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## Employment

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## Research outputs

**Book review: On Theories: Logical Empiricism and the Methodology of Modern Physics, by William Demopoulos**  
Halvorson, Hans, 2024, (E-pub ahead of print) In: Mind.

### John Bell on 'Subject and Object': An Exchange

Halvorson, Hans & Butterfield, J., 2023, In: Journal for General Philosophy of Science. 54, p. 305–324

### Mutual translatability, equivalence, and the structure of theories

Barrett, T. W. & Halvorson, Hans, 2022, In: Synthese. 200, 3, 36 p., 240.

### Objective description in physics

Halvorson, Hans, 2022, *Logic, Methodology and Philosophy of Science and Technology: Bridging Across Academic Cultures: Proceedings of the Sixteenth International Congress in Prague*. Marvan, T., Andersen, H., Chang, H., Löwe, B. & Pezlar, I. (eds.). College Publications, p. 111-132

### John Bell on 'Subject and Object': an Exchange

Halvorson, Hans & Butterfield, J., 2 Jun 2021.

### Steven French: There Are No Such Things as Theories

Halvorson, Hans, 2021, In: Journal for General Philosophy of Science. 52, 4, p. 609-612 4 p.

### Niels Bohr Forvansket

Halvorson, Hans, 4 Jun 2020, In: Weekendavisen. 1 p.

### How Logic Works: A User's Guide

Halvorson, Hans, 2020, 1 ed. Princeton University Press. 256 p.

### The Logic in Philosophy of Science

Halvorson, Hans, 2019, Cambridge University Press. 296 p.

### To Be a Realist about Quantum Theory

Halvorson, Hans, 2019, *Quantum Worlds: Perspectives on the Ontology of Quantum Mechanics*. Lombardi, O., Fortin, S., López, C. & Holik, F. (eds.). Cambridge University Press, p. 133-163

## **FOUNDATIONS AND PHILOSOPHY**

Tsementzis, D. & Halvorson, Hans, May 2018, In: Philosophers Imprint. 18, 10, p. 1-15

### **Foundations and philosophy**

Tsementzis, D. & Halvorson, Hans, May 2018, In: Philosophers Imprint. 18, 10

### **A theological critique of the fine-tuning argument**

Halvorson, Hans, 2018, *Knowledge, Belief, and God: New Insights in Religious Epistemology*. Benton, M. A., Hawthorne, J. & Rabinowitz, D. (eds.). Oxford University Press, p. 122-135

### **Categories of scientific theories**

Halvorson, Hans & Tsementzis, D., 2018, *Categories for the Working Philosopher*. Landry, E. (ed.). Oxford University Press, p. 402-429

### **It Keeps Me Seeking: The Invitation from Science, Philosophy and Religion: The Invitation from Science, Philosophy and Religion**

Briggs, A., Halvorson, Hans & Steane, A., 2018, Oxford University Press.

### **Preface**

Ozawa, M., Butterfield, J., Halvorson, Hans, Rédei, M., Kitajima, Y. & Buscemi, F., 2018, In: Springer Proceedings in Mathematics and Statistics. 261, p. v-vi

### **From Geometry to Conceptual Relativity**

Barrett, T. W. & Halvorson, Hans, 2017, In: *Erkenntnis: An International Journal of Scientific Philosophy*. 82, p. 1043-1063

### **Quine's conjecture on many-sorted logic**

Barrett, T. W. & Halvorson, Hans, 2017, In: *Synthese*. 194, p. 3563-3582

### **Glymour and Quine on Theoretical Equivalence**

Barrett, T. W. & Halvorson, Hans, 2016, In: *Journal of Philosophical Logic*. 45, p. 467-483

### **MORITA EQUIVALENCE**

Barrett, T. W. & Halvorson, Hans, 2016, In: *Review of Symbolic Logic*. 9, 3, p. 556-582

### **Why Methodological Naturalism?**

Halvorson, Hans, 2016, *The Blackwell Companion to Naturalism*. Clark, K. J. (ed.). Wiley-Blackwell, p. 136-149 (Blackwell companions to philosophy, Vol. 62).

### **The Conventionality of Parastatistics**

Baker, D. J., Halvorson, Hans & Swanson, N., 2015, In: *British Journal for the Philosophy of Science*. 66, 4, p. 929-976

### **How is spontaneous symmetry breaking possible? Understanding Wigner's theorem in light of unitary inequivalence**

Baker, D. J. & Halvorson, Hans, 2013, In: *Studies in history and philosophy of modern physics*. 44, 4, p. 464-469

### **PLANTINGA ON PROVIDENCE AND PHYSICS**

Halvorson, Hans, 2013, In: *European Journal for Philosophy of Religion*. 5, 3, p. 19-30

### **The Semantic View, If Plausible, Is Syntactic**

Halvorson, Hans, 2013, In: *Philosophy of Science*. 80, 3, p. 475-478

### **Physical Cosmology**

Halvorson, Hans & Kragh, H., 2012, *The Routledge Companion to Theism*. Taliaferro, C., Harrison, V. S. & Goetz, S. (eds.). Routledge, p. 241-255

**What Scientific Theories Could Not Be**

Halvorson, Hans, 2012, In: *Philosophy of Science*. 79, 2, p. 183-206

**Introduction**

Halvorson, Hans, 1 Jan 2011, *Deep Beauty: Understanding the Quantum World Through Mathematical Innovation*. cambridge university press (cup), p. 1-10 10 p.

**Deep Beauty: Understanding the Quantum World Through Mathematical Innovation**

Halvorson, Hans (ed.), 2011, Cambridge University Press. 472 p.

**Preface**

Halvorson, Hans, 2011, *Deep Beauty: Understanding the Quantum World Through Mathematical Innovation*. Cambridge University Press, p. xi-xii

**Antimatter**

Baker, D. J. & Halvorson, Hans, 2010, In: *British Journal for the Philosophy of Science*. 61, 1, p. 93-121

**Algebraic Quantum Field Theory**

Halvorson, Hans, 2007, *Philosophy of Physics*. Elsevier, p. 731-864 134 p.

**Algebraic quantum field theory**

Halvorson, Hans, 1 Jan 2006, *Philosophy of Physics*. Elsevier, p. 731-864 134 p.

**Comments on Clouser's Claims for Theistic Science**

Halvorson, Hans, In: *PERSPECTIVES ON SCIENCE AND CHRISTIAN FAITH*. 58, 1, p. 18-19

**Can quantum cryptography imply quantum mechanics? Reply to Smolin**

Halvorson, Hans & Bub, J., 2005, In: *Quantum Information and Computation*. 5, 2, p. 170-175

**Complementarity of representations in quantum mechanics**

Halvorson, Hans, Mar 2004, In: *Studies in History and Philosophy of Science Part B - Studies in History and Philosophy of Modern Physics*. 35, 1, p. 45-56

**On information-theoretic characterizations of physical theories**

Halvorson, Hans, 2004, In: *Studies in History and Philosophy of Science Part B - Studies in History and Philosophy of Modern Physics*. 35, 2, p. 277-293

**Remote preparation of arbitrary ensembles and quantum bit commitment**

Halvorson, Hans, 2004, In: *Journal of Mathematical Physics*. 45, 12, p. 4920-4931

**Characterizing quantum theory in terms of information-theoretic constraints**

Clifton, R., Bub, J. & Halvorson, Hans, 2003, In: *Foundations of Physics*. 33, 11, p. 1561-1591

**No place for particles in relativistic quantum theories?**

Halvorson, Hans & Clifton, R., 2002, In: *Philosophy of Science*. 69, 1, p. 1-28

**Are rindler quanta real? Inequivalent particle concepts in quantum field theory**

Clifton, R. & Halvorson, Hans, 2001, In: *British Journal for the Philosophy of Science*. 52, 3, p. 417-470

**Entanglement and open systems in algebraic quantum field theory**

Clifton, R. & Halvorson, Hans, 2001, In: *Studies in History and Philosophy of Science Part B - Studies in History and Philosophy of Modern Physics*. 32, 1, p. 1-31

**On the nature of continuous physical quantities in classical and quantum mechanics**  
Halvorson, Hans, 2001, In: Journal of Philosophical Logic. 30, 1, p. 27-50

**Reeh-Schlieder defeats Newton-Wigner: On alternative localization schemes in relativistic quantum field theory**  
Halvorson, Hans, 2001, In: Philosophy of Science. 68, 1, p. 111-133

**The Einstein-Podolsky-Rosen state maximally violates Bell's inequalities**  
Halvorson, Hans, Sep 2000, In: Letters in Mathematical Physics. 53, 4, p. 321-329

**Nonlocal correlations are generic in infinite-dimensional bipartite systems**  
Clifton, R., Halvorson, Hans & Kent, A., Apr 2000, In: Physical Review A - Atomic, Molecular, and Optical Physics. 61, 4, p. 421011-421017 7 p., 042101.

**Bipartite-mixed-states of infinite-dimensional systems are generically nonseparable**  
Clifton, R. & Halvorson, Hans, Jan 2000, In: Physical Review A - Atomic, Molecular, and Optical Physics. 61, 1, p. 12108-1-12108-5 012108.

**Bipartite-mixed-states of infinite-dimensional systems are generically nonseparable**  
Clifton, R. & Halvorson, Hans, 2000, In: Physical Review A - Atomic, Molecular, and Optical Physics. 61, 1, p. 5 1 p.

**Generic Bell correlation between arbitrary local algebras in quantum field theory**  
Halvorson, Hans & Clifton, R., 2000, In: Journal of Mathematical Physics. 41, 4, p. 1711-1717

**Nonlocal correlations are generic in infinite-dimensional bipartite systems**  
Clifton, R., Halvorson, Hans & Kent, A., 2000, In: Physical Review A - Atomic, Molecular, and Optical Physics. 61, 4, 7 p., 042101.

**Maximal beable subalgebras of quantum mechanical observables**  
Halvorson, Hans & Clifton, R., 1999, In: International Journal of Theoretical Physics. 38, 10, p. 2441-2484

**Superentangled states**  
Clifton, R., Feldman, D. V., Halvorson, Hans, Redhead, M. L. G. & Wilce, A., 1998, In: Physical Review A - Atomic, Molecular, and Optical Physics. 58, 1, p. 135-145