

Dangerously Addictive. Why we are biologically ill-suited to the riches of modern America?

Niebezpieczne uzależnienie. Dlaczego biologicznie nie przystajemy do bogactw nowoczesnej Ameryki?

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Abstract

For the past quarter century we have worshiped the “free” market as an ideology rather than a natural product of human social evolution. Under the spell of this ideology and the false promise of instant riches, the America’s immigrant values of thrift, prudence and community concern – traditionally the foundation of the American Dream – have been hijacked by an all-consuming self-interest.

That the human animal is a curiosity-driven pleasure seeker easily seduced is of no surprise to the behavioral neuroscientist. “Overloading” the brain’s ancient reward circuits with excessive stimulation – through drugs, novel experience, or unlimited choice – will trigger craving and insatiable desire. When desire is lost we call it anhedonia – or depression – and consider it an illness. But when the brain’s reward circuits are overloaded or unconstrained, then desire can turn to craving and to an addictive greed that co-opts executive analysis and commonsense.

Adam Smith – the eighteenth century Scottish philosopher and capitalism’s patron saint – believed that “self-love” (instinctual self-interest) within the give and take of a market framework would create a self-regulating economic order. Today the tethers that gave us Adam Smith’s enduring metaphor of an “invisible hand” balancing market behavior, have been weakened by an intrusive mercantilism that never sleeps.

Before 1985 American consumers saved on average about 9% of their disposable income but by 2005 the comparable savings rate was zero as mortgage, credit card and other consumer debt rose to 127% of disposable income. America had transformed itself from the world’s bank to a debtor nation. With the nation’s financial system at the brink of disaster we found ourselves rudely awake.

Now with reality challenging the laissez faire ideology of recent decades we have the opportunity to take stock with a renewed self-awareness, to curb our addictive striving and to reach beyond immediate reward to craft a vigorous, equitable and sustainable market society –

Streszczenie

W ciągu ostatniego ćwierćwiecza traktowaliśmy „wolny” rynek raczej jako ideologię niż naturalny produkt rozwoju społeczeństwa. Fascynacja tą ideologią i fałszywą obietnicą natychmiastowego bogactwa doprowadziły do tego, że wartości wyznawane przez imigrantów w Ameryce – oszczędność, rozważa i wspólnota społeczna, które tradycyjnie stanowiły podwaliny „American Dream” – zostały pokonane przez wszechogarniające skupienie na własnej korzyści. Dla naukowców zajmujących się neurobiologią zachowania nie jest niespodzianką, że motywacją działania człowieka jest ciekawość i poszukiwanie przyjemności. Jednak „przeładowanie” mózgowego układu nagrody przez nadmierną stymulację lekami, nowymi doświadczeniami lub niczym nieograniczoną możliwością wyboru wyzwala pragnienie i nienasycone pożądanie. Utratę pragnień nazywamy anhedonią lub depresją i uważamy za chorobę. Gdy mózgowy układ nagrody są przeładowane i brak jest mechanizmów hamujących, pragnienie może przekształcić się w pożądanie, które wymyka się spod racjonalnej kontroli.

Adam Smith – osiemnastowieczny szkocki filozof uważany za patrona kapitalizmu – uważał, że instynktowne skupienie na własnych potrzebach może stanowić narzędzie samoregulacji gospodarki. Dzisiaj koncepcja wyrażona przez metaforę Adama Smitha o „niewidzialnej ręce” rynku została pokonana przez nieustający i pochłaniający merkantylizm.

W okresie do 1985 r. amerykańscy konsumenci oszczędzili średnio ok. 9% dochodów, natomiast w 2005 r. oszczędności spadły do zera, jako że kredyty hipoteczne, zadłużenie kart kredytowych i inne długi wzrosły do wartości 127% dochodów. Ameryka przeistoczyła się z banku światowego w społeczeństwo dłużników. Doświadczaliśmy brutalnego przebudzenia, gdy narodowy system finansowy znalazł się na krawędzi bankructwa. Dzisiaj, gdy rzeczywistość stanowi wyzwanie dla ideologii leseferyzmu obowiązującej w ostatnich dekadach, mamy możliwość uzyskania nowej samoświadomości oraz okiełznania pragnień prowadzących do uzależnie-

one where technology and profit serve as instruments in achieving the good life and are not confused with the good life itself.

Key words: markets, economics, consumerism, addiction, dopamine reward pathways, migration

“It’s called the American Dream”, George Carlin lamented shortly before his death, “because you have to be asleep to believe it”. Too bad for the rest of us that George and his signature satire haven’t been around for the wake-up call of the current market meltdown. After all, George Carlin knew something about the dangers of addiction from first hand experience. He understood earlier than most that the debt fueled consumptive frenzy that has gripped the American psyche for the past two decades was a nightmare in the making – a seductive, twisted and commercially conjured version of the American Dream that now threatens our environmental, individual and civic health.

The United States is the quintessential trading nation and for the past quarter century we have worshiped the “free” market as an ideology rather than for what it is – a natural product of human social evolution and a set of economic tools with which to construct a just and equitable society. Under the spell of this ideology and the false promise of instant riches the America’s immigrant values of thrift, prudence and community concern – traditionally the foundation of the Dream – have been hijacked by an all-consuming self-interest.

The astonishing appetite of the American consumer now determines some seventy percent of all economic activity in the US. And yet in this land of opportunity and material comfort – where we enjoy the 12-inch dinner plate, the 32-ounce soda, and the 64-inch TV screen – more and more citizens feel time starved, overworked and burdened by debt. Epidemic rates of obesity, anxiety, depression and family dysfunction are accepted as the norm.

It is the paradox of modernity that as choice and material prosperity increase health and personal satisfaction decline. This is now an accepted truth. And yet it is the rare American who manages to step back from the hedonic

nia i chęci uzyskiwania natychmiastowej nagrody. Umożliwiłoby to stworzenie sprawiedliwego i trwałego społeczeństwa rynkowego, w którym technologia i zysk stanowiłyby środki do osiągnięcia dobrego życia, a nie byłyby same owym „dobrym życiem”.

Słowa kluczowe: rynki, gospodarka, konsumpcjonizm, uzależnienie, szlak dopaminergiczny, migracja

treadmill long enough to savor his or her good fortune. Indeed, for most of us, regardless of what we have we want more, and we want it now. The roots of this conundrum – of this addictive striving – are to be found in our evolutionary history. As creatures of the natural world, having evolved under conditions of danger and scarcity, we are by instinct reward-seeking animals that discount the future in favor of the immediate present. As a species we have no familiarity with the seductive prosperity and material riches that exists in America today. A novel experience, it is both compelling and confusing.

Brain systems of immediate reward were a vital survival adaptation millennia ago when finding a fruit tree was a rare delight and dinner had a habit of running away or flying out of reach. But living now in relative abundance, when the whole world is a shopping mall and our appetites are no longer constrained by limited resources, our craving for reward – be that for money, the fat and sugar of fast food, or for the novel gadgetry of modern technology – has become a liability and a hunger that has no bounds. Our nature has no built-in braking system. More is never enough.

That the human animal is a curiosity-driven pleasure seeker easily seduced is of no surprise to the behavioral neuroscientist. It is clearly established that “overloading” the brain’s ancient reward circuits with excessive stimulation – through drugs, novel experience, or unlimited choice – will trigger craving and insatiable desire. Brain anatomy helps us understand why this is so. The human brain is a hybrid: an evolved hierarchy of three-brains-in-one. A primitive “lizard” brain, designed millennia ago for survival, lies at its core and cradles the roots of the ancient dopamine reward pathways. When the dinosaurs still roamed, around this reptilian pith there evolved the limbic cortex – literally the “border crust” – of the early mammalian brain, which is the

root of kinship behavior and nurturance. The evolution of mammalian species is marked by a continuous expansion of this cortex, with the pre-frontal lobes of the human brain – the powerful information processing or “executive” brain that distinguishes *Homo sapiens* within the primate lineage – emerging only recently, within the last two hundred thousand years.

With the three brains working in harmony the human animal has extraordinary adaptive advantage, as is evident from the success we have achieved as a species. Through a process of continuous learning – orchestrated by the executive brain – the risks and rewards inherent in changing circumstance are carefully assessed and the personal and social consequence of what we do is remembered to future benefit. But there is a catch. Despite our superior intelligence, as in all animals, we remain driven by our ancient desires. Desire is as vital as breathing. Indeed, in human experience, when desire is lost we call it anhedonia – or depression – and consider it an illness. But, as George Carlin understood, the flip side of this is that when the brain’s reward circuits are overloaded or unconstrained, then desire can turn to craving and to an addictive greed that co-opts executive analysis and commonsense.

All this is important when considering market behavior, for in the market place it is desire that fuels the vital engines of commerce – self-interest, novelty seeking and social ambition. It was Adam Smith – the eighteenth century Scottish philosopher and capitalism’s patron saint – that first cogently argued the value of harnessing what he called “self-love” (instinctual self-interest) within the give and take of a market framework to create a self-regulating economic order. Although it was well recognized that the human creature left unchecked has a propensity for greed, Smith argued that in a free society overweening self-interest is constrained by the wish to be loved by others, (the limbic brain’s drive for attachment) and by the “social sentiment” (empathic and commonsense behavior) that is learned by living in community. Therefore, with the adoption of a few rules – such as honesty in competition, respect for private property, and the ability to exchange goods for money – personal desire can be safely liberated to prime the engines of economic growth. Self-love will be simultaneously molded to the common good by the complex personal relationships and the social order in which the “free” market operates; self-interest will ultimately serve the common

interest. And indeed, experience tells us that locally capitalized neighborhood markets do sustain their own rational order founded as they are upon an interlocking system of self-interested exchange.

But Smith lived before the invention of the mega-corporation, before instant global communication, and before the double cheeseburger and hedge funds. Today the tethers that once bound self-interest and social concern into closely knit economic communities, and which gave us Adam Smith’s enduring metaphor of an “invisible hand” balancing market behavior, have been weakened by an intrusive mercantilism that never sleeps.

Since the 1950s, across the globe rapidly advancing technologies have removed the physical limitations once placed upon human activity by darkness, sea and distance thus diminishing the natural barriers to free market exchange. The United States, as a great trading nation, applauded these advances and sought to drive economic growth further by limiting government regulation of market practice as prescribed by economist Milton Friedman and the Chicago school. Thus beginning in the late 1980s, as the Soviet Union crumbled and the Internet was commercialized, Smith’s engines of economic growth – self interest, curiosity and social ambition – were supercharged and placed in high gear with the conviction that *Homo economicus*, a presumed rational being, was capable of self-policing. Freed of constraint, markets would magically regulate themselves delivering to the American people an ever-increasing prosperity. With a bright future ahead credit laws were relaxed and borrowing encouraged. The American Dream was no longer a promise based upon old notions of toil and patience: it was immediate and material.

We had perfected the consumer driven society. The idea was simple and irresistible. It tapped deep into the nation’s mythology and for a brief moment, during the exuberant years of the dot.com bubble, the Dream *was* made material. Vast shopping malls proclaimed prosperity throughout the land. Horatio Alger’s story was once again our story – the American story – but this time on steroids. Temptation was everywhere. And true to our instinctual origins, we were soon focused on immediate gratification ignoring future consequence. Shopping became the national pastime. Throwing caution to the wind, at all levels of our society we hungered for more – more money, more power, more food and more stuff.

It was a Dream dangerously addictive, and one unsustainable. America's productivity per person per hour is comparable to that of most European nations but our material consumption per capita is greater by one third. We finance the difference by working longer hours, sleeping less, cutting back on vacations, neglecting our families and by taking on debt – massive amounts of debt. Before 1985 American consumers saved on average about 9% of their disposable income but by 2005 the comparable savings rate was zero as mortgage, credit card and other consumer debt rose to 127% of disposable income. With Uncle Sam similarly awash in red ink, America had transformed itself from the world's bank to a debtor nation. The invisible hand had lost its grip.

The financial meltdown that began as the "sub-prime" mortgage crisis has finally brought home the inherent dangers of our reward-driven, shortsighted behavior. As the post dot.com housing bubble inflated both Wall Street financiers and ordinary Americans began to believe that real estate values could never fall. With prices skyrocketing at 20% each year, the family home was mistaken for a piggy bank – as just another asset to borrow against when struggling to finance an overstretched life-style. With zero down payment, adjustable interest rates and deregulated borrowing practices the challenge became, as George Dyson the historian has puckishly observed, "whether you can live in a house you've paid nothing for and spend it at the same time".

But as we are now experiencing, the worst was yet to come. As part of the scramble toward "freeing" the market, in 2004 America's big investment banks had become exempt from depression era regulations that specified the capital reserves that must be held against losses. Instinctual desire, abetted by its wily cousin speculation, soon became greed. Avarice was rampant as the skill and analytic powers of the executive brain were placed in thrall to the lizard. Clever people were now manipulating money for money's sake. Mortgage-backed-securities, credit derivatives, default obligations and other mysterious financial instruments designed to limit risk were packaged and repackaged to create unknown trillions of imaginary wealth. *Homo economicus* had been too clever by half. In reality, when the meltdown began, few people – even the financial gurus – truly understood what was happening. Caught in a web of our own creation we first had fooled ourselves about the risks involved, and then the

instruments we had created had fooled us. With the nation's financial system at the brink of disaster we found ourselves rudely awake.

The conflict between seeking fame and fortune and the corrupting power of money is a perennial source of fascination in America. As I write this *Road Show*, the much-repackaged story by Sondheim and Weidman of the Mizner brothers and their get rich quick schemes, has opened in New York. The characters of Addison, the flapper age dreamer who helped define the architectural vision of Florida's Palm Beach and Boca Raton, and Wilson, his manipulative huckster brother, together embody the striving that many Americans find irresistible – the urge to act out the Dream in material representation.

But dreams are more than things material. Dreams cannot be packaged and placed on sale in the shopping mall. The American Dream is not to be found in a new refrigerator, or a 64-inch TV screen, for as reward driven creatures we quickly grow tired of such novelties. No, dreaming is a state of mind that binds the brain in harmony. For each of us our dreams are an evolving work of the imagination, built upon an elusive inner reality that is shaped by emotion and experience – an intuitive sense of future possibility that binds instinct and hope with common-sense analysis.

As a guiding metaphor the Dream holds a unique place in American culture and it will continue to do so. This is because while the American constitution is grounded in the Enlightenment and draws upon a faith in human reason to dream is part of the émigré package, integral to our never-ending search for Eldorado. In our self-selection Americans are different: a migrant people defined by movement and change. By temperament we tend toward restlessness, optimism, curiosity, risk-taking and entrepreneurship – just as Alexis de Tocqueville described in *Democracy in America*, in 1831. It is these same qualities of mind that kindled the novus ordo seclorum – the "new order of the ages" – that was the dream of the Founding Fathers and is proclaimed still on the back of each US one dollar bill.

Somewhere along the road to affluence, caught up in the excitement of global markets, a virtual world of electronic wizardry and immediate material reward America has lost sight of those founding hopes and dreams. What is the purpose of the journey in this land of opportunity when individual social mobility

lags behind that of Europe, when 45 million souls are without health insurance and when our educational system is badly broken? Now with reality challenging the laissez faire ideology of recent decades we have the opportunity to take stock with a renewed self-awareness, to curb our addictive striving and to reach beyond immediate reward to craft a vigorous, equitable and sustainable market society – one where technology and profit serve as instruments in achieving the good life and are not confused with the good life itself.

The dream that material markets will ultimately deliver social perfection and human happiness is an illusion. Perfection does not exist in nature. Nature is infinitely more pragmatic. In nature it's all a matter of dynamic fit – of living creatures striving for balance with their surroundings. Anais Nin put it well: “The dream is always running ahead... to catch up with it, to live for a moment in unison with it, that is the miracle”. George Carlin would have agreed.

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