

David Jakobsen
Associate Professor
Department of Culture and Communication
The Faculty of Social Sciences and Humanities
Human Centered Science and Digital Technology
Purposeful Technology Lab
The Logic of Time and Modality
Tid, Eksistens og Naturforbundethed
InDiMedia (Centre for Interactive Digital Media & Experience Design)
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Research profile

"My research focuses on logic, particularly tense logic, and artificial intelligence. I am especially interested in the historical and conceptual discussions that led to the formalization of the dynamic view of time, also known as tense logic. Tense logic is fascinating as a language that can provide a rigorous formalization of the meaning of time in information systems. I am interested in the research of the founder of tense logic, Arthur Norman Prior (1914-1969), who was highly influential as both a philosopher and logician. I find it important and significant to focus on the impact that the development of tense logic has had on the discussion of philosophical problems concerning time. This includes, in particular, time and existence, where questions about the ontology of the present are crucial, but also the contingency of the future and human freedom. Together with Peter Øhrstrøm and Per Hasle, I lead the Arthur Norman Prior archive at Aalborg University, which houses his correspondence and published as well as unpublished articles. It can be found at nachlass.prior.aau.dk. My latest research has focused on the use of generative artificial intelligence as an assistant for critical thinking. I am interested in developing and researching systems where generative artificial intelligence plays a role that makes it clear that it is the user who has the opportunity, and therefore the responsibility, to be the critical thinker."

Employment

Associate Professor

Associate Professor
Department of Culture and Communication
The Faculty of Social Sciences and Humanities
1 Sept 2015 → 31 Dec 4712

Associate Professor

Associate Professor
The Faculty of Social Sciences and Humanities
Aalborg Ø, Denmark
1 Sept 2015 → 31 Dec 4712

Associate Professor

Associate Professor
Human Centered Science and Digital Technology
The Faculty of Social Sciences and Humanities
1 Sept 2015 → 31 Dec 4712

Purposeful Technology Lab

The Faculty of Social Sciences and Humanities
1 Oct 2022 → present

The Logic of Time and Modality

The Faculty of Social Sciences and Humanities

1 Oct 2022 → present

Tid, Eksistens og Naturforbundethed

The Faculty of Social Sciences and Humanities

1 Oct 2022 → present

InDiMedia (Centre for Interactive Digital Media & Experience Design)

The Faculty of Social Sciences and Humanities

Denmark

1 Jan 2025 → present

Research outputs

A Danish Chatbot for Kaj Munk: Experiences in Developing a Chatbot for the Study of Kaj Munk's Ordet

Jakobsen, D., Pacis, S. K., Jalk, S. F. & Øhrstrøm, P., 13 Nov 2025, (E-pub ahead of print) In: *Artificial Intelligence and Applications*. p. 1-7 7 p.

Reasoning with Generative AI

Jakobsen, D., 4 Mar 2025, *Advances in Information and Communication - Proceedings of the 2025 Future of Information and Communication Conference, FICC 2025*. Arai, K. (ed.). Springer, p. 172-178 7 p. (Lecture Notes in Networks and Systems, Vol. 1283).

The Convolutions of Necessitarianism

Jakobsen, D., 13 Jan 2025, In: *Logic and Philosophy of Time*. 6, 1, p. 160-175

Taking Socratic Learning Seriously: A Pilot Study on the Use of AI in a Basic Logic Course

Jakobsen, D., Thorvaldsen, S., Øhrstrøm, P. & Pacis, S. K., 2025, *Innovative Technologies and Learning. ICITL 2025*. Wang, W.-S., Sandnes, F. E., Lai, C.-F., Sandrø, T. A. & Huang, Y.-M. (eds.). Springer, Vol. 15914. p. 289-298 10 p. (Lecture Notes in Computer Science (LNCS)).

Tense-Logic and the Revival of Philosophical Theology

Jakobsen, D., Oct 2024, In: *Philosophies*. 9, 5, 139.

Exploring Learning in Basic Logic Using Stored Log Data and Exam Data

Jakobsen, D., Thorvaldsen, S. & Øhrstrøm, P., 2024, *Innovative Technologies and Learning - 7th International Conference, ICITL 2024, Proceedings*. Cheng, Y.-P., Pedaste, M., Bardone, E. & Huang, Y.-M. (eds.). Springer, p. 109-119 11 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), Vol. 14785 LNCS).

A. N. Prior's journey to 'real' freedom

Jakobsen, D., 23 Oct 2023, In: *Logic and Philosophy of Time*. 5, 1, 35 p.

History and Philosophy of Tense-Logic

Jakobsen, D. (Editor), Øhrstrøm, P. (Editor) & Hasle, P. (Editor), 23 Oct 2023, Aalborg Universitetsforlag. 377 p. (Logic and Philosophy of Time, Vol. 5).

Fulfilling Russell's Wish: A.N. Prior and the Resurgence of Philosophical Theology

Jakobsen, D., 28 Feb 2023, *Organon F*. 1 ed. Slovakia: Filozofický ústav SAV, Vol. 30. p. 32-52 21 p.

Formal, Measurable Ontologies for Worldviews

Jakobsen, D. & Graf, S. J., 1 Jan 2023, *Measuring Ontologies for Value Enhancement: Aligning Computing Productivity with Human Creativity for Societal Adaptation - 1st International Workshop, MOVE 2020, Revised Selected Papers*. Polovina, R., Polovina, S. & Kemp, N. (eds.). 1 ed. Springer, Vol. 1. p. 86-97 12 p. (Communications in Computer and Information Science).

Prior's Turn to Medieval Logic

Jakobsen, D., 5 Jan 2022, In: *KronoScope. Journal for the Study of Time*. 21, 2, p. 157-171 15 p.

In What Sense is J.N. Findlay the Founding Father of Tense-logic?

Jakobsen, D., 2021, In: *History and Philosophy of Logic*. 42, 2, p. 180-188 9 p.

A.N. Prior and 'The Nature of Logic'

Jakobsen, D., 2020, In: *History and Philosophy of Logic*. 41, 1, p. 71-81 11 p.

Arthur Prior's Early Thoughts on Predestination

Jakobsen, D. & Øhrstrøm, P., 2020, *Three Little Essays: Arthur Prior in 1931*. Jakobsen, D., Øhrstrøm, P., Prior, M. & Rini, A. (eds.). 1 ed. Aalborg: Aalborg Universitetsforlag, p. 55-71 16 p. (*Logic and Philosophy of Time*, Vol. 3).

Dispelling the Freudian Specter: A.N. Prior's Discussion of Religion in 1943

Jakobsen, D., 2020, *The Metaphysics of Time: Themes from Prior*. Hasle, P., Jakobsen, D. & Øhrstrøm, P. (eds.). Aalborg: Aalborg Universitetsforlag, p. 63-85 22 p. (*Logic and Philosophy of Time*, Vol. 4).

Letters between Mary and Arthur Prior in 1954: Topics on Metaphysics and Time

Jakobsen, D., Øhrstrøm, P. & Prior, M., 2020, *The Metaphysics of Time: Themes from Prior*. Hasle, P., Jakobsen, D. & Øhrstrøm, P. (eds.). Aalborg: Aalborg Universitetsforlag, p. 179-226 47 p. (*Logic and Philosophy of Time*, Vol. 4).

Prior and the "Logic of the Word of God"

Jakobsen, D. & Götzsche, H., 2020, *The Metaphysics of Time: Themes from Prior*. Hasle, P., Jakobsen, D. & Øhrstrøm, P. (eds.). Aalborg: Aalborg Universitetsforlag, p. 87-98 12 p. (*Logic and Philosophy of Time*, Vol. 4).

Three Little Essays: Arthur Prior in 1931

Jakobsen, D. (Editor), Øhrstrøm, P. (Editor), Prior, M. (Editor) & Rini, A. (Editor), 2020, 1 ed. Aalborg: Aalborg Universitetsforlag, 292 p. (*Logic and Philosophy of Time*, Vol. 3).

The Return of Medieval Logic in the Philosophy of Time

Jakobsen, D., 2019, *Logic and Philosophy of Time: Further Themes from Prior, Volume 2*. Blackburn, P., Hasle, P. & Øhrstrøm, P. (eds.). 1 ed. Aalborg: Aalborg Universitetsforlag, (*Logic and Philosophy of Time*, Vol. 2).

Tro og tidslogik

Jakobsen, D. & Øhrstrøm, P., 2019, *Tro og videnskab*. Øhrstrøm, P. (ed.). Forlaget CKT, 18 p.

In Celebration of Past, Present and Future

Jakobsen, D., Øhrstrøm, P. & Hasle, P., 2017, *Logic and Philosophy of Time: Themes from Prior*. Aalborg: Aalborg Universitetsforlag, p. 9-27 19 p. (*Logic and Philosophy of Time*, Vol. 1).

The Prior-von Wright Debate on Anselm's Argument for the Existence of God

Jakobsen, D. & Øhrstrøm, P., 2017, *On the Human Condition: Philosophical Essays in Honour of the Centennial Anniversary of Georg Henrik von Wright*. Societas Philosophica Fennica, Vol. 93. p. 255-267 13 p. (*Acta Philosophica Fennica*).

The Significance of the Prior-Smart Correspondence for the Rise of Tense-Logic

Jakobsen, D., 2017, *Logic and Philosophy of Time: Themes from Prior*. Aalborg: Aalborg Universitetsforlag, p. 63-82 19 p. (*Logic and Philosophy of Time*, Vol. 1).

An illusion close to life

Jakobsen, D., Nov 2016, In: *Synthese*. 193, 11, p. 3429 - 3439 10 p.

Conceptual and Metaphysical Origins and Relevance of Temporal Logic

Jakobsen, D. & Øhrstrøm, P., 2016, *PROCEEDINGS, 23rd International Symposium on Temporal Representation and Reasoning — TIME 2016*. Dyreson, C., Hansen, M. R. & Hunsberger, L. (eds.). IEEE (Institute of Electrical and Electronics Engineers), p. 167-176 10 p.

The Interpretation of Branching Time Diagrams

Jakobsen, D. & Øhrstrøm, P., 2016, *Graph-Based Representation and Reasoning*. Haemmerlé, O., Stapleton, G. & Zucker, C. F. (eds.). Springer, p. 31-39 9 p. (Lecture Notes in Artificial Intelligence : Subseries of Lecture Notes in Computer Science, Vol. 9717).

A.N. Prior og etikkenes ophav

Jakobsen, D., 2015, *Mening med tiden*. Ploug, T. (ed.). Aalborg: Aalborg Universitetsforlag, p. 103-131 28 p.

Arthur Norman Priors bidrag til metafysikken

Jakobsen, D., 2013, 167 p.

An introduction to 'faith, unbelief and evil'

Jakobsen, D., 2012, In: *Synthese*. 188, 3, p. 399-409 11 p.

A.N. Prior's Ideas on Tensed Ontology

Jakobsen, D., Schärfe, H. & Øhrstrøm, P., 2011, In: *Lecture Notes in Computer Science*. 6828, p. 118-130 13 p.

A.N. Prior's Notion of the Present

Jakobsen, D., 2011, In: *Lecture Notes in Computer Science*. 6789 LNAI, p. 36-45 10 p.

Activities

Dispelling the Freudian Spectre

Jakobsen, D. (Lecturer)
20 Nov 2019

Arthur Norman Prior's diskussion af tro, tvivl og ondskab

Jakobsen, D. (Lecturer)
5 Oct 2019

Letters between Mary and Arthur Prior in 1954: Topics on Metaphysics of Time

Jakobsen, D. (Lecturer)
19 Mar 2019 → 21 Mar 2019

The Metaphysics of Time: Themes from Prior

Jakobsen, D. (Organizer), Øhrstrøm, P. (Organizer) & Hasle, P. (Organizer)
19 Mar 2019 → 21 Mar 2019

Prizes

Best Paper Award

Jakobsen, D. (Recipient), Øhrstrøm, P. (Recipient), Ploug, T. (Recipient), Thorvaldsen, S. (Recipient) & Sandborg-Petersen, U. (Recipient), 25 Nov 2020

Best Paper Award

Øhrstrøm, P. (Recipient), Jakobsen, D. (Recipient) & Pacis, S. K. (Recipient), 7 Aug 2025

Projects

Building Educational Co-operation in Smart City

Jakobsen, D. (Project Participant) & Øhrstrøm, P. (Supervisor)
01/08/2018 → 01/12/2019

Educational and Entrepreneurial co-operation in Future City

Jakobsen, D. (Project Participant), Svarre, T. (Project Participant), Lindof, T. (Project Participant), Christensen, B. A. (Project Participant) & Gram-Hansen, S. B. (Project Participant)
01/09/2021 → 01/12/2023