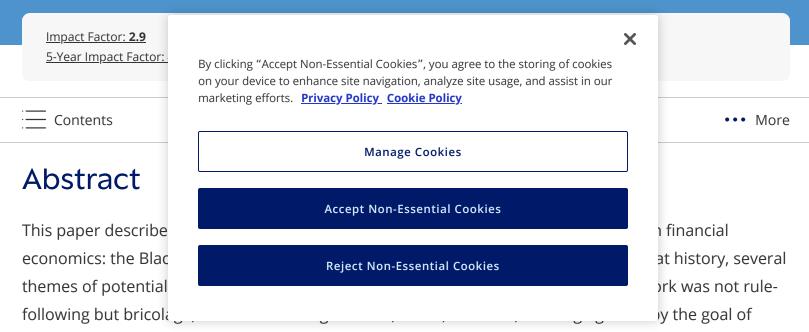
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finding a solution to the problem of option pricing analogous to existing exemplary solutions, notably the Capital Asset Pricing Model, which had successfully been applied to stock prices. Third, the central strands of work on option pricing, although all recognizably 'orthodox' economics, were not unitary. There was significant theoretical disagreement amongst the pioneers of option pricing theory; this disagreement, paradoxically, turns out to be a strength of the theory. Fourth, option pricing theory has been performative. Rather than simply describing a preexisting empirical state of affairs, it altered the world, in general in a way that made itself more true.



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References

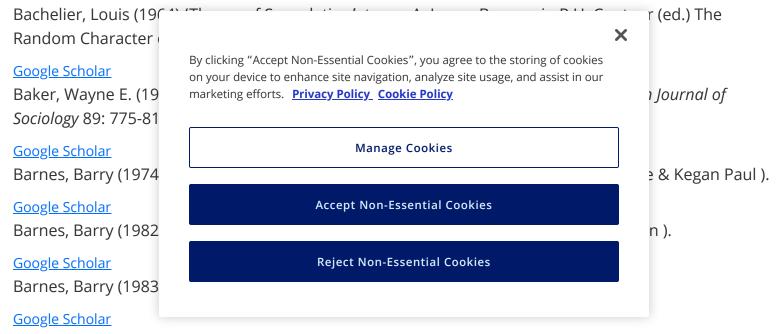
Abolafia, Mitchel Y. (1996) Making Markets: Opportunism and Restraint on Wall Street (Cambridge, MA: Harvard University Press).

Google Scholar

Abolafia, Mitchel Y. (1998) 'Markets as Cultures: An Ethnographic Approach', in M. Callon (ed.) The Laws of the Markets (Oxford: Blackwell): 69-85.

Bachelier, Louis (1900) 'Théorie de la Spéculation', *Annales de l'Ecole Normale Supérieure* (3rd series) 17: 22-86.

Google Scholar



Beck, Ulrich (1992) Risk Society: Towards a New Modernity (London: SAGE).

Google Scholar

Bernstein, Peter L. (1992) Capital Ideas: The Improbable Origins of Modern Wall Street (New York: Free Press).

Google Scholar

Black, Fischer (1964) A Deductive Question Answering System, PhD thesis: Harvard University.

Google Scholar

Black, Fischer (1986) 'Noise', Journal of Finance 41: 529-543.

Google Scholar

Black, Fischer (1988) 'The Holes in Black-Scholes', Risk 1 (4) (March): 30-32.

Google Scholar

Black, Fischer (1989) 'How We Came Up with the Option Formula', *Journal of Portfolio Management* 15 (Winter): 4-8.

Google Scholar

Black, Fischer & Myron Scholes (1970a) 'A Theoretical Valuation Formula for Options, Warrants, and Other Securities', unpublished typescript in the personal files of Stewart Myers, MIT.

Google Scholar

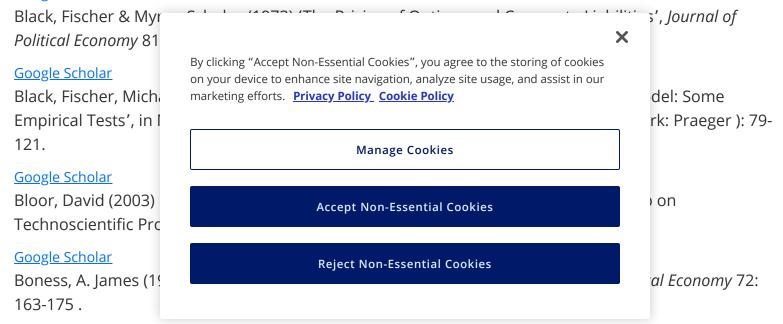
Black, Fischer & Myron Scholes (1970b) 'A Theoretical Valuation Formula for Options, Warrants, and Other Securities', Financial Note no. 16B, 1 October 1970, Black papers, box 28, Working Paper Masters #2.

Google Scholar

Black, Fischer & Myron Scholes (1971) 'Capital Market Equilibrium and the Pricing of Corporate Liabilities', Financial Note no. 16C, January 1971, Black papers, box 28, Working Paper Masters #2.

Black, Fischer & Myron Scholes (1972) 'The Valuation of Option Contracts and a Test of Market Efficiency', *Journal of Finance* 27: 399-417.

Google Scholar



Google Scholar

Callon, Michel (ed.) (1998) The Laws of the Markets (Oxford: Blackwell).

Google Scholar

Castelli, Charles (1877) The Theory of 'Options' in Stocks and Shares (London: Mathieson).

Google Scholar

Courtault, Jean-Michel, Yuri Kabanov, Bernard Bru, Pierre Crépel, Isabelle Lebon & Arnaud Le Marchand (2000) 'Louis Bachelier on the Centenary of Théorie de la Spéculation', *Mathematical Finance* 10(3): 341-353.

Google Scholar

Cox, D.R. & H.D. Miller (1965) The Theory of Stochastic Processes (London: Methuen).

Google Scholar

Cox, John C., Stephen A. Ross & Mark Rubinstein (1979) 'Option Pricing: A Simplified Approach', *Journal of Financial Economics* 7: 229-263.

Google Scholar

de la Vega, Joseph (1957) Confusion de Confusiones, trans. Hermann Kellenbenz (Boston, MA: Baker Library, Harvard Graduate School of Business Administration).

Google Scholar

Durand, David (1968) 'State of the Finance Field: Further Comment', Journal of Finance 23: 848-852.

Google Scholar

Fama, Eugene F. (1970) 'Efficient Capital Markets: A Review of Theory and Empirical Work', *Journal of Finance* 25: 383-417.

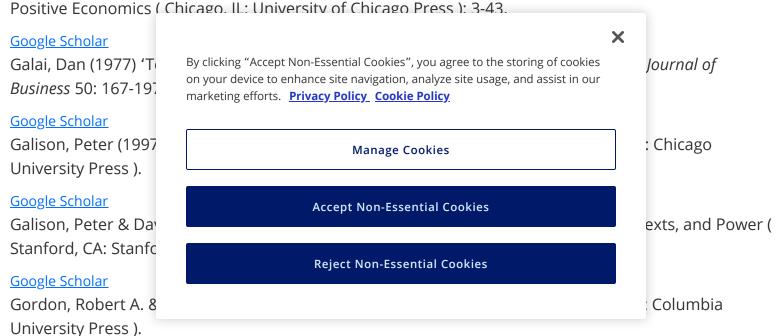
Google Scholar

Fama, Eugene (1991) 'Efficient Capital Markets: II', Journal of Finance 46(5): 1575-1617.

<u>Coogle Scholar</u> (1959) Understanding Put and Call Options (New York: Crown).

Google Scholar

Friedman, Milton (1953) 'The Methodology of Positive Economics', in Milton Friedman, Essays in



Google Scholar

Gordon, Robert J. (1970) Letter to Fischer Black, 24 November, Black papers, box 13, *Journal of Political Economics* [sic] file.

Google Scholar

Green, Stephen (2000) 'Negotiating with the Future: The Culture of Modern Risk in Global Financial Markets', *Environment and Planning D: Society and Space* 18: 77-89.

Google Scholar

Hacking, Ian (1992a) 'The Self-Vindication of the Laboratory Sciences', in Andrew Pickering (ed.) Science as Practice and Culture (Chicago, IL: Chicago University Press): 29-64.

Google Scholar

Hacking, Ian (1992b) 'World-Making by Kind-Making: Child Abuse for Example', in Mary Douglas & David Hull (eds) How Classification Works (Edinburgh: Edinburgh University Press): 180-238.

Google Scholar

Hacking, Ian (1995a) Rewriting the Soul: Multiple Personality and the Sciences of Memory (Princeton, NJ: Princeton University Press).

Google Scholar

Hacking, Ian (1995b) 'The Looping Effects of Human Kinds', in D. Sperber, D. Premack & A. J. Premack (eds) Causal Cognition: A Multidisciplinary Approach (Oxford: Clarendon).

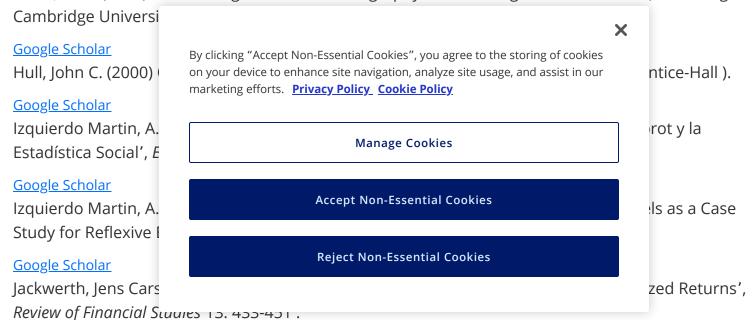
Google Scholar

Harrison, J. Michael & David M. Kreps (1979) 'Martingales and Arbitrage in Multiperiod Securities Markets', *Journal of Economic Theory* 20: 381-408.

Harrison, J. Michael & Stanley R. Pliska (1981) 'Martingales and Stochastic Integrals in the Theory of Continuous Trading', *Stochastic Processes and their Applications* 11: 215-260.

Google Scholar

Hertz, Ellen (1998) The Trading Crowd: An Ethnography of the Shanghai Stock Market (Cambridge:



<u>Google Scholar</u>

Jackwerth, Jens Carsten & Mark Rubinstein (1996) 'Recovering Probability Distributions from Option Prices', *Journal of Finance* 51(5): 1611-1631.

Google Scholar

Jarrow, Robert A. (1999) 'In Honor of the Nobel Laureates Robert C. Merton and Myron S. Scholes: A Partial Differential Equation that Changed the World', *Journal of Economic Perspectives* 13: 229-248.

Google Scholar

Jovanovic, Franck (2003) 'Why Does the History of Efficient Theory Have No Credibility?: Fama's "History" as Memory', presented to Workshop on Social Studies of Finance, Konstanz, Germany, 15-18 May.

Google Scholar

Kairys, Joseph P., Jr. & Nicholas Valerio III (1997) 'The Market for Equity Options in the 1870s', *Journal of Finance* 52(4): 1707-1723 .

Google Scholar

Kassouf, Sheen T. (1962) Evaluation of Convertible Securities (New York: Analytic Investors).

Google Scholar

Kassouf, Sheen T. (1965) A Theory and an Econometric Model for Common Stock Purchase Warrants (Brooklyn, NY: Analytical Publishers).

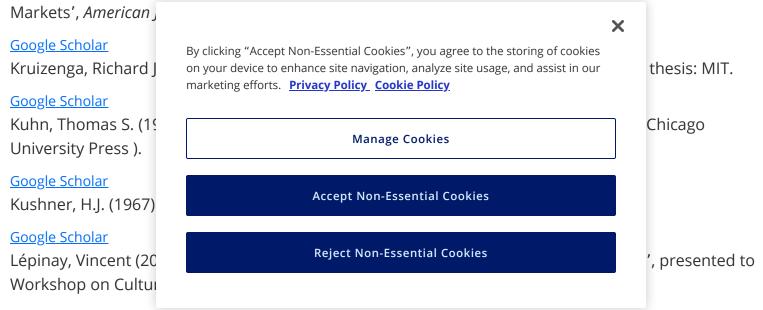
Google Scholar

Klaes, Matthias (2000) 'The History of the Concept of Transaction Costs: Neglected Aspects', *Journal of the History of Economic Thought* 22: 191-216.

Knorr Cetina, Karin (1999) Epistemic Cultures: How the Sciences make Knowledge (Cambridge, MA: Harvard University Press).

Google Scholar

Knorr Cetina, Karin & Urs Bruegger (2002) 'Global Microstructures: The Virtual Societies of Financial



Google Scholar

Lépinay, Vincent & Fabrice Rousseau (2000) 'Les Trolls sont-ils Incompétents? Enquête sur les Financiers Amateurs', *Politix* 13(52): 73-97.

Google Scholar

Lévi-Strauss, Claude (1966) The Savage Mind (London: Weidenfeld & Nicolson).

Google Scholar

Levy, H. & Harry Markowitz (1979) 'Approximating Expected Utility by a Function of Mean and Variance', *American Economic Review* 69: 308-317.

Google Scholar

Lintner, John (1965) 'Security Prices, Risk and Maximal Gains from Diversification', *Journal of Finance* 20: 587-615.

Google Scholar

Lynch, Michael (1985) Art and Artifact in Laboratory Science: A Study of Shop Work and Shop Talk in a Research Laboratory (London: Routledge & Kegan Paul).

Google Scholar

McKean, Henry P., Jr (1965) 'Appendix: A Free Boundary Problem for the Heat Equation arising from a Problem of Mathematical Economics', *Industrial Management Review* 6(2): 32-39.

Google Scholar

MacKenzie, Donald (2000) 'Fear in the Markets', London Review of Books 13 April: 31-32.

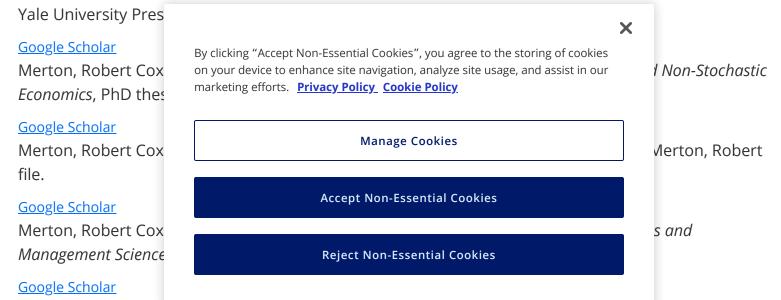
Google Scholar

MacKenzie, Donald (2001) 'Physics and Finance: S-terms and Modern Finance as a Topic for Science Studies', *Science, Technology & Human Values* 26: 115-144.

MacKenzie, Donald & Yuval Millo (forthcoming) 'Constructing a Market, Performing Theory: The Historical Sociology of a Financial Derivatives Exchange', *American Journal of Sociology*.

Google Scholar

Markowitz, Harry (1959) Portfolio Selection: Efficient Diversification of Investments (New Haven, CT:



Merton, Robert Cox (1977) On the Fricing of Contingent Claims and the Modigitarii-Miller Theorem', Journal of Financial Economics 5: 241-249.

Google Scholar

Merton, Robert Cox (1987) 'On the Current State of the Stock Market Rationality Hypothesis', in R. Dornbusch, S. Fischer & J. Bossons (eds) Macroeconomics and Finance: Essays in Honor of Franco Modigliani (Cambridge, MA: MIT Press): 93-124.

Google Scholar

Merton, Robert Cox (1992) Continuous-Time Finance (Cambridge, MA: Blackwell).

Google Scholar

Merton, Robert Cox (1998) Applications of Option-Pricing Theory: Twenty-Five Years Later (Boston, MA: Harvard Business School).

Google Scholar

Merton, Robert K. (1936) 'The Unanticipated Consequences of Purposive Social Action', *American Sociological Review* 1: 894-904.

Google Scholar

Merton, Robert K. (1949) 'The Self-Fulfilling Prophecy', in Robert K. Merton, Social Theory and Social Structure (New York: Free Press): 179-195.

Google Scholar

Michie, Ranald C. (1999) The London Stock Exchange: A History (Oxford: Oxford University Press).

Google Scholar

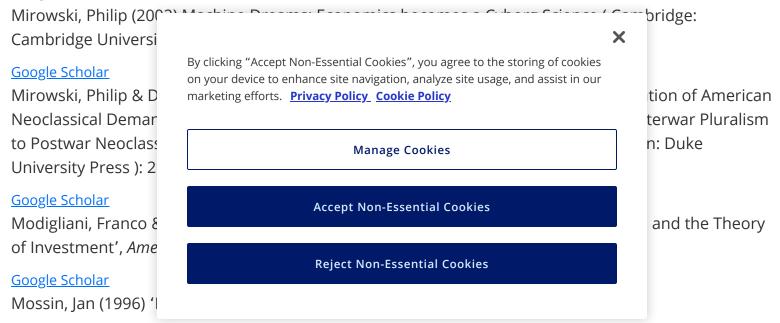
Miller, Daniel (2002) 'Turning Callon The Right Way Up', Economy and Society 31: 218-233.

Google Scholar

Millo, Yuval (forthcoming) 'How to Finance the Floor? The Chicago Commodities Markets Ethos and the Black-Scholes Model', typescript.

Mirowski, Philip (1989) More Heat than Light: Economics as Social Physics: Physics as Nature's Economics (Cambridge: Cambridge University Press).

Google Scholar



Google Scholar

Muniesa, Fabian (2000) 'Performing Prices: The Case of Price Discovery Automation in the Financial Markets', in Herbert Kalthoff, Richard Rottenburg & Hans-Jürgen Wagener (eds) Ökonomie und Gesellschaft, Jahrbuch 16. Facts and Figures: Economic Representations and Practices (Marburg: Metropolis): 289-312.

Google Scholar

Olson, Mancur (1980) The Logic of Collective Action: Public Goods and the Theory of Groups (Cambridge, MA: Harvard University Press).

Google Scholar

Osborne, M.F.M. (1959) 'Brownian Motion in the Stock Market', Operations Research 7: 145-173.

Google Scholar

Preda, Alex (2001) 'The Rise of the Popular Investor: Financial Knowledge and Investing in England and France, 1840-1880', Sociological Quarterly 42: 205-232.

Google Scholar

Preda, Alex (2002) 'On Ticks and Tapes: Financial Knowledge, Communicative Practices, and Information Technologies on 19th Century Markets', presented to the Columbia Workshop on Social Studies of Finance, 3-5 May.

Google Scholar

Richards, Graham (1997) 'Race', Racism and Psychology: Towards a Reflexive History (London: Routledge).

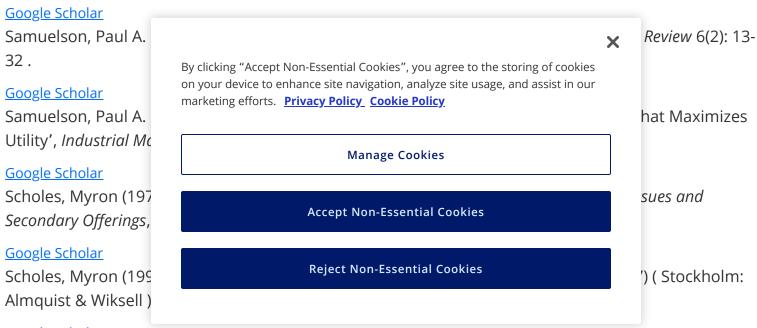
Google Scholar

Ross, Stephen A. (1987) 'Finance', in John Eatwell, Murray Milgate & Peter Newman (eds) The New Palgrave Dictionary of Economics (London: Macmillan): 322-336.

Rubinstein, Mark (1994) 'Implied Binomial Trees', Journal of Finance 49: 771-818.

Google Scholar

Samuelson, Paul A. (1938) 'A Note on the Pure Theory of Consumer's Behaviour', Economica 5: 61-71.



Google Scholar

Sent, Esther-Mirjam (1998) The Evolving Rationality of Rational Expectations (Cambridge: Cambridge University Press).

Google Scholar

Sent, Esther-Mirjam (forthcoming) 'Pluralisms in Economics', typescript.

Google Scholar

Sharpe, William F. (1964) 'Capital Asset Prices: A Theory of Market Equilibrium under Conditions of Risk', *Journal of Finance* 19 (1964): 425-442.

Google Scholar

Shiller, Robert J. (1989) Market Volatility (Cambridge, MA: MIT Press).

Google Scholar

Skapiner, Michael (2002) 'A Split Sense of Purpose', Financial Times (18 September): 14.

Google Scholar

Smith, Charles W. (1999) Success and Survival on Wall Street: Understanding the Mind of the Market (Lanham, MD: Rowman & Littlefield).

Google Scholar

Smith, C.W., Jr (1976) 'Option Pricing: A Review', Journal of Financial Economics 3: 3-51.

Google Scholar

Sprenkle, Case M. (1961) 'Warrant Prices as Indicators of Expectations and Preferences', *Yale Economic Essays* 1: 178-231.

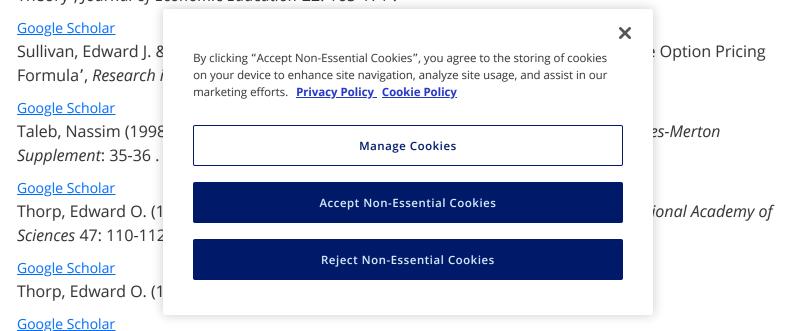
<u>Google Scholar</u>

Stratonovich, R.L. (1966) 'A New Representation for Stochastic Integrals and Equations', *Society for Industrial and Applied Mathematics Journal on Control* 4(2): 362-371 .

Stroock, Daniel W. & S.R.S. Varadhan (eds) (1987) Kiyosi Itô: Selected Papers (New York: Springer).

Google Scholar

Sullivan, Edward J. & Timothy M. Weithers (1991) 'Louis Bachelier: The Father of Modern Option Pricing Theory', *Journal of Economic Education* 22: 165-171.



Thorp, Edward O. (1969) 'Optimal Gambling Systems for Favorable Games', *Review of the International Statistical Institute* 37: 273-281.

Google Scholar

Thorp, Edward O. (1973) 'Extensions of the Black-Scholes Option Model', in Proceedings of the 39th Session of the International Statistical Institute, Vienna, Austria: 522-529.

Google Scholar

Thorp, Edward O. (2002) 'What I Knew and When I Knew it: Part 1', Willmot (September): 44-45.

Google Scholar

Thorp, Edward O. & Sheen T. Kassouf (1967) Beat the Market: A Scientific Stock Market System (New York: Random House).

Google Scholar

Titmus, Richard (1970) The Gift Relationship: From Human Blood to Social Policy (London: Allen & Unwin).

Google Scholar

Treynor, Jack (1962) 'Toward a Theory of Market Value of Risky Assets', Black papers, box 56, Treynor file.

Google Scholar

Treynor, Jack (1999) 'Toward a Theory of Market Value of Risky Assets', in Robert A. Korajczyk (ed.) Asset Pricing and Portfolio Performance: Models, Strategy and Performance Metrics (London: Risk Books): 15-22.

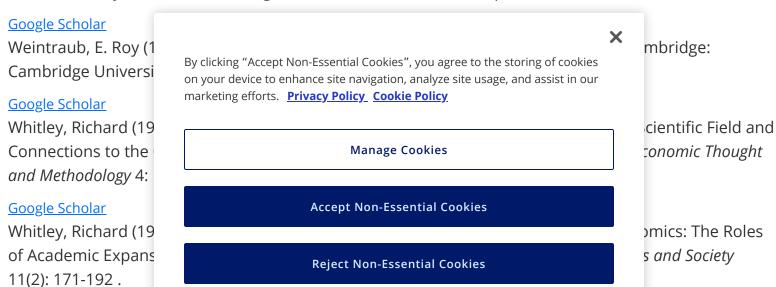
Google Scholar

Treynor, Jack & Fischer Black (1976) 'Corporate Investment Decisions', in Stewart C. Myers (ed.) Modern Developments in Financial Management (New York: Praeger): 310-327.

Tudball, Dan (2002) 'In for the Count', Willmot (September): 24-35.

Google Scholar

Weinstein, Meyer H. (1931) Arbitrage in Securities (New York: Harper).

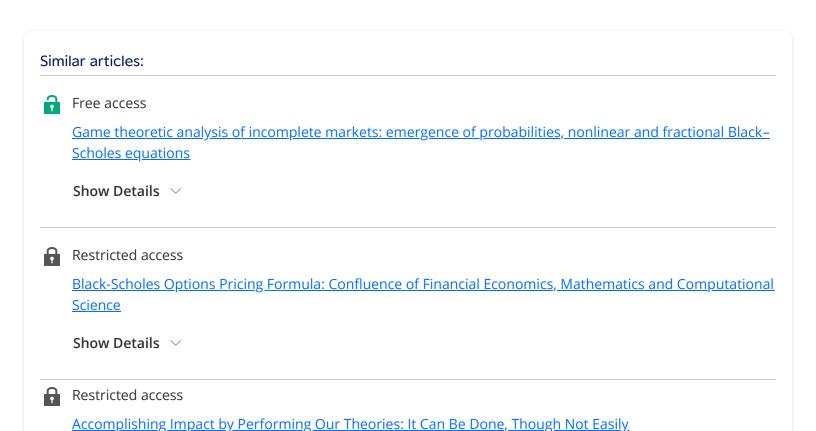


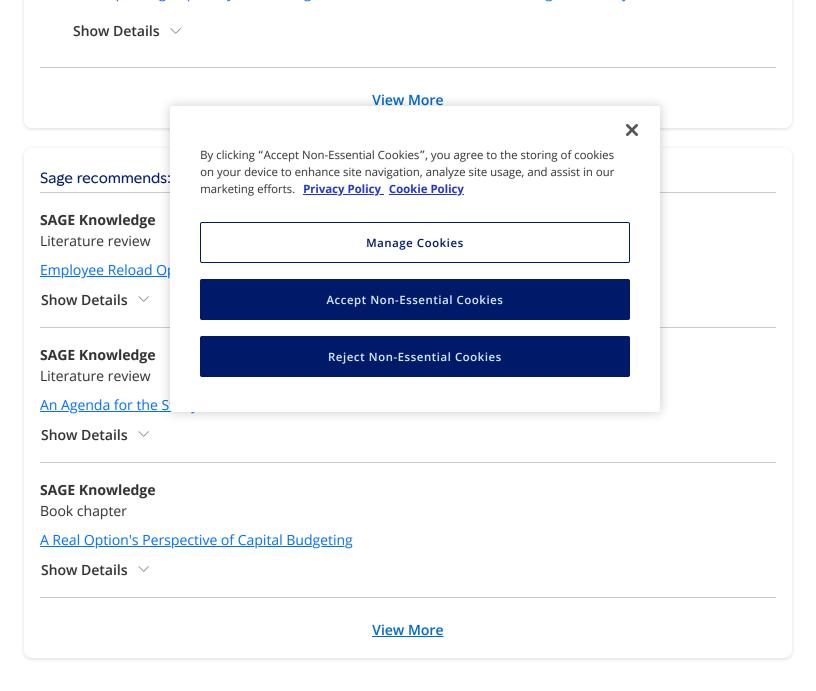
Yonay, Yuval P. (1994) 'When Black Boxes Clash: Competing Ideas of What Science is in Economics', *Social Studies of Science* 24: 39-80.

Google Scholar

Google Scholar

Yonay, Yuval P. & Daniel Breslau (2001) 'Economic Theory and Reality: A Sociological Perspective on Induction and Inference in a Deductive Science', available at: http://www.eh.net/lists/archives/hes/oct-2 000/0002.php/





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