

CURRICULUM VITAE

Orly Shenker

Updated December 2020

HIGHER EDUCATION

2000	Postdoctoral fellow, The Hebrew University.
1999	Postdoctoral fellow, Haifa University.
1998	Postdoctoral fellow, Oxford University, Sub-Faculty of Philosophy.
1997	Postdoctoral fellow, Cambridge University, Department of the History and Philosophy of Science.
1991-1997	Ph.D. The Hebrew University of Jerusalem, Dissertation title: "Maxwell's Demon." Advisor: Professor Itamar Pitowsky.
1988-1991	B.Sc. The Hebrew University of Jerusalem, physics, Amirim program, Project: Chaos and Determinism.
1985	Admitted to the Israeli Bar.
1980-1984	LL.B Tel-Aviv University, faculty of law.

ACADEMIC APPOINTMENTS

2020-present	Professor, The Hebrew University of Jerusalem.
2017-present	Eleanor Roosevelt Chair in History and Philosophy of Science, HUJI.
2015-present	Associate Professor, The Hebrew University of Jerusalem.
2010-2014	Senior lecturer, The Hebrew University of Jerusalem.
2007-2010	Senior researcher, Haifa University.
2002-2010	Instructor, coordinator and seminar supervisor, The Open University of Israel.
2002-2005	Lecturer, Ono Academic College, School of Management.
2002-2004	Lecturer (external), College of Management, School of Management.
2000-2002	Lecturer, LSE - London School of Economics and Political Science, Department of Philosophy, Logic and Scientific Method.
1992-1997	Teaching assistant, The Hebrew University, Department of Philosophy.
1991	Research assistant, The Hebrew University, Department of Physics.
1986	Research assistant, Tel Aviv University, Faculty of Management.

SOME RECENT FUNCTIONS AT THE HEBREW UNIVERSITY

- *Director*, the Sidney M. Edelstein Center for the History and Philosophy of Science, Technology and Medicine.
Activities as director included: Initiating and organizing about a dozen international conferences and workshops; Founding international collaboration programs, e.g. with MCMP (Munich) and with the Hungarian Academy of Sciences; Establishing the highly successful and by-now prestigious International Senior Fellowship program at the Center; Strengthening the Israeli HPS community and promoting the Center's leading role in it, by maintaining an active and lively Center which hosts various reading groups as well as individual scholars in the field.
- Member of the academic committee of the Hebrew University Quantum Information Center. Website: <http://qcent.huji.ac.il/>
- Member of the Hebrew University's Gender Committee.
- Member of the Academic Committee of the Hebrew University's Einstein Archive.

SOME OTHER RECENT ACADEMIC ACTIVITIES

- 2020-present Member of the PSA (Philosophy of Science Association) International Relations Committee.
- 2020-present Member of Academia Europaea
<https://www.ae-info.org/>
- 2018-present Founder and Editor-in-Chief, *The Jerusalem Series in Philosophy and History of Science (JSPS)*. Springer Verlag.
- Series aim: to increase visibility of research in Israel in this field.
Volumes 1,2 came out in 2020, Volumes 3-6 in preparation.
<https://www.springer.com/series/16087>
- 2016-present President, "The Pond: Network of Philosophy of Science around the Mediterranean."
- Aim: to foster collaboration in research, funding, and exchanges of students and staff, between countries in the region, including a rare collaboration between a dozen European, North African, and Middle Eastern countries. Funding applications under review and exchanges of staff and students are encouraged via mainly Erasmus+. Yearly meetings: 1st took place in Jerusalem, 2nd in Athens, 3rd in Lisbon, 4th in Barcelona, 5th (Lyon, France) postponed due to pandemic. A joint publication is in preparation.
A biannual *summer school* in philosophy of science for students from the region will begin in the summer of 2021.

LIST OF PUBLICATIONS

In all joint publications the contributions are equal and authors' order is alphabetic.

DOCTORAL DISSERTATION

1. *Maxwell's Demon*. Advisor: Professor Itamar Pitowsky. The Hebrew University of Jerusalem, 1997.

BOOKS

2. Sassoon, David M. and Shenker, Orly (1986). *A Guide to Documentary Credits*. Tel-Aviv: Schocken. 238 pages. In Hebrew. (1st edition of item 3). In Hebrew. Second edition: Sassoon, David M. , Shenker, Orly, Yifrach, Meir (1996). *A Guide to Documentary Credits*.
3. Shenker, Orly (2012) *The Sociological Turn: Sociology of Scientific Knowledge and The Social Construction of Scientific Facts*. Raanana: The Open University. 279 pages. In Hebrew.
4. Hemmo, Meir and Shenker, Orly (2012). *The Road to Maxwell's Demon*. Cambridge: Cambridge University Press.

EDITED VOLUMES

5. Shenker, Orly and Hemmo, Meir (2020). *Quantum, Probability, Logic: The work and influence of Itamar Pitowsky*. Springer.
<https://www.springer.com/gp/book/9783030343156>
6. Hemmo, Meir, Ioannidis Stavros, Shenker, Orly, Vishne Gal (2021). *Levels of Reality in Science and Philosophy: Re-examining the multi-level structure of reality*. Springer. Forthcoming December 2021.
7. Shenker, Orly and Hemmo, Meir (2022). Levels of Reality. *The Monist*, special issue. Forthcoming April 2022.

CHAPTERS IN COLLECTIONS

8. Hemmo, Meir and Shenker, Orly (2012). Measures over Initial Conditions. In Y. Ben-Menahem and M. Hemmo (eds.), *Probability in Physics: Essays in Honor of Itamar Pitowsky*, The Frontiers Collection, Heidelberg-Berlin: Springer-Verlag, pp. 87-98.
9. Hemmo, Meir and Shenker, Orly (2016). The Arrow of Time. In Y. Dolev and M. Roubach (eds.), *Cosmological and Conscious Time*. Springer-Verlag, pp. 155-162.
10. Hemmo, Meir and Shenker, Orly (2020). Why the Many-Worlds Interpretation of quantum mechanics needs more than Hilbert space structure. In: Rik Peels, Jeroen de Ridder, René van Woudenberg (eds.), *Scientific Challenges to Common Sense Philosophy*. Oxford: Routledge. Pages 61-70.
11. Shenker, Orly (2020) Common Sense and Scientific Realism: Completing the Cycle. In: Jeroen de Ridder, René van Woudenberg, and Rik Peels (eds.), *Cambridge Companion to Common Sense Philosophy*. Cambridge University Press. Pp. 333-351.
<https://doi.org/10.1017/9781108598163.016>
12. Hemmo, Meir and Shenker, Orly (2020). Quantum Mechanics as a Theory of Probability. In: Hemmo, Meir and Shenker, Orly (eds.), *Quantum, Probability, Logic: The work and influence of Itamar Pitowsky*. Springer. Pages 337-351.
13. Hemmo, Meir and Shenker, Orly (2021). Is the Mentaculus the Best System of the World? In B. Loewer, B. Weslake and A. Winsberg (Eds.), forthcoming in *Time's Arrow and the Origin of the Universe: Reflections on Time and Chance: Essays in Honor of David Albert's Work*, Cambridge, MA: Harvard University Press. Forthcoming.
14. Hemmo, Meir and Shenker, Orly (2018). Can one explain the psychological time arrow by the past hypothesis? Valia Allori (ed.), *Statistical Mechanics and Scientific Explanation: Determinism, Indeterminism and Laws of Nature*. World Scientific. Forthcoming, expected in 2020.
15. Shenker, Orly (2018). Foundations of quantum statistical mechanics. In: Eleanor Knox and Alastair Wilson (eds.), *Routledge Companion to the Philosophy of Physics*. Oxford: Routledge. Forthcoming, expected in 2020.

ARTICLES IN REFEREED JOURNALS

16. Shenker, Orly (1984). Fraud in Documentary Credits. *Tel Aviv University Law Review* 10: 555-587. In Hebrew.

17. Shenker, Orly (1994). Fractal Geometry is not the Geometry of Nature. *Studies in the History and Philosophy of Science* 25: 967-981.
18. Shenker, Orly (1999). Is $-k\text{Tr}(\rho \ln \rho)$ The Entropy in Quantum Mechanics? *British Journal for the Philosophy of Science* 50: 33-48.
19. Shenker, Orly (1999). Maxwell's Demon and Baron Munchausen: Free Will as a Perpetuum Mobile. *Studies in the History and Philosophy of Modern Physics* 30: 347-372.
20. Shenker, Orly (2000). Science: Freedom and Reason: Comments on Mara Beller's Quantum Dialogue. *Iyyun: The Jerusalem Philosophical Quarterly* 50: 55-62. (in English)
21. Hemmo, Meir and Shenker, Orly (2001). Can We Explain Thermodynamics by Quantum Decoherence? *Studies in the History and Philosophy of Modern Physics* 32: 555-568.
22. Hemmo, Meir and Shenker, Orly (2003). Quantum Decoherence and the Approach to Equilibrium, Part I. *Philosophy of Science* 70: 330-358.
23. Shenker, Orly (2004). Maxwell's Demon 2: Entropy, Classical and Quantum Information, Computing. *Studies in the History and Philosophy of Modern Physics* 35: 537-540.
24. Hemmo, Meir and Shenker, Orly (2005). Quantum Decoherence and the Approach to Equilibrium, Part II. *Studies in the History and Philosophy of Modern Physics* 36: 626-648.
25. Hemmo, Meir and Shenker, Orly (2006). Von Neumann's Entropy Does Not Correspond to Thermodynamic Entropy. *Philosophy of Science* 73(2): 153-174.
26. Shenker, Orly (2009). Probability and Experience. *Iyyun: The Jerusalem Philosophical Quarterly* 58: 307-323. In Hebrew.
27. Hemmo, Meir and Shenker, Orly (2010). Maxwell's Demon. *The Journal of Philosophy* 107(8): 389-411.
28. Hemmo, Meir and Shenker, Orly (2011). Szilard's Perpetuum Mobile. *Philosophy of Science* 78(2): 264-283.
29. Hemmo, Meir and Shenker, Orly (2011). Introduction to the Philosophy of Statistical Mechanics: Can Probability Explain the Arrow of Time in the Second Law of Thermodynamics? *Philosophy Compass* 6(9): 640-651
30. Hemmo, Meir and Shenker, Orly (2012). The Mathematical Representation of the Arrow of Time. *Iyyun: The Jerusalem Philosophical Quarterly* 61: 167-192.
31. Hemmo, Meir and Shenker, Orly (2013). On an Incoherence Between Multiple Realizability and Supervenience: An Argument for Type Physicalism. *Iyyun: The Jerusalem Philosophical Quarterly* 62: 107-122. In Hebrew.
32. Hemmo, Meir and Shenker, Orly (2013). Entropy and Computation: The Landauer-Bennett Thesis Reexamined. *Entropy* 15: 3387-3401.
33. Hemmo, Meir and Shenker, Orly (2013). Probability Zero in Bohm's theory. *Philosophy of Science* 80:1148-1158.

34. Hemmo, Meir and Shenker, Orly (2015). Probability and Typicality in Deterministic Physics. *Erkenntnis* 80, 575-586.
35. Shenker, Orly (2015). Davidsonian Descriptions as a Principle Theory. *Iyyun: The Jerusalem Philosophical Quarterly* 64:171-190. In Hebrew.
<https://www.jstor.org/stable/24307974>
36. Hemmo, Meir and Shenker, Orly (2015). The Emergence of Macroscopic Regularity. *Mind and Society* 14: 221-244.
<https://doi.org/10.1007/s11299-015-0176-x>
37. Hemmo Meir and Shenker, Orly (2015). Boltzmann's Approach to Probability: Letter to the editor. *International Studies in the Philosophy of Science* 29: 91-93.
38. Hemmo, Meir and Shenker, Orly (2016). Maxwell's Demon. *Oxford University Press Handbooks Online*.
[doi: 10.1093/oxfordhb/9780199935314.013.63](https://doi.org/10.1093/oxfordhb/9780199935314.013.63)
39. Shenker, Orly (2017). Foundations of Statistical Mechanics: mechanics by itself. *Philosophy Compass*.
[doi: 10.1111/phc3.12465](https://doi.org/10.1111/phc3.12465).
40. Shenker, Orly (2017). Foundations of Statistical Mechanics: the auxiliary hypotheses. *Philosophy Compass*.
[doi: 10.1111/phc3.12464](https://doi.org/10.1111/phc3.12464).
41. Shenker, Orly (2017) Flat physicalism: some consequences. *Iyyun: The Jerusalem Philosophical Quarterly* 66, 211–225.
42. Hemmo, Meir and Shenker, Orly (2019). The Second Law of Thermodynamics and the Psychological Arrow of Time. *British Journal for Philosophy of Science*.
<https://doi.org/10.1093/bjps/axz038>
43. Hemmo, Meir and Shenker, Orly (2019). Two kinds of high-level probability. *The Monist* 102(4) 458-477. <https://doi.org/10.1093/monist/onz020>
44. Hemmo, Meir and Shenker, Orly (2019). The Physics of Implementing Logic: Landauer's Principle and the Multiple-computations Theorem. *Studies in History and Philosophy of Modern Physics* 68, 90-105. <https://doi.org/10.1016/j.shpsb.2019.07.001>
45. Shenker, Orly (2019). Information vs. Entropy vs. Probability. *European Journal for Philosophy of Science* 10(1). [doi: 10.1007/s13194-019-0274-4](https://doi.org/10.1007/s13194-019-0274-4)
46. Hemmo, Meir and Shenker, Orly (2020). Maxwell's Demon in Quantum Mechanics. *Entropy* 22, 269. <https://doi.org/10.3390/e22030269>
47. Baras, Dan and Shenker, Orly (2020) Calling for Explanation: The Case of the Thermodynamic Past State. *European Journal for Philosophy of Science* 10:1-20.
<https://doi.org/10.1007/s13194-020-00297-7>
48. Shenker, Orly (2020). Denialism: What do the so-called consciousness deniers deny? *Iyyun: The Jerusalem Philosophical Quarterly* 68: 307-337.

49. Hemmo, Meir and Shenker, Orly (2021). A Challenge to the Second Law of Thermodynamics from Cognitive Science and Vice Versa. *Synthese*, forthcoming.