *Journal of Pragmatics, 36*, 921-944.

33. Weinstock, M., Neuman, Y., & Tabak, I. (2004). Missing the point or missing the norm: Epistemological norms as predictors of students' ability to identify fallacious arguments. *Contemporary Educational Psychology, 29*, 77-94.

34. Bekerman, Z., & Neuman, Y. (2005). On Borge's amnesia and Talmudic understanding: Reviving ancient traditions in re-search. *Journal of Research Practice, 1(1), Article P1*. Retrieved [Date of Access], from http://jrp.icaap.org/content/v1.1/bekerman.html

35. Glassner, A., Weinstock, M., & Neuman, Y. (2005). Pupils' evaluation and generation of evidence and explanation in argumentation. *The British Journal of Educational Psychology, 75*, 105-118.

36. Neuman, Y. (2005). The immune self, the sign and the testes. *S.E.E.D (Semiotics, Evolution, Energy, Development) Journal, 5*, 85-109

37. Neuman, Y. (2005). Meaning making in language and biology. *Perspectives in Biology and Medicine, 48*, 320-327.

38. Weinstock, M., Neuman, Y., and Glassner, A. (2006). Developmental factors in the ability to identify informal reasoning fallacies. *Journal of Educational Psychology 98,* 327-341.

39. Neuman, Y., & Orion, Y. (2006). Dimensionality constrains on the construction of 3-D organisms. *Foundations of Science, 12*, 1-7.

40. Neuman, Y. (2006). The specificity enigma: From mechanics to poiesis. *Rivisita di Biologia / Biology Forum, 99*, 327-341.

41. Neuman, Y. (2006). Cryptobiosis: A new theoretical perspective. *Progress in Biophysics and Molecular Biology, 92*, 258-267 [Q1].

42. Neuman, Y. (2006). The logic of meaning-in-context. *The American Journal of Semiotics, 19,* 211-222. [Special issue: "Gregory Bateson: A sign"]

43. Neuman, Y. (2006). A theory of meaning. *Information Sciences, 176*, 1435-1449 [Q1].

44. Neuman, Y. (2006). Why do we need signs in biology? *Rivisita di Biologia / Biology Forum, 98,* 497-513.

45. Neuman, Y. (2006). A note on life as meaning making machinery. *Semiotica, 158,* 357-365.

46. Neuman, Y., Nadav, M., & Bessor, Y. (2006). The pragmatics of bereavement. *Journal of Pragmatics 38,* 1369-1384.

47. Neuman, Y., Weinstock, M., & Glassner, A. (2006). The effect of contextual factors on the judgment of informal reasoning fallacies. *The Quarterly Journal of Experimental Psychology, 59*, 411-426.

48. Neuman, Y. (2007). Immune memory, immune oblivion: A lesson from Funes the memorious. *Progress in Biophysics and Molecular Biology, 92*, 258-267 [Q1].

49. Neuman, Y. (2008). The polysemy of the sign: From quantum computing to the garden of the forking paths. *Semiotica, 169*, 155-168.

50. Neuman, Y., Argyris, A., & Nave, O. (2008). Sign-mediated concept formation. *The American Journal of Semiotics, 24, 107-123.* [Humanities Journal] [Special issue Biosemiotics].

51. Neuman, Y., & Nave. O. (2008). On the semio-mathematical nature of codes. *Biosemiotics*, 1, 99-113 [New Journal]

52. Neuman, Y., & Nave, O. (2008). A mathematical theory of sign-mediated concept formation. *Applied Mathematics & Computation, 201,* 72-81 [Q1].

53. Neuman, Y., & Nave, O. (2009). Why the brain needs language in order to be self-conscious. *New Ideas in Psychology, 28, 37-48.*

54. Neuman, Y. (2009). On love, hate and knowledge. *International Journal of Psychoanalysis*, 90, 697-712 [Q1].

55. Neuman, Y. (2009). Peter Pan's shadow and the relational matrix of the "I". *Semiotica*, 176, 15-27.

56. Neuman, Y. (2009). On the Alpha-function, chaotic cats, and unconscious memory. *New Ideas in Psychology, 3,* 305-311.

57. Neuman, Y. (2009). Double binds, triadic binds. *Semiotica*, 174, 227–240.

58. Neuman, Y., Marwan, N., & Livshitz. D. (2009). The complexity of advice-giving. *Complexity*, 15, 28-30.

59. Neuman, Y., & Nave, O. (2009). Metaphor-based meaning excavation. *Information Sciences*, 179, 2719-2728 [Q1].

60. Neuman, Y., & Tamir, B. (2009). On meaning, self-consciousness and quantum physics. *Journal of Cosmology*, 3, 540-547 [Special issue: The Cosmos, Quantum Physics & Consciousness].

61. Neuman, Y. (2010). Empathy: From mind-reading to the reading of a distant text. *Integrative Psychological and Behavioral Science*, 44, 235-244.

62. Neuman, Y. (2010). Psychosomatic symptoms as biomarkers: Transcending the psyche-soma dichotomy. *Bulletin of the Menninger Clinic*, 74, 63-77.

63. Neuman, Y. (2011). A novel semio-mathematical technique for excavating themes out of group dynamics. *Semiotica, 187*, 323–336

64. Neuman, Y. (2011). Penultimate interpretation. *International Journal of Psychoanalysis, 91, 1043-1054* [**Q1**].

65. A French translation of the above paper appeared in: *Revue Belge de Psychanalyse* N^{O} 63(2013) under the title: "La penultieme interpretation".

66. Neuman, Y. Nave, O. & Dolev, E. (2011). Buzzwords on their way to a tipping point: A view from the Blogosphere. *Complexity, 16,* 58-68.

67. Neuman, Y. (2012). On revenge. *Psychoanalysis, Culture & Society*, 17, 1-15 [NO IF].

68. Neuman, Y. Assaf. D. Cohen, Y. (2012). Automatic identification of themes in small group dynamics through the analysis of network motifs. *Bulletin of the Menninger Clinic, 76,* 53-68 [**Q3**].

69. Neuman, Y., Turney, P., & Cohen, Y. (2012). How language enables abstraction: A case study in computational cultural psychology. *Integrative Psychological and Behavioral Sciences, 46, 129-145.*

70. Neuman, Y. (2012). The immune self: Practicing meaning *in Vivo*. *AVANT - Trends in Interdisciplinary Studies and Philosophy of Science.* Volume III, Number 1/2012 *www.avant.edu.pl/en* Special issue on the immune self [Humanities journal]

71. Neuman, Y., Cohen, Y., Bekerman, Z., & Nave, O. (2012). A generic methodology for measuring the potential number of structure-preserving transformations. *Complexity*, 18, 26-37 [Q2, IF = 1.3].

72. Neuman, Y. et al. (2012). Proactive screening for depression through automatic and metaphorical text analysis. *Artificial Intelligence in Medicine*, 56, 19-25 [Q2].

73. Neuman, Y. (2013). Shakespeare's first sonnet: Reading through repetitions. *Semiotica*, 195, 119–126 [Q1, Humanities].

74. Neuman, Y., Assaf, Y., & Cohen, Y. (2013). Fusing distributional and experiential information for measuring semantic relatedness. *Information Fusion, 14, 281-287.* **Q1** [COMPUTER SCI. THEORY AND METHOD].

75. Neuman Y, Assaf D, Cohen Y, Last M, Argamon S, et al. (2013) Metaphor Identification in Large Texts Corpora. PLoS ONE 8(4): e62343. doi:10.1371/journal.pone.0062343. [IF = 4, **Q1]**.

76. Neuman, Y. Marwan, N., & Unger, D. (2014) Dinner is ready! Studying the dynamics and semiotics of dinner. *Semiotica*, 202, 555-569 [**Q1**, Humanities Journal according to SCImago].

77. Neuman Y, Cohen Y. (2014). A vectorial semantics approach to personality assessment. *Scientific Reports*, 4 [IF = 5, **Q1**].

78. Neuman Y. Cohen, Y & Marwan, N. (2014). Change in the embedding dimension as an indicator of an approaching transition. *PLoS ONE* 9(6): e101014. doi:10.1371/journal.pone.0101014 [**IF= 3.5, Q1**].

79. Nave, O. Neuman, Y., Howard, D., Perslovsky, L. et al. (2014). How much information should we drop to become intelligent? *Applied Mathematics and Computation*. [IF = 1.6, **Q1]**

80. Neuman, Y. (2014). Personality from a cognitive-biological perspective. *Physics of Life Reviews*, *11*(4), 650-686 [**IF = 7.4, Q1**].

81. Neuman, Y., Cohen, Y., & Shahar, G. (2015). A novel computer assisted methodology for leaders' profiling. *American Intelligence Journal*, 32(1), pp. 136-146 [Special issue: New Paradigms in [Military] Intelligence Analysis] [NO IF]

82. Neuman, Y., Assaf, D. & Israeli, N. (2015). Identifying the location of a concealed object through unintentional eye movements. *Frontiers in Psychology*/*Cognitive Sciences* [**Q1, IF=2.46**]. http://journal.frontiersin.org/article/10.3389/fpsyg.2015.00381/abstract

83. Neuman, Y. et al. (2015). How do we understand the meaning of connotations? A *cognitive*-computational model. *Semiotica* [**Q1**, Humanities], 205, 1-16.

84. Neuman et al. (2015). Automatic profiling and screening for school shooters. *Frontiers in Psychiatry* [A new journal, Q1 according to SCImago]. doi: 10.3389/fpsyt.2015.00086

85. Neuman, Y., Perlovsky., Cohen, Y., & Livshits, D. (2015). The personality of music genres: A computational analysis. *Psychology of Music* [Q1, IF = 2].

86. Assaf, D.et al. Opposition Theory and computational semiotics. *Sign Systems Studies* [Humanities].

87. Neuman, Y & Cohen, Y. (2016). A novel approach for measuring psychological dimensions in textual data. *The Computer Journal* [Q2, IF = 1].

88. Tamir, B & Neuman, Y. (2016). The physics of categorization. *Complexity*. [**Q1**, IF = 3.5].

89. Neuman, Y. Howard, N. Fallissard, L. & Malach, R. (2017). The embodied nature of connotations: A proposed model. *Semiotica*. [Humanities, **Q1**, Scimago].

90. Assaf et al., (2016). Dynamic patterns of expertise: The case of orthopedic medical diagnosis. *PlosOne* [**Q1**]. http://dx.doi.org/10.1371/journal.pone.0158820.

91. Neuman, Y., Neuman, Y., & Cohen, Y. (2017). A novel procedure for measuring semantic synergy. *Complexity* [**Q1**].

92. Neuman, Y., Cohen, Y., Assaf, D., & Danesi, M. (2017). Identifying the Meta-Forms of Situations: A Case-Study in Computational Semiotics. *International Journal of Semiotics and Visual Rhetoric (IJSVR)*, *1*(1), 56-71.

93. Neuman, Y., Hames, H., & Cohen, Y. (2017). An information-based procedure for measuring semantic change in historical data. *Measurement*, *105*, 130-135.

94. Neuman, Y., Cohen, Y., Israeli, N., & Tamir, B. (2018). A proposed methodology for studying the historical trajectory of words' meaning through Tsallis entropy. *Physica A: Statistical Mechanics and its Applications*, *492*, 804-813.

95. Neuman, Y., Noble, D., & Cohen, Y. (2018). Is the whole different from the sum of its parts? A proposed procedure for measuring divergence from additivity. *International Journal of General Systems*, *47*(7), 665-678. [**Q1**]

96. Neuman, Y., Israeli, N., Vilenchik, D., & Cohen, Y. (2018). The adaptive behavior of a soccer team: An entropy-based analysis. *Entropy*, *20*(10), 758. [**Q2**, physics]

97. Neuman, Y. (2019). Language mediated mentalization: A proposed model. *Semiotica*. Humanities. Humanities. Q1 according to Scimago.

98. Neuman, Y. et al., (2019). How to (better) identify a perpetrator in a haystack. *Journal of Big Data* (BIGD-D-18-00148R1). A new open access journal by Springer. Q1 according to Scimago.

99. Neuman, Y., & Vilenchik, D. (2019). Modeling Small Systems Through the Relative Entropy Lattice. *IEEE Access*, *7*, 43591-43597. [**Q1,** Comp. Sci.].

100. Neuman, Y., Vilenchik, D., & Cohen, Y. (2020). From physical to social interactions: The relative entropy model. *Scientific Reports*, *10*(1), 1-8. [**Q1**]

101. Neuman, Y. et al., (Submitted). Learning from irreversibility. *Physica A.*

102. Neuman, Y, Lev-Ran, Y and E. S. Erez. (Submitted). Screening for school shooters through the weight of evidence. *Journal of Big Data.*

103. Neuman, Y. (Submitted) Modeling relative information through the orthogonality of morphisms. *Int. J. General Systems*.

In preparation/In progress

1. Natural prediction through constraints-based ordinal patterns
2. Natural emergence of diversity through constraints-based dyadic interactions
3. On Anna Karenina, entropy and soft features.
4.

Unrefereed professional articles and publications (from 2009)

Neuman, Y.
2009
"We are all unique but never alone" A review of Billig, M. "The hidden roots of critical psychology" London: Sage, 2008.
Culture and Psychology

Neuman, Y.
2011
The Synergetic Mind. An invited commentary on 'Language, Emotions, And Cultures: Emotional Sapir-Whorf Hypothesis ' by Perlovsky L.
WebmedCentral 2011;2(10):WMCRW001006.

Neuman, Y.
2012
The definition of life and the life of a definition. An invited commentary on E. N. Trifonov, "Vocabulary of definitions of life suggests a definition". *J Biomol Struct Dyn* 29, 259-266 (2011)
J Biomol Struct Dyn, 29, 645-646.

Neuman, Y.

2012

"Information and living systems" An invited review of G. Terzis and R. Arp (Eds.) (2011) *Information and Living Systems: Philosophical and Scientific Perspectives*, Cambridge, MA: MIT Press.

Artificial Life

Papers in Hebrew (Unrefereed)

נוימן. י. (2014). הרתעה ועיצוב תודעה. מערכות.71-70 ,454 ,

נוימן, י. אסף, ד. ו יזרעאלי. נ. (2015). שימוש בטכנולוגיות מתקדמות לצורך חקירה: ממדע בדיוני למדע שימושי. ביטחון הפנים .

Lectures and Presentations at Meetings and Invited Seminars not Followed by Published Proceedings

Invited plenary lectures at conferences/meetings (recent years)

Neuman, Y.

Computational personality analysis

CLEF 2019, Lugano, Switzerland

Neuman, Y.

Personality analysis for natural language processing: An invited tutorial

EMNLP 2015 (Sept 2015, Lisbon Portugal). This is one of the most distinguished conferences in the field of natural language processing.

Neuman, Y.

Computational personality analysis

IBM Israel, July 2014

Neuman, Y.

Computational psychoanalysis: When Matte-Blanco met Alan Turing. ***Matte-Blanco International Congress***, Paris, August 29-31, 2014.

Neuman, Y.
Penultimate interpretation and idiographic singularities. ***London School of Economics***, May 2013.

Neuman, Y.
Semiotics, mathematics and information technology: The future is already here
Workshop on Semiotics, mathematics and cognitive science - ***The Fields Institute of Mathematical Sciences, University of Toronto***, 2011

https://www.fields.utoronto.ca/audio/10-11/semiotics/neuman

Presentation of papers at conferences/meetings (oral or poster from 2012)

Neuman, Y. (Nov. 2016)
Naples, Italy

Neuman, Y.
PIK, Potsdam, Germany (May, 2016)

Neuman, Y.
Department of Applied Mathematics, Queen Mary University, UK (May, 2016)

Neuman, Y.
How do we learn abstract connotations?
Weizmann Institute of Science, Department of Neurobiology, May 2016

Weinstock, M., Neuman, Y., & Assaf, D.
2012, June
The role of context and epistemic understanding in adolescents' argument evaluations and trust in argument.
Paper presented at the Annual Meeting of the Jean Piaget Society, Toronto, ON, Canada.

Livshits, D., Howard, N., & Neuman, Y* [corresponding author].
2012, August
Can computers help us to better understand different cultures? Toward computer-based CULINT.
Paper presented at the *2012 European Intelligence and Security Informatics Conference* (EISIC 2012), August 22-24, University of Southern Denmark, Odense, Denmark.

Assaf, D. et al. Why "dark thoughts" aren't really dark: A novel algorithm for metaphor identification.
Paper presented at the *IEEE Comp. Intel. Conf.* Singapore, 2013.

Neuman, Y. et al. A cognitively motivated word sense induction algorithm.
Paper presented at the *IEEE Comp. Intel. Conf.* Singapore, 2013.

Research Grants

1996 - The Chief Scientist Office, Ministry of Education and Culture
Self-explanations and problem solving
30,000 NIS (approx. $8300)

2001 - Borda Center for Innovative Communications – Yair Neuman
Political rhetoric
1 year – 4000 NIS (approx. $1000)

2003 - Borda Center for Innovative Communications – Yair Neuman
Networks of meaning in political rhetoric
1 year – $3,500

2003 – The Karev Foundations – David Gordon and Yair Neuman (PI'S)
The evaluation of Karev Program
3 years – 900,000 NIS (approx. $250,000)

2005 - The Israel Ministry of Defense – Yair Neuman
The identification of meaning in texts
1 year - 200,000 NIS (approx. $55,000)

2008 – ISF – Yair Neuman (PI) & Michael Weinstock
Informal reasoning fallacies
2 years - $41,000

2009 - The Israel Ministry of Defense – Yair Neuman
Metaphor based meaning excavation
1 year - 300,000 NIS (approx. $83,000)

2012– IARPA – Yair Neuman, Shlomo Argamon, Newton Howard, Mark Last, Moshe Koppel (PIs)
IARPA Metaphor Project
($1,400,000) $522,600 for the Israeli group for the first year.

2014 - The Israel Ministry of Defense
$55,000 for 1 year

Book reviews

A review of Levy, P. *The semantic sphere: Computation, cognition and information economy*. UK: Wiley. **Sign System Studies (2014)**.

A review of Valsiner, J. (2012). *A guided science: History of psychology in the mirror of its making*. USA: Transaction Publishers. **Theory and Psychology** (2014)

Additional Information

Biographical citation
2007 – Present, Marquis Who's Who in Science and Engineering
2008 - Outstanding Scientists of the 21st Century. International Biographical Centre, Cambridge, England.

Ad Hoc Reviewer

1. Applied Linguistics
2. Artificial Intelligence

3. Artificial Intelligence in Medicine
4. Biosemiotics
5. Canadian Journal of Experimental Psychology
6. Cognitive Processing
7. Computational Intelligence
8. Computer Methods and Programs in Biomedicine
9. Cybernetics and Human Knowing
10. Entropy
11. Expert Systems with Applications
12. Frontiers in Psychology
13. Human Relations
14. Human Arenas
15. Integrative Psychological and Behavioral Science
16. International Journal of Medical Informatics
17. IEEE Intelligent Systems
18. IEEE Access
19. International Journal of Bifurcation and Chaos
20. International Journal of Psychoanalysis
21. Journal of Cosmology
22. Journal of Educational Psychology
23. Journal of Pragmatics
24. Language Resources and Evaluation
25. Learning and Instruction
26. New Ideas in Psychology
27. PlosOne
28. Political Science Research and Methods (2019)
29. Psychology of Music
30. Scientific Reports
31. Scientometrics
32. Semiotica
33. Social semiotics
34. Systems Research and Behavioral Science
35. The IEEE VAST 2007
36. Thinking & Reasoning
37. Transactions on Affective Computing (2019)

38. Psychology of violence

Media Coverage (A partial list)

BGU computer algorithm can place bloggers on the couch. June 17, 2010, **The Jerusalem Post** by Judy Siegel-Itzkovich.

Are your texts depressed? The computer knows, maybe. **Chronicle of Higher Education**, June 18, 2010, by Matthew Kalman.

Israeli team develops software to spot depressed bloggers. June 21, 2010, **Ha'aretz** by Youval Azoulay.

Software might know of you're depressed. June 23, 2010, **CNET** by Leslie Katz.

Detecting depression the high-tech way. June 24, 2010, **CBS** by Leslie Katz.

Program helps detect depressed bloggers. **Chicago Tribune**, June 29, 2010, by Julie Deardorff.

Facebook in the service of the Intelligence and the CIA. **TheMarker**, April 10, 2011, by Mia Epstein.

New worlds: Computers for cultures. June 17, 2012, **The Jerusalem Post** by Judy Siegel-Itzkovich.

Software finds Obama 'unfriendly' when talking about Israel. August 24, 2014, **The Times of Israel** by Andrew Tobin.

An interview to **Fox News** about political leaders' profiling, Sept. 2014.

Harmless angry bloggers or school shooter? Sept 10, 2015**, Forbes** by A. Weintraub

Synopsis

I’m interested in higher order cognition and in building models and computational models for interdisciplinary cognitive science. Currently, I’m working on three main projects: (1) The modeling of complex small-system from soccer teams to families, (2) the way in which intelligent systems process cues, and (3) the modeling of cognitive processes through conceptual mathematics (i.e. category theory)