The Trader Curriculum

Sept 20th · Playing the Right Game · Sources & Further Reading

I. CITED IN THE ISSUE: TRADING BOOKS

Douglas, M. (2000). *Trading in the Zone: Master the Market with Confidence, Discipline, and a Winning Attitude*. New York Institute of Finance. *Thinking in probabilities; the definition of an edge.*

Tharp, V. K. (1999). *Trade Your Way to Financial Freedom*. McGraw-Hill. *Expectancy and R-multiples.*

Elder, A. (1993). *Trading for a Living: Psychology, Trading Tactics, Money Management*. Wiley. *The 2% rule and the 6% rule.*

Schwager, J. D. (1989). *Market Wizards: Interviews with Top Traders*. New York Institute of Finance. *Interview with Larry Hite on risking a small fraction of equity per trade.*

Vince, R. (1992). *The Mathematics of Money Management: Risk Analysis Techniques for Traders*. Wiley. *Optimal position sizing and the cost of overbetting.*

Poundstone, W. (2005). *Fortune's Formula: The Untold Story of the Scientific Betting System That Beat the Casinos and Wall Street*. Hill and Wang. *Kelly, Shannon and Thorp, and why bet size decides survival.*

II. CITED IN THE ISSUE: RESEARCH & LITERATURE

Tversky, A., & Kahneman, D. (1971). Belief in the law of small numbers. *Psychological Bulletin, 76*(2), 105–110. *Why small samples feel like they should look like the average.*

Stoppard, T. (1967). *Rosencrantz and Guildenstern Are Dead*. London: Faber and Faber. *The opening coin-tossing scene.*

Jung, C. G. (1955–56). *Mysterium Coniunctionis: An Inquiry into the Separation and Synthesis of Psychic Opposites in Alchemy*. Collected Works, Vol. 14. *The coniunctio as the union of opposites.*

Laplace, P.-S. (1814). *Essai philosophique sur les probabilités*. Paris: Courcier. *Source of the closing quotation.*

III. FURTHER READING: TRADING, RISK & PSYCHOLOGY

Steenbarger, B. N. (2003). *The Psychology of Trading: Tools and Techniques for Minding the Markets*. Wiley. *A clinical psychologist's approach to trader performance.*

Taleb, N. N. (2001). *Fooled by Randomness: The Hidden Role of Chance in Markets and in Life*. Texere. *Survivorship and alternative histories.*

Mauboussin, M. J. (2012). *The Success Equation: Untangling Skill and Luck in Business, Sports, and Investing*. Harvard Business Review Press. *The skill–luck continuum.*

Duke, A. (2018). *Thinking in Bets: Making Smarter Decisions When You Don't Have All the Facts*. Portfolio. *Resulting: judging decisions by outcomes.*

Kelly, J. L., Jr. (1956). A new interpretation of information rate. *Bell System Technical Journal, 35*(4), 917–926. *The original growth-optimal betting result.*

Thorp, E. O. (2006). The Kelly criterion in blackjack, sports betting, and the stock market. In S. A. Zenios & W. T. Ziemba (Eds.), *Handbook of Asset and Liability Management, Vol. 1* (pp. 385–428). Elsevier. *Practical treatment, including fractional Kelly.*

Peters, O. (2019). The ergodicity problem in economics. *Nature Physics, 15*, 1216–1221. *Why the average across many traders is not what one trader experiences.*

IV. FURTHER READING: PROBABILITY & THE MIND

Bernoulli, J. (1713). *Ars Conjectandi*. Basel: Thurneysen Brothers. *The first proof of the law of large numbers.*

Devlin, K. (2008). *The Unfinished Game: Pascal, Fermat, and the Seventeenth-Century Letter That Made the World Modern*. Basic Books. *The 1654 correspondence that founded probability.*

Bernstein, P. L. (1996). *Against the Gods: The Remarkable Story of Risk*. Wiley. *How we learned to measure uncertainty.*

Kahneman, D. (2011). *Thinking, Fast and Slow*. Farrar, Straus and Giroux. *Background on intuition and statistical error.*

Baron, J., & Hershey, J. C. (1988). Outcome bias in decision evaluation. *Journal of Personality and Social Psychology, 54*(4), 569–579. *Identical decisions are rated higher when they end well.*

Chen, D. L., Moskowitz, T. J., & Shue, K. (2016). Decision making under the gambler's fallacy: Evidence from asylum judges, loan officers, and baseball umpires. *Quarterly Journal of Economics, 131*(3), 1181–1242. *The gambler's fallacy among professionals.*

Langer, E. J. (1975). The illusion of control. *Journal of Personality and Social Psychology, 32*(2), 311–328. *Choice and involvement inflate perceived control over chance.*

Schultz, W., Dayan, P., & Montague, P. R. (1997). A neural substrate of prediction and reward. *Science, 275*(5306), 1593–1599. *Dopamine and reward prediction error.*

Kuhnen, C. M., & Knutson, B. (2005). The neural basis of financial risk taking. *Neuron, 47*(5), 763–770. *Brain activity before risk-seeking and risk-averse choices.*

Lo, A. W., & Repin, D. V. (2002). The psychophysiology of real-time financial risk processing. *Journal of Cognitive Neuroscience, 14*(3), 323–339. *Professional traders' physiological responses to market events.*

V. FURTHER READING: LITERATURE

Borges, J. L. (1941). The lottery in Babylon [La lotería en Babilonia]. Collected in *Ficciones* (1944). *A society governed by chance until chance and order blur.*

Dostoevsky, F. (1867). *The Gambler*. *The psychology of the gambler, from the inside.*

Epictetus. *Enchiridion* (c. 125 CE), §1. *What is up to us and what is not.*

VI. HOW THE NUMBERS WERE CALCULATED

Coin table: exact binomial probabilities for a coin with p = 0.6; observed-heads ranges are the central 95% interval (normal approximation for 100 and 1,000 tosses).

Expectancy example: 0.40 × 2R − 0.60 × 1R = +0.20R per trade.

Losing streaks: simulation of 200,000 sequences of 100 independent trades at a 40% win rate; about 49% contained a run of eight or more losses. Real trades are rarely perfectly independent, so treat this as a baseline.

Ten losses in a row: with risk r per trade, the account falls to (1 − r)^10 of its starting value, and recovering requires a gain of 1 / (1 − r)^10 − 1. Each loss is sized as a fixed percentage of the current balance.