The Trader Curriculum

Sept 27th · The Illusion of Emotional Control · Sources & Further Reading

This week's LEARN section drew on Cognitive Appraisal Theory and the neuroscience of threat perception. The literature below is organized so you (or your students) can go as deep as you want — from the original psychology, to the brain-imaging evidence, to studies run specifically on traders.

I. THE APPRAISAL–EMOTION LINK

Lazarus, R. S. (1991). Emotion and Adaptation. Oxford University Press. *The foundational text. Introduces primary appraisal ("is this relevant to my well-being?") and secondary appraisal ("what can I do about it?") as the two-stage process that generates emotion.*

Lazarus, R. S., & Folkman, S. (1984). Stress, Appraisal, and Coping. Springer. *Extends the model to stress specifically — useful for framing drawdowns and losing streaks as "taxing demands" rather than threats to identity.*

Smith, C. A., & Lazarus, R. S. (1993). Appraisal components, core relational themes, and the emotions. Cognition & Emotion, 7(3–4), 233–269. *Shows that swapping the appraisal of the same event changes the emotion it produces — the empirical backbone of "change the data input, not the feeling."*

II. THE BRAIN ON RISK AND LOSS

De Martino, B., Kumaran, D., Seymour, B., & Dolan, R. J. (2006). Frames, biases, and rational decision-making in the human brain. Science, 313(5787), 684–687. *fMRI study: the amygdala lights up specifically when a choice is framed as a potential loss, and traders with more prefrontal-cortex engagement were less swayed by the framing. This is the neural version of "ignorant vs. statistical appraisal."*

Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. Econometrica, 47(2), 263–291. *The origin of loss aversion — losses are felt roughly twice as intensely as equivalent gains. Explains why a single loss can feel disproportionate even when it's statistically trivial.*

III. TRADER-SPECIFIC FINDINGS

Fenton-O'Creevy, M., Soane, E., Nicholson, N., & Willman, P. (2011). Thinking, feeling and deciding: The influence of emotions on the decision making and

performance of traders. Journal of Organizational Behavior, 32(8), 1044–1061. *118 professional traders across four London investment banks. High performers regulate emotion "antecedent-focused" (before the trade, via rules and sizing) rather than "response-focused" (in-the-moment suppression) — a direct match for this week's Old Way / New Way framing.*

Coates, J. M., & Herbert, J. (2008). Endogenous steroids and financial risk taking on a London trading floor. PNAS, 105(16), 6167–6172. *A trader's cortisol rises with the variance of their results and market volatility — the physiological signature of the "threat to survival" response described in the LEARN section.*

Fenton-O'Creevy, M., Nicholson, N., Soane, E., & Willman, P. (2003). Trading on illusions: Unrealistic perceptions of control and trading performance. Journal of Occupational and Organizational Psychology, 76, 53–68. *Traders with a higher illusion of control over random outcomes had lower risk-adjusted returns — good supporting evidence for "the market decides the distribution of wins and losses."*

> *"Cortisol codes for risk and testosterone for reward."*
> **— Coates, Gurnell & Rustichini (2010), Phil. Trans. R. Soc. B**

IV. ADDITIONAL FINDINGS

Coates, J. M., Gurnell, M., & Rustichini, A. (2009). Second-to-fourth digit ratio predicts success among high-frequency financial traders. PNAS, 106(2), 623–628. *A prenatal-testosterone marker predicted long-run trading survival and profitability — one of the more striking findings tying biology to trading outcomes.*

Talmi, D., Hurlemann, R., Patin, A., & Dolan, R. J. (2010). Framing effect following bilateral amygdala lesion. Neuropsychologia, 48(6), 1823–1827. *Patients without a functioning amygdala still showed a framing effect but gambled more overall — evidence that emotion shapes risk appetite even when it isn't producing the classic bias.*

V. FOR DEEPER READING

Douglas, M. (2000). Trading in the Zone. Prentice Hall. *This week's closing quote is from here. The book most directly makes the "probabilistic mindset" case in trader's language rather than academic language.*

Kahneman, D. (2011). Thinking, Fast and Slow. Farrar, Straus and Giroux. *A readable tour of System 1 / System 2 thinking, loss aversion, and the cognitive biases that Prospect Theory launched — the best non-technical companion to Section II above.*

Steenbarger, B. (2003). The Psychology of Trading. Wiley. *Written by a clinical psychologist who also traded; bridges the appraisal-theory research above with day-to-day trading-desk practice.*