Curb Your Darwinism

Supernormal Stimuli:
How Primal Urges Overran Their Evolutionary Purpose
by Deirdre Barrett
Norton, 2010,
216 pages.

Reviewed by Marshall Poe

Despite what economists say, biology is really the dismal science. In its clinical guise, it's all about how your body can and eventually will break down. Doctors can put you back together for a time, but their final judgment is always the same: "You're going to die. Here's why, in excruciating detail." In its scientific guise, biology is full of heretical, inconvenient, and even dangerous facts. We are descended from dumb, mute beasts. *What?* We are not equal, nor can we be made equal. *Really?* We are not entirely responsible for what we do. *How's that?* We are very likely to make our planet uninhabitable long before its geological expiration date. *Come again?* Scientists tell us we can forestall ecological catastrophe, but they know how things will end: "You're *all* going to die. Here's why, in mind-numbing particulars." Interesting, but not very helpful.

It's hardly astonishing, then, that we don't like to talk about biology. It's just depressing. Neither is it remarkable that when we *must* talk about it, we tell ourselves comforting lies. In fact, biology may be the only discipline (except for history) in which the practitioners themselves are afraid to speak the truth, or at least the whole truth. Take the "nature vs. nurture" debate—a debate that has yet to be decided, and looks far from resolution any time soon. A good thing, too, for it fuels in no small part a successful pop-science genre, of which Deirdre Barrett's *Supernormal Stimuli: How Primal Urges Overran Their Evolutionary Purpose* is but a recent example.

Barrett is a Harvard psychologist in the Oliver Sacks mode, which is to say she is both an academic researcher and a popular writer. Her previous works show how nimbly she straddles the line between them: In *The Pregnant Man* (1998), she offers titillating "cases from the hypnotherapist's

couch"; in *The Committee of Sleep* (2001), she argues that dreams can be used in creative problem solving; and in *Waistland* (2007), she tells us how to "r/evolutionize [*sic*] our view" of weight and fitness. With *Supernormal Stimuli*, however, she's entered a minefield, as passions on both sides of the "nature-nurture" debate run high. Not surprisingly, then, she treads carefully, determined to avoid alienating any reader. Unfortunately, this overweening caution, combined with a tiresome affection for puns and pop-culture references, makes it hard to take her arguments as seriously as we should.

Barrett's book offers another opportunity to revisit a centuries-old discussion. The philosophers of the Enlightenment, after all, also thought a lot about the issue of human nature, the degree to which it was unitary, the extent to which it was good or bad, and the ways that it might or might not be changed for the better. Though some agreed with Hobbes that human nature was naturally diverse, inclined toward evil, and largely inflexible, the prevailing sentiment was that of Rousseau: All humans are the same and equally malleable; under corrupting conditions, they all became corrupt, and under virtuous conditions, they all become virtuous. In the course of the nineteenth and early twentieth centuries, many republican social reformers accepted Rousseau's ideas on human nature, even using them as weapons to fight the evils of slavery, racism, and sexism. To their credit (and our benefit), they indeed made significant gains in the arenas of freedom, equality of status, and fair opportunity. Legal human bondage was ended in the Atlantic world, African-Americans were granted citizenship (though not yet equal status) in the United States, and the women's liberation movement made great strides in North America and Western Europe.

But Rousseauism proved to be a double-edged sword. Yes, it could be used to promote political progress. But insofar as it was taken as an article of faith, it could also be used to stifle scientific advance. By the late nineteenth century, biologists and physical anthropologists were amassing evidence suggesting that human nature was, *pace* Rousseau, persistently various and in some ways quite rigid. How, they asked, could it be otherwise, in light of Darwin's theories? Humans are animals and animals evolve. Evolution is founded on the concepts of variation in, and selective retention of, inbuilt adaptive traits. It's only natural, then, that human behaviors vary, and are in many cases difficult to modify. Of course the Rousseauists viewed this

position with the utmost suspicion. Anthropologist Franz Boaz, for example, said some of the behavioral Darwinists were nothing but bigots in lab coats and field jackets, pseudoscientists defending the unjust status quo (or trying to make things worse). He was not always wrong, as the Nazi experiments in what might be called "applied racial hygiene" soon demonstrated. But not all of the behavioral Darwinists were fascists. Some were well-meaning scientists who sought a way to do their work without offending the Rousseauist consensus.

Shortly after World War II they found such a way, by means of a kind of deal: The Darwinists would investigate the biological underpinnings of behavior, but they would steer far clear of *human* behavior. Ants, birds, apes—all these were fine, but *Homo sapiens* were more or less off limits, at least for politically reputable scholars. And when confronted with questions about the possible biological roots of human behavior, the Darwinists agreed to repeat the following refrain: Human behavior is almost entirely the result of nurture; inbuilt, significant, unalterable natural differences and propensities simply do not, biologically speaking, exist. And so, in the 1950s and 1960s, the behavioral Darwinists quietly proceeded with their work, happily developing the obscure biological subdiscipline known as "ethology," or the study of animal behavior in an evolutionary context.

They learned a great deal, and eventually grew bold. By the mid-1970s, a group of them—led, interestingly enough, by an ant expert (Edward O. Wilson)—felt they had enough empirical ammunition to attack the nurture establishment directly. The "sociobiologists," as they came to be called, were painfully naïve: They failed to realize that while solid evidence may hold sway in the seminar room, it often counts for little in public discourse. Needless to say, the Rousseauists did not meet Wilson and company's pro-nature hypotheses with cool, reasoned deliberation on their merits. Civil rights advocates called them racists, feminists called them sexists, and Marxist biologists (that's right, Marxist biologists) called them reactionary conservatives. These libels were baseless. What's more, they made no sense. Aside from the aforementioned tenured revolutionaries, most bench-and-field scientists in the 1970s (as now) were politically moderate, and universities, even then, didn't usually hire outspoken bigots. But proof didn't matter. The Rousseauists convinced themselves that human dignity itself was on the line, and it was therefore excusable to slander a few tin-eared scientists and

bury what just might be the truth. Sensibly enough, the sociobiologists beat a hasty retreat back into the lab.

And it was there, in the 1980s and 1990s, that they did three things. First, they proceeded with their ethological work, all of which served only to confirm what the founders of sociobiology had said: Like every other sexually reproducing animal, humans are evolved creatures with evolved behaviors that differ within groups and between the sexes. Second, they rebranded and relaunched their unjustly discredited movement. The Darwinists no longer spoke (at least very loudly) about sociobiology. Instead, they began to speak about "evolutionary psychology." Of course, everyone in the field knew that the two were essentially the same, but the new label provided a much needed cover. Finally, because they no longer had to deny outright that nature played a role in human behavior (*some* gains had been made by Wilson et al.), the Darwinists crafted a new, politically acceptable refrain: Humans have some inherent behavioral patterns, but because nature and nurture are so tightly intertwined, it's impossible to separate the two; pure nature and pure nurture, therefore, do not exist "in a biological sense." Having thus laid the groundwork for a more user-friendly enterprise, the behavioral Darwinists again quietly proceeded with their work, further developing a number of little-known biological subdisciplines, including "human behavioral ecology," "behavioral genetics," and, of course, "evolutionary psychology."

Once more they learned a great deal, and eventually grew even bolder. Finally, the Darwinists were ready to take on the Rousseauists anew. But this time, their champion was not an avuncular bugman more at home with Petri dishes than public debate. He was, rather, a polished psychologist with a lion's mane and a publicist's touch: Steven Pinker. His 2002 book, *The Blank Slate: The Modern Denial of Human Nature*, accomplished something remarkable: It managed to make the basic tenets of sociobiology at least marginally acceptable to the Rousseauists. Part of the reason for the book's success was clearly generational: the Marxist biologists were gone (along with Marxism). Part of the reason was also rhetorical: Pinker is a slick writer with a golden boy's résumé, along with the admirable ability to make it seem that every position but his own is plainly indefensible. But perhaps the most important reason for *The Blank Slate*'s triumph was empirical: Pinker's audience—educated, middle-to-upper-class, liberal professionals interested in "ideas"—could no longer deny that nature often *does* trump nurture,

as politically disturbing a thought as that might be. Indeed, they could see this with their own eyes: the schools were integrated; historically disadvantaged groups—women, minorities, the poor—were encouraged and assisted in their efforts to go to college; discrimination in the workplace (and everywhere else, really) had been outlawed; and the once-disenfranchised could now be seen in the highest reaches of business, government, and academia. In other words, the social playing field had been largely, if not completely, leveled. Nonetheless, there were impossible-to-ignore discrepancies in "outcomes," and they could not be explained away by "socioeconomic factors." For these privileged, successful, liberal-to-the-core people, the Rousseauist experiment had run its course, and the results were in: There was a thing called "human nature," and it was a very tough nut to crack.

The positive reception of Pinker's book showed that the Rousseauists were now ready to discuss variations in and limitations of human nature. This is not to say, however, that they wanted to deliberate *all* such variations and limitations. For quite practical reasons, the Rousseauists proposed (implicitly rather than explicitly, naturally) certain guidelines. They would not discuss race. (The Rousseauists maintain that it—whatever "it" is—does not exist "in a biological sense.") They would not discuss sexual differences in abilities and propensities. (The Rousseauists hold that while these may *seem* to exist, they are really an artifact of social inequities, and not evolutionary factors.) Finally, they would not discuss the ways in which education might fail to solve the problem of inequity. (The Rousseauists have not lost faith in the egalitarian project; on the contrary, they need to believe that education—which was, after all, their ticket to prosperity—is the key to all social progress, and infinite in its power to mold our troublesome, various natures.)

Deirdre Barrett follows all the Rousseauist guidelines in *Supernormal Stimuli.* Like her earlier book *Waistland*, it works in the tradition not so much of Freud, Jung, and Erikson, but of Darwin, Huxley, and Dawkins. That's progress. For too long, psychologists have treated the mind as if it just "appeared" for no reason. Recognition that it evolved according to the dictates of mutation, selection, genetic drift, and gene flow is certainly a step in the right (Darwinist) direction.

Yet Barrett, careful not to offend modern Rousseauist sensibilities, treads very carefully through Darwinism. She begins *Supernormal Stimuli*, logically enough, with a history of the

biological study of human behavior. You might think she would begin with Darwin—he did, after all, pen the two foundational texts in the study of the evolution of human behavior: *The Descent of Man, and Selection in Relation to Sex* (1871) and *The Expression of the Emotions in Man and Animals* (1872). And besides, Rousseauists love Darwin, as he showed that all humans are descended from one ancestor and are, therefore, all the same. The problem is that he did no such thing, and Barrett knows it. He did believe in common descent, but did not hold that all humans are the same. *Descent* (especially) and *Expression* (to a lesser extent) are chock full of distressing passages that show Darwin—genius though he was—to be a typically Victorian racist and sexist, and moreover one who seemed convinced that humans have immutable (and rather nasty) instincts. The Darwin of *Descent* and *Expression* is therefore an embarrassment to the Rousseauists, and so she leaves him aside.

Instead, she begins her intellectual genealogy with Nikolaas Tinbergen, of whom you have probably never heard, but who is arguably one of the two founding fathers of ethology. He also has excellent Rousseauist credentials: he was Dutch (the Dutch are very progressive, you know), he was nerdy (always a good sign), and he was held in detention by the Nazis (not as good as being in the Resistance, but we'll take it). It's unfortunate for Barrett that the *other* father of ethology, Konrad Lorenz, was *not* the sort of man Rousseauists tend to admire: He was nominally Austrian, though by allegiance German (just like you-know-who); he was an ambitious self-promoter (just like you-know-who); and he was a highly placed Nazi (also just like you-know-who!). But since it's impossible to leave Lorenz out of the tale—ethology really is *his* story—Barrett gently massages his CV. The beleaguered zoologist was, she explains, "pressured" to join the Nazi Party. Now, most historians would say that this may or may not be true; the evidence is complicated. The important point, however, is that he *did* join the Nazi Party, and thereafter said some unpardonable things about the merits of racial purity and how to achieve it. Not wishing to dwell on these unpleasantries, however, Barrett moves right along.

Next stop: Wilson and the sociobiologists. She gives them two paragraphs. Why so little? Is it because she knows that that bad man Wilson broke the rules when he suggested that "individual variation on traits such as intelligence, creativity, and introversion" might be genetically founded, that there might even be "ethnically based" differences in behavior (by

which she means "racially based," though she can't quite bring herself to say it), and that education might not be a cure-all? I would be willing to bet that Barrett agrees with Wilson about each of these things; most behavioral scientists do. But she's not going to say so, at least in a book pitched at Rousseauists. So again, not wanting to linger, she moves on.

Next and final stop: evolutionary psychology, the new Rousseauist "in crowd." The evolutionary psychologists are geniuses. She adores them. They are her people. Why? Because they follow all the rules and know the modern Rousseauist refrain by heart: "Evolutionary psychologists argue that this [understanding of behavior] is not just another swing of the nature/nurture pendulum…. Their position instead is that it is a false dichotomy." This, of course, is an odd thing to say in a book about instincts (read: "nature"). But the Rousseauists demand that it be said, and Barrett accommodates them. (Perhaps, like Lorenz, she was "pressured" into doing so.)

Now that Barrett has set—or rather, carefully arranged—the intellectual stage, she presents the primary argument of the book. Humans, she says, in one voice with the evolutionary psychologists, evolved in and are adapted to a particular social and natural environment, namely life in smallish, hunter-gatherer bands roaming the Paleolithic savannas of Africa. In this environment, the *Homo sapiens* mind became imprinted with certain more-or-less hard-wired instincts. The trouble, she continues, is that these instincts are in many ways inconsistent with modern life, or rather the "supernormal stimuli" offered by modern life. As she puts it, "Animals and man are indeed often harmed by what they desire—especially when encountering new stimuli for which evolution hasn't prepared them." Over millions of years, natural selection et al. tuned our minds to "normal stimuli," or evolutionarily advantageous items that rarely presented themselves, and therefore elicited significant reflexive responses. Examples include opportunities to mate, large slabs of meat, and crowding. When confronted with these things, our prehistoric ancestors got all worked up. But since these stimuli were unusual ("normal"), our ancestors didn't get all worked up very often, or for very long. Over the past several hundred years, however, we and our hunter-gatherer, savanna-specific, evolved psychologies have been confronted with supernormal stimuli of our own making. Here Barrett has in mind things like universally available pornography, cheap and fatty fast food, and cities swarming with strangers.

These things naturally get us excited, but because they are ubiquitous, they do so to an unnatural degree. In short, supernormal stimuli—which is to say, modern life—make us sick, or at least weird.

Barrett devotes the various chapters of her book to the ways in which various supernormal stimuli warp us. Pornography, for instance, causes men to masturbate compulsively. Glossy fashion magazines and soap operas "exploit" women's instincts to make themselves attractive, and as a result find good mates. Puppies, kittens, and hamsters (not to mention toy makers) all take advantage of our ingrained fondness for babies. McDonald's is designed to appeal to our evolved love of once-rare fatty food. Living in large, dense communities triggers our selfish, territorial, and sometimes violent instincts. Cultural differences become exaggerated and essentialized by our natural tendency to fear others. Television, computer games, and the Internet play on our "instinct to pay attention to any sudden or novel stimulus such as a movement or sound" and to be fascinated with certain stereotyped social scenarios. And finally, intense intellectual pursuits stimulate our native desire "for seeking novel, challenging problems."

There is nothing wrong with any of this. Barrett's characterization of the primary tenets of evolutionary psychology is brief but sound. I would have liked to see her give more credit to Wilson and the sociobiologists for their elaboration of the theory of evolved human psychology, but that's a minor issue. I also would have appreciated some discussion of the primary criticism of evolutionary psychology—namely, that most of its "explanations" for instincts are incomplete, at least empirically. It's one thing to say, "Observed trait A was selected by observed environment B," as we can for the evolution of microbial traits (for example, the resistance to antibiotics in hospitals). But it's quite another to say, "Observed trait X was selected by *unobserved* environment Y," as evolutionary psychologists often do. The fact of the matter is that we have a lot to learn about the "environment of evolutionary adaptedness" (i.e., the ancient African savanna), and until we learn it, evolutionary psychological explanations of particular human instincts will remain hypotheses. They certainly make sense, but they are not proven by any scientific standard. And Barrett should say so.

Barrett's main point is also correct: Some of our instincts do seem to go against the grain of modernity. Again, I would like to have seen her pay more attention to her intellectual predecessors: Didn't Freud write a book about civilization and its

discontents, called *Civilization and Its Discontents* (1930)? I couldn't find any reference to it in *Supernormal Stimuli*. Moreover, Barrett might well have noted that that there is currently a big fight going on over which human behaviors are hard-wired and which aren't. The trouble, again, is empirical. You can say, confidently, "Observed trait A is caused by observed physiological mechanism B." But it's more difficult to argue that "Observed trait X is caused by *unobserved* physiological mechanism Y," as evolutionary psychologists sometimes do. To prove that an instinct is hard-wired, you need to find the wiring and understand how it works. But in many (most?) cases, we haven't done that, and Barrett should say so.

Barrett does deserve credit, however, for connecting a newish theory—evolutionary psychology, to an old but persistent problem—the conflict between instincts and society. I have the feeling that *Supernormal Stimuli* could have been a significant book; perhaps not *Civilization and Its Discontents 2.0*, but important nonetheless. Alas, it does not live up to its potential. The reason has less to do with substance (though that, too, is imperfect) than with style: While Barrett's topic is weighty, *Supernormal Stimuli* feels light as a feather. It's as if Barrett thinks her post-Pinker Rousseauist readers just can't take the complex, troublesome truths of evolutionary psychology presented in simple, straightforward prose. As a result, the book comes off as condescending. Allow me to give three examples.

First, Barrett sprinkles puns and "clever" phrases throughout *Supernormal Stimuli*. Why? Generally, people find puns so annoying that they pardon themselves for making them. They are the mark of a silly mind, not a serious one. But Barrett finds them useful. To her, puns are the equivalent of a spoonful of sugar: they help, in the immortal words of Julie Andrews, "the medicine go down." But do they really? You can judge for yourself. Here are some chapter titles and section headers from *Supernormal Stimuli*: "Sex for Dummies"; "Wanker Nation"; "Porn for Women"; "Sex in the City"; "Foraging in Food Courts"; "McHunters and McGatherers"; "Junk-Food Junior"; "Defending Home, Hearth, and Hedge Fund"; "Attack of the Supernormal Stimuli." Get it? I would really like to say that this book was not written for readers like me. That, however, would be a lie. I *am* the target audience. And, judging by all this showy "wit," I can only conclude that Barrett believes my tastes (and

yours) run toward fart jokes and sight gags.

Second, Barrett illustrates many of her points with references to American pop culture. Again: Why? After all, most people would agree that sitcoms and the like are, while entertaining, pretty dumb. Like puns, frequent reference to pop culture is a sign of silliness, not seriousness. Nonetheless, Barrett thinks she—or rather you—need them. Her reasoning would seem to go something like this: "America is the biggest audience for *Supernormal Stimuli*. Americans watch a lot of TV; therefore, I need to litter my book with amusing references to popular culture in order to make it readable." Forget that there is a large non-American, English-reading audience for a book on the friction between instincts and modernity. Forget that Americans, and especially college-educated Americans, both watch a lot of TV *and* read serious books. And forget that numerous references to TV shows do not really enhance readability (on the contrary, like puns, they are annoying). To hell with all that; let the pop culture flow! So while Barrett deprives us of *Civilization and Its Discontents*, she give us *All in the Family*, *The Brady Bunch*, *Cheers, Dark Shadows*, *Eight Is Enough*, *Friends*, *Good Times*, *Leave It to Beaver*, *Little House on the Prairie*, *Mad About You*, *The Matrix*, *Sex and the City*, and *Star Wars*. I was born and raised in the United States; I recognize all these pop-cultural references (though some rather dimly). But what's that you say? You *weren't* born and raised in the United States? You *don't* know what *Dark Shadows* is? Really? But you speak English so well! How can you not know what *Dark Shadows* is?

Third, Barrett likes to say that the conflict between our instincts and civilization is causing various "crises," or at the very least grave problems. Most people, however, would probably say that the issues Barrett identifies are of concern, but are hardly crises by any measure. Folks who follow world affairs would generally reserve the word "crisis" for things like the genocide in Darfur, the HIV epidemic in Africa, and the state-imposed famine in North Korea. But Barrett prefers a broader definition. She seems to believe that if she doesn't paint masturbation, fat kids, and video-game addiction in the darkest possible tones, you won't pay attention. I can't speak for you, but I can ensure her that *I* will. There is no need to shout. In fact, I'm as worried about porn addiction, rampant obesity, and compulsive video-gaming as the next guy. Really, I am. I find it unnerving, however, to hear these

things called "crises" and the like when, truth be told, they aren't.

Barrett concludes *Supernormal Stimuli* with this thought: The solution to "most of our modern crises" lies in recognizing where modern life exploits our evolved instincts and refusing to be so exploited. In the final analysis, then, Barrett seems to agree with Rousseau: Our root problem is too much civilization. But Rousseau was wrong, and so is Barrett. Our root problem is not too much civilization, but rather too little of it. The areas of the world that are suffering most from *real* crises are not the most developed, but the least developed. The solution to "most of our modern crises," therefore, has almost nothing to do with recognizing when too much of something might cause us minor harm. Rather, it centers on providing enough of everything for everyone. I, for one, look forward to the day when the impoverished, oppressed, hopeless people of the undeveloped world suffer from the "crises" Barrett identifies in *Supernormal Stimuli*. I imagine they do, too.

Marshall Poe teaches at the University of Iowa. He is the host of the New Books in History *website (http://newbooksinhistory.com).*