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January 22, 2009

What Do Women Want?

By DANIEL BERGNER

Meredith Chivers is a creator of bonobo pornography. She is a 36-year-old psychology professor at Queen's University in the small city of Kingston, Ontario, a highly regarded scientist and a member of the editorial board of the world's leading journal of sexual research, Archives of Sexual Behavior. The bonobo film was part of a series of related experiments she has carried out over the past several years. She found footage of bonobos, a species of ape, as they mated, and then, because the accompanying sounds were dull — "bonobos don't seem to make much noise in sex," she told me, "though the females give a kind of pleasure grin and make chirpy sounds" — she dubbed in some animated chimpanzee hooting and screeching. She showed the short movie to men and women, straight and gay. To the same subjects, she also showed clips of heterosexual sex, male and female homosexual sex, a man masturbating, a woman masturbating, a chiseled man walking naked on a beach and a well-toned woman doing calisthenics in the nude.

While the subjects watched on a computer screen, Chivers, who favors high boots and fashionable rectangular glasses, measured their arousal in two ways, objectively and subjectively. The participants sat in a brown leatherette La-Z-Boy chair in her small lab at the Center for Addiction and Mental Health, a prestigious psychiatric teaching hospital affiliated with the University of Toronto, where Chivers was a postdoctoral fellow and where I first talked with her about her research a few years ago. The genitals of the volunteers were connected to plethysmographs — for the men, an apparatus that fits over the penis and gauges its swelling; for the women, a little plastic probe that sits in the vagina and, by bouncing light off the vaginal walls, measures genital blood flow. An engorgement of blood spurs a lubricating process called vaginal transudation: the seeping of moisture through the walls. The participants were also given a keypad so that they could rate how aroused they felt.

The men, on average, responded genitally in what Chivers terms "category specific" ways. Males who identified themselves as straight swelled while gazing at heterosexual or lesbian

sex and while watching the masturbating and exercising women. They were mostly unmoved when the screen displayed only men. Gay males were aroused in the opposite categorical pattern. Any expectation that the animal sex would speak to something primitive within the men seemed to be mistaken; neither straights nor gays were stirred by the bonobos. And for the male participants, the subjective ratings on the keypad matched the readings of the plethysmograph. The men's minds and genitals were in agreement.

All was different with the women. No matter what their self-proclaimed sexual orientation, they showed, on the whole, strong and swift genital arousal when the screen offered men with men, women with women and women with men. They responded objectively much more to the exercising woman than to the strolling man, and their blood flow rose quickly — and markedly, though to a lesser degree than during all the human scenes except the footage of the ambling, strapping man — as they watched the apes. And with the women, especially the straight women, mind and genitals seemed scarcely to belong to the same person. The readings from the plethysmograph and the keypad weren't in much accord. During shots of lesbian coupling, heterosexual women reported less excitement than their vaginas indicated; watching gay men, they reported a great deal less; and viewing heterosexual intercourse, they reported much more. Among the lesbian volunteers, the two readings converged when women appeared on the screen. But when the films featured only men, the lesbians reported less engagement than the plethysmograph recorded. Whether straight or gay, the women claimed almost no arousal whatsoever while staring at the bonobos.

"I feel like a pioneer at the edge of a giant forest," Chivers said, describing her ambition to understand the workings of women's arousal and desire. "There's a path leading in, but it isn't much." She sees herself, she explained, as part of an emerging "critical mass" of female sexologists starting to make their way into those woods. These researchers and clinicians are consumed by the sexual problem Sigmund Freud posed to one of his female disciples almost a century ago: "The great question that has never been answered and which I have not yet been able to answer, despite my 30 years of research into the feminine soul, is, What does a woman want?"

Full of scientific exuberance, Chivers has struggled to make sense of her data. She struggled when we first spoke in Toronto, and she struggled, unflagging, as we sat last October in her university office in Kingston, a room she keeps spare to help her mind stay clear to contemplate the intricacies of the erotic. The cinder-block walls are unadorned except for three photographs she took of a temple in India featuring carvings of an entwined couple, an orgy and a man copulating with a horse. She has been pondering sexuality, she

recalled, since the age of 5 or 6, when she ruminated over a particular kiss, one she still remembers vividly, between her parents. And she has been discussing sex without much restraint, she said, laughing, at least since the age of 15 or 16, when, for a few male classmates who hoped to please their girlfriends, she drew a picture and clarified the location of the clitoris.

In 1996, when she worked as an assistant to a sexologist at the Center for Addiction and Mental Health, then called the Clarke Institute of Psychiatry, she found herself the only woman on a floor of researchers investigating male sexual preferences and what are known as paraphilias — erotic desires that fall far outside the norm. She told me that when she asked Kurt Freund, a scientist on that floor who had developed a type of penile plethysmograph and who had been studying male homosexuality and pedophilia since the 1950s, why he never turned his attention to women, he replied: "How am I to know what it is to be a woman? Who am I to study women, when I am a man?"

Freund's words helped to focus her investigations, work that has made her a central figure among the small force of female sexologists devoted to comprehending female desire. John Bancroft, a former director of the Kinsey Institute for Research in Sex, Gender and Reproduction, traces sexological studies by women at least as far back as 1929, to a survey of the sexual experiences of 2,200 women carried out by Katharine Bement Davis, a prison reformer who once served as New York City's first female commissioner of corrections. But the discipline remains male-dominated. In the International Academy of Sex Research, the 35-year-old institution that publishes Archives of Sexual Behavior and that can claim, Bancroft said, most of the field's leading researchers among its 300 or so members, women make up just over a quarter of the organization. Yet in recent years, he continued, in the long wake of the surveys of Alfred Kinsey, the studies of William Masters and Virginia Johnson, the sexual liberation movement and the rise of feminism, there has been a surge of scientific attention, paid by women, to illuminating the realm of women's desire.

It's important to distinguish, Julia Heiman, the Kinsey Institute's current director, said as she elaborated on Bancroft's history, between behavior and what underlies it. Kinsey's data on sexuality, published in the late 1940s and early '50s in his best-selling books "Sexual Behavior in the Human Male" and "Sexual Behavior in the Human Female," didn't reveal much about the depths of desire; Kinsey started his scientific career by cataloging species of wasps and may, Heiman went on, have been suspicious of examining emotion. Masters and Johnson, who filmed hundreds of subjects having sex in their lab, drew conclusions in their books of the late '60s and early '70s that concentrated on sexual function, not lust. Female

desire, and the reasons some women feel little in the way of lust, became a focal point for sexologists, Heiman said, in the '70s, through the writing of Helen Singer Kaplan, a sex therapist who used psychoanalytic methods — though sexologists prefer to etch a line between what they see as their scientific approach to the subject and the theories of psychoanalysis. Heiman herself, whom Chivers views as one of sexology's venerable investigators, conducted, as a doctoral candidate in the '70s, some of the earliest research using the vaginal plethysmograph. But soon the AIDS epidemic engulfed the attention of the field, putting a priority on prevention and making desire not an emotion to explore but an element to be feared, a source of epidemiological disaster.

To account partly for the recent flourishing of research like Chivers's, Heiman pointed to the arrival of Viagra in the late '90s. Though aimed at men, the drug, which transformed the treatment of impotence, has dispersed a kind of collateral electric current into the area of women's sexuality, not only generating an effort — mostly futile so far — to find drugs that can foster female desire as reliably as Viagra and its chemical relatives have facilitated erections, but also helping, indirectly, to inspire the search for a full understanding of women's lust. This search may reflect, as well, a cultural and scientific trend, a stress on the deterministic role of biology, on nature's dominance over nurture — and, because of this, on innate differences between the sexes, particularly in the primal domain of sex. "Masters and Johnson saw men and women as extremely similar," Heiman said. "Now it's research on differences that gets funded, that gets published, that the public is interested in." She wondered aloud whether the trend will eventually run its course and reverse itself, but these days it may be among the factors that infuse sexology's interest in the giant forest.

"No one right now has a unifying theory," Heiman told me; the interest has brought scattered sightlines, glimpses from all sorts of angles. One study, for instance, published this month in the journal Evolution and Human Behavior by the Kinsey Institute psychologist Heather Rupp, uses magnetic resonance imaging to show that, during the hormonal shifts of ovulation, certain brain regions in heterosexual women are more intensely activated by male faces with especially masculine features. Intriguing glimmers have come not only from female scientists. Richard Lippa, a psychologist at California State University, Fullerton, has employed surveys of thousands of subjects to demonstrate over the past few years that while men with high sex drives report an even more polarized pattern of attraction than most males (to women for heterosexuals and to men for homosexuals), in women the opposite is generally true: the higher the drive, the greater the attraction to both sexes, though this may not be so for lesbians.

Investigating the culmination of female desire, Barry Komisaruk, a neuroscientist at Rutgers University, has subjects bring themselves to orgasm while lying with their heads in an fM.R.I. scanner — he aims to chart the activity of the female brain as subjects near and reach four types of climax: orgasms attained by touching the clitoris; by stimulating the anterior wall of the vagina or, more specifically, the G spot; by stimulating the cervix; and by "thinking off," Komisaruk said, without any touch at all. While the possibility of a purely cervical orgasm may be in considerable doubt, in 1992 Komisaruk, collaborating with the Rutgers sexologist Beverly Whipple (who established, more or less, the existence of the G spot in the '80s), carried out one of the most interesting experiments in female sexuality: by measuring heart rate, perspiration, pupil dilation and pain threshold, they proved that some rare women can think themselves to climax. And meanwhile, at the Sexual Psychophysiology Laboratory of the University of Texas, Austin, the psychologist Cindy Meston and her graduate students deliver studies with names like "Short- and long-term effects of ginkgo biloba extract on sexual dysfunction in women" and "The roles of testosterone and alpha-amylase in exercise-induced sexual arousal in women" and "Sex differences in memory for sexually relevant information" and — an Internet survey of 3,000 participants — "Why humans have sex."

Heiman questions whether the insights of science, whether they come through high-tech pictures of the hypothalamus, through Internet questionnaires or through intimate interviews, can ever produce an all-encompassing map of terrain as complex as women's desire. But Chivers, with plenty of self-doubting humor, told me that she hopes one day to develop a scientifically supported model to explain female sexual response, though she wrestles, for the moment, with the preliminary bits of perplexing evidence she has collected — with the question, first, of why women are aroused physiologically by such a wider range of stimuli than men. Are men simply more inhibited, more constrained by the bounds of culture? Chivers has tried to eliminate this explanation by including male-to-female transsexuals as subjects in one of her series of experiments (one that showed only human sex). These trans women, both those who were heterosexual and those who were homosexual, responded genitally and subjectively in categorical ways. They responded like men. This seemed to point to an inborn system of arousal. Yet it wasn't hard to argue that cultural lessons had taken permanent hold within these subjects long before their emergence as females could have altered the culture's influence. "The horrible reality of psychological research," Chivers said, "is that you can't pull apart the cultural from the biological."

Still, she spoke about a recent study by one of her mentors, Michael Bailey, a sexologist at

Northwestern University: while fM.R.I. scans were taken of their brains, gay and straight men were shown pornographic pictures featuring men alone, women alone, men having sex with men and women with women. In straights, brain regions associated with inhibition were *not* triggered by images of men; in gays, such regions weren't activated by pictures of women. Inhibition, in Bailey's experiment, didn't appear to be an explanation for men's narrowly focused desires. Early results from a similar Bailey study with female subjects suggest the same absence of suppression. For Chivers, this bolsters the possibility that the distinctions in her data between men and women — including the divergence in women between objective and subjective responses, between body and mind — arise from innate factors rather than forces of culture.

Chivers has scrutinized, in a paper soon to be published in Archives of Sexual Behavior, the split between women's bodies and minds in 130 studies by other scientists demonstrating, in one way or another, the same enigmatic discord. One manifestation of this split has come in experimental attempts to use Viagra-like drugs to treat women who complain of deficient desire.

By some estimates, 30 percent of women fall into this category, though plenty of sexologists argue that pharmaceutical companies have managed to drive up the figures as a way of generating awareness and demand. It's a demand, in any event, that hasn't been met. In men who have trouble getting erect, the genital engorgement aided by Viagra and its rivals is often all that's needed. The pills target genital capillaries; they don't aim at the mind. The medications may enhance male desire somewhat by granting men a feeling of power and control, but they don't, for the most part, manufacture wanting. And for men, they don't need to. Desire, it seems, is usually in steady supply. In women, though, the main difficulty appears to be in the mind, not the body, so the physiological effects of the drugs have proved irrelevant. The pills can promote blood flow and lubrication, but this doesn't do much to create a conscious sense of desire.

Chivers isn't especially interested at this point, she said, in pharmaceutical efforts in her field, though she has done a bit of consulting for Boehringer Ingelheim, a German company in the late stages of testing a female-desire drug named Flibanserin. She can't, contractually, discuss what she describes as her negligible involvement in the development of the drug, and the company isn't prepared to say much about the workings of its chemical, which it says it hopes to have approved by the Food and Drug Administration next year. The medication was originally meant to treat depression — it singles out the brain's receptors for the neurotransmitter serotonin. As with other such drugs, one worry was that it would dull

the libido. Yet in early trials, while it showed little promise for relieving depression, it left female — but not male — subjects feeling increased lust. In a way that Boehringer Ingelheim either doesn't understand or doesn't yet want to explain, the chemical, which the company is currently trying out in 5,000 North American and European women, may catalyze sources of desire in the female brain.

Testosterone, so vital to male libido, appears crucial to females as well, and in drug trials involving postmenopausal women, testosterone patches have increased sexual activity. But worries about a possibly heightened risk of cancer, along with uncertainty about the extent of the treatment's advantages, have been among the reasons that the approach hasn't yet been sanctioned by the F.D.A.

Thinking not of the search for chemical aphrodisiacs but of her own quest for comprehension, Chivers said that she hopes her research and thinking will eventually have some benefit for women's sexuality. "I wanted everybody to have great sex," she told me, recalling one of her reasons for choosing her career, and laughing as she did when she recounted the lessons she once gave on the position of the clitoris. But mostly it's the aim of understanding in itself that compels her. For the discord, in women, between the body and the mind, she has deliberated over all sorts of explanations, the simplest being anatomy. The penis is external, its reactions more readily perceived and pressing upon consciousness. Women might more likely have grown up, for reasons of both bodily architecture and culture — and here was culture again, undercutting clarity — with a dimmer awareness of the erotic messages of their genitals. Chivers said she has considered, too, research suggesting that men are better able than women to perceive increases in heart rate at moments of heightened stress and that men may rely more on such physiological signals to define their emotional states, while women depend more on situational cues. So there are hints, she told me, that the disparity between the objective and the subjective might exist, for women, in areas other than sex. And this disconnection, according to yet another study she mentioned, is accentuated in women with acutely negative feelings about their own bodies.

Ultimately, though, Chivers spoke — always with a scientist's caution, a scientist's uncertainty and acknowledgment of conjecture — about female sexuality as divided between two truly separate, if inscrutably overlapping, systems, the physiological and the subjective. Lust, in this formulation, resides in the subjective, the cognitive; physiological arousal reveals little about desire. Otherwise, she said, half joking, "I would have to believe that women want to have sex with bonobos."

Besides the bonobos, a body of evidence involving rape has influenced her construction of separate systems. She has confronted clinical research reporting not only genital arousal but also the occasional occurrence of orgasm during sexual assault. And she has recalled her own experience as a therapist with victims who recounted these physical responses. She is familiar, as well, with the preliminary results of a laboratory study showing surges of vaginal blood flow as subjects listen to descriptions of rape scenes. So, in an attempt to understand arousal in the context of unwanted sex, Chivers, like a handful of other sexologists, has arrived at an evolutionary hypothesis that stresses the difference between reflexive sexual readiness and desire. Genital lubrication, she writes in her upcoming paper in Archives of Sexual Behavior, is necessary "to reduce discomfort, and the possibility of injury, during vaginal penetration. . . . Ancestral women who did not show an automatic vaginal response to sexual cues may have been more likely to experience injuries during unwanted vaginal penetration that resulted in illness, infertility or even death, and thus would be less likely to have passed on this trait to their offspring."

Evolution's legacy, according to this theory, is that women are prone to lubricate, if only protectively, to hints of sex in their surroundings. Thinking of her own data, Chivers speculated that bonobo coupling, or perhaps simply the sight of a male ape's erection, stimulated this reaction because apes bear a resemblance to humans — she joked about including, for comparison, a movie of mating chickens in a future study. And she wondered if the theory explained why heterosexual women responded genitally more to the exercising woman than to the ambling man. Possibly, she said, the exposure and tilt of the woman's vulva during her calisthenics was processed as a sexual signal while the man's unerect penis registered in the opposite way.

When she peers into the giant forest, Chivers told me, she considers the possibility that along with what she called a "rudderless" system of reflexive physiological arousal, women's system of desire, the cognitive domain of lust, is more receptive than aggressive. "One of the things I think about," she said, "is the dyad formed by men and women. Certainly women are very sexual and have the capacity to be even more sexual than men, but one possibility is that instead of it being a go-out-there-and-get-it kind of sexuality, it's more of a reactive process. If you have this dyad, and one part is pumped full of testosterone, is more interested in risk taking, is probably more aggressive, you've got a very strong motivational force. It wouldn't make sense to have another similar force. You need something complementary. And I've often thought that there is something really powerful for women's sexuality about being desired. That receptivity element. At some point I'd love to do a study that would look at that."

The study Chivers is working on now tries to re-examine the results of her earlier research, to investigate, with audiotaped stories rather than filmed scenes, the apparent rudderlessness of female arousal. But it will offer too a glimpse into the role of relationships in female eros. Some of the scripts she wrote involve sex with a longtime lover, some with a friend, some with a stranger: "You meet the real estate agent outside the building." From early glances at her data, Chivers said, she guesses she will find that women are most turned on, subjectively if not objectively, by scenarios of sex with strangers.

Chivers is perpetually devising experiments to perform in the future, and one would test how tightly linked the system of arousal is to the mechanisms of desire. She would like to follow the sexual behavior of women in the days after they are exposed to stimuli in her lab. If stimuli that cause physiological response — but that do not elicit a positive rating on the keypad — lead to increased erotic fantasies, masturbation or sexual activity with a partner, then she could deduce a tight link. Though women may not want, in reality, what such stimuli present, Chivers could begin to infer that what is judged unappealing does, nevertheless, turn women on.

Lisa Diamond, a newly prominent sexologist of Chivers's generation, looks at women's erotic drives in a different way. An associate professor of psychology and gender studies at the University of Utah, with short, dark hair that seems to explode anarchically around her head, Diamond has done much of her research outside any lab, has focused a good deal of her attention outside the heterosexual dyad and has drawn conclusions that seem at odds with Chivers's data about sex with strangers.

"In 1997, the actress Anne Heche began a widely publicized romantic relationship with the openly lesbian comedian Ellen DeGeneres after having had no prior same-sex attractions or relationships. The relationship with DeGeneres ended after two years, and Heche went on to marry a man." So begins Diamond's book, "Sexual Fluidity: Understanding Women's Love and Desire," published by Harvard University Press last winter. She continues: "Julie Cypher left a heterosexual marriage for the musician Melissa Etheridge in 1988. After 12 years together, the pair separated and Cypher — like Heche — has returned to heterosexual relationships." She catalogs the shifting sexual directions of several other somewhat notable women, then asks, "What's going on?" Among her answers, based partly on her own research and on her analysis of animal mating and women's sexuality, is that female desire may be dictated — even more than popular perception would have it — by intimacy, by emotional connection.

Diamond is a tireless researcher. The study that led to her book has been going on for more

than 10 years. During that time, she has followed the erotic attractions of nearly 100 young women who, at the start of her work, identified themselves as either lesbian or bisexual or refused a label. From her analysis of the many shifts they made between sexual identities and from their detailed descriptions of their erotic lives, Diamond argues that for her participants, and quite possibly for women on the whole, desire is malleable, that it cannot be captured by asking women to categorize their attractions at any single point, that to do so is to apply a male paradigm of more fixed sexual orientation. Among the women in her group who called themselves lesbian, to take one bit of the evidence she assembles to back her ideas, just one-third reported attraction solely to women as her research unfolded. And with the other two-thirds, the explanation for their periodic attraction to men was not a cultural pressure to conform but rather a genuine desire.

"Fluidity is not a fluke," Diamond declared, when I called her, after we first met before a guest lecture she gave at Chivers's university, to ask whether it really made sense to extrapolate from the experiences of her subjects to women in general. Slightly more than half of her participants began her study in the bisexual or unlabeled categories — wasn't it to be expected that she would find a great deal of sexual flux? She acknowledged this. But she emphasized that the pattern for her group over the years, both in the changing categories they chose and in the stories they told, was toward an increased sense of malleability. If female eros found its true expression over the course of her long research, then flexibility is embedded in the nature of female desire.

Diamond doesn't claim that women are without innate sexual orientations. But she sees significance in the fact that many of her subjects agreed with the statement "I'm the kind of person who becomes physically attracted to the person rather than their gender." For her participants, for the well-known women she lists at the start of her book and for women on average, she stresses that desire often emerges so compellingly from emotional closeness that innate orientations can be overridden. This may not always affect women's behavior — the overriding may not frequently impel heterosexual women into lesbian relationships — but it can redirect erotic attraction. One reason for this phenomenon, she suggests, may be found in oxytocin, a neurotransmitter unique to mammalian brains. The chemical's release has been shown, in humans, to facilitate feelings of trust and well-being, and in female prairie voles, a monogamous species of rodent, to connect the act of sex to the formation of faithful attachments. Judging by experiments in animals, and by the transmitter's importance in human childbirth and breast feeding, the oxytocin system, which relies on estrogen, is much more extensive in the female brain. For Diamond, all of this helps to explain why, in women, the link between intimacy and desire is especially potent.

Intimacy isn't much of an aphrodisiac in the thinking of Marta Meana, a professor of psychology at the University of Nevada at Las Vegas. Meana, who serves with Chivers on the board of Archives of Sexual Behavior, entered the field of sexology in the late 1990s and began by working clinically and carrying out research on dyspareunia — women's genital pain during intercourse. She is now formulating an explanatory model of female desire that will appear later this year in Annual Review of Sex Research. Before discussing her overarching ideas, though, we went together to a Cirque du Soleil show called "Zumanity," a performance of very soft-core pornography that Meana mentioned to me before my visit.

On the stage of the casino's theater, a pair of dark-haired, bare-breasted women in G-strings dove backward into a giant glass bowl and swam underwater, arching their spines as they slid up the walls. Soon a lithe blonde took over the stage wearing a pleated and extremely short schoolgirl's skirt. She spun numerous Hula-Hoops around her minimal waist and was hoisted by a cable high above the audience, where she spread her legs wider than seemed humanly possible. The crowd consisted of men and women about equally, yet women far outnumbered men onstage, and when at last the show's platinum-wigged M.C. cried out, "Where's the beef?" the six-packed, long-haired man who climbed up through a trapdoor and started to strip was surrounded by 8 or 10 already almost-bare women.

A compact 51-year-old woman in a shirtdress, Meana explained the gender imbalance onstage in a way that complemented Chivers's thinking. "The female body," she said, "looks the same whether aroused or not. The male, without an erection, is announcing a lack of arousal. The female body always holds the promise, the suggestion of sex" — a suggestion that sends a charge through both men and women. And there was another way, Meana argued, by which the Cirque du Soleil's offering of more female than male acrobats helped to rivet both genders in the crowd. She, even more than Chivers, emphasized the role of being desired — and of narcissism — in women's desiring.

The critical part played by being desired, Julia Heiman observed, is an emerging theme in the current study of female sexuality. Three or four decades ago, with the sense of sexual independence brought by the birth-control pill and the women's liberation movement, she said, the predominant cultural and sexological assumption was that female lust was fueled from within, that it didn't depend on another's initiation. One reason for the shift in perspective, she speculated, is a depth of insight gathered, in recent times, through a booming of qualitative research in sexology, an embrace of analyses built on personal, detailed interviews or on clinical experience, an approach that has gained attention as a way to counter the field's infatuation with statistical surveys and laboratory measurements.

Meana made clear, during our conversations in a casino bar and on the U.N.L.V. campus, that she was speaking in general terms, that, when it comes to desire, "the variability within genders may be greater than the differences between genders," that lust is infinitely complex and idiosyncratic.

She pronounced, as well, "I consider myself a feminist." Then she added, "But political correctness isn't sexy at all." For women, "being desired is the orgasm," Meana said somewhat metaphorically — it is, in her vision, at once the thing craved and the spark of craving. About the dynamic at "Zumanity" between the audience and the acrobats, Meana said the women in the crowd gazed at the women onstage, excitedly imagining that their bodies were as desperately wanted as those of the performers.

Meana's ideas have arisen from both laboratory and qualitative research. With her graduate student Amy Lykins, she published, in Archives of Sexual Behavior last year, a study of visual attention in heterosexual men and women. Wearing goggles that track eye movement, her subjects looked at pictures of heterosexual foreplay. The men stared far more at the females, their faces and bodies, than at the males. The women gazed equally at the two genders, their eyes drawn to the faces of the men and to the bodies of the women — to the facial expressions, perhaps, of men in states of wanting, and to the sexual allure embodied in the female figures.

Meana has learned too from her attempts as a clinician to help patients with dyspareunia. Though she explained that the condition, which can make intercourse excruciating, is not in itself a disorder of low desire, she said that her patients reported reduced genital pain as their desire increased. The problem was how to augment desire, and despite prevailing wisdom, the answer, she told me, had "little to do with building better relationships," with fostering communication between patients and their partners. She rolled her eyes at such niceties. She recalled a patient whose lover was thoroughly empathetic and asked frequently during lovemaking, "'Is this O.K.?' Which was very unarousing to her. It was loving, but there was no oomph" — no urgency emanating from the man, no sign that his craving of the patient was beyond control.

"Female desire," Meana said, speaking broadly and not only about her dyspareunic patients, "is not governed by the relational factors that, we like to think, rule women's sexuality as opposed to men's." She finished a small qualitative study last year consisting of long interviews with 20 women in marriages that were sexually troubled. Although bad relationships often kill desire, she argued, good ones don't guarantee it. She quoted from one participant's representative response: "We kiss. We hug. I tell him, 'I don't know what it

is.' We have a great relationship. It's just that one area" — the area of her bed, the place desolated by her loss of lust.

The generally accepted therapeutic notion that, for women, incubating intimacy leads to better sex is, Meana told me, often misguided. "Really," she said, "women's desire is not relational, it's narcissistic" — it is dominated by the yearnings of "self-love," by the wish to be the object of erotic admiration and sexual need. Still on the subject of narcissism, she talked about research indicating that, in comparison with men, women's erotic fantasies center less on giving pleasure and more on getting it. "When it comes to desire," she added, "women may be far less relational than men."

Like Chivers, Meana thinks of female sexuality as divided into two systems. But Meana conceives of those systems in a different way than her colleague. On the one hand, as Meana constructs things, there is the drive of sheer lust, and on the other the impetus of value. For evolutionary and cultural reasons, she said, women might set a high value on the closeness and longevity of relationships: "But it's wrong to think that because relationships are what women choose they're the primary source of women's desire."

Meana spoke about two elements that contribute to her thinking: first, a great deal of data showing that, as measured by the frequency of fantasy, masturbation and sexual activity, women have a lower sex drive than men, and second, research suggesting that within long-term relationships, women are more likely than men to lose interest in sex. Meana posits that it takes a greater jolt, a more significant stimulus, to switch on a woman's libido than a man's. "If I don't love cake as much as you," she told me, "my cake better be kick-butt to get me excited to eat it." And within a committed relationship, the crucial stimulus of being desired decreases considerably, not only because the woman's partner loses a degree of interest but also, more important, because the woman feels that her partner is trapped, that a choice — the choosing of her — is no longer being carried out.

A symbolic scene ran through Meana's talk of female lust: a woman pinned against an alley wall, being ravished. Here, in Meana's vision, was an emblem of female heat. The ravisher is so overcome by a craving focused on this particular woman that he cannot contain himself; he transgresses societal codes in order to seize her, and she, feeling herself to be the unique object of his desire, is electrified by her own reactive charge and surrenders. Meana apologized for the regressive, anti-feminist sound of the scene.

Yet while Meana minimized the role of relationships in stoking desire, she didn't dispense with the sexual relevance, for women, of being cared for and protected. "What women want

is a real dilemma," she said. Earlier, she showed me, as a joke, a photograph of two control panels, one representing the workings of male desire, the second, female, the first with only a simple on-off switch, the second with countless knobs. "Women want to be thrown up against a wall but not truly endangered. Women want a caveman and caring. If I had to pick an actor who embodies all the qualities, all the contradictions, it would be Denzel Washington. He communicates that kind of power and that he is a good man."

After our discussion of the alley encounter, we talked about erotic — as opposed to aversive — fantasies of rape. According to an analysis of relevant studies published last year in The Journal of Sex Research, an analysis that defines rape as involving "the use of physical force, threat of force, or incapacitation through, for example, sleep or intoxication, to coerce a woman into sexual activity against her will," between one-third and more than one-half of women have entertained such fantasies, often during intercourse, with at least 1 in 10 women fantasizing about sexual assault at least once per month in a pleasurable way.

The appeal is, above all, paradoxical, Meana pointed out: rape means having no control, while fantasy is a domain manipulated by the self. She stressed the vast difference between the pleasures of the imagined and the terrors of the real. "I hate the term 'rape fantasies,'" she went on. "They're really fantasies of submission." She spoke about the thrill of being wanted so much that the aggressor is willing to overpower, to take. "But 'aggression,' 'dominance,' I have to find better words. 'Submission' isn't even a good word" — it didn't reflect the woman's imagining of an ultimately willing surrender.

Chivers, too, struggled over language about this subject. The topic arose because I had been drawn into her ceaseless puzzling, as could easily happen when we spent time together. I had been thinking about three ideas from our many talks: the power, for women, in being desired; the keen excitement stoked by descriptions of sex with strangers; and her positing of distinct systems of arousal and desire. This last concept seemed to confound a simpler truth, that women associate lubrication with being turned on. The idea of dual systems appeared, possibly, to be the product of an unscientific impulse, a wish to make comforting sense of the unsettling evidence of women's arousal during rape and during depictions of sexual assault in the lab.

As soon as I asked about rape fantasies, Chivers took my pen and wrote "semantics" in the margin of my notes before she said, "The word 'rape' comes with gargantuan amounts of baggage." She continued: "I walk a fine line, politically and personally, talking frankly about this subject. I would never, never want to deliver the message to anyone that they have the right to take away a woman's autonomy over her body. I hammer home with my students,

'Arousal is not consent.' "

We spoke, then, about the way sexual fantasies strip away the prospect of repercussions, of physical or psychological harm, and allow for unencumbered excitement, about the way they offer, in this sense, a pure glimpse into desire, without meaning — especially in the case of sexual assault — that the actual experiences are wanted.

"It's the wish to be beyond will, beyond thought," Chivers said about rape fantasies. "To be all in the midbrain."

One morning in the fall, Chivers hunched over her laptop in her sparsely decorated office. She was sifting through data from her study of genital and subjective responses to audiotaped sex scenes. She peered at a jagged red line that ran across the computer's screen, a line that traced one subject's vaginal blood flow, second by second. Before Chivers could use a computer program to analyze her data, she needed to "clean" it, as the process is called — she had to eliminate errant readings, moments when a subject's shifting in her chair caused a slight pelvic contraction that might have jarred the plethysmograph, which could generate a spike in the readings and distort the overall results. Meticulously, she scanned the line, with all its tight zigs and zags, searching for spots where the inordinate height of a peak and the pattern that surrounded it told her that arousal wasn't at work, that this particular instant was irrelevant to her experiment. She highlighted and deleted one aberrant moment, then continued peering. She would search in this way for about two hours in preparing the data of a single subject. "I'm going blind," she said, as she stared at another suspicious crest.

It was painstaking work — and difficult to watch, not only because it might be destroying Chivers's eyesight but also because it seemed so dwarfed by the vastness and intricacy of the terrain she hoped to understand. Chivers was constantly conjuring studies she wanted to carry out, but with numberless aberrant spikes to detect and cleanse, how many could she possibly complete in one lifetime? How many could be done by all the sexologists in the world who focus on female desire, whether they were wiring women with plethysmographs or mapping the activity of their brains in fM.R.I. scanners or fitting them with goggles or giving them questionnaires or following their erotic lives for years? What more could sexologists ever provide than intriguing hints and fragmented insights and contradictory conclusions? Could any conclusion encompass the erotic drives of even one woman? Didn't the sexual power of intimacy, so stressed by Diamond, commingle with Meana's forces of narcissism? Didn't a longing for erotic tenderness coexist with a yearning for alley ravishing? Weren't these but two examples of the myriad conflicting elements that create

women's lust? Had Freud's question gone unanswered for nearly a century not because science had taken so long to address it but because it is unanswerable?

Chivers, perhaps precisely because her investigations are incisive and her thinking so relentless, sometimes seemed on the verge of contradicting her own provisional conclusions. Talking about how her research might help women, she said that it could "shift the way women perceive their capacity to get turned on," that as her lab results make their way into public consciousness, the noncategorical physiological responses of her subjects might get women to realize that they can be turned on by a wide array of stimuli, that the state of desire is much more easily reached than some women might think. She spoke about helping women bring their subjective sense of lust into agreement with their genital arousal as an approach to aiding those who complain that desire eludes them. But didn't such thinking, I asked, conflict with her theory of the physiological and the subjective as separate systems? She allowed that it might. The giant forest seemed, so often, too complex for comprehension.

And sometimes Chivers talked as if the actual forest wasn't visible at all, as if its complexities were an indication less of inherent intricacy than of societal efforts to regulate female eros, of cultural constraints that have left women's lust dampened, distorted, inaccessible to understanding. "So many cultures have quite strict codes governing female sexuality," she said. "If that sexuality is relatively passive, then why so many rules to control it? Why is it so frightening?" There was the implication, in her words, that she might never illuminate her subject because she could not even see it, that the data she and her colleagues collect might be deceptive, might represent only the creations of culture, and that her interpretations might be leading away from underlying truth. There was the intimation that, at its core, women's sexuality might not be passive at all. There was the chance that the long history of fear might have buried the nature of women's lust too deeply to unearth, to view.

It was possible to imagine, then, that a scientist blinded by staring at red lines on her computer screen, or blinded by peering at any accumulation of data — a scientist contemplating, in darkness, the paradoxes of female desire — would see just as well.

Daniel Bergner is a contributing writer for the magazine. His new book, "The Other Side of Desire: Four Journeys Into the Far Realms of Lust and Longing," will be published this month.

http://www.nytimes.com/2009/01/25/magazine/25 desire-t.html?pagewanted=print