

# *The Recalibration of Gender Relations*

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**V**isualize a stroke victim. Paralyzed on one entire side of his body, he awkwardly shuffles along, dragging his useless leg while keeping his odd, bent, unusable arm close to his side. One half of his face, previously the most emotionally expressive part of him, registers a waxy flatness indicating the atrophy of the once finely tuned delicate muscles that lie beneath.

When he speaks, if he can, his words are slurred and sometimes incoherent. In conjuring this image, we witness a person who is half the human being he once was and who is operating at considerably less than half the potential he would certainly have if he were whole.

This image of a hemiplegic is an apt metaphor for the present state of gender relations in many parts of the world. Observing the daily news, evidence abounds that many societies repress women, thoroughly suffocating their creative potential. At its worst, institutionalized patriarchy marries off child brides to old men, sequesters mature women, promotes sexual slavery, endorses female genital mutilation, and imposes draconian dress codes that serve to make women all but invisible.

The happiest and most successful contemporary societies are those in which women have achieved near equal parity with men in terms of political, economic, and social power. The general quotient of productivity, abundance, democracy, and tolerance is the highest in those places where men and women behave with respect and compassion toward each other. However, the number of women in the world forced to adapt to deadening cultural mores designed to keep them "in their place" remains persistently high, and it is this perverse and counterproductive outlook that is preventing the human species from getting on with attaining its next level. Resembling a hemiplegic, we must rehabilitate our culture by reinvigorating its missing half; otherwise, we must surely suffer more decline. Yet, in the midst of this doleful story, numerous signs have surfaced that indicate that patriarchy is losing its grip.

So how did we arrive at this paradoxically dreadful, yet hopeful crossroads? Are patriarchal attitudes the result of cultural conditioning, or are they all precoded in our genes?

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Leonard Shlain's essay excerpted from his book *Sex, Time and Power: How Women's Sexuality Shaped Human Evolution*. New York: Viking Press, 2003

Was Freud right when he proclaimed, "Anatomy is destiny"? If not, then how must society change to effect change? Before attempting to answer these questions, let us first investigate how we arrived at this portentous but expectant juncture.

Anatomical and physiological developments that occurred in the prehistoric Pleistocene age profoundly shaped our gender relations. First, we are the only animal that walks heel to toe, and second, we have the largest brain-to-body ratio of any species. The hominid ancestor that made the fateful decision to stand up and begin walking on two feet instead of four paws could not have known that this act would set in motion events that would shape all future human sexual relations. Aligning the vertebral column perpendicular to the earth, instead of horizontally, positioned a mass of internal organs that towered over our bipedal hominid ancestor's pelvis. To prevent the unfortunate individual from being turned inside out when strolling after a particularly heavy lunch, the bony hole in the pelvis narrowed. Even as the pelvic inlet's circumference constricted, the brain of this two-legged creature underwent a remarkable hyperinflation, resulting in a one-third increase in volume, all in a very short period of planetary time.

This led to an evolutionary crisis with the advent of *Homo sapiens* approximately 150,000 years ago. The fetal brain had ballooned so that it could no longer easily negotiate the ever-constricting pelvic inlet. Females sought help to deliver their young, a remarkable biological event not present among the mothers of other creatures. And eventually, somewhere, sometime, a healthy young woman had growing within her a new life whose head was simply too large. During the delivery, her baby became wedged. After a prolonged labor, she died. Her baby died. Those in attendance could do nothing to help. The laws of physics superseded the strength of her uterine contractions. Unfortunately, she was the first of an avalanche of young mothers to die. For the first time in the history of any higher animal, extraordinarily high numbers of healthy females began to die in childbirth. The percentage of stillbirths grimly paralleled the rise. The significant number of mothers and their newborns lost trying to edge past this danger was a wasteful reproductive strategy that could have been expected to toll the death knell of the line. Yet it created precisely the kind of crucible in which a species must adapt—or go the way of the dinosaurs.

The big-head/narrow-pelvis conundrum forced a momentous epiphany to erupt in the emerging consciousness of the ancestral human female. An extreme environmental stress originating from within a woman's body that did not similarly affect a man was a highly unusual twist of natural selection. She had to evolve cognitively faster than the male in the area of sexual relations. To survive, she had to grasp the connection between sex and pregnancy. This crucial insight demarcated a sharp line between all the organisms that had evolved before this event and the solitary one that evolved after it. The new *Homo sapiens* female acquired the ability to arch over the present in order to connect the past with the future. This skill does not exist to this extraordinary degree in the mind of any other animal. Wide-awake to the dangers of sex, the human female, haltingly at first but with increasing assertiveness, began to resist the hard-wired commandments demanding that she mate whenever she ovulated.

To achieve, first, the extraordinary insight concerning sex/pregnancy and, second, an extraordinary power to refuse to engage in sex, she had to develop an ego-consciousness

capable of disengaging from the *Be-Here-Now* mentality used by all other animals. There came into existence within her brain “a room of her own” high above the hurly-burly of her insistent instincts and hormones. The story of her release from the slavery of brute instinct is the preface to the tale of how modern humans, both men and women, came to be the way we are. *Homo sapiens* means “wise man.” So great were the changes in the female of the new species compared to those of the male that it would have been more accurate for scientists to have named our genus and species *Gyna<sup>1</sup> sapiens* rather than *Homo sapiens*. I shall acknowledge what I believe to be the female’s role in advancing our species by using *Gyna sapiens* when referring to the ancestral females of the species *Homo sapiens*.

The female—not the male—underwent a major transformation because it was the female—not the male—who was dying in childbirth. The dictates of natural selection would predict that she, rather than he, would evolve novel adaptations to the challenge. By wresting control away from her sexual urges, *Gyna sapiens* and her daughters exerted discipline over the process of conception. It was small compensation for the increased risks she exposed herself to whenever she became pregnant. If she was going to be the one who died in childbirth, then it was she who had best be able to choose when, where, how, and with whom she would become intimate. Other females of some species may be able to choose upon which male among multiple suitors they wish to confer their favors. An occasional female of any species may decide not to mate with anyone or at any time. But the human species was the first in which *all* the females evolved the capacity to consciously decide to refuse to mate during any one ovulation or all the time.

This one breakaway female primate not only underwent a major overhaul in the design of her brain (as did the male), but in addition she experienced a gear-grinding resetting of the major timers within her reproductive system. For a woman to make the connection between sex and the first signs of pregnancy, she would have had first to recognize a time period longer than a month. To accomplish this, natural selection traded a bumptious periodic estrus for a vexing periodic menses that was associated with physical, physiological, and psychological changes she could not ignore. Further, this monthly visitation was punctuated with the most dramatic sign there is in animalland—external bleeding. No animal can afford to ignore external bleeding. Among the 4,000 species of mammals, of which humans are one, there is no other female that experiences as much menstrual blood loss as a human. Perhaps these dramatic changes that occurred to the human female’s reproductive life cycle served primarily to teach our species the invaluable secret of how to maneuver within the dimension of time. This insight allowed humans to escape from the thin slice of the ever-present *Now* occupied by other creatures and roam the canyons of the past as well as explore the misty plains of the future.

The rapid changes in *Gyna sapiens*’ sexuality confounded the male. A perplexed *Homo sapiens* discovered to his dismay that he had to respond to the challenge she posed to him or lose the opportunity to pass on his genes. Changes simultaneously occurring in his genome compounded his problem, particularly his increased eagerness to have sex with a woman, any woman. Other males of other species express interest in females only when the females enter their period of heightened sexual receptivity called variously “rut,” “heat,” or “estrus.” The human male became the first male of the multitude that

desired sex—with any female—all the time. The psychosexual emergency precipitated by this dissonance of desire between the sexes set the stage for a battle, the tocsin sounds of which have reverberated down through all the generations ever since.

The human species has a further peculiar physiological feature: females—but not males—have fewer circulating red cells. The magic behind a red cell's seamless performance is the protein called *hemoglobin*. And like a set of nested Russian *babushka* dolls, at the core of hemoglobin lies the element iron. Iron and oxygen, due to the salutary arrangement of their outer electron shells, eagerly seek out each other's embrace. Once merged, the two form a molecule called iron oxide. Hemoglobin transforms iron's strong affinity for oxygen into a delicate "grasp and release" maneuver, allowing oxygen to be easily acquired in the lungs and readily relinquished further down the line to the cells. Iron is a critical component of human vigor, intelligence, and health.

Considering how important adequate circulating levels of iron are to the human venture, a strange thing began to occur to the human female. Obscured by her flamboyant reproductive changes, *Gyna sapiens'* internal milieu began to exhibit a perplexing inability to retain iron atoms. The loss of iron atoms from multiple avenues throughout her fertile life imperiled her health and destiny. The homeostatic warning light on the gauge tracking her serum hemoglobin levels blinked ominously during the time she was gestating, birthing, or breastfeeding her baby. Some other species also manifest a male/female hemoglobin disparity, but they do not have to answer to a greedy, demanding brain that can appropriate over one-fourth of all the hemoglobin's precious oxygen cargo. Another factor added to her potential peril: the breastfed infants of other mammals do not have iron-hungry brains that more than double in size during the first year of life.

While there are adequate quantities of iron in most vegetables, the food highest in easily absorbable iron is meat. When humans trekked north out of Africa 70,000 years ago, they inadvertently walked into the teeth of one of the worst Ice Ages the planet had experienced. There were not sufficient quantities of iron-rich vegetables available for foraging in the prolonged winters of the northern climes that humans chose to inhabit. Meat, containing its precious iron atoms, became an indispensable part of the human diet.

This then was the dilemma. By exercising her power to postpone sex, women gained a significant advantage over men; men, however, without the burden of childrearing, could more easily obtain the essential item, iron, that women and their babies needed. As a consequence, men enthusiastically increased their interest in the hunting life to acquire the nuptial gift most desired by ancestral women—meat. For the first time among the animals, Mother Nature required that the members of the opposite sexes enter into complex negotiations in order to mutually agree on the terms and conditions under which they would engage in consensual sex.

Another major insight occurring to *Gyna* and *Homo sapiens* as a result of breaking through to the future was the realization that among the many diseases that harried them, the only one that carried a one hundred percent mortality rate was life. Everyone, no matter how young, strong, or ebullient, was doomed to die. This epiphany spooked men more than it did women, and knowledge of death initiated a sea change in consciousness second only to the connection a woman had previously made between sex and pregnancy.

I base this conclusion on my personal observations. As a surgeon for thirty-five years, I have had to inform many patients after an operation that they had a terminal illness. On average, men in all age groups take this news much harder than women do. They more often insist on heroic and drastic measures to stave off the inevitable. Men fear death more, though of course there are many exceptions to this generalization. I have witnessed many women fight tenaciously to forestall death, and I have attended many men during their gracious and courageous last days. Nevertheless, art, custom, culture, religion, mythology, and literature provide ample supporting evidence of this gender difference in attitudes toward death.

Asked to create a metaphor for time, a woman will usually draw a circle. Ask a man the same question, and he will, as often as not, draw an arrow. Perhaps women, being closer to the cycles of life, view death as an ineluctable phase in the turning wheel of fate. Men, on the other hand, tend to conceptualize life as moving along on a linear trajectory with a beginning and an end. Women face death on a more intimate basis than men. Every woman is aware of the danger of childbearing, a truth more trenchant in ancestral times than the present. Each menses to a woman trying to conceive represents a *petit mort*. She knows the pain of the death of her children, both before and after birth. She lives with the knowledge of death from the moment she knows she can give new life. Men must actively seek out death experiences, as they do not confront them on a routine basis.

The awareness of a *future death* changed the outlook, demeanor, and aspirations of the human species, separating them further from both their close and distant relatives on life's extensively branching tree. Increasingly complex rituals, beliefs, and customs emerged that were attempts to soften the blow.

Soon after these discoveries, the facility to think ahead led to the third transformative insight. A man finally discovered his role in the sex/birth process and realized he fathered specific children. This knowledge alleviated some, but not all, of his limited-life anxiety. Awareness of paternity spawned in him an intense interest concerning the fate of his offspring never witnessed before in the males of any other species. For the first time, a male wanted to keep track of the exact whereabouts and fortunes of his genetic legacy. He hoped to live on through the memory of his children and he committed himself to being involved in their upbringing. A powerful emotion, hitherto never experienced to the same degree by the male of any other species, began to move him. Sustainable over an extended period of time, love greatly aided his comity with both his offspring and the mother who bore them. His burning desire to know his children required establishing an entirely novel relationship with their mother. The new neuronal and hormonal systems sustaining a sense of love, however, had to incongruously coexist alongside others that sounded the clarion call to arms or the frenetic cries of the hunt. Men had to be killers and lovers simultaneously, a merging of opposites that has never completely succeeded.

These three insights concerning birth, death, and paternity, all of which are intimately bound to sex and indirectly connected to iron metabolism, molded every culture in the world into their present shapes. Men eventually realized that the only way they could be confident that a man's "begats" were his and his alone was to plot together to restructure society's sexual relationships. To accomplish their long-term goals, men set

out to achieve the seemingly impossible—control of both women’s sexuality and their reproductive abilities. Women were at a significant disadvantage if they tried to resist these male impositions because they were weaker physically and their babies’ enormous needs required that they constantly seek male support. Despite these evident drawbacks, women were not entirely without resources. Many were able to influence men by subtler means. Still the evidence remains undeniable: men have craftily sought ways to blunt the power of women’s choice in sex.

Our species is 150,000 years old. In the last 10,000 years, we have experienced a series of technological revolutions that have markedly affected the relationship between men and women. The substantial creation of wealth and the social upheaval attendant upon the rise of first agriculture, then industrialization, and most recently technology tend to obscure the important fact that all of us are still walking around with a nervous system designed to work optimally within a small band of hunter-and-gatherers. The most critical legacy of those bygone times was a sharp division of labor between men and women, a necessary condition for the survival of the individual and the progression of the generations. The key three insights into birth, death, and paternity triggered a massive reconfiguration of that society. Many of the sexist biases and social institutions that persist in the world came into being as a result. The two most pervasive that affect relations between men and women are misogyny and patriarchy.

Misogyny is a disdain for women and denigration of the values commonly associated with the feminine. Patriarchy is a set of institutionalized social rules put in place by men to control the sexual and reproductive rights of women.

When asked, many men will gallantly express their admiration for women in general and profess a profuse love for their mate in particular. Despite these touching personal testimonials, global society is rife with misogyny and patriarchy. The historical record presents an even bleaker picture. The Western canon consists of many brilliant tomes written by esteemed white males, the overwhelming majority of whom were unapologetic misogynists. Isaiah, Jeremiah, Plato, Aristotle, Paul, Pliny, Jerome, Augustine, Aquinas, Bacon, Luther, Calvin, Nietzsche, Schopenhauer, Marx, Hegel, and Freud ranged from outright woman haters to those who weren’t quite as blatant but nevertheless strongly promoted the patriarchal agenda.

Even during the majestic periods in which human dignity flourished—Classical Greece, Renaissance Europe, Parliamentary England, Revolutionary America, and Enlightenment France—such champions of human rights as Socrates, Pico della Mirandola, Erasmus, Locke, Jefferson, and Voltaire did not consider the need to elevate women from their second-class status as an item high on their political agendas. Western culture had to wait until the nineteenth century before a prominent male philosopher, John Stuart Mill, was willing to stand up and speak out for women’s equality.

The record in non-Western cultures is also dismal. Both Confucius and Buddha were misogynistic. Of the few leaders who seemed friendly to women, Jesus, Mohammed, and Lao Tzu stand out, but what they really had to say has been so filtered by subsequent patriarchal commentators that it is difficult *now* to know exactly what their true attitudes toward women were during their lives *then*. The history of Christianity, Islam, and Taoism

darkly demonstrates that the religions that flowed from the teachings of these three influential leaders have been most unkind to women. In every case, after the death of the founder, men with harsh patriarchal leanings seized the power of the inkpot and revised in writing whatever gentle counsel the originators of these traditions may have had said to their disciples with respect to their original teaching concerning women.

Psychoanalysts, anthropologists, sociologists, physiologists, and feminist theorists have different answers to the question of why patriarchy has so dominated human cultures. Space constraints do not permit me to lay out the arguments all of the above have made to explain society's baleful patriarchy that has led to what Frederick Engels called, "the world historic defeat of the feminine." I can trace but one path that begins in adolescence.

Misogyny takes root and grows immediately after puberty when sex becomes the central issue in every boy's and girl's life. During the halcyon days of childhood, boys' attitude toward girls resembles the apathy that male mammals express toward females that are not in heat. Girls ignore boys nearly as much. And then the rolling wall of puberty, like a giant tsunami wave, slams into young bodies. This is the moment when the political agendas of the sexes sharply diverge. This is the moment when economic negotiations over sex become paramount. This is the moment when men confront the "world historic defeat of the masculine" at the hands of mere girls.

Prior to the onset of puberty, a boy's testosterone levels are nearly undetectable. Then the juice of Eros jolts his nervous system with a twenty- to fortyfold increase. Testosterone floods the young male's incompletely finished brain, creating a dangerous and unstable situation. Among its protean manifestations, the androgenic hormone boosts the level of the male's sexual tension to unbearable levels. While frequent masturbation offers him a partial solution, a teenager realizes for the first time in his life that he requires the intimate cooperation of a willing female. Therein lays the problem.

Boys enjoy playing games, and seek out other boys for group games. Put several of them together and within a few moments they will be engrossed in a cooperative form of play distinguished by clear winners and losers, and requiring minimal negotiation at the outset. (The arguments start shortly thereafter.) Rarely will a boy refuse an invitation from another boy to join a game. Imagine, then, a post-pubertal boy's surprise and consternation when he first invites a girl to play with him the game that has become the most fascinating and intriguing sport of his young life—the one in which the closer he gets to her bare skin and external openings, the more points he scores. The other player is, from all outward appearances, a member of the same team, but the boy soon perceives that he is dealing with an alien. She seems to speak a different language from the one with which he is familiar. Worse, he must play by her rules, and much to his surprise, despite her smaller stature, she is extremely effective at tenaciously guarding her goal. Initially, he may be convinced that it is he who is in control of the situation; after all, he is the one who initiated the game in the first place. Over time, however, he dimly perceives that she is setting the pace and conditions, and more often than not, he accedes to her requests in order to please her.

In those contemporary cultures in which harsh patriarchy has not yet destroyed a young woman's exercise of sexual choice, a young man's initial foray into this unfamiliar arena most likely occurs at a middle school dance. (There is no reason to doubt that some variant of this ritual also occurred in the Pleistocene.) Perhaps the first girl he asks refuses his offer to dance, confounding him by her inexplicable rejection. Rarely in his life has a potential playmate refused to engage in a game. If a conspiratorial peal of giggles among her close group of friends follows her refusal, then in addition to his feelings of perplexity, his nascent masculinity suffers a crushing blow. Our young explorer soon comes to the realization that his quest is going to be far more difficult than he had initially anticipated. Perhaps he is fortunate enough to be rich, suave, handsome, strong, athletic, and never at a loss for words. Even if he has all those qualities, convincing a girl to join him in the play called sex will remain a pointed-elbows contest of wills at this stage in their lives.

Throughout the animal world, males compete among themselves for the right to impregnate females, whether in schools of sperm racing toward a prize only one of them can win, or the very visible and resounding clash of locked horns on the elk's field of battle. Once a male has won the contest among other males for mating rights, he meets virtually no resistance from a female in heat. She desires sexual union as eagerly as he does because her hormones are firmly in control of her brain's behavior. Through impeccable timing, the height of her lustful frenzy coincides with the departure of her eggs from her ovaries. The irresistible siren song of her sexual instinct compels a female's willingness. In contrast, the human female is the only mammalian species that we know for sure has lost estrus (or its equivalent.) However, what she has lost, the male seems to have gained; a young male of the human species exhibits ample behavioral indicators signifying that he is in a state of full blown "estrus" *all the time*.

Behind every expectation is a frustration waiting to happen. Sadly, a young man learns to his eternal disappointment that the person of the opposite sex upon whom he has just recently fixated his attention is balky, recalcitrant, and uncooperative. It is his incredible frustration with his sexual counterpart's unwillingness to comply with even his simplest sexual advances that causes misogyny to rear its ugly head. Cultural convention and media may reinforce his feelings later, but this is the fount from which it springs. This is exceedingly unfortunate because his testosterone fog prevents him from seeing the major difference between his agenda and hers. At his young age, he is blithely unaware of the stakes involved—while he indulges himself thinking he is just playing a game, she is playing for keeps. For her, this is not a game, but the opening skirmish in a campaign she cannot afford to lose.

Elder women train girls very early for the mission they must accomplish post-menarche (first period). During her initial contacts with the opposite sex, a young woman must learn to recognize the key landmarks of the male mind's strange terrain and to quickly assess the outlines of his character. She must often make snap judgments so as not to



waste valuable time that could be better used birthing babies with Mr. Right. The considerable advantages afforded her by her youth and beauty during this early period of her life serves her well. Her ultimate goal is to negotiate his willing surrender—preferably “unconditional.” She wants him to declare publicly that he will no longer seek the attention of any other woman and will devote his time, resources, love, and help in raising any children that may result from their passionate embraces. She knows that she cannot claim victory until she hears it in his voice, sees it in his eyes, reads it in his gestures, and feels it in her marrow.

From a young woman’s perspective, this contest is a matter of life and death. At some tellurian level, she understands that she will soon be called upon to put her life on the line. If she survives the dangerous delivery of her offspring, she requires the impregnating male to make a very long and very intense commitment in order to maintain her health and ensure her ability to continue to birth intelligent babies. Parents, older women, and her culture’s conventions constantly remind her that if she fails to secure a future reliable source of resources, the result will be catastrophic. And it doesn’t matter how badly she herself wants to have sex. She *must* exercise restraint over her hormonal urges. She knows that her ability to withhold that which a man so hungers for is her most potent bargaining chip. Her agenda differs so markedly from his at this stage of life that his extraordinary frustration is unavoidable. *Her veto over sex is the primary source of her power and becomes the root of his anger.*

Many men resist the pull of misogyny and remain favorably disposed to gender equality. To a large extent, their mother’s love undergirds their equipoise. Reciprocating that love allows them to translate the deep feelings they have for their mothers into loving relationships with their lovers, wives, sisters, and daughters. Maternal adoration is the balm that can offset the bane a man experiences when confronted by a woman’s repeated failure to cooperate with his sexual agenda. Unfortunately, war, loss, illness, and catastrophe may prevent a boy from properly bonding with a loving mother. Surrogate mothers, sisters, aunts, grandmothers, teachers, and even fathers and grandfathers can often substitute for this crucial missing ingredient of a man’s character, but a subset of emotionally damaged men exists for whom the art of loving women is a difficult and daunting challenge. Moreover, not all mothers love their sons equally and some even irreparably wound them.

In general, without the unguent of a mother’s love to salve the erupting adolescent antagonism toward women, men may evolve a suspicious and angry attitude toward women, making it nearly impossible for them to love any particular woman. Many a woman married to a man lugging this lumber around in his unconscious storehouse has discovered that despite her love for him, the structural damage stemming from his childhood remains too extensive to repair. The most critical choice of her life often turns into a disaster as her mate behaves maladaptively toward her and disappoints as a father to their children. Of course, many exceptions to these observations abound.

Through persistence, a woman gradually convinces a man to compromise his primary reproductive goal of unfettered access to a variety of women, a dream he relinquishes reluctantly and a restriction for which he never really forgives her. In the springtime of his life when his hormones are in full flood, he is inclined to bargain away the right to be sexually free in exchange for exclusive sexual access. In the intense negotiation that occurs

between the sexes, she wants him to make this key promise to her. The likelihood that he is in love vastly increases his willingness to please her by agreeing. Male leaders of religion, government, and culture further women's agenda because they know that restraining the male's sexual urges reduces conflict, aids babies, and provides all fathers with an increased confidence concerning their genetic heritage. So the immense social pressure of culture is brought to bear on him. The weight of tradition, ritual, and taboo must be marshaled against his towering natural impulse to pursue *all women, all the time*.

Initially, his concession does not seem very important to him. His volatile mixture of love and lust persuades him that he is obtaining his heart's desire. And then passing time erodes the fortitude underpinning his promise. Familiarity gradually dims the intensity of his ardor. His hormones begin to back up and press against the thin barrier that culture constructed to hem them in. Testosterone urges him to follow the evolutionary imperative adhered to by 99.9 percent of male creatures—to spread his seed far, wide, and often.

A moment arrives in every husband's life when he begins to question the fairness of his decision to pledge himself to one mate forever. (The same doubt also occurs to his wife, but she is less likely to act on it because, once she has children, deciding to leave her mate is a more hazardous and difficult course of action for her than it is for him.) Many men experience a sense of guilt for their sexual fantasies and/or transgressions. A part of him resents women for preventing him from having what he wants. On the other side of this divide, a husband's failure to adhere to his "I do" oath in particular, and the male gender's failure to live up to women's expectations in general, induces women to harbor a deep resentment toward the male sex. This mutual rancor abets the war between the sexes and renews itself in every generation.

Further exacerbating a man's sense of pusillanimity when dealing with women is his realization that fatherhood is the least taxing route open to him to satisfy his longing to find a way to soften the terror of death. Children mean he can deposit a part of himself—especially his name—in the next generation. Although he also has the alternative option of performing a memorable heroic deed, the more reliable method open to the average man is to father children who adore and respect him. And so, a young man learns that not only can a young woman control his access to pleasure, but further diminishing his negotiating stance, she is also the guarantor of his lineage.

Men experience irritation with the hoops that they must jump through to convince a woman to say *Yes!* Chafing under their load of "shoulds" and "oughts," men crave to establish a social structure that will allow them to have their cake and eat it too. A man wants one woman to be exclusively his and at the same time he wants to philander. He demands that all the children "his" woman bears are exclusively his, yet he resists any restrictions on his sexual escapades, even if they result in his illicit partner's pregnancy. Men see no paradox in the contradictory goals of the double standard that has grown directly from the three grand transformative insights earlier mentioned: sex causes babies, everyone's gonna die, and his begets ensure immortality. This resentment has led men to resort to the powerful weapon they have at their disposal to wield against women—their ability to make public symbols. *The institution of patriarchy came into existence because men needed, first, to control women's sexuality and, second, to control women's reproductive*

rights. The first ensured he could relieve his intolerable itch on terms favorable to his sex; the second assured him his place in posterity.

The masculine half of the body politic also resists acknowledging the obvious: disdaining, ignoring, and dismissing its distaff half is extremely counterproductive. Until individuals, couples, and cultures can facilitate and appreciate the contributions of both halves of the human psyche, the human species will continue to be hobbled by this serious handicap.

What can we do to redirect culture's gender relationships and set them in a more congenial direction? The many framers of this question most often posit their solutions in the context of education. If only we somehow could change the content and context of what we teach children, then we could begin to eradicate this poison that prevents harmony between the sexes. Certainly education has a role to play, but in this essay I have tried to move the conversation away from an emphasis on culture and more towards the realm of genetics and evolution. Some might protest, claiming that this approach is but a warmed-over version of Freud's "anatomy is destiny" determinist argument that men have used to legitimize their dominance over women throughout the ages. That is not my intention. I do not seek to *justify* why things are the way they are, but rather to *understand* why they are the way they are. This must be the first step in the process to initiate meaningful change in our cultural institutions. Chiseled into the lintel above the entrance to the Oracle of Delphi in ancient Greece was Apollo's first commandment to all mortals, *Gnosti Seautum*—Know Thyself. This ancient Socratic imperative remains very relevant today.

Grasping the evolutionary reasons behind the many quirks in the human mating system will lead, I believe, to an improvement in the relations between men and women. This overriding of the "anatomy is destiny" conundrum is possible because we have arrived at a critical juncture in the life of our species. *Homo sapiens sapiens*, the doubly wise human as we used to be called, is presently undergoing a metamorphosis. We humans are in the process of changing into something else. A new species is being born right before our eyes, but because we are so close to the cataclysmic event, we cannot appreciate its full import.

In Buddhist parables, an ordinary man may behave in a selfish and self-serving manner until he becomes "awakened." To achieve this state, a man must withdraw temporarily from the world and turn inward. The transformation that is occurring within his soul is not visible to anyone observing him from the outside. Upon achieving enlightenment, the person is utterly changed and is said to have attained the state of *satori*. One so enlightened is freed from the obligation to return reincarnated to the world on another turn of the karmic wheel of fate. The Buddhists frequently use the metaphor of the metamorphosis of a caterpillar into a butterfly to poetically describe this transformation of the individual. Could it be that the entire human species began its existence as a collective caterpillar? As we enter our most environmentally rapacious stage, are we on the verge of transforming into the metaphorical equivalent of a butterfly?

Two and a half million years ago, the evolving hominid line differentiated away from its apelike predecessor by fashioning the first stone tool. Imagine the moment. A slow-witted, little more than pint-brained *Homo habilis* held a cobble in his hand and through

a concerted effort of sustained mental concentration conceived a tool residing inside the rock. The imprisoned tool could not be released from the stone unless the first *Handy man* (or *woman*) sat still and laboriously chipped away at one side of the rock. Employing patience and persistence, the first toolmaker was rewarded at last with a working stone tool that sported a crude cutting edge. *Homo habilis* continued to make this identical simple tool with very few modifications for almost the next one million years!

Then the next hominid version, bigger brained *Homo erectus*, figured out that a stone's cutting edge could be sharpened considerably if he or she simply turned the rock over and began alternating knapping each side. The bifacial hand ax fashioned in this manner sliced through hides and cut bone from joint much cleaner than those previously fashioned by *Homo habilis*. And again, while Acheulian bifacial hand axes, the signature tool of *Homo erectus*, have been discovered nearly everywhere our predecessor settled in Africa, Europe, and Asia, these artifacts remained mysteriously unchanged for the next 800,000 years. Anthropologist Glynn Isaac remarked disappointedly on this "shuffling of the same essential ingredients" for an extraordinarily lengthy period of time "in a minor directionless change."<sup>2</sup>

Then, 150,000 years ago, along came *Homo sapiens*. At the start of their adventure, some novel tool-making techniques appear in the archeological record. But the pace of innovation advanced with the speed of spreading molasses until rather suddenly *sapients* crossed some sort of an invisible barrier 40,000 years ago. Inexplicably, humans began to create representational art and elaborate grave goods, to consistently bury their dead, and to engage in ritual. Around 30,000 years ago we invented sewing needles and fishhooks; 15,000 years ago the first bow and arrow appeared. The pace of novelty accelerated with the agricultural revolution 10,000 years ago and went into hyperdrive in the last century. The amazing increase in the celerity with which humans embraced innovation has necessitated converting the 2,500,000-million-year curve from a geometric representation to a logarithmic scale for the last 1.5 percent of its length. In an hourlong film chronicling the hominid tool-making epoch, the industrial age of the machine would flash by in the last few seconds.

Whenever a measurement curve switches from a slowly rising horizontal one to a steeply ascending vertical one, conditions are favorable for a major transformation. Typically, this is the moment when the object being measured or observed changes from one state into another. This alteration in states occurs in a relative instant without any transitional gradations. In physics this process is called a phase change; in biology, metamorphosis; and in evolution, punctuated change.

Technological innovation has advanced so rapidly in our lifetime that it has become the primary environmental stimulus responsible for refashioning the animal that began life as *Homo* and *Gyna sapiens*. Linguist Derek Bickerton observed, "The two most shocking facts of human evolution: that our ancestors stagnated so long despite their ever-growing brains and that human culture grew exponentially only after the brain had ceased to grow."<sup>3</sup> Utilizing newly discovered technology, humans have brought about intended and unintended changes in both their external surroundings and each individual's internal milieu. Warnings about the impact of the negative consequences have been widely

disseminated and have induced appropriate levels of anxiety in thoughtful people; the positive consequences, however, possess the power to transform us as a species.

At the outset of the human species, the limit of human intelligence was set by the diameter of the female's pelvis. Evolution could simply not push a bigger brained baby through that narrow opening. Primatologists examining the gestational periods of our closest primate relatives have concluded that the human female should be pregnant for eighteen months. But she must deliver her unfinished baby at the end of only nine months. Any delay beyond that time frame threatens both her life and the life of her baby. Natural selection's solution was to bring a human into the world premature and totally helpless. However, waiting for the baby on the other side of the mother's pelvic ring of bone were the missing developmental pieces. They are called culture and they were ladled back into the baby's brain through the agency of a remarkable new adaptation called language. Language and the cultural knowledge it contained can be thought of in modern computer terminology. Language resembles the addition of a peripheral device that stores information outside of the main computer.

Since the innovation of language, we clever humans have invented writing, and then libraries, and finally the telegraph, telephones, film, cell phones, telescopes, radios, computers, and the Internet. These innovative additions to our innate brain power, more than anything else, are changing us as a species. And there is no evidence that the explosive technological progress we have been experiencing is slowing. Quite the contrary, we are entering a critical phase when our species will either drastically decline as a result of our rapid degradation of the earth's resources or, more likely, transform into a new species that we, who are in the midst of the transformation, cannot discern.

If long-lived intergalactic alien anthropologists were present at the birth of our species, they would express wonderment at the changes they observed happening right before their eyes. Witnessing the first *Gyna sapiens* die in childbirth 150,000 years earlier, they would recall the many dire prognostications for future prospects of the hominid line. And there would be similar bouts of hand-wringing as they watch African Eve's descendants now mucking up the planet they inherited. The more perceptive aliens, however, would discern the outlines of an emergent brave new species undergoing an unheralded form of metamorphosis. They would excitedly notify the mother ship that they were witnessing the birth throes of something that none of them could have anticipated. The old reliable parameters of physical attributes, such as brain size or bone length, cannot distinguish this new species from the old, but the dramatic changes in the way some men and women have begun to relate to each other can. *Sapients* are experiencing a period of punctuated change.

Humbled, perhaps, by the knowledge of how wrong they were when predicting African Eve's survival chances 150,000 years earlier, the aliens would most likely add the qualifier that their report on the mating patterns of this new species is a work-in-progress. They hedge their bets because the transformation they are observing is entirely without precedent when compared to anything that has occurred in the previous 3.8 billion years of life on planet Earth.

#### NOTES

1. *Gyn* is the Greek prefix root of the word female, as in the English *gynecology*.
2. Glynn Isaac, quoted in Steven Mithin, *The Prehistory of the Mind* (London: Thames and Hudson, 1996), p. 123.
3. Derek Bickerton, *Language and Human Behavior* (Seattle: University of Washington Press, 1995), p. 65.

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