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Emotion + “Radical Neuroscience” = Alpha

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If alpha is defined as the element of returns that results from pure human skill and creativity, then it follows that alpha is - in part - the result of a quintessentially human characteristic: emotion. Denise K. Shull, M.A. is President of Trader Psyches Inc., a consulting firm specializing in both market and trader psychology. In today's guest posting, she cites new neuroscientific studies that suggest, in her words, "emotion is a critical source of alpha".

How science is showing that emotion, feelings and intuition can lead to alpha



Special to AllAboutAlpha.com by: Denise Shull, M.A., Founder, [1] [Trader Psyches](#)

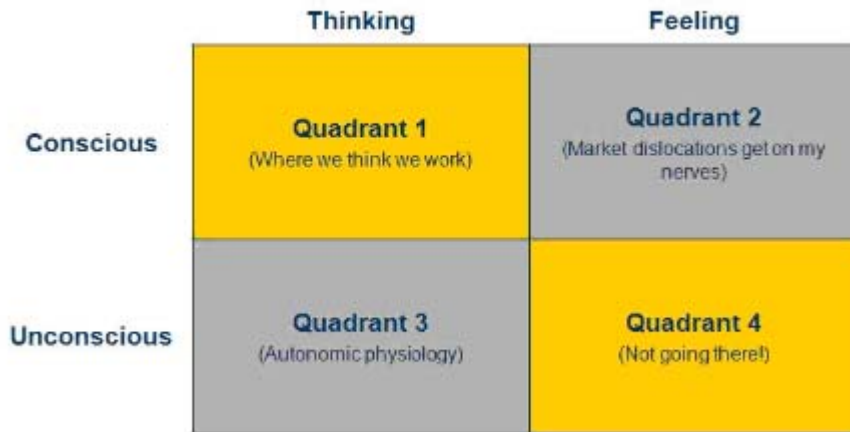
If 485 respondents to a recent [2] [Watson Wyatt/Financial Times Survey](#) should be believed, we face a protracted shortage of alpha. Despite slicing and dicing portable alpha, alternative beta, returns or holdings-based alpha, excess returns remain elusive. Where can we find more? Has anything - or anywhere - been overlooked?

Infused within our market analyses and woven into our models, lies the quest to bet correctly on the future price of an asset. Alpha materializes when we figure out before the next guy what he or she will want or need to buy next week, next month or next year.

Does this fortune-telling aspect suggest buying *The Complete Idiot's Guide to Psychic Awareness*? Before anyone runs to Barnes & Noble, let's re-examine this decision making process. No, I don't mean the morning trade desk meeting or the endless crunching of scenarios with variable implied volatilities. I mean a human being using their brain to evaluate information, draw conclusions and execute a trade. But how exactly does a brain do that?

It so happens that the ivory towers have been busy photographing live brains in action. Called “neuroimaging”, their technique involves asking people to decide between stocks, bonds or cash and snapping away to capture where the brain handles the decision.

A review of many such studies is contained in a paper called [3] [Neuroeconomics: How Neuroscience Can Inform Economics](#) by Camerer, Loewenstein and Prelec. These researchers lay out a model in which the brain works via reciprocal interaction between the following four quadrants.



BRAIN ORGANIZATION: ADAPTED from Camerer et. al. March, 2005

The authors contrast the parallel, reflexive and effortless work of quadrants 3 and 4 against the serial and deliberate effort of quadrant 1. They describe their approach as “radial neuroeconomics”. But what’s so “radical”?

Firstly, quadrant #1, currently the main tool in alpha research, gets demoted by the authors. In their words,

“...It is not enough to “know” what should be done; it is also necessary to ‘feel’ it.”

“We are only now beginning to appreciate the importance of affect for normal decision making.”

But “Wait,” you say. They can’t mean us alpha-generating traders who inherited Mr. Spock’s emotionless genes! Continue the authors:

“Since quadrant 1 often does not have conscious access to activity in the other quadrants, it is perhaps not surprising that it tends to over-attribute behavior to itself – i.e. to deliberate decision processes.”

Another study backs up the argument that emotion is a critical source of alpha. Myeong-Gu Seo and Lisa Feldman Barrett published a paper recently called “[4] [Being Emotional During Decision Making – Good or Bad? – An Empirical Investigation in 2007](#)”. Underscoring the radical shift, they argue:

“Contrary to the popular belief that feelings are generally bad for decision making, we found that individuals who experienced more intense feelings had higher decision making performance.”

“...Individuals who were better able to identify and distinguish among their current feelings achieved higher decision making performance...”

“This study suggests that whether their feelings are actually beneficial or harmful to decisions may largely depend upon how people experience, treat and use their feelings during decision making..”

Emotional intelligence is a source of competitive advantage and of alpha. In fact, the strategy even has a name – “Emotions as Information” theory. When you think about it, adopting such a strategy leverages *intuition* – a recognized, if hard to quantify, competitive edge sometimes

couched as “experience.”

Understanding one’s own feelings also increases one’s ability to predict what the competition will do. Academics call that The “Theory of Mind”. How critical is this “good read” in times of outsized volatility? How valuable would it be to better forecast the arrival of potentially crippling liquidity crunch? Improved accuracy in such complex decision-making can deliver outperformance. And isn’t that exactly what creating alpha is all about?

- D. Shull, February 15, 2008

The opinions expressed in this guest posting are those of the author and not necessarily those of AllAboutAlpha.com.

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