OUR MONEY STORIES

The NeuroScience of Good & Bad Decisions

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Our Money Stories

A money story is not someone's income, expenses, assets, debt, or net worth. It's their relationship with money: the plot and storylines of a money autobiography. A money story is the secret language of money at work: the unconscious tale you continually tell yourself about what you say with money, what it means to you, and what money says about you. It's a running dialogue about how much you feel you deserve, how much you think you're worth, and how much you assume you're capable of.

The most fundamental understanding about our relationship with money is not knowing more about financial and economic principles, but appreciating how our minds and brains affect our money behavior. The beliefs and decisions and seemingly inexplicable behavior involving money aren't about money at all; rather, money is a portal to the immaterial and the intangible.

To meaningfully address impulse purchases and other money behaviors requires understanding of each person's money story and its choice architecture. We can then illuminate the fundamental beliefs, assumptions, convictions, and conflicts about money. Our money stories tell us less about money and more about the human mind and its operations.

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Money As Rorschach

Money is a simple unit of value. It can't speak, can't promise, can't have regrets, can't look ahead. Money doesn't even know who owns it. Yet money can convey any message. The wonder of money is that it can represent anything. It's a stand-in for what we idealize and desire, yet fear and lack; for what we covet, crave, spurn, chase or follow. We use money to show how much or how little we care. We use to it measure success and buy happiness—or try to. We use it to bolster our self-esteem, to regulate moods, to influence others.

We give money meaning: we breathe life into it, give it emotional value, build a relationship with it and make it bigger than it is. We use money to try to soothe emotional pains, buy the respect of others, and ourselves. What people say and do are inevitable, unavoidable self-statements of their beliefs and personal realities. All that you say is about yourself. A life story or money story manifests through self-statements. The story tells most about the teller.

We use money to communicate, and it says whatever we tell it to. It is our voice that we project onto money. Money is the universal Rorschach inkblot that we imbue with whatever design or image we create. We imagine all sorts of things using money, and ultimately have to confront the illusion that it is our voice, our hope—nothing that is intrinsic to money.

The more we give money meaning according to our personal money stories, the more we lose focus on what money means. Money is the one true metaphor that can stand for anything else.

The Abstraction of Money

The vast majority of our money management occurs not through our hands, or broker's hands, but inside our minds, in a complex interplay of thoughts, emotions, and neurological wiring.

As money becomes more abstracted (barter → coins → paper bills → paper checks → plastic → electron configurations) transactions are easier, but our understanding of money fades. And our relationship with it changes.

Money is a way of thinking we know exactly what we're getting. We think we know what money *is* by what it can *do* for us—that it will guarantee our expectations.

The Surface & Shadow Stories

Neuroscientists estimate that about 95 percent of our operating system of core beliefs and patterns are pre-programmed in the unconscious mind. This operating system is on autopilot to ghostwrite behaviors and relationships. At times these beliefs and patterns can create a shadow story that exerts powerful influence.

Then, we may create two stories simultaneously. The *surface story,* such as "I want to save more for retirement," can be opposed by the *shadow story,* "I want to buy what I want now."

The surface story and the shadow story are related, but can go in opposite directions with equal force. The interface between the two simultaneously links and separates inner and outer reality. Money becomes the expression of both desire and obstacle, informed by what our brains are wired to construct as a meaning for money (security, freedom, pleasure, etc.).

How We Decide

When we are faced with two stories simultaneously that go in opposite directions, it's not a metaphor, but brain chemistry. We have several minds and two brain systems that compete. One example is the "buy now" pleasure center of the brain and the "have to pay" pain center of the brain. This duality is at the heart of being human. *We have to know our money story and understand how our minds and brains work in order to have effective strategies to change and improve our money behaviors.*

Operating Systems

Regardless of how logical we think we are, our first register of a new stimulus is emotional. Any information or external stimulus goes directly to the amygdala in the midbrain (there are two amygdalae, one in each brain hemisphere). The amygdala sorts incoming stimuli and moves it to the hippocampus, also in the midbrain, to attach meaning. *Then* it goes to the forebrain to process consciously and intellectually—to make logical sense. The hippocampus is the primary location of what psychoanalysts refer to as "the unconscious" as it is where meaning is attached. However, almost everything in the lower brain operating system operates at an unconscious level.

The brain has two essentially separate operating systems. While they are largely independent, they operate together. The "bottom-up" system is from lower brain neural machinery. Daniel Kahneman, in his book, *Thinking Fast and Slow* refers to this bottom-up operation as System 1, characterized as fast, intuitive, running automatically on impressions and feelings. The bottom-up system is quick, impulsive, and requires focus and strategies to develop self-awareness and deliberate planning.

How We Decide

continued…

The "top-down" system is slower, more deliberate, and usually the seat of self-control for executive function and reasoning. This forebrain system from the neocortex, the brain's frontal top-most areas, determines voluntary attention, willpower, and logic. Kahneman refers to this as System 2, consisting of deliberate operations of choice and reason.

These two systems operate as an ongoing dance to balance urges with logical reasons.

Notice that the emotional activation registers *before* cognitive areas of the brain come into play to assess options. Neuroscientists have demonstrated that we make decisions—especially "buy" decisions—up to several seconds *before* we're even consciously aware.

Once we unconsciously make an emotional commitment to a "yes" or to a "no," these lower brain structures send the conscious mind on a mission to gather all the logical reasons to support that decision. We find something conscious and sensible for it to light on, even if it's not an accurate cause and effect.

Predisposing Factors to Impulsivity

A number of factors can tip the balance away from self-awareness and planning towards impulsivity. The imbalance can result in overspending, addictions, risk-taking, and other impulsive actions.

The part of the brain that anticipates pleasant outcomes, the *nucleus accumbens,* activates a "buy" decision. A "don't buy" decision originates in the *insula,* an area involved in anticipating pain. The anticipatory emotions bias as well as drive decision-making.

The part of our brains that responds to morphine or cocaine is the same that responds to the anticipation of making or spending money. The brain region that lights up with the prospect of receiving money or of spending money is the nucleus acumbens. The greater the potential monetary reward, the more active this center becomes.

The paradox: when people actually *receive* money, or make a purchase, the pleasure center shuts down. It is the *anticipation* rather than the actual reward that creates arousal. The prospect of money, food, sex, or other exciting action stimulates the same reward circuits. This shutdown accounts for the common phenomenon of buyer's remorse, or simply not having the degree of long anticipated pleasure at purchasing a particular object, such as a new car.

A number of influencing factors can overbalance bottom-up decisions toward impulsivity. Impulsive moves to overspend, overborrow, overeat, or engage in other addictive habits can occur without conscious awareness or direction. An awareness of these factors which lower the threshold of resilience against impulsivity become essential to recognize.

Some factors that predispose to impulsive decisions include:

- *Depleted energy.* When we become depleted for any reason, including exercising willpower, the tired brain yields more readily to temptation. When depleted, we tend to fall back on default mode and actions. On stressful days, or other times of emotional exhaustion, we are more likely to choose an unhealthy alternative, or make a decision with negative consequences. We are likely to eat things that enhance our mood, or spend money to regulate our state of mind. Diets, budgets, and smoking cessations become the consequences of particular or prolonged stress. In addition to physical fatigue, depletion occurs when we've been thinking about complex things for a period of time.

- *Lowered blood glucose levels.* Eight parole judges were studied for their decision-making regarding applications for parole. The average among all judges: 35 percent parole request approval. However, the exact time of each decision was studied in relation to the judge's three food breaks: morning break, lunch break, and afternoon break. After each meal: 65 percent parole requests approval. Just before lunch and the end of the day (corresponding with lowest blood glucose levels): almost *zero percent approval rate*.

- *Emotional overwhelm.* When we are overwhelmed by emotion, we quickly can move from top-down to bottom-up predominance. The stronger the emotion, the more likely we are to act impulsively. Additionally, specific, unconscious coupling of emotionally charged meanings can trigger an instant change of state of mind. The state of mind can then generate impulsive actions.

- *High demands of self-control and concentration.* Various activities that impose sustained self-control and concentration become depleting and have the impact of drawing energy away from an emotional bank account. Mental energy is more than a metaphor. The nervous system consumes considerably more glucose than other aspects of the body, and mental activity is expensive in glucose currency. The body expends more energy on difficult tasks, thus lowering the threshold for impulsivity. Additionally, after a long day of repeated resistance to temptation, there is greater likelihood of succumbing to temptation for the same reason of the effort and energy that it takes to continuously resist and exercise willpower.

- *Distraction.* When we are distracted, we are more likely to lose focus on rational decision-making and react with a default pattern. We succumb more readily to temptation and make bad decisions when we are preoccupied. Researchers Shiv and Fedorikhin demonstrated that people succumb to temptation more frequently when the part of their brains that is in charge of deliberate thinking is occupied or overloaded. When participants were asked to remember a harder number of seven digits as opposed to a simpler two-digit number, this created cognitive strain and the participants would select the sweet treat of chocolate cake rather than the healthier choice of fruit much more frequently.

- *Abundance of choices.* An excess of choices can flood our bottom-up system to spend today without regard to how we pay tomorrow.

- *Ineffectiveness or powerlessness.* After an experience of helplessness or ineffectiveness, engaging in activity of spending, eating or drinking is an attempt to focus on a tangible action to change a state of mind. For example, one of the best days in the history of retail shops on Madison Avenue was the day of the stock market crash in 2008.

Remedies…

Remedies for these predispositions and influencers include:

- Have a plan and a specific shopping list of what you will purchase before entering the context and the stimulation. When bored, or even just killing time such as waiting for a flight in an airport, the risk increases to spend money impulsively. Look for alternate ways to brighten a day, or to distract from focusing on spending.
- Pause before the purchase. The conscious mind can only hold one idea at a time, and it is often helpful to pause, and to step back from the momentum of buying to consider the item in the context of your home or office, and in the future to determine its value and need. Situations that create heightened arousal include vacations, events such as concerts or cinema, or even theme parks. Money spent on souvenirs is often impulsive due to the context and the feeling within that context.
- Awareness of the techniques being used to sell to you (emotional appeal, nostalgia, urging a quick decision) allows you to focus on consideration of the specific item itself, the value, and the decision of purchase.

The persuasion industry is powerful and sophisticated, so it is necessary to understand how our minds and brains work, especially regarding shopping and spending. Choice architecture becomes a necessary ingredient. Subtle hidden persuaders such as color, music, lighting, aromas can trigger a desire to spend.

Mental energy is more than a metaphor, requiring both a plan and practice. Specific rituals—behaviors, practices, meditation—that eventually become automatic create sustainable effectiveness and overall well-being.

The Social Nature of the Brain

We often spend in order to engage or impress others, to be included, and to be socially accepted. We now know that the neural region involved in the pain of feeling excluded—the dorsal portion of the anterior cingulate cortex—Is specifically activated when feeling most rejected. In fact, many of the processes operating in the background when our brains are at rest are involved in thinking about other people and ourselves.

The Contagion Effect

We are all embedded in vast social networks of friends, families, coworkers, and more. Nicolas Christakis MD, a Professor of Medicine at Harvard, studied social networks following 12,067 people for 32 years. He found that clusters of friends show a "contamination" in the induction of issues including obesity, unhappiness, spending, drinking, smoking, exercise, and healthy diets. He shows how an individual's location in the network impacts behaviors in subtle ways.

Examples include:

- If your immediate circle of friends is obese, your risk of obesity is 45 percent higher.
- If your good friend *becomes* obese, it increases your chance of becoming obese by 57 percent in the same time period.
- If your good friend's friends are obese, your risk is 25 percent higher. *Even if you've never seen them.*

Another extensive study showed this contagion effect in everyday life. At restaurants, on average we eat:

- Alone: least amount.
- With one other person: 35 percent more.
- In a party of four: 75 percent more.
- In a party of seven or more: 96 percent more.

What might be causing this contagion?

1. Mirror neurons: Emotional attitudes, disposition, and states of mind are contagious without people even being aware of it. Neuroeconomists studied pairs of people using fMRI scans of their brains when they were interacting with each other to show that the brain state and emotion of one is mirrored by the other. A recent study at Princeton used brain scans to find that when one person tells a story and the other actively and empathically listens, their brain patterns begin to synchronize—their neural activity mirrors each other. If the listener fails to comprehend or disengages, their brain patterns decouple.
2. Induction: If I gain weight, you gain weight. It changes ideas about is acceptable, and a norm or a behavior can spread from person to person.
3. Confounding: We share a common exposure to places like a restaurant or gym, blend with others, and intermingle influences ranging from nutrition and wellness to wealth accumulation. Add the notion of homophily, that birds of a feather flock together.

Contagion within social networks can help us understand various trends such as the rapid transmission of market runs and crashes, the spread of product adoption, and the dispersion of ideas.

Motivations to Spend

At times, we have various motivations to spend in order to enhance internal and external factors of status, certainty, autonomy, and attachment.

1. *Status*

   We constantly assess how social encounters enhance or diminish our status. If people realize they might compare unfavorably to someone else, the threat response releases cortisol and stress related hormones. A significant motivation of spending is to increase the perception, both of our selves and others, of status.

   Social pain is processed in the brain in much the same way as physical pain. Being excluded from a group activates this pain. Likewise, people are acutely sensitive to their social status—their importance relative to others—and are attuned to where they fall on the social ladder. This active and conscious consideration of status-related information in comparing ourselves to others can result in, "I can purchase what anyone else can using my credit card."

   Our sense of status increases when we feel better than another person. Primary reward circuitry (dopamine levels) is activated with a status-inferring event or perception. One study showed that an increase in status was similar in strength to a financial windfall.

   Status can alternatively be increased through positive feedback, one's own attention to incremental improvements, and the setting and achieving of stepwise goals.

2. *Autonomy*

   The experience of exerting control over our environment, of simply having choices is rewarding. Especially at times where one feels threatened, or blocked, being able to spend money creates a sense of effectiveness. A threat response impairs analytic thinking, creative insight, and problem solving.

   Planning ways to strategically create action in response to challenges creates a sense of autonomy and effectiveness. In an adaptive application, being able to both predict and explain an emotional event helps with self-regulation. Simply labeling or reappraising emotions can help reduce the emotion and increase executive functions.

   The experience of autonomy, known to increase wellbeing and cognitive function, can enhance the choice to charge a purchase. This act of initiative in making a purchase generates an experience of effectiveness.

3. *Attachment*

   When people make stronger social connections, their brains secrete the hormone oxytocin. This chemical is linked with affection, maternal behavior, and generosity, enhancing connectedness with others. We have a fundamental need to belong are strongly motivated to remain in good standing with our social group, and avoid social exclusion. Collaborating with and influencing others becomes a particularly effective way to generate connection.

   The experience of feeling connected with others, a sense of relatedness, is a driver of behavior in many ways. People spend to be considered part of a group, to be "in" a status group, and to feel a sense of belonging.

   With the sense of disruption of this primary need of a positive social connection, people may try to purchase their way back into an engagement with others.

Guidelines for Making Grounded Money Decisions

A safety deposit box requires two keys to open the box: one held by the bank and one by the owner. Financial decisions need the same thing: the simultaneous operation of Systems 1 and 2—bottom-up and top-down, operating simultaneously. These guidelines that will help you integrate input from both brain systems to help you make more balanced money decisions.

- **Avoid making important money decisions when you are emotional.** Heightened emotion—good or bad—narrows your perspective, cuts you off from your sense of the big picture, and makes it more difficult to logically see the long-term consequences of your choices. Paradoxically, attempting to use reason and logic with someone who is in a heightened emotional state only deepens the automatic alarm pattern and will usually lead the person to dig in his heels and spiral into more extreme and less considered impulses. Empathic listening and communication of understanding are far more effective at de-escalating things.

- **Avoid making important money decisions under tension or fatigue.** Increased tension produces emotional regression. With increased tension and advanced conflict, the stress response reaction can move someone into a more emotional pattern characteristic of a much earlier age. The same holds true for fatigue. Make important decisions after tension has eased and you are rested. "Never go to bed angry" is an ages-old maxim for healthy relationships, and with good reason. It's easier to fly off the handle when fatigued and say things we might later regret. Or to *buy* things we might later regret.

- **Be willing to sleep on it.** There are few true emergencies in life. Investing isn't one of them, and neither is buying that plasma television. If it is a good decision today, it will be a good decision tomorrow, after you have had the state change and perspective of sleeping on it. Be clear on the distinction between being passive and making an informed decision not to act right now. "I'll sleep on it" *is* a decision. Especially in times of traumatic or crisis situations, sleeping on it can revert a "hot state" to one of cooler reason. Recognize if you are vulnerable to emotional news or gyrations in order to devise a strategy to not react in the financial arena. Limit exposure to emotional triggers, such as checking a stock ticker each day.

- **Have a well-informed and fully structured plan.** Look at the big picture and your long-term objectives, and create a strategy and game plan based on facts rather than on emotions or instinctive reactions. Seek out whatever assistance you need to become fully informed on the issues involved. Periodically review your plan to make sure it is in alignment with objective expert advice by a money or investment specialist.

- **Stick to your plan.** Especially in times of doing extremely well and feeling euphoric, stick to the plan. Get your excitement and take risk in areas other than financial.

- **Worry about the right things.** Decide what you can control (your plan, your actions, your decisions) and what you can't (market conditions, external events), and put all your effort, energy and focus into those things you can determine. When things happen that are beyond your control and that you cannot determine, stick to the plan.

We often rely on skilled consultants for *investing* money, but leave *spending* our money to the vagaries of our impulses, to our subjective—often brief and ill-considered—decisions. Intuition here does not provide a sufficient guide.

Changing the way we spend our money can increase our happiness.

More Money Principles and Mentoring Tools from David Krueger, MD

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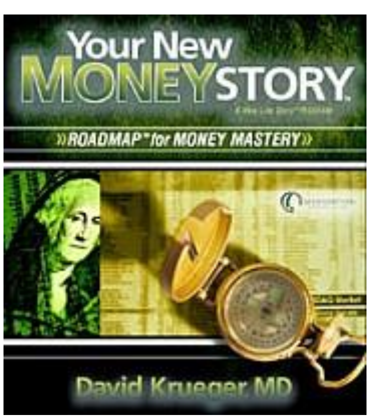

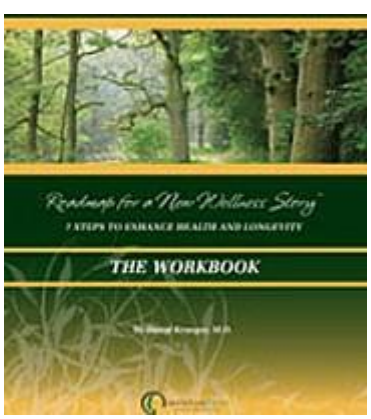

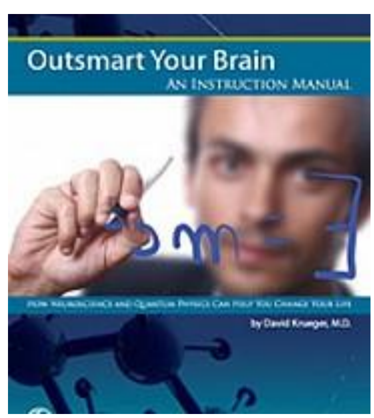

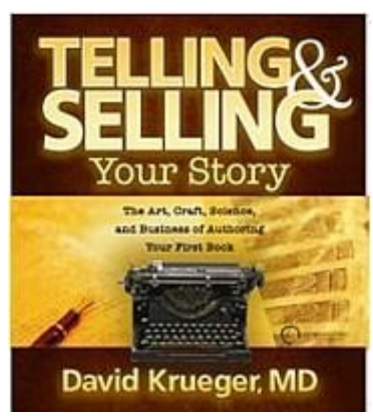

David Krueger, M.D. is an Executive Mentor Coach and CEO of MentorPath®, an executive coaching, training, publishing, and wellness firm. He is the author of 17 books and numerous articles and scientific papers on self-development, money, success, and wellness. He has been mentoring Executives and Professionals to write the next chapter of their life or business stories and training professionals to become licensed, specialty-certified New Life Story® Wellness Coaches and New Money Story® Mentors.

He is a coach's coach and a trainer's trainer and is the Dean of Curriculum for the Coach Training Alliance. His latest book, The Secret Language of Money (McGraw Hill) is a Business Bestseller translated into 10 languages.

David believes that Stories are how we understand, how we remember. And how we learn…that our experiences are always consistent with our assumptions. He teaches that each moment we actively construct what we think, feel, and experience.
As a coach or future coach, David Krueger is a valuable source of knowledge and experience to help you succeed.
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