

Freedom from the Selfish Gene

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We are born, not as human beings, but as primates, like the chimpanzee. True human beings see, understand, and manage the genetic imperative embedded in our cells choreographed by ancient brain wiring mostly unchanged over millions of years.

I call our brains *Stone Age Brains* to remind us that our lives are run by ancient evolutionary logic. Interestingly, many of us are blind to the fact our lives originated from, and are driven by, the irrepressible gene.

Our brains are not single units. They are really three brains in one, layered, one upon the other. The older the layer, the more power it has over the other layers, however; all three layers are still humming along in all our heads. The oldest is 250 million years old: the reptilian brain, just like the snakes and lizards that leave or eat their young. Mammalian wiring was laid down next, 150 million years ago - it gives us emotions, so we won't eat our young like reptiles. The newest layer is 3 million years old and gives us language, reason, imagination, and forethought.

It's taken me 20 years of psychiatric practice to hear evolution's murmur hidden in patients' stories. Now I hear it everywhere, as our Stone Age Brains struggle with a barrage of email, instant messenger, cell phone stimuli, a media bursting with sex and violence and continuous exposure to worldwide disasters, and an explosion of population density, while wired to focus on sex, status and power.

Once you know, in your bones, that ancient brain systems - our Stone Age Brains -still run the show, clarity comes to the kaleidoscope of otherwise confusing human travails. Fight or flight reactions to social scrutiny, marital strife, the allure of gangs, teenage ennui and recklessness, bullying and scapegoating, struggles for status and ascension of social hierarchies, parental aggression in kids' sports, addiction, even our extraordinary capacity for deception of self and others (to name a few.)

This paper tells a story about a chatty, well-dressed, inventive, less hairy primate, its genes 99% identical to the chimpanzee, still driven by sex, status, and power, by the invisible imperative to reproduce. You know who I'm talking about: You!

Accepting our primate status doesn't make us any less human. In fact, it gives us a chance to become more human, by learning to manage the Stone Age Brain's primitive ways. To become a full human being, to be capable of compassion, decency, and authenticity, we must first own up to having Stone Age Brains, to know and manage our ancient biology. Acceptance of our evolutionary heritage, of the antiquity of our brain wiring, doesn't reduce us to biochemical robots. It doesn't steal the poetry of our lives. To the contrary: managing the Stone Age Brain allows more of our humanity to shine through. And you can still be Christian, Muslim, Islamic, Atheist, Taoist, or whatever!

This paper is not science, which is quantitative, technical and complex. Instead, it's a story about science, born from intimate chats with thousands of patients, from listening to and watching evolution's handiwork and gauging the resonance and power of clinical evolutionary explanations from thousands of hours practicing psychiatry.

Like all books about science, even science itself, there is bias in these words and ideas. Who we are gets intertwined with what we see and write. Who am I? A physician - psychiatrist - and father; a high school dropout and former motorcycle racer with a degree in philosophy of science; an author of scientific papers on medication errors and patient safety, and a happily xenophobic Mainer.

What's my definition of the human being? A monkey who has learned to see and manage the Stone Age Brain, to be less Machiavellian, less status driven, and more focused on leading a virtuous life.

Step One in becoming a human being, a step we're not taught, is to know and accept we're primates, just like the chimpanzee. Of course, we're taller, less hairy, and have larger frontal lobes.

But genes, the construction plans for building and maintaining bodies in all our cells, tell the story of our origins. Our genes and that of the mouse are 75% identical; with the chimpanzee's, our genes are 98% identical. Look at the evolutionary thread connecting other primates' hands and feet to ours; genes, the construction plans for building and maintaining bodies in all our cells, tell the story of our origins.

Evolution's wheels turn slowly. From Earth's first life forms to the arrival of humans, it took almost 3 billion (3,000,000,000) years of evolution and natural selection - it makes sense that our brains haven't changed all that much over the last 10,000 years. In fact, our brains are really 3 brains in 1. Dr. McLean, a famous brain scientist, aptly called it the *Stone Age Brain*. I call it the *Stone Age Brain*.

The oldest brain in your head, called the reptilian brain, which runs basic bodily functions, is over 250 million years old. Next is the limbic or mammalian brain, a mere 150 million years old. It infuses emotion and meaning into experience, and directs us to rear our young, instead of leaving or eating them. Newest, just 3 million years old, is the cerebral cortex. It enables insight, impulse control, language, forethought, imagination.

Ten thousand years ago we were hunter gatherers. Living in small clans, we rarely saw strangers. Survival was the name of the game. Unlike now, we were intimately tied to the biological world.

A lot's changed, especially over the last 300 years. We've made billions of ourselves - taken over and radically transformed the earth. No wonder our Stone Age Brains are flummoxed! The fierce speed of population growth, urbanization, and communication technology's advancements has outpaced evolution's glacial pace.

If Human evolution is put on a *12 hour clock's face*, then, in the last 1 minute and 44 seconds, we've gone from wandering the Serengeti to knifing through thousands of fellow sidewalk pedestrians, a barrage of violent images from worldwide tragedies, and constant communication via email, social media and cell phones.

The veneer of civilization conceals our animal nature and behaviors. We clothe ourselves; shave our faces, armpits, and legs; we marvel in technology's tools and toys. We attend school, play sports, get jobs, make money to feed and clothe ourselves, groom ourselves to attract a mate and often have babies. We conclude we're human beings - highly evolved, unconnected to the biological world, adrift in our man-made culture and social decorum.

Sex and power are dominant themes for chimpanzees, *and* for human primates. Chimpanzees strictly abide by social dominance hierarchies, also called pecking orders. The strongest, smartest, and most sexually successful males and females run the troop. Those weaker, odd, less sexually fit, different in some odd way, are bullied or scapegoated, and must learn to defer to the rulers.

It's the same for us: our Stone Age Brains, hell-bent on survival, remain laser-focused on sex, power, status, and our standing in the social dominance hierarchy - the pecking order - to see who's alpha chimp.

Money is a symbol of power and status. It tells us and others how high or low we are in the pecking order. By clawing up the pile of those competing for power and prowess, we increase our odds of attracting a mate and passing along our genes - not exactly a romantic fairy tale. But that's how the Stone Age Brain, and its evolutionary logic, works.

Evolution also explains our extraordinary capacity to deceive self and others. For human primates, it's most visible in the dance of seduction: in the males' archetypal mating dances as they croak like bullfrogs with money, power, virility, and charm; and in women as they paint and preen - titillating, while carefully screening, predatory sperm carriers, searching for good nest builders and protectors. It's no wonder the pageantry of these ancient dances can still deceive, while concealing the real Wizard of Oz: evolution and our Stone Age Brains.

We're puzzled by kids' bullying and scapegoating, parental aggression in kids' sports, fight or flight reactions to social scrutiny, addiction, marital strife, the allure of gangs, teenage ennui and recklessness; even our extraordinary capacity for deception of self and others. Once we remember how old our Stone Age Brains are, it's not so puzzling - it's quite a feat that most of us are relatively civilized!

Knowing the Stone Age Brain's logic illuminates and clarifies many disturbing behaviors, like:

- Addiction to alcohol, cocaine, or other powerful triggers of our Stone Age pleasure centers;
- Marital strife: why male hunters, geared for widespread sex and killing, and female gatherers, built to carefully pick partners and fastidiously manage the nest, struggle a bit at getting along;
- Why teenagers and young adult males like to rove in groups and gangs;
- And why evolution has honed our ability to gossip (90% of all conversation) and lie.

Then there's the evolutionary value (no longer relevant in the 21st century) of being a James Dean. Young men are seduced by high risk adventures, and young women are seduced by such James Dean recklessness. Evolution favored male hunters; prowess with a spear against ferocious predators took courage bordering on recklessness and defiance. Such hunters, able - literally - to bring home the bacon, and have swagger in their step, probably had better success with Stone Age Ladies. Modern brains might conclude otherwise.

Stone Age Brain logic offers a better explanation of Anxiety Disorders as an excessive of normal anxiety, caused by a bad fit between the radically transformed modern world and the ancient brain logic still in our skulls.

Our body alarms, overwhelmed by excess stimuli - email, social media, stranger overload, bombardment of visual images of world-wide tragedies in the making - go off when we're not in life-threatening situations. Our hearts pound, we can't breathe, we feel faint and dizzy - it feels like a heart attack! We think we're going crazy; but it's just our Stone Age Brain's alarm going off at the wrong time. Darwin himself had Panic Disorder. Upon returning from his five-year voyage aboard the HMS Beagle, he described a *"...sensation of fear... accompanied by troubled beating of the heart, sweat, trembling of muscles..."*

We're well-dressed chimps, with Stone Age Brains, living in a crowded, complex, tech-inclined world. Yet, most of us don't realize this is so - nobody teaches us about it. Having Stone Age Brains doesn't erase the poetry of being alive. Compassion, beauty, spirituality, aesthetics - these all remain and become even more attainable once we master our ancient biology.

There's good news in all of this: we can choose to master our Stone Age impulses and become true human beings. This means becoming less bound to social pecking orders and a life driven by money-making, status, and power.

More good news: some psychiatric illnesses are better understood as maladaptation's - evolution and the Stone Age brain haven't caught up with the modern world. Panic attacks and other anxiety disorders are good examples. It can be healing to understand that much suffering arises, not from illness, but from a normal-functioning ancient brain's lack of fluency with the modern world's language. Meaning that if you have excess anxiety, you're not crazy! An important caveat: reconsidering some psychiatric disorders as maladaptation's doesn't mean those with maladaptation's are suffering any less. It's also not an excuse for denying the right to treatment.

So, what's a well-dressed primate to do?

First, accept that we're all born as primates with the genes' ancient drives roiling in our brains. The human beings among us awaken, see the genes' million-year old choreography of sex, power, and survival, and choose to be more. They choose to transcend primitive chimpanzee politics; they choose empathy and compassion while still meeting their survival needs and caring for themselves and their own.

Learn to see the thinly veiled clamor for status and power behind much of what we do. Notice how much attention you pay to brand names as measures of status in clothing, furniture, college choice, the car you drive or want. Remember that you can opt out of the fight for social standing and status, by choosing your own values, like authenticity, courage, integrity, loyalty, compassion, honesty. Then, maybe you'd choose not to abide by their brand-name symbols. How liberating!

Be conscious of the ferocity our genes bring to furthering our own children by having them stand out as stars in kids' sports. A better psychology might be to emphasize giving our kids the opportunity to simply play, to enjoy athleticism without emphasis on winning and the intrusion of well-intending adults over coaching and pushing for wins.

If you're a boy or man, know that you must master the innate desire to have sex with nearly anybody, anytime. That's the message our genes carry - spread millions of sperm far and wide. A true man is one who learns to have women friends, to love some women, and to see through the ancient gene emphasis on making the chase titillating and making "getting laid" as success. There's still plenty of room for vigor and virility.

If you're a girl or woman, know that you may be seduced, especially as a teenager and young adult, by risk-taking guys because the ancient evolutionary message is that risk-takers carry sperm more likely to survive. Well, what worked for cave dwellers 100,000 years ago doesn't work today. Somehow you must see that a more successful version of virility in today's world would include a capacity for friendship, intelligence, companionship, playfulness, and humor. The roughhewn, gutsy, brusque, macho gangster athlete, at the top of the drug-using, toughness food chain won't be much of a trustworthy partner nor a good father to your children.

If you struggle with excess anxiety, and have panic attacks, generalized anxiety, obsessive compulsive disorder, or post-traumatic stress disorder, remember that you're not crazy or mentally ill. Instead, your body alarm is firing when you're not in mortal danger, or your normal, necessary capacity for worry and obsession is turned up a bit too much. Get treatment, remembering that it's just a matter of managing your ancient biology, which doesn't fit the modern world. Treatment can include thinking differently about body signals (called cognitive behavioral therapy), using small biologically active agents that adjust your body alarm and worry systems (called medications), and multiple tools like relaxation, mindful meditation, yoga, aerobic exercise, and more, all of which give you the power to manage the Stone Age Brain.

Learn about the universal, evolutionarily determined, built-in tendency to deceive self and others; learn to recognize other true human beings. They are the ones who are not trying to sell you something you don't want or need, trample upon you or your children while climbing the local social hierarchy of status, money, and power, seduce you when you're really not interested, one-up you in the other myriad ways the ego uses as a tool of the genes, or harm you because of a partisan-based need to vilify and diminish those who are or think differently. When you find true human beings, protect and cherish those relationships at all costs.

The "take home message"? The more we realize our lives are governed by ancient impulses and the Stone Age Brain, the better our chances at being ***true human beings***.