By Scott O. Lilienfeld

One of the first clients I treated in my therapy training in clinical psychology in the early 1980s was a 22-year-old college senior psychology major I’ll call James. In almost all domains of life, James was successful and self-assured. Yet he had bumped up against a seemingly insurmountable obstacle. To graduate, James needed to pass the required course in laboratory methods that compelled students to conduct a few simple learning demonstrations with rats, of which James had been morbidly afraid since childhood. Working with James, I first came to appreciate just how paralyzing fear can be.

He’d never been bitten by a rat, and had seen a live rat only once, scurrying away from a garbage dump at night. But the mere prospect of interacting with a rat had filled James with such abject terror that he’d postponed the course for several years, hoping beyond hope that he’d somehow find a way of surmounting his fear in the interim. He hadn’t. Now he was confronted with an unenviable choice: drop out of college or get over his fear. He selected the latter. James proved to be the ideal client: motivated, cooperative, and insightful. He understood that his fear was irrational, but was at a complete loss to know what to do about it. So we began by jointly constructing a hierarchy of fear-provoking experiences, starting with situations that James was certain he could handle with minimal anxiety — such as looking at a photograph of a rat in a book — and eventually working our way up to his holding a live pet rat. Yet during our second session, James found that merely viewing a photo of a rat suddenly was too much to handle, as if he were overcome by the looming ultimate step. We went back to the drawing board and decided to begin with his viewing a cartoon drawing of a rat, but even that step proved too anxiety-generating. Finally, we settled on his starting by looking at the word “rat” from a distance, an experience that triggered only mild anxiety. Over the next two months of weekly sessions, we gradually worked our way up to his holding a live pet rat. Yet this apparent diversity is deceptive, because we can subsume most phobias under a small number of categories. The most recent (fourth) edition of the American Psychiatric Association’s Diagnostic and Statistical Manual of Mental Disorders identifies four subtypes of “specific phobia,” the most widespread version of pathological fear:

- Natural-environment phobia, the fear of heights, water, thunderstorms, and darkness. These are among the stimuli that Martin E. P. Seligman, best-selling author, psychology professor and director of the Positive Psychology Center at University of Pennsylvania, in a 1971 article in the journal Behavior Therapy, called “prepared,” meaning that we’re predisposed evolutionarily to fear them because of the risks they posed to our ancestors. For instance, Phil Rizzuto, Hall of Fame Yankees shortstop and legendary sportscaster, had such an intense phobia of lightning that he would routinely leave the announcer’s booth during thunderstorms.
- Animal phobia, with dogs, cats, snakes, insects, and spiders receiving top billing. Such phobias usually begin in childhood and commonly dissipate by adolescence, perhaps because most children as they age have repeated uneventful encounters with animals.
- Situational phobias, typically the fear of specific situations, like closed-in spaces (claustrophobia), tunnels, elevators, airplanes, and motor vehicles. Situational phobias commonly overlap with a more pervasive condition called agoraphobia, a fear of an array of situations in which panic attacks — sudden surges of terror — are likely.
- Blood/injection/injection phobia, the fear of blood, injury, medical shots, or deformity. In contrast to other phobias, which are marked by sharp increases in heart rate and blood pressure, blood/injection/injection phobia is marked by sharp decreases in heart rate and blood pressure, explaining why it often produces fainting. Many psychologists suspect that this cardiovascular response is a residue of an evolutionarily adaptive reaction: When we’re losing blood, we want our heart and blood vessels to tamp down output to help survival.

Given that most of us don’t exactly enjoy pondering our own inevitable demise, we might expect the most common fear to be of death (thanatophobia). Yet population surveys show that fear of public speaking (glossophobia) comes in at number one, while fear of death usually ranks a distant second. When fear of public speaking reaches excessive proportions, it becomes social phobia, also called social anxiety disorder. People with social phobia are petrified of situations in which they could become embarrassed or humiliated; they are terrified of how others may...
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Social phobia may manifest itself in other
phobia), allowing more blood to pour into
our extremities and preparing us either to
fight or flee. In reality, this reaction is
better thought of as the fight-flight-freeze
reaction, as some species, such as deer or
rabbits, become motionless when terrified,
and a flaring of the
characterized by a widening of the eyes, a
dilation of the pupils, and a flaring of the
nostrils. Each of these telltale signs of fear
indicates, but more than 90 percent of us
manage to do it. People with social phobia
either cannot do it or force themselves to
do it while experiencing intense distress.
Social phobia may manifest itself in other
fears too, such as fears of performing in
public, swimming in public, eating in
public, writing in public, or more rarely,
using public restrooms. Singers Barbra
Streisand and Carly Simon are admitted
social phobics, a fact that explains why
they rarely tour.

Fear serves useful purposes

One need not be a fervent proponent of
evolutionary psychology to accept a basic
proposition: Fear, although unpleasant,
serves a crucial adaptive function. It alerts
us to potential dangers, like a predator or
criminal, readying us for what influential
Harvard Medical School physiologist
Walter Cannon called the “fight-flight
reaction” in his 1929 book, Bodily Changes
in Pain, Fear, Hunger, and Rage. When we
become frightened, our heart speeds up and
blood vessels constrict (bearing in mind
the exception of blood/injury/injection
phobia), allowing more blood to pour into
our extremities and preparing us either to
fight or flee. In reality, this reaction is
better thought of as the fight-flight-freeze
reaction, as some species, such as deer or
rabbits, become motionless when terrified,
probably because many predators rely on
movement to detect potential prey.

Facial expressions associated with fear
also impart a clear evolutionary story. As
clinical psychologist Paul Ekman points
out in his important 2007 book, Emotions
Revealed, across all human cultures fear is
characterized by a widening of the eyes, a
dilation of the pupils, and a flaring of the
nostrils. Each of these telltale signs of fear
maximizes our sensory input, helping us to
detect potential hazards, like an oncoming
For a look at stage fright,
see page 24.

Some of the more common phobias include fear of snakes, clowns, spiders, and enclosed spaces such as tunnels. Do any of these frighten you? Or does something else terrify you?

perceive them rather than of discrete
stimuli, like dogs or needles. Admittedly,
more than 90 percent of us become
apprehensive prior to giving a speech in
front of a large audience, research
indicates, but more than 90 percent of us

External and internal factors cause fear

If fear is generally adaptive, why does it
sometimes become maladaptive? As
clinical psychologist David Barlow,
founder/director of the Center for Anxiety
and Related Disorders at Boston University,
notes in his 2004 book, Anxiety and Its
Disorders, we can conceptualize fear
disorders as “false alarms.” They reflect the
triggering of a fight-flight response in the
absence of genuine danger. Virtually all of
us would experience a full-blown panic
attack while drowning or being chased by a
lion, but the threats in such cases would be
real and the fight-flight response helpful
to our survival. In panic disorder, in
contrast, we witness identical patterns of
physiological arousal, like racing heart,
sweating and hyperventilating, but in
situations that are objectively safe, such as
an afternoon stroll in a marketplace. So,
fear disorders reflect the activation of an
otherwise adaptive response that has gone
awry for still largely mysterious genetic
and environmental reasons.

Although fear surely has deep-seated
evolutionary roots, it is just as surely
shaped by culture. Some sea hunters in
Greenland suffer from “kayak angst,” a
marked fear of going out in kayaks and an
intense desire to return to land, despite the
necessity of such travel, for instance, to
hunt fish. Kayak angst bears conspicuous
similarities to the Western condition of
panic disorder with agoraphobia. Some
individuals in Asian cultures, especially
Japan, experience “taijin kyofusho,” which
appears to be an Eastern variant of social
phobia and is characterized by a fear of
offending others, most typically by one’s
behavior, appearance, or body odor.
Interestingly, most Asian cultures are
more “collectivist”— concerned with
group harmony— than are Western
cultures, so taijin kyofusho may reflect the
manifestation of extreme social anxiety
in societies in which upsetting others is a
cardinal sin.
Gender plays a role, too. In a groundbreaking 2000 article in Psychological Review, University of California, Los Angeles, psychology professor Shelley E. Taylor, director of the school’s Social Neuroscience Lab, and her colleagues amassed a substantial body of evidence to show that when frightened, women are more likely than men to display a “tend and befriend” response, as opposed to the better known fight-flight response. That is, when afraid, women more often turn to nurturing and bonding with others, including their children and friends. As even causal viewers of HBO’s Sex and the City know, women often gravitate toward their close buddies (ideally, at upscale New York City restaurants) when stressed out by work or romance.

Psychopaths lack fear

The proposition that fear is adaptive leads to a straightforward prediction: People without sufficient fear should be psychologically impaired. In their 1996 book, Why We Get Sick: The New Science of Darwinian Medicine, the noted evolutionary theorists Randolph M. Nesse and George C. Williams posited the existence of a yet-to-be-discovered disorder: “hypophobia,” or fearlessness. In reality, we needn’t look terribly far for such a condition, as psychologists and psychiatrists have recognized it for decades. First described systematically by Hervey M. Cleckley in his trailblazing 1941 book, The Mask of Sanity, it’s termed psychopathic personality, or psychopathy. Psychopaths, as they’re called colloquially, tend to be superficially charming, yet guiltless, callous, egocentric, and dishonest. They’re often prone to antisocial and criminal behaviors, like pick-pocketing, shoplifting, fraud, and, in extreme cases, violence. Some psychologists have suggested that bank robber John Dillinger, serial killer Ted Bundy, and convicted swindler Bernard Madoff embody the cardinal features of psychopathy.

If you think a life free of fear is easy, think again. The paucity of fear can be every bit as maladaptive as its surfeit. In a 1957 article in the Journal of Abnormal and Social Psychology, University of Minnesota psychophysiological scholar and behavioral geneticist David T. Lykken argued that psychopaths possess a “low fear IQ,” or more technically, a high threshold for experiencing fear, allowing them to take physical and social risks that would unnervé the rest of us. In classic research reviewed in his 1995 book, the Antisocial Personalities, Lykken discovered that psychopaths don’t develop adequate conditioned associations between neutral tones paired repeatedly with electric shock. When presented with the tones alone, psychopaths — in striking contrast to the rest of us — barely respond physiologically. Consequently, they don’t become frightened in anticipation of signals of impending threat. (Interestingly, their response to the shock itself is essentially identical to that of normals.) In a 1966 study, also published in the Journal of Abnormal and Social Psychology, influential researcher and academic Robert Hare found that when asked to wait for an electric shock (or, in later research, a joltingly loud noise), psychopaths display markedly lower skin conductance responses — a good index of arousal — than do nonpsychopaths, again suggesting a deficit in fear sensitivity. This fear deficit may render children susceptible to many of the features of psychopathy like lack of guilt and empathy. Fear, after all, is an essential socializing agent for parents and teachers. Without fear, children have little motivation to learn from their mistakes or to predict the negative reactions of powerful others. As the philosopher Nietzsche observed, “Fear is the mother of morality.”

Why, then, have psychopaths not been pruned out of the population by natural selection? Without fear, children have little motivation to learn from their mistakes or to predict the negative reactions of powerful others. As the philosopher Nietzsche observed, “Fear is the mother of morality.” Why, then, have psychopaths not been pruned out of the population by natural selection? Without fear, children have little motivation to learn from their mistakes or to predict the negative reactions of powerful others. As the philosopher Nietzsche observed, “Fear is the mother of morality.” Why, then, have psychopaths not been pruned out of the population by natural selection? Without fear, children have little motivation to learn from their mistakes or to predict the negative reactions of powerful others. As the philosopher Nietzsche observed, “Fear is the mother of morality.”

What is, then, the only thing we have to fear?

All of this brings us to an intriguing conclusion. Much as we’d like to live without fear, most of us need it, at least in moderate doses. Even my early client James knew he had to overcome his fear of rats and was afraid of what would happen if he didn’t; without his healthy fear of dropping out of college, James might never have sought treatment. Natural selection may have predisposed the bulk of us to experience intermediate levels of fear, but allowed a few of us with low levels of fear to thrive in certain vocations and avocations — and perhaps capitalize on the fears of the rest of us. Novelist Henry Miller may have gotten it right: “There is nothing strange about fear. No matter in what guise it presents itself it is something with which we are all so familiar that when a man appears who is without it we are at once enslaved by him.”