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CITIZENSHIP:

Canadian, American.

EDUCATION AND DEGREES:

1971 B.A. University of Saskatchewan, magna cum laude.
1973 B.A. Cambridge University, first class honours in philosophy.
1974 M.A. University of Toronto, philosophy.
1977 M.A. Cambridge University.
1977 Ph.D. University of Toronto, philosophy. Thesis: *Explanation and Scientific Inference*.
1985 M.S. University of Michigan, Ann Arbor, computer science.

AREAS OF SPECIALIZATION:

Cognitive science, philosophy of science and medicine, philosophy of mind.

EMPLOYMENT:

1977-1981, Assistant Professor of Philosophy, University of Michigan-Dearborn.

1981-1986, Associate Professor of Philosophy, University of Michigan-Dearborn.

1981-1982, Visiting Scholar, Program in Cognitive Science, University of Michigan, Ann Arbor.

1983-1985, Visiting Associate Research Scientist, Psychology Department, University of Michigan, Ann Arbor.

1985-1986, Visiting Research Fellow/Visiting Associate Professor, Psychology Department, Princeton University.

1986-1989, Research Psychologist, Princeton University.

1989-1992, Senior Research Cognitive Scientist, Princeton University.

1990-1991, Adjunct Professor of Decision Sciences, University of Pennsylvania, Wharton School.

1992-2016, Professor of Philosophy, University of Waterloo.

1992-2014, Adjunct Professor of Psychology and Computer Science, University of Waterloo.

1995-2014, Director, Cognitive Science Program, University of Waterloo.

2005-2012, University Research Chair, University of Waterloo.

2015-2022, Fellow, Balsillie School of International Affairs.

2017-current, Distinguished Professor Emeritus, University of Waterloo.

HONOURS

1997-1999, Killam Research Fellow.

1999, Fellow of the Royal Society of Canada.

2003, University of Waterloo Award for Excellence in Research.

2005-2012, University of Waterloo University Research Chair.

2006, Fellow of the Cognitive Science Society.

2007, Canada Council for the Arts Molson Prize for Social Sciences and Humanities.

2009, Fellow of the Association for Psychological Science.

2013, Canada Council Killam Prize for Humanities.

SOCIETY MEMBERSHIPS:

Association for Psychological Science
Cognitive Science Society (governing board, 1996-2002; chair, 1998-1999)
Royal Society of Canada

PRESENTATIONS:

American Association for Artificial Intelligence Spring Symposium on Automated Abduction, American Association for Artificial Intelligence Spring Symposium on Scientific Discovery, AAAI Workshop on Evaluating Computational Models of Cognition, AAAI Workshop on Visual Reasoning, AAAI Workshop on Neurosymbolic Processing, American Association for the Advancement of Science (2), American Philosophical Association (5), American Psychological Association, Applications of Computer Algebra, Association for Psychological Science, British Society for the Philosophy of Science (2), Canadian Conference on Artificial Intelligence, Canadian Society for Epistemology, Conference on Clinical Judgment, Conference on Cognitive Science Education, Conference on Evolving Knowledge in Natural Science and Artificial Intelligence, Canadian Consensus Conference on *Helicobacter pylori*, Canadian Philosophical Association (7), Canadian Society for History and Philosophy of Science (3), Cognitive Science Society (17), Congreso Iberoamericano de Filosofía de la Ciencia y Tecnología, Creative Concepts Conference, DARPA Workshop on Case-Base Reasoning, Georgia Philosophical Society (3), French Society for Philosophy of Science, German Cognitive Science Society, Group Decision and Negotiation (3), International Congress for Logic, Methodology, and Philosophy of Science; International Joint Conference on Artificial Intelligence (2); International Peirce Congress (2); International Society for the Psychology of Science and Technology, Model-Based Reasoning in Scientific Discovery Conference (4), Philosophy of Medicine Roundtable, Philosophy of Science Association (8), Political Cognition Conference, Society for Machines and Mentality, Society for Philosophy and Psychology (4), Society for Personality and Social Psychology, Society for Text and Discourse Processing, Workshop on Computational Models of Scientific Discovery, Society for Social Studies of Science, XXXVI

International Congress of Psychology, International Joint Conference on Neural Networks (3), Vancouver Conference on Cognition (2), Workshop on Evidence and the Law, Conference on the Cognitive Basis of Science, Western Canadian Philosophical Association, Workshop on Cognitive Studies of Science, Philosophy of Medicine Conference, Canadian Congress of Social Sciences and Humanities Symposium on Computer Use in Humanities, Canadian Society for Epistemology, North American Computing and Philosophy Conference, Southern Ontario Decision Research Conference, Conference on Computational Discovery, Cognitive Science Society Workshop on Cognitive Social Sciences, Philosophy of Social Science Roundtable, Ontario Society for the Study of Argumentation, Conference on Social Dimensions of Science, Workshop on Thought Experiments, International Association for the Psychology of Science and Technology, Workshop on Cyber-physical society, Workshop on Conceptual Change, Workshop on Epistemic Cognition, Workshop on Modeling Conceptual Change, Workshop on Socially Responsible Philosophy of Science, Conference on Modes of Explanation, International Conference on Artificial Intelligence and Law, Conference on Complexity and Urban Planning, Conference on Ethics and the Human Brain Project, Workshop on Social Simulations of Science, Research Conference on Roots of Empathy, Expert Meeting on Building Bridges Between Functional and Cognitive Psychology, Kazmierz Naturalizing Epistemology Workshop, Budapest Semester in Cognitive Science, Emory Conference on Emotions, Boston Workshop on Cognitive Sociology, Western University Conference on Taxonomic Change, Plymouth Conference on Creativity and Neuroscience, Barcelona Conference on Philosophy of Public Health, UQAM Summer School on Cognitive Science, Munich Workshop on Science Education, Berlin Conference on Coherence in Decision Making, Santiago Jornadas Chuaqui Conference, Helsinki Conference on Conceptual Change in History, Finland Workshop on Relevance, Austin Riggs Hospital Conference on Beyond Duality, Society for Psychology and Computers, Bristol Conference on Creativity in Art and Science, Avant Conference Porto, Renmin University Conference on Computers and Philosophy.

Autonomous National University of Mexico, Australian National University, Baylor College of Medicine, Bell Communications Research, Boston University, Bowling Green State University, Brock University, Brooklyn College, University of Calgary, Cambridge University, Carnegie Mellon University (2), Cardozo College of Law, Carleton College, Carleton University (3), Dalhousie University, Educational Testing Service, Emory University, Franklin and Marshall College, Freiberg Universität (3), University of Georgia, Georgia State University, Georgia Institute of Technology (3), Harvard Business School (2), University of Illinois at Urbana-Champaign, Institute for Research on Learning, Lehigh University, University of Maryland, London Health Research Day, McDonnell Douglas Aerospace, McGill University, McMaster University, University of Michigan (3), University of Minnesota, University of New South Wales, University of Newcastle, New York University, Ohio State University, Ontario Institute for Studies in Education, University of Örebro (2), University of Pennsylvania, University of Pittsburgh (2), Princeton University, University of Puerto Rico, Purdue University, Université du Québec à Montréal (5), Queen's University, Rensellaer Polytechnic Institute, Renmin University (2), Rutgers University, Universität des Saarlandes, SRI International, Stanford University, State University of New York at Buffalo (4), St. Jerome's University, Sun Yat-sen University, Tufts University, University of A Coruna (2), University of Arizona, University of Aarhus (2), University of British Columbia-

Okanagan, University of California at Berkeley, University of California at Irvine, University of California at Los Angeles, University of California at San Diego, University of Chicago (2), University of Colorado, University of Dusseldorf, University of Groningen, University of Nevada-Reno, University of Southern California, University of Sussex, University of Tel Aviv, University of Toronto (5), University of Virginia, University of Waterloo (8), University of Western Ontario (2), University of Wisconsin (2), Yale University, York University (3), University of Nice, University of Provence, Villanova University, University of Trnava, University of Victoria, Tufts University, University of Freiburg, New York University, University of Memphis, University of Helsinki, University of Amsterdam, Université du Québec à Montréal (2).

REFEREE FOR:

Philosophy of Science, Behavioral and Brain Sciences, Business Ethics, Dialogue, Journal of Philosophical Logic, Cognitive Psychology, Systematic Zoology, Cognitive Science, American Psychologist, Biology and Philosophy, Synthese, Philosophical Psychology, Journal of the History of Philosophy, Journal of Experimental Social Psychology, Psychological Review, Psychological Bulletin, New Ideas in Psychology, Language and Cognitive Processes, Linguistics and Philosophy, Decision Support Systems, Informal Logic, Machine Learning, Journal of the Learning Sciences, Instructional Science, Canadian Journal of Philosophy, Computational Intelligence, Cognition and Instruction, Minds and Machines, International Studies in Philosophy of Science, Personality and Social Psychology Bulletin, Review of General Psychology, Psychonomic Bulletin & Review, IEEE Transactions on Systems, Man, and Cybernetics; Journal of Artificial Intelligence Research, Trends in Cognitive Sciences, Cognitive Science Quarterly, Journal of Personality and Social Psychology, Psychological Science, Cognition and Emotion, Theory & Psychology, Science in Context, Neural Networks, History and Philosophy of the Life Sciences, Acta Biotheoretica, Applied Artificial Intelligence, Eidos, Philosophical Quarterly, Cognition, Perspectives on Science, Psychological Methods, Journal of Consciousness Studies, Journal of Cognitive Science, Journal of the Psychology of Science and Technology, Topics in Cognitive Science, European Journal of Philosophy of Science, Group Decision and Negotiation, Pacific Philosophical Quarterly, Philosophical Studies, Social Cognition, Studies in History and Philosophy of Science, Theoretical Medicine and Bioethics, Scientific Study of Literature, Environment Systems and Decisions, Neuropsychologia, Journal for General Philosophy of Science, Artificial Intelligence and Law, Social Cognition, Journal of the Philosophy of History, Frontiers in Psychology, Perspectives on Psychological Science, Social Epistemology, Politics and the Life Sciences, Methods, Proceedings of the National Academy of Sciences, Journal of Experimental Psychology: General.

National Science Foundation (History and Philosophy of Science, Memory and Cognition, Knowledge and Database Systems, Social Psychology, Science Studies), National Endowment for the Humanities, Air Force Office of Scientific Research, Spencer Foundation, Australian Research Council, Medical Research Council (Britain), National Sciences and Engineering Research Council of Canada (Psychology, Computer Science), Social Sciences and Humanities Research Council of Canada, Fonds pour la Formation de Chercheurs et l'Aide à la Recherche (Quebec), NATO Collaborative Research Grants, Polish Academy of Sciences, Society for Philosophy and Psychology, International Joint Conference on Artificial Intelligence, Cognitive Science Society

Conference, Canadian Philosophical Association Conference, Machine Learning Conference, European Conference on Artificial Intelligence, IEEE Conference on AI Applications, Oxford University Press, Basil Blackwell, Academic Press, MIT Press, Cambridge University Press, Princeton University Press, Macmillan, Sage, Springer-Verlag, Routledge, John Templeton Foundation, European Research Community, Swiss National Science Foundation, Wellcome Trust.

EDITORIAL/ADVISORY BOARD MEMBER: *Philosophical Psychology, Journal of Cognitive Science, Episteme, Mind and Society, Dialogue (1997-2000), SIGART Bulletin* (Book Review Editor, 1990-1993), *Cognitive Science* (1999-2005, Associate Editor, 2006-2008).

PROGRAM COMMITTEE MEMBER:

American Association for Artificial Intelligence Workshop on Abductive Reasoning, spring 1990. Florida Artificial Intelligence Research Symposium, Workshop on Analogy, 1994. Philosophy of Science Association Conference, 1996. American Association for Artificial Intelligence National Conference, 1996. AAAI Workshop on Computational Cognitive Modeling, 1996. Conference on Information, Statistics, and Induction in Science, Melbourne, 1996. Conference on Computational Models of Metaphor and Analogy, Aizu, 1998. Conference on Model-Based Reasoning, 1998, 2001, 2009, 2010, 2012. Cognitive Science Society Annual Conference, 2000, 2002, 2003, 2005, 2006, 2007, 2008, 2009, 2010, 2014, 2015. Workshop on Creative Systems, 2002. AAAI Workshop on Visual Reasoning, 2010. Model-Based Reasoning, 2012. International Association for Computing and Philosophy, 2013.

GRANTS AND FELLOWSHIPS:

1979: Rackham faculty grant, University of Michigan. Title: Theories and Frames.

1980: Campus grant, University of Michigan-Dearborn. Title: Theories and Explanations in Cognitive Science.

1981: Council of Philosophical Studies Fellowship. To attend Summer Institute in Psychology and the Philosophy of Mind.

1981-82: National Science Foundation. Title: Knowledge Structures: Methodological and Conceptual Issues in Cognitive Science.

1981-82: Cognitive Science Program, University of Michigan, Ann Arbor: Sloan Post-doctoral Fellowship.

1982-83: Alfred P. Sloan Foundation (with J. Holland, K. Holyoak, and R. Nisbett). Title: The Process of Induction.

1983-84: Systems Development Foundation (with J. Holland, K. Holyoak, and R. Nisbett). Title: The Process of Induction.

1986-89: U.S. Army Research Institute for the Behavioral and Social Sciences (with K. Holyoak). Title: A Cognitive Architecture for Solving Ill-Structured Problems.

1989: American Council of Learned Societies Travel Grant

1989-1992: U.S. Army Research Institute for the Behavioral and Social Sciences (with K. Holyoak). Title: A Cognitive Architecture for Analogy and Problem Solving.

1992-1995. Social Sciences and Humanities Research Council of Canada. Title: Integration of Psychological and Sociological Models of Scientific Change.

1992-1995. Natural Sciences and Engineering Research Council of Canada. Title: Cognitive Mechanisms for Forming and Evaluating Explanatory Hypotheses.

1993-1995. University of Waterloo Interdisciplinary Grants Committee. Title: Development and Coordination of Cognitive Science Research at the University of Waterloo.

1995-1998, Social Sciences and Humanities Research Council of Canada. Title: Explaining Scientific Change: The Development and Acceptance of the Bacterial Theory of Ulcers.

1995-2000, Natural Sciences and Engineering Research Council of Canada. Title: Cognitive Mechanisms for Analogy and Explanation

1997-1999, Canada Council Killam Research Fellowship. Title: Making Sense: Coherence in Thought and Action.

2000-2005, Natural Sciences and Engineering Research Council of Canada. Title: Cognitive Mechanisms for Coherence and Emotion.

2005-2010, Natural Sciences and Engineering Research Council of Canada. Title: Cognitive and Neural Mechanisms for Decision and Explanation.

2010-2016, Natural Sciences and Engineering Research Council of Canada. Title: Cognitive and Neural Mechanisms for Goal Revision and Emotional Change.

2014-2015, Centre for International Governance Innovation (with Thomas Homer-Dixon and Steven Mock). Title: Ideational Conflict Project.

BOOKS:

Holland, J., Holyoak, K., Nisbett, R., & Thagard, P. (1986). *Induction: Processes of inference, learning, and discovery*. Cambridge, MA: MIT Press/Bradford Books. Paperback edition, 1988. Japanese translation published by Shinyo Sha, 1990.

Holyoak, K., & Thagard, P. (1995). *Mental leaps*: *Analogy in creative thought.* Cambridge:, MA: MIT Press/Bradford Books. Paperback edition, 1996. Japanese translation published by Shinyo Sha, 1998.

Thagard, P. (1988). *Computational philosophy of science*. Cambridge, MA: MIT Press/Bradford Books. Paperback edition, 1993.

Thagard, P. (1992). *Conceptual revolutions*. Princeton: Princeton University Press. Paperback edition, 1993. Italian translation published by Guerini e Associati, 1994. Chinese translation published by Hung Yeh Publishing, Taiwan., 2004. Selected by

the Association of American Publishers, Professional/Scholarly publishing division, as the outstanding psychology book of 1992.

Thagard, P. (1996). *Mind: Introduction to cognitive science.* Cambridge, MA: MIT Press/Bradford Books. Italian translation published by Guerini e Associati, 1998. Portuguese translation published by Artes Médicas, 1998. German translation published by Kletta-Cotta Verlag, 1999. Japanese translation published by Kyoritsu Shuppan, 1999. Chinese translation published by the University of Science and Technology of China Press, 1999. Czech translation published by Portal, 2001. Chinese translation(complex character) published by Wu-Nan Book Company, 2003.

Thagard, P. (1999). *How scientists explain disease.* Princeton: Princeton University Press. Paperback edition, 2000. Italian translation published by McGraw-Hill Italy, 2001. Chinese translation published by Shanghai Science and Technology Education Publishers, 2001.

Thagard, P. (2000). *Coherence in thought and action.* Cambridge, MA: MIT Press. Paperback edition, 2002.

Thagard, P. (2005). *Mind: Introduction to cognitive science, second edition.* Cambridge, MA: MIT Press. Reprint edition published 2006 by Prentice-Hall of India. Spanish translation published 2008 by Katz Editores. Chinese translation published 2012 by Shanghai Lexicographical Publishing House. Greek translation published by Polytropon, 2023.

Thagard, P. (2006). *Hot thought: Mechanisms and applications of emotional cognition*. Cambridge, MA: MIT Press. Paperback edition, 2008. Chinese translation published in 2019 by China Science Publishing.

Thagard, P. (2010). *The brain and the meaning of life*. Princeton: Princeton University Press. Paperback edition, 2012. Korean translation published by Purun Communications, 2011. Catalan translation published by Obrador Edendum, 2012. Japanese translation published by Shinyosha, 2012. Serbian translation published by Akademska Knjiga, 2014. Italian translation published by Mondadori, 2014.

Thagard, P. (2012). *The cognitive science of science: Explanation, discovery, and conceptual change.* Cambridge, MA: MIT Press. Paperback edition, 2014.

Thagard, P. (2019). *Brain-mind: From neurons to consciousness and creativity*. New York: Oxford University Press. Paperback edition, 2021.

Thagard, P. (2019). *Mind-society: From brains to social sciences and professions* New York: Oxford University Press. Paperback edition, 2021.

Thagard, P. (2019). *Natural philosophy: From social brains to knowledge, reality, morality, and beauty*. New York: Oxford University Press. Paperback edition, 2021.

Thagard, P. (2021). *Bots and beasts: What makes machines, animals, and people smart?* Cambridge, MA: MIT Press. Italian translation published by FrancoAngeli, 2021. Chinese published by China Science and Technology Press, 2024. Paperback edition, 2024.

Thagard, P. (2022). *Balance: How it works and what it means*. New York: Columbia University Press. Audiobook published by Findaway, 2022. Arabic translation published by Ninawa, 2023.

Thagard, P. (2024). *Falsehoods fly: Why misinformation spreads and how to stop it*. New York: Columbia University Press. Audiobook published by Tantor Media.

Thagard, P. (2025). *Dreams, jokes, and songs: How brains build consciousness*. Oxford: Oxford University Press.

Thagard, P. (forthcoming). *Doom or boom? Philosophy and psychology of the new artificial intelligence*. Cambridge, MA: MIT Press.

EDITED BOOKS:

Magnani, L., Nersessian, N., and Thagard, P. eds. (1999), *Model-based reasoning in scientific discovery.* New York: Plenum. Chinese translation published by China Science and Technology Press, 2000.

Thagard, P., ed. (1998). *Mind readings: Introductory selections on cognitive science.* Cambridge, MA: MIT Press/Bradford Books.

Thagard, P. ed. (2007). *Philosophy of psychology and cognitive science.* Amsterdam: Elsevier.

ARTICLES AND REVIEWS:

Thagard, P. (1977). Darwin and Whewell. *Studies in History and Philosophy of Science*, *8*: 353-356.

Thagard, P. (1977). The unity of Peirce's theory of hypothesis. *Transactions of the Charles S. Peirce Society*, *13*: 112-121.

Thagard, P. (1978). The best explanation: criteria for theory choice. *Journal of Philosophy*, *75*: 76-92.

Thagard, P. (1978). Semiotics and hypothetic inference in C. S. Peirce. *Quaderni di studi semiotici*, *19/20*: 163-172.

Thagard, P. (1978). Why astrology is a pseudoscience. In I. Hacking & P. Asquith (Eds.), *PSA 1978 vol. 1* (pp. 223-234). East Lansing: Philosophy of Science Association.

Thagard, P. (1979). In defense of deductive inference. *Australasian Journal of Philosophy*, *57*: 274-279.

Thagard, P. (1980). Against evolutionary epistemology. In R. Giere & P. Asquith (Eds.), *PSA 1980, vol. 1* (pp. 187-196). East Lansing: Philosophy of Science Association.

Thagard, P. (1980). Comments on Ray Hyman on pathological science. *Zetetic Scholar*, *6*: 65.

Thagard, P. (1980). Resemblance, correlation, and pseudoscience. In M. Hanen,M. Osler, & R. Weyant (Eds.), *Science, Pseudoscience, and Society* (pp. 17-27). Waterloo, Ont.: Wilfred Laurier University Press.

Thagard, P., & Hausman, D. (1980). Sun signs vs. science: using astrology to teach philosophy of science. *Metaphilosophy*, *11*: 101-104.

Thagard, P. (1980 (reprint of 1978 article)). Why astrology is a pseudoscience. In E. D. Klemke & et al. (Eds.), *Introductory Readings in the Philosophy of Science.* (pp. 66-75). Buffalo: Prometheus Books.

Thagard, P. (1981). The autonomy of a logic of discovery. In L. W. Sumner et al. (Eds.), *Pragmatism and Purpose* (pp. 248-260). Toronto: University of Toronto Press.

Thagard, P. (1981). Critical Notice of Michael Ruse, Sociobiology: Sense or Nonsense? *Canadian Journal of Philosophy*, *11*: 751-759.

Thagard, P. (1981). Peirce on hypothesis and abduction. In K. Ketner et al. (Eds.), *Proceedings of the C. S. Peirce Bicentennial International Congress* (pp. 271-274). Lubbock, Texas: Texas Tech University Press.

Thagard, P. (1982). Beyond utility theory. In M. Bradie & K. Sayre (Eds.), *Reason and Decision* (pp. 42-49). Bowling Green, Ohio: Bowling Green State University.

Thagard, P. (1982). Fallacies of practical inference. *Informal Logic Newsletter*, *V*: 26-27.

Thagard, P. (1982). From the descriptive to the normative in psychology and logic. *Philosophy of Science*, *49*: 24-42.

Thagard, P. (1982). Hegel, science, and set theory. *Erkenntnis*, *18*: 397-410.

Thagard, P. (1982). Programs, theories and models in cognitive science. In *Proceedings of the Fourth Annual Conference of the Cognitive Science Society* (pp. 155-157). Ann Arbor, MI:

Thagard, P. (1982). Review of books by Mary Hesse, John Klige, and Gary Gutting (ed.). *Teaching Philosophy*, *5*: 258-261.

Thagard, P., & Nisbett, R. (1982). Variability and confirmation. *Philosophical Studies*, *42*: 379-394.

Nisbett, R., & Thagard, P. (1983). Psychology, statistics, and analytic epistemology. *Behavioral and Brain Sciences*, *6*: 257-258.

Thagard, P. (1983). Artificial intelligence, psychology, and the philosophy of discovery. In P. Asquith & T. Nickles (Eds.), *PSA 1982, vol. 2.* (pp. 166-175). East Lansing: Philosophy of Science Association.

Thagard, P., & Nisbett, R. (1983). Rationality and charity. *Philosophy of Science*, *50*: 250-267.

Thagard, P. (1984). Alternative methods for psychological research (review of D. Polkinghorne, Methodology for the Human Sciences). *Contemporary Psychology*, *29*: 911-912.

Thagard, P. (1984). Computer programs as psychological theories. In O. Neumaier (Ed.), *Mind, Language, and Society* (pp. 77-84). Vienna: Conceptus-Studien.

Thagard, P. (1984). Conceptual combination and scientific discovery. In P. Asquith & P. Kitcher (Eds.), *PSA 1984, vol. 1.* (pp. 3-12). East Lansing: Philosophy of Science Association.

Thagard, P. (1984). Frames, knowledge, and inference. *Synthese*, *61*: 233-259.

Thagard, P. (1984). Psychology meets philosophy. (review of E. Valentine, *Conceptual Issues in Psychology*). *Contemporary Psychology*, *29*: 514-515.

Thagard, P. (1984). Rules for conceptual combination. In *Proceedings of the Sixth Annual Conference of the Cognitive Science Society*, (pp. 328-333). Boulder, Colorado.

Thagard, P., & Holyoak, K. (1985). Discovering the wave theory of sound: induction in the context of problem solving. In *Proceedings of the Ninth International Joint Conference on Artificial Intelligence* (pp. 610-612.). Los Altos: Morgan Kaufmann.

Laudan, L., Donovan, A., Laudan, R., Barker, P., Brown, H., Leplin, J., Thagard, P., & Wykstra, S. (1986). Scientific change: philosophical models and historical research. *Synthese*, *69*: 141-223.

Thagard, P. (1986). Charles Peirce, Sherlock Holmes, and Artificial Intelligence. *Semiotica*, *60*: 289-295.

Thagard, P. (1986). The emergence of meaning: How to escape Searle's Chinese room. *Behaviorism*, *14*: 139-146.

Thagard, P. (1986). Parallel computation and the mind-body problem. *Cognitive Science*, *10*: 301-318.

Thagard, P. (1986). The pragmatics of induction. *Behavioral and Brain Sciences*, *9*: 668-669.

Holland, J., Holyoak, K., Nisbett, R., & Thagard, P. (1987). Classifier systems, Q-morphisms, and induction. [reprinted excerpts from 1986 book, Induction]. In L. Davis (Ed.), *Genetic Algorithms and Simulated Annealing* (pp. 116-128). London: Pitman.

Thagard, P. (1987). Computerized creativity. (review of P. Langley, H. Simon, G. Bradshaw, and J. Zytkow, *Scientific Discovery*). *The Scientist*, *1*: 22.

Thagard, P. (1987). Reply to Krellenstein on parallel computation. *Cognitive Science*, *11*: 159-161.

Thagard, P. (1987). Review of Z. Pylyshyn and W. Demopoulos (Eds.)., *Meaning and cognitive dtructure. Canadian Philosophical Reviews*, *7*: 422-423.

Thagard, P. (1987). Zdolnosc godzaca a struktura teorii. [Consilience and the structure of theories]. In K. Jodkowski (Ed.), *Realizm, Racjonalnosc Relatywizm 4* (pp. 153-170). Lublin: MCS University Press.

Thagard, P., & Kunda, Z. (1987). Hot cognition: mechanisms of motivated inference. In E. Hunt (Ed.), *Proceedings of the Ninth Annual Conference of the Cognitive Science Society* (pp. 753-763). Hillsdale, N.J.: Erlbaum.

Ranney, M., & Thagard, P. (1988). Explanatory coherence and belief revision in naive physics. In *Proceedings of the Tenth Annual Conference of the Cognitive Science Society* (pp. 426-432). Hillsdale, NJ: Erlbaum.

Thagard, P. (1988). Computational models in the philosophy of science. In A. Fine & P. Machamer (Eds.), *PSA 1986, vol. 2.* (pp. 329-335). East Lansing, MI: Philosophy of Science Association.

Thagard, P. (1988). Dimensions of analogy. In D. Hellman (Ed.), *Analogical Reasoning* (pp. 105-124). Dordrecht: Reidel.

Thagard, P. (1988). Review of M. Midgley, *Evolution as a Religion*, and M. Ruse, *Taking Darwin Seriously*. *Victorian Studies*, *31*: 433-435.

Thagard, P. (1988). Why astrology is a pseudoscience. (reprint of 1978 article). In E. D. Klemke et al.(Eds.), *Introductory Readings in the Philosophy of Science (revised edition)* (pp. 45-54). Buffalo: Prometheus Books.

Thagard, P., & Nowak, G. (1988). The explanatory coherence of continental drift. In A. Fine & J. Leplin (Eds.), *PSA 1988 vol. 1.* (pp. 118-126). East Lansing, Michigan: Philosophy of Science Association.

Holyoak, K., & Thagard, P. (1989). Analogical mapping by constraint satisfaction. *Cognitive Science*, *13*: 295-355.

Holyoak, K., & Thagard, P. (1989). A computational model of analogical problem solving. In S. Vosniadou & A. Ortony (Eds.), *Similarity and Analogical Reasoning* (pp. 242-266). Cambridge: Cambridge University Press.

Thagard, P. (1989). Connectionism and epistemology: Goldman on winner-take-all networks. *Philosophia*, *19*: 189-196.

Thagard, P. (1989). Epistemology and explanation. [review of W. Lycan, *Judgment and Justification*]. *Contemporary Psychology*, *34*: 646-647.

Thagard, P. (1989). Explanatory coherence. *Behavioral and Brain Sciences*, *12*: 435-467.

Thagard, P. (1989). Extending explanatory coherence (reply to 27 commentators). *Behavioral and Brain Sciences*, *12*: 490-502.

Thagard, P. (1989). Scientific cognition: hot or cold? In S. Fuller, M. de Mey, T. Shinn, & S. Woolgar (Eds.), *The Cognitive Turn: Sociological and Psychological Perspectives on Science* (pp. 71-82). Dordrecht: Kluwer.

Thagard, P. (1989). Welcome to the cognitive revolution. *Social Studies of Science*, *19*: 653-657.

Thagard, P., Cohen, D., & Holyoak, K. (1989). Chemical analogies: two kinds of explanation. In *Proceedings of the Eleventh International Joint Conference on Artificial Intelligence* (pp. 819-824). San Mateo: Morgan Kaufmann.

Thagard, P., & Holyoak, K. (1989). Why indexing is the wrong way to think about analog retrieval. In *Proceedings of the DARPA Workshop on Case-Based Reasoning* (pp. 36-40). San Mateo: Morgan Kaufman.

Holyoak, K., & Thagard, P. (1990). A constraint-satisfaction approach to analogue retrieval and mapping. In K. Gilhooly,M. Keane,R. Logie, & G. Erdos (Eds.), *Lines of thinking, vol. 1.* (pp. 205-220). Chichester, U.K.: Wiley.

Thagard, P. (1990). Comment: information and concepts. In P. Hanson (Ed.), *Information, Language, and Cognition.* (pp. 169-174). Vancouver: University of British Columbia Press.

Thagard, P. (1990). Concepts and conceptual change. *Synthese*, *82*: 255-274.

Thagard, P. (1990). The conceptual structure of the chemical revolution. *Philosophy of Science*, *57*: 183-209.

Thagard, P. (1990). Modelling conceptual change. In J. Tiles, G. McKee, & G. Dean (Eds.), *Evolving Knowledge in Natural Science and Artificial Intelligence* (pp. 201-218). London: Pitman.

Thagard, P. (1990). Philosophy and machine learning. *Canadian Journal of Philosophy*, *20*: 261-276.

Thagard, P. (1990). Review of H. Margolis *Patterns, Thinking, and Cognition*. *Philosophical Psychology*, *3*: 165-167.

Thagard, P., Holyoak, K., Nelson, G., & Gochfeld, D. (1990). Analog retrieval by constraint satisfaction. *Artificial Intelligence*, *46*: 259-310.

Thagard, P., & Nowak, G. (1990). The conceptual structure of the geological revolution. In J. Shrager & P. Langley (Eds.), *Computational Models of Scientific Discovery and Theory Formation* (pp. 27-72). San Mateo: Morgan Kaufmann.

Thagard, P. (1991). Concepts and conceptual change (reprint of 1990 paper). In J. Fetzer (Ed.), *Epistemology and Cognition.* (pp. 101-120). Dordrecht: Kluwer.

Thagard, P. (1991). Connectionism and legal inference. *Cardozo Law Review*, *13*: 1001-1004.

Thagard, P. (1991). Defending explanatory coherence (reply to 4 commentators). *Behavioral and Brain Sciences*, *14*, 745-748.

Thagard, P. (1991). The dinosaur debate: Explanatory coherence and the problem of competing hypotheses. In J. Pollock & R. Cummins (Eds.), *Philosophy and AI: Essays at the Interface.* (pp. 279-300). Cambridge, Mass.: MIT Press/Bradford Books.

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