■ **PETER T. ITTIG, Feature Editor**

Investment Decisions

by Peter T. Ittig, PhD

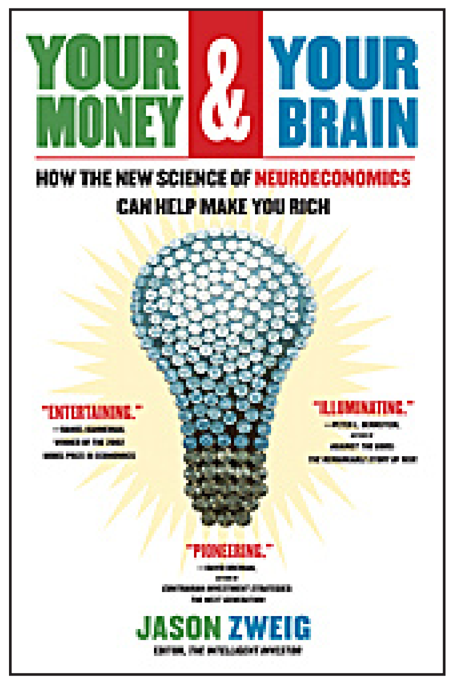
There has been fascination with the relationship between the conscious and subconscious parts of the human mind since before the time of Sigmund Freud and his exploration of the "Id." In recent years, considerable research results have accumulated about precisely how the human brain functions, the physical locations of various activities in the brain, how it makes decisions, and how the subconscious parts influence the decision-making process. The subconscious parts of the brain appear to be much older (from an evolutionary perspective). Those parts probably evolved to suit the needs of other animals as well as early humans over millions of years. Those parts interact with the cerebral cortex, the newer and highly developed part of the human brain where analytical decisions are made (as well as the processing of language and mathematics). For one perspective on the influence of the subconscious on decisions, see the book *Gut Feelings: The Intelligence of the Unconscious,* by Gerd Gigerenzer, reviewed in the January 2008 issue of *Decision Line*

(http://www.decisionsciences.org/decisionline/Vol39/39_1/dsi_dl39_1books.pdf).

Also see the book *Blink,* by Malcolm Gladwell, which is based, in part, on the research of Gigerenzer. Both Gigerenzer and Gladwell argue that the intuitive or subconscious part of the human brain is not only very fast in suggesting decisions, but often just as good or better than more analytical alternatives!

In a new book, Jason Zweig strenuously disagrees about the wisdom of using the suggestions of the subconscious, at least with regard to decisions about money. Jason Zweig is the author of the "Intelligent Investor" column in *The Wall Street Journal*. He has also been a writer for *Money* magazine, a feature editor for *Forbes* magazine, as well as a guest columnist for *Time* magazine and for CNN.com. In his book *Your Money & Your Brain*, Zweig reviews the research on the relationship between the conscious and subconscious parts of the brain in making decisions about investments. The book recently came out in paperback. A disadvantage of the paperback version is that the figures have bad numbers. An advantage, of course, is that it is much cheaper than the hardcover version.

Zweig concludes that the subconscious (he calls it the "reflexive" brain) is likely to give you quick but wrong investment decisions and needs to be kept on a leash. Zweig believes that the subconscious or intuitive side of the brain



Your Money & Your Brain
by Jason Zweig
Simon & Schuster, paperback edition
September 2008
352 pages
Paperback list $15.00
http://www.simonandschuster.com/

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is hazardous to your wealth. The subconscious has the sensitivity and quick response one would expect of a predator reacting to anything that moves, and it is capable of inducing powerful feelings of fear and anticipation. However, the subconscious produces those reactions not only when you see a bear moving in the woods, but also when you see the markets move on your TV or computer screen. The subconscious is probably better suited to fast responses to threats and opportunities facing the animals it evolved to serve. Zweig further concludes that, while the conscious part of the brain (he calls it the "reflective" brain) is much slower and demands much more mental effort, it is far better suited to tasks concerning money. However, the subconscious is not only very fast, but it is quite powerful and can be difficult to ignore. The influence appears to take place through emotion, intuition, and through the automated release of chemicals that cause the anticipation of pleasure or pain. Zweig extensively cites the literature on research into what he calls the new field of "Neuroeconomics" to support his views. Some portions of the book report insights that may be helpful to those struggling to deal with the terrible investment climate of 2008.

One interesting issue concerns the impressive pattern recognition and forecasting capability of the human brain. Unfortunately, it produces lots of false positives, identifying patterns where none exist and projecting them into the future. This is a particular problem when dealing with markets that display a substantial amount of randomness. Zweig reports that if an event happens twice, the "reflexive" brain anticipates that it will happen again. "Three is a trend" that is projected into the future! These projections heavily discount the past in a kind of exponential smoothing routine with a high value of the alpha smoothing parameter. Further, the "reflexive" brain is much more sensitive to the size of a possible reward rather than the probability of occurrence. Probabilities, and numbers generally, are handled in the slower "reflective" brain. Even an occasional reward will induce subconscious anticipation of more when similar precursors are present and will encourage the behavior that produced the reward. This response is useful in training dogs, but in people it helps to explain the popularity of slot machines. It also helps to explain why so many investors buy stocks after the market has been rising for a while and then sell their stocks after the market suffers a period of decline (the opposite of sensible behavior). Investors often have difficulty accepting their inability to predict the markets and have difficulty maintaining a diversified portfolio of stocks, bonds, and cash. The "reflexive" part of your brain may react badly when one component of your diversified portfolio declines, as is likely. However, as Zweig notes, "Selling your investments every time they take a sudden drop… will just make you poor and jittery."

The author suggests that the "reflexive" brain be kept out of investment decisions by setting up rational decision rules at times when you are not being subjected to waves of panic or other emotional signals. This may be automated to some extent, as by setting an asset allocation for your portfolio and then rebalancing once or twice a year. The act of rebalancing forces you to sell some of the assets that have risen in value and purchase those that have fallen. In choosing your asset allocation, Zweig suggests that you not trust the schemes that claim to help you to identify your risk tolerance. He believes that your risk tolerance is sensitive to context and that you become much more sensitive to risk when markets are falling, as many of us noticed in 2008. We tend to be much more tolerant of risk when markets are rising.

There are appendices that offer some relatively conventional financial planning advice including: Use mutual funds with low expense ratios and low turnover rates, use index funds. The argument for using index funds is very strong as the financial markets really are quite efficient, as we tell our MBA students. Prices set by free markets are essentially impossible to predict in the short term.

This is an excellent book on a branch of decision sciences that is not usually taught in business schools. It is also highly entertaining. I recommend it. I particularly enjoyed the chapter on "Happiness" that explains why people who pass age 65 (having recently crossed that boundary myself) tend to be more satisfied than younger folks. Zweig quotes Robert Browning on this topic:

> *Grow old along with me!*
>
> *The best is yet to be,*
>
> *The last of life, for which the first was made.*

I expect to turn over the Bookshelf feature to someone else shortly (suggestions and nominations are invited). It has been an honor and a privilege to carry this responsibility for my colleagues in DSI. Best wishes to all. ■

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ficers. (Both sets of documents are now posted on our web site.) Among his many other contributions, he served on the strategic planning committee for regions at the Institute level. Carper is one who effectively acts and follows through on his ideas and suggestions for SEDSI and is truly deserving of this award.

The 3rd Annual SEDSI Invitational Golf Tournament was held prior to the conference at Rivertowne Country Club in Mt. Pleasant, S.C. The winning team included **Barry Pfitzner** and **Steven Lang,** both from Randolph-Macon College, and **Carey Cole** of James Madison University. This tournament has become a popular pre-conference event which welcomes golfers of all levels; next year we look forward to an even greater turnout in Wilmington, N.C!

Next year our meeting will be held February 17-19 at the Hilton Wilmington Riverside in Wilmington, N.C. Please join us for a great meeting! Remember that we welcome participants from all regions, and Wilmington is a great place to be in February. So, we look forward to seeing you there! For more information, please see our website at http://www.sedsi.org/ ■