

Part One

The Pleasure Instinct and Brain Development

Chapter 1

Foibles and Follies

If you prick us, do we not bleed? If you tickle us, do we not laugh? If you poison us, do we not die? And if you wrong us, shall we not revenge?

—William Shakespeare, *The Merchant of Venice*

Human nature exists.

—Melvin Konner, *The Tangled Wing*

Why does pleasure exist?

Beyond academic circles one seldom hears this question. In daily life, as we move through the minutiae of meetings, ready the kids for school, manage a household, and take care of the basic necessities, we're more likely to seek new ways to pursue pleasure than ponder its existence. Pleasure, like fear and fire, is a natural force that humans have sought to harness and control since their beginnings. The pleasure instinct—evolution's ancient tool for prodding us in the directions that maximize our reproductive success—has created a staggering panorama of behaviors, pathologies, and cultural idioms in our modern lives that often bewilder and beguile.

This book is a biography of sorts, a chronicle of the relationship between humans and pleasure. As the story is told, we will address some of the deepest questions that have been asked about human nature through recorded history and undoubtedly beyond. To understand pleasure, we must know its history and evolution. How is it that the human mind experiences pleasure in mere shapes and colors, textures and touch, myths and stories? Why does humor relieve tension? Why does music invigorate us—to dance, swoon, make love, or march off to battle—while many other noises leave no mark? Why do social attachments make us feel good? Do other animals experience pleasure? Why do we find babies so darn cute? And how is it possible that pleasurable feelings can be elicited from such an astonishingly wide array of events ranging from the mother's gaze at her newborn to the addict's anticipation of his next high?

Philosophers and spiritual leaders have debated the value and nature of pleasure for centuries, often comparing it to its more abiding sibling, happiness. The two are related, of course, but most of us, from saint to sinner, have never doubted which of the pair would make the best honeymoon companion. Happiness is often said to be a “gift for making the most of life” or “enjoying the simple things.” Pleasure is a hedonistic reflex, a burning impulse to abandon rational thought altogether and immerse oneself in the moment. Happiness is an abstraction, constructed from our social and moral identities—a carefree stroll on the beach, 2.3 children and a white picket fence, a sense of accomplishment. The pleasure instinct, like the survival instinct, is pure biological imperative fueled by an ephemeral reward so fevered and beautiful with desire that it can drive us to extraordinary lengths. Happiness is a Norman Rockwell painting hanging over your fireplace on a cold winter's eve. Pleasure is the warmth and aesthetic beauty of the flames, the heat beating on your skin.

Pleasure is experienced in a multitude of colorful ways—the ecstasy of a sexual encounter, the epicurean delight of chocolate, the delivery of a punch line. Yet despite this it has a central core of universal features that cuts across all human cultures and historic periods. In this respect, we are all deeply connected by both the gifts and constraints that natural selection and adaptation have afforded us.

We live in an antidepressant era, dominated by a seemingly insatiable appetite for happiness, and it is critically important to our individual and societal health (and happiness) to understand why this is the case. We can't get no satisfaction. We go on spiritual quests, read all the right books, join health spas, travel, buy new cars, eat out, watch cable TV. We all want a piece of it—bliss, elation, cheer, the primrose path, spice, titillation, glee, exuberance, mirth, joy, and jubilation. How about vice, addiction, lust, malfeasance, adultery, a monkey on your back, obsession, and perversion? Our modern brains, forged from the grist of evolution's mill during our stay as hunter-gatherers, must deal with contemporary conditions that are radically different from—and in some cases in direct opposition to—the ancestral environments in which more than 97 percent of our history has been lived. Thus the importance of understanding why pleasure evolved, how the context and selection factors that shaped its evolution differ vastly from the environmental circumstances we face today, and the personal and societal consequences of these differences cannot be overstated. And certainly not ignored.

Pleasure is not an epiphenomenon, a lucky happenstance of neurons being in the right place and firing at the right time. It has evolved to serve a very specific and adaptive set of functions from our distant past. The genes that encourage the expression and feeling of pleasure are success stories of natural selection—they are still around. Therefore, in our quest to understand the psychological, biological, and cultural foundations of pleasure in the modern world, we must consider what problems pleasure solved for our ancestors. If the pleasures did not provide a functional solution to some selection factors faced by our earlier brethren, the genes that shape their expression and feeling would be long gone, into the dustbin of ecological time like most others.

Darwin without “Social Darwinism”

Understandably, some people twinge when Darwinism and human nature are mentioned in the same breath—Darwin himself made virtually no reference to humans in his great work *The Origin of Species*.

Our fear, perhaps, lies in what we foresee as a sterile, eugenic existence such as that thrust upon the characters in Aldous Huxley's *Brave New World*. Most of us genuinely resent the notion that our behaviors, thoughts, and feelings—the very ingredients that make humans extraordinary—are shaped, even in part, by biological and genetic factors. We refuse to accept that our genes chain us to a destiny preordained by proteins. But, as we'll see throughout this book, nothing in modern Darwinian theory claims this to be the case. Indeed, understanding why emotions evolved, particularly the pleasure instinct, can have a profound and positive impact on daily life by showing readers how pleasure influences the way we make aesthetic, social, and moral choices, and learn from our mistakes.

Until recently, scientists have concentrated almost exclusively on studying how social and cultural factors shape emotions. Academics have typically shied away from using evolutionary principles to study slippery subjects such as pleasure because they often fear that such an approach leaves little or no room for the role of experience. We've heard it so many times: "People like things because they learn to like them, not because their genes tell them to." We're not programmed with innate preferences, the argument goes; we learn what is pleasurable through trial and error. And this is often the case. Yet studies have shown that rather general biases are present immediately after birth. For example, newborns prefer the taste of sweets to sour; a smile to an expressionless face; symmetrical to asymmetrical objects and scenes; and rhythmic to random sounds. These preferences emerge long before the infant ever encounters a cookie or hears its first joke. This book explores the many innate proclivities that have evolved in humans as a result of our pleasure instinct, and examines how they dramatically shape our brains, behaviors, thoughts, and feelings.

In the last twenty years a scientific revolution has been under way that marks a significant departure from how human behavior has been studied in the past. The new thinking rests on the firm belief that to make sense of human nature, one must consider how the human mind was molded by both natural and sexual selection. Instead of simply asking, How does the mind solve problem X?

a better question is, Why was that particular mind/brain mechanism selected for during our earlier history as hunter-gatherers?

Some claim this revolution began with the 1975 publication of E. O. Wilson's now classic book *Sociobiology*, which examined the way selection factors influence reproduction strategies. Rarely has a scientific text produced such a strong sense of political outrage, particularly among social critics who saw it as a scientific justification for patriarchal societies. Posters were placed all over Harvard University inviting students to attend and disrupt Wilson's classes with noise-makers, and he was attacked in the press by many of his colleagues.

Yet the revolution has continued to gather steam, finding support and a more solid foundation from such diverse fields as molecular biology, behavioral genetics, cognitive psychology, cultural anthropology, and neuroscience. Sociobiology and its heir apparent, evolutionary psychology, have now grown at an exponential rate, with thousands of researchers using them as the main paradigms through which they investigate human behavior and indeed culture.

For our purposes, we will use both evolutionary and developmental principles to help us navigate the rambling terrain of pleasure—from its ancient landmasses that gave rise to modern landscapes, to its largely unexplored hinterlands. Pleasure, as we shall see, is the “common currency” that regulates the way humans self-stimulate their own brain growth and maturation. Human babies, for instance, are exceedingly discriminating in what they prefer to look at, listen to, feel, taste, and smell. These innate biases—from a love of primary colors, to a fondness for prosody—ensure that infants seek out the best kinds of sensory experiences for promoting normal brain development in their early years of life. Such biases persist well beyond the critical periods that every parent is familiar with, and form a system of positive reinforcers that profoundly impact adult cognition and behavior. In the chapters that follow we will address long-standing questions and learn why pleasure is ultimately a regulator of development. The issues that arise are at the very core of what it means to be human, and give us a glimpse of what we can reasonably expect of human nature. Why did pleasure evolve?

What are the evolutionary advantages, biological realities, and consequences of pleasure?

- How does pleasure fine-tune the brain? Why are certain sensory experiences more pleasurable than others?
- What evolutionary/developmental factors govern our attraction and attachment to friends, lovers, relatives, and offspring?
- What makes sinning so much fun? How did addictive behaviors evolve and what can natural selection and developmental principles tell us about treatment?
- Why is laughter contagious? How is it related to aggression? Are mice ticklish? Do animals experience love and joy? Why do we smile when pleased?
- Is there such a thing as a universal set of aesthetics? Why do some of us see art while others see only squiggly lines? What is it that makes some people more physically attractive than others? Why do we like the sounds of wind, thunder, and flowing streams? Why do we find certain environmental landscapes so aesthetically pleasing?
- Why do so many of us take pleasure in thrills and chills—from parachuting out of airplanes to riding roller coasters to watching horror flicks? How are phobias related to thrill-seeking?
- And perhaps most important of all—how can we use what science is now learning about the pleasure instinct to improve our quality of life?

This is but a small sampling of the questions that arise naturally when we ask: Why does pleasure exist? Fundamental answers to these questions will not be found by generating a hodgepodge of disjointed theories, each tied to a particular issue. Instead, when asked against the backdrop of evolution, they reveal the framework of a new worldview that is beginning to change the way we think about human nature. The story of how the pleasure instinct evolved and continues to function today begins with our first steps into the cognitive niche.

The next two chapters of this book are dedicated to exploring these initial steps into the cognitive niche and provide a conceptual foundation for understanding the role of pleasure in the evolution of our species. Chapters 4 through 8 detail how the pleasure instinct facilitates normal brain growth and development in each of the five primary senses—touch, taste, smell, audition, and vision. Chapters 9 through 11 provide three examples of how the pleasure instinct impacts our everyday lives, including how we choose mates and why we love rhythm so much, and provides a new perspective on addictive behaviors. Finally, chapter 12 summarizes this material and considers the open questions that await answers from future research.

