Dædalus

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Spring 2007

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AMERICAN ACADEMY OF ARTS & SCIENCES

Inside front cover: A plate depicting the Month of Bhādon (August – September): the rainy season, when people have to stay indoors a lot, and use the weather as an excuse for making love. See Wendy Doniger on *Reading the "Kamasutra": the strange & the familiar*, pages 66 – 78: "It is not, as most people think, a book about the positions in sexual intercourse. It is about the art of living – finding a partner, maintaining power in a marriage, committing adultery, living as or with a courtesan, using drugs – and also about the positions in sexual intercourse." Image courtesy of the State Museum, Lucknow, India.

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Dædalus is designed by Alvin Eisenman

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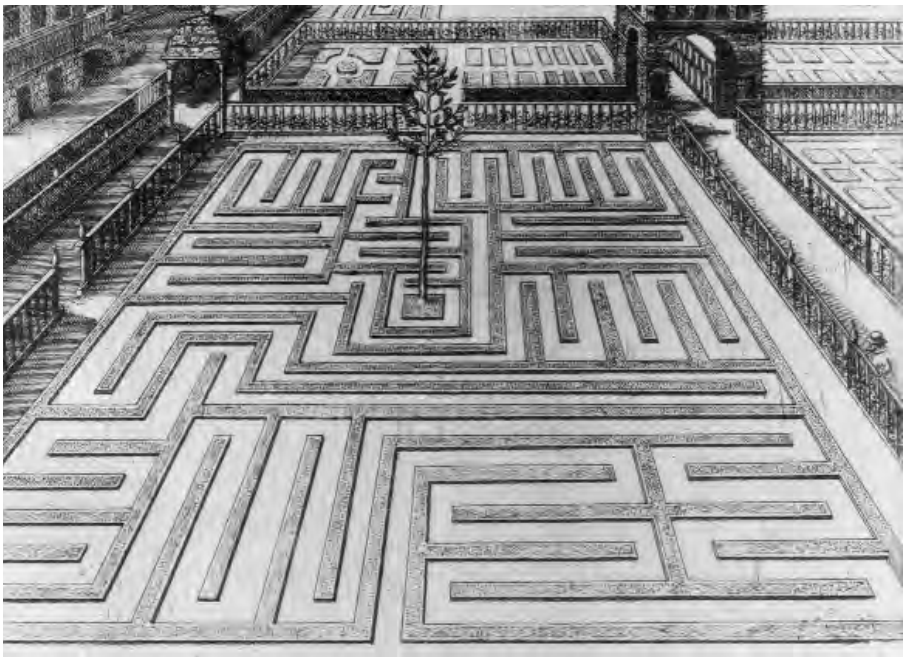

Design for the hedge maze is by Johan Vredeman de Vries, from *Hortorum viridariorumque elegantes et multiplicis artis normam affabre delineatae* (Cologne, 1615).

Dædalus was founded in 1955 and established as a quarterly in 1958. The journal's namesake was renowned in ancient Greece as an inventor, scientist, and unriddler of riddles. Its emblem, a maze seen from above, symbolizes the aspiration of its founders to "lift each of us above his cell in the labyrinth of learning in order that he may see the entire structure as if from above, where each separate part loses its comfortable separateness."

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Comment by Paul Ehrlich & Marcus W. Feldman

Genes, environments & behaviors

Our large brains are surely at the center of our humanity. But it is equally certain that few organs are the subject of more misinformation in scientific and public discourse – especially in the widespread notion that most behaviors controlled by our marvelous brain are somehow programmed into it genetically. A typical treatment in the popular press is this overexcited claim by columnist Nicholas Wade in the *New York Times*: "When . . . [the human genome] . . . is fully translated, it will prove the ultimate thriller – the indisputable guide to the graces and horrors of human nature, the creations and cruelties of the human mind, the unbearable light and darkness of being."[1]

Wade may get a pass for being a journalist, but some scientists are equally confused. Molecular biologist Dean Hamer wrote: "People are different because they have different genes that created different brains that formed different personalities," and "[u]nderstanding the genetic roots of personality will help you 'find yourself' and relate better to others." As distinguished a neurobiologist as Michael Gazzaniga is guilty of

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1 The authors thank Richard Lewontin, Deborah Rogers, Robert Sapolsky, and Michael Soulé for their comments on earlier versions of the manuscript. N. Wade, "Ideas and Trends: The Story of Us; The Other Secrets of the Genome," *New York Times*, February 18, 2001, sec. 4, 3.

the misleading claim that "all behavioral traits are heritable";[2] and molecular evolutionists Roderick Page and Edward Holmes have asserted that "genes control 62% of our cognitive ability."[3] In fact, an entire neo-field labeled evolutionary psychology has sprung up based on the misconception that genes are somehow determining our everyday behavior and our personalities. It is a field that believes there are genetic evolutionary answers to such questions as why a man driving an expensive car is more attractive than one driving a cheap car.[4]

So even well-educated and thoughtful observers have been persuaded by the language of heritability. With expressions such as 'genes are responsible for 50 percent of,' or 'genes contribute 50 percent of,' a behavior, this language gives the impression that genetic and environmental contributions to human behaviors are actually separable. They are not.

Heritability was originally introduced in the 1930s in the context of agriculture. It is an index of amenability to selective breeding under environmental conditions that the breeder could control. This index, now often termed 'narrow-sense heritability,' is the fraction of all variation in a trait that can be ascribed only to genes that act independently of one another and whose joint effect is the sum of their individual effects. One easy-to-understand way of measuring heritability is through a one-generation selection experiment. Individuals with extreme values of a trait are bred to one another – for example, the heaviest individuals from a hog population. The offspring are then raised in the same environment, and their average weight calculated. If the average weight of the offspring doesn't increase over that of the entire population (not just of the heavy parents) in the previous generation, the heritability is zero. On the other hand, if the average weight of the offspring equals that of their heavy parents, the heritability is 100 percent.

In the 1960s, the term 'heritability' was adopted by some students of human behaviors who wanted to know what fraction of the variation in these behaviors was primarily attributable to genetic differences and what percentage to environmental differences. Because controlling the environments of human subjects is not possible, however, this fraction – now called 'broad-sense heritability' – includes variation from interactions between genes and environments. That fraction of variation is nevertheless interpreted as determined by genes, thus inflating the heritability.

In other words, this new heritability statistic assumes no relationship between genetic transmission and environment, e.g., that the IQ scores of parents cannot affect those parts of the environment that might interact with genes to influence a child's IQ. The amount of stimulation parents provide their young children, the nature of dinner-table conversations, and the number of books in the home are thus taken to be independent of any genetic influences on children's IQ. When this independence assumption is violated, there is gene-environment correlation – exactly the correlation that agricultural experiments to estimate narrow-sense heritability eliminated by holding environments constant. But with human behav-

2 M. S. Gazzaniga, *The Ethical Brain* (New York: Dana Press, 2005), 44.

3 R. D. M. Page and E. C. Holmes, *Molecular Evolution: A Phylogenetic Approach* (Oxford: Blackwell, 1998), 119.

4 D. M. Buss, *The Evolution of Human Desire* (New York: BasicBooks, 1994), 99 – 100.

iors such designs are impossible, and the correlation between parental IQ and the offspring's environment may contribute to the heritability.

Many of the high estimates for heritability, and the resulting interpretation that human behavioral traits are heavily influenced by genes, have been derived from comparisons of identical twins (who originate from a single fertilized egg) and fraternal twins (from two eggs). These estimates are based on the fact that identical twins share exactly the same hereditary endowment, while fraternal twins, on average, share only 50 percent of their genes.

But many assumptions about twins inflate twin-based estimates of broad-sense heritability. One is the 'equal environments' assumption, that variation in environments created by parents to which identical twin pairs are exposed is the same as those to which fraternal pairs are exposed – i.e., that there is no difference between the way parents treat identical and fraternal twins. Statistical estimates of the differences in the environmental exposure of identical and fraternal twins *outside of the parental contribution*, however, are not usually made. Some studies have found that the correlation between IQ and the environments *not* transmitted by the parents of identical twins is much higher than that of fraternal twins.[5] Thus, factors in the nonfamilial environment of identical twins are often more similar than those of fraternal twins, but this difference between identical and fraternal twins is usually ignored.

It might be thought that some of the problems with twin studies may be overcome if the identical twins under study were reared apart, that is, in different families. In a perfect experiment of this kind, all observed differences between the twins should be environmental, and high levels of similarity of the pair should be due to their identical genes. It turns out not to be so simple. First, separated twin pairs are rare, and the reasons for the separation are not usually known. Second, the twins share the prenatal environment of the ovary, fallopian tube, and uterus, which could be very influential in producing similar developmental pathways. Third, the separation is frequently carried out well after birth so some shared early postnatal environmental effects could mistakenly be interpreted as genetic. Fourth, twins have often been placed in separate homes that are similar in aspects that may be important for the traits under study, for example, in homes of relatives of their parents. The environments are thus not a random sample of all possible environments. Kamin and Goldberger documented these problems with the well-publicized Minnesota study of twins reared apart.[6] All of these effects add to that component of variation that is interpreted as genetic, with the result that estimates of genetic heritability based on identical twins raised separately are biased upward.

At first glance, some of the stories of the similarities of identical twins raised separately seem extraordinary examples of the power of genetic identity. Two men separated near birth grow up to be beer-drinking firefighters and grasp the beer cans in the same unusual way, hold-

5 C. R. Cloninger, J. Rice, and T. Reich, "Multifactorial Inheritance with Cultural Transmission and Assortative Mating," *American Journal of Human Genetics* 31 (1979): 176 – 198; M. W. Feldman and S. Otto, "Twin Studies, Heritability and Intelligence," *Science* 278 (1997): 1383 – 1384.

6 L. J. Kamin and A. S. Goldberger, "Twin Studies in Behavioral Research: A Skeptical View," *Theoretical Population Biology* 61 (2002): 83 – 95.

ing the little finger under the can.[7] But they were raised in similar lower middle-class Jewish homes in New Jersey. Being a firefighter is an ambition of many males, and firefighters are not notorious for being addicted to wine. Furthermore, it is well known that physical attributes of people greatly influence how other people treat them. Individuals with identical genomes are usually strikingly alike in appearance, and within the same culture they will be treated more similarly than randomly selected individuals of the same gender from the same occupational and age groups. Resemblance in body structure (strong in identical twins) would probably also make it comfortable to hold containers in the same manner, and we doubt if even the most dedicated hereditarian would seek a gene for use of the pinky in beer drinking.

Ever since narrow-sense heritability was first used, it has been well understood by geneticists that an estimate of the genetic influence on a trait's variability depends on the particular population and the particular environment in which the trait was measured. Furthermore, even a very high heritability measured in a population cannot be used to infer something about any single member of that population. Suppose a population is known to have higher than average blood pressure. Would a physician treating one individual patient from that population prescribe an antihypertensive drug on the basis of the population statistic? Of course not – a doctor would use detailed history and laboratory workup to decide on the appropriate treatment for that particular patient. The patient's diet or stress level (the environment) would be critical to the medical recommendation and, in most cases, likely to overwhelm any genetic effect inferred from population studies. The logic of using the heritability of some trait in a population to predict something about a member of that population would be foolish.

Recent studies of intelligence in samples of twins of different socioeconomic status strongly reinforce these restrictions on the generalization of heritability. For example, the estimated heritability of IQ in individuals from advantaged backgrounds is significantly higher than in those from disadvantaged backgrounds.[8] That is because better environments allow more variance in IQ to be expressed: potential geniuses have trouble developing into Einsteins in slums without schools. Likewise, the heritability of height in a normal human population would be greater than that in a starved one, where everyone's growth is stunted and the variance in height thereby reduced.

Individuals with Down syndrome, caused by an entire additional chromosome 21 (trisomy), develop as severely mentally handicapped if given no special treatment. But it turns out that the degree of handicap is extremely labile to the environment of rearing.[9] In fact, the day may come when an environment can be provided in which their development will be entirely normal. Moreover, not even evolutionary psychologists

7 N. L. Segal, *Indivisible by Two: Lives of Extraordinary Twins* (Cambridge, Mass.: Harvard University Press, 2005).

8 E. Turkheimer, A. Haley, M. Waldron, B. D'Onofrio, and I. I. Gottesman, "Socioeconomic Status Modifies Heritability of IQ in Young Children," *Psychological Science* 14 (2003): 623–628.

9 R. I. Brown, "Down Syndrome and Quality of Life: Some Challenges for Future Practice," *Down Syndrome Research and Practice* 2 (1994): 19–30; N. J. Roizen and D. Patterson, "Down's Syndrome," *The Lancet* 361 (2003): 1281–1289.

have proposed that chromosome 21 is the locus of 'the intelligence gene.'

Such important gene-environment interactions preclude the partition of variation in traits like trisomy, IQ, or height into genetic and nongenetic influences. It is especially inappropriate to talk about genetic 'contributions' to such complex traits when in some environments genetic variation is not even detectable. It is equally incorrect to say, 'characteristic A is more influenced by nature than nurture,' as it is to say, 'the area of a rectangle is more influenced by its length than its width.' (Note that the area of a rectangle one hundred miles long and one inch wide is halved by reducing its length by fifty miles or by reducing the width by half an inch.)

None of this should be taken to mean that genes do not affect behavior. In fact, in a sense, they influence all behavior, at least by laying out how human capabilities differ from those of other primates. If genes did not, in the course of development, interact with pre- and postnatal environments to generate the brain – some of the major patterns of its organization, and its principal modes of interaction with hormonal systems – the human behaviors that interest us would not occur at all. Genomic disparities between species doubtless influence differences in the general configuration of the systems that control behavior.

But it is clear from the long pre- and (especially) postnatal environmental programming that these systems must undergo to produce a behaviorally 'normal' person that genes are not responsible for embedding detailed instructions on how to act, or even 'tendencies' toward certain kinds of behavior. Environmental inputs are so extensive that the cortex of the brain is not fully developed until the mid-twenties. In view of this, it's not surprising that nothing indicates that genes favored by selection while our ancestors were hunter-gatherers significantly influence such contemporary individual behavioral characteristics as choice of beers or marriage partners.

For many behavioral traits, especially serious psychiatric disorders, some individual genes have been shown to play a role in some environments but not in others. Consider research by psychologist Avshalom Caspi and his colleagues on the effects of having different forms of a gene involved in the transport of serotonin, a compound that is involved in transmitting signals along certain nerve pathways. Which form an individual possesses apparently influences whether stressful events will produce depression. Having the 'wrong' gene, however, only makes a difference if an individual is exposed to a stressful environment early in adult life – a beautiful example of gene-environment interaction.[10]

Many other cases illuminate the failure of genes to 'control' behavior. The original Siamese twins, Chang and Eng, were joined for life by a narrow band of tissue connecting their chests. Despite their identical genomes, they had very different personalities. One was an alcoholic, the other sober; one was dominant, the other submissive. Equally fascinating is the story of the Dionne quintuplets, five genetically identical little girls who, in the 1930s, were essentially raised in a laboratory under the supervision of a psychologist. When the girls were only five, the psychologist wrote a book that expressed his astonishment at how *different* the little girls were – something confirmed by their very different

10 M. Rutter, *Genes and Behavior: Nature-Nurture Interplay Explained* (Oxford: Blackwell, 2005).

life trajectories. One had epilepsy, the others did not; some died young, the others old; some married, others remained single; and so on. Similarly, the identical Marks triplets grew up with different sexual orientations, two straight and one gay; one of the two identical Perez girls chose to change her sex with hormones and surgery and married a woman, while the other twin remained female and married a man.[11]

But one does not even have to look at such extreme cases to see that genes are not controlling human actions; evidence that common behaviors are not genetically determined is superabundant. Perhaps the most impressive comes from thousands of cross-cultural 'experiments' in which children from one culture are raised from an early age by adoptive parents from another. Invariably, the children mature with the language and attitudes of the adoptive culture.

Also impressive is the ease with which culture overrides the only 'commandment' we can be sure is contained in everyone's DNA: ensure that your genes are maximally represented in the next generation, either by having more children or by helping your relatives (who tend to have the same genes) to reproduce. Differential reproduction of genetically different individuals (not explicable by chance) *is* natural selection, the creative force in evolution. We wouldn't be here if our ancestors hadn't been effective reproducers of their genes, if they hadn't had high 'fitness.' But culture (part of the environment) has led human beings to limit their reproduction as far back in history as we can trace, all the way to the ancient Egyptians who used crocodile-dung suppositories as contraceptives (which we are convinced were very effective!).[12] Indeed, although evolutionary psychologists like to imagine that rapists are programmed to assault women in order to reproduce themselves – that is, to increase their fitness – over half of all rapes occur in circumstances (e.g., victims too old or too young, no ejaculation into the vagina) where fertilization is impossible, and in more than a fifth of cases more force is used than would be required to achieve the supposed reproductive goal.[13]

Most definitive, though, is the problem of gene shortage.[14] Our roughly twenty-five thousand genes can't possibly code all of our separate everyday behaviors into the human genome. After all, we have less than twice as many as required to make a fruit fly, and just a few more than those that lay out the ground plan of a simple roundworm. Even if the human brain had not evolved for flexibility but instead were programmed for stereotypic behavior, our genes couldn't store enough information to accomplish it. Genes are not little beads with instructions like 'grow up gay' engraved on them. They are instructions that, in a very complex mechanism, can be translated into a sequence of amino acid residues in a protein. It is near miraculous that these proteins – interacting with each other, function-

11 Segal, *Indivisible by Two: Lives of Extraordinary Twins*.

12 L. Manniche, *Sexual Life in Ancient Egypt* (New York: Kegan Paul, 1997).

13 J. Coyne, "Of Vice and Men: A Case Study in Evolutionary Psychology," in *Evolution, Gender, and Rape*, ed. C. Travis (Cambridge, Mass.: MIT Press, 2003), 171 – 189.

14 P. R. Ehrlich, *Human Natures: Genes, Cultures, and the Human Prospect* (Washington, D.C.: Island Press, 2000); P. R. Ehrlich and M. W. Feldman, "Genes and Cultures: What Creates Our Behavioral Phenome?" *Current Anthropology* 44 (2003): 87 – 107.

ing in different physical, physiological, and social environments, and helping to control the production of other proteins – are able to produce an entire human body and the basic scaffolding for a brain with a trillion or so nerve cells (neurons) connected to each other by tens of trillions of intricate junctions (synapses). On average, each gene must influence many characteristics. There are obviously enough genes, interacting with each other and with diverse environments at all scales, to provide a brain that can generate all observed human behaviors. But this has confused some observers into thinking that because one gene normally affects many functions there is no gene shortage.

That fact is actually the *basis* of calling it gene shortage. It means that natural selection altering the genome to encode one behavior would inevitably change other aspects of the genome as well – so that selection increasing, say, the speed of contraction of muscle fibers would quite possibly modify the connections between some neurons that, say, transmit visual information from the retina to the brain. Because of the small number of genes in the human genome and the ubiquity of interactions between proteins and between proteins and environments, natural selection must ordinarily entrain a multiplicity of changes. It must operate on a genome enormously 'amplified' in development by the multiple uses of the proteins produced by single genes, by the alternative ways the proteins are assembled, by the small RNA molecules that often control the expression of multiple genes, and by the epigenetic phenomena that may have differing effects even on identical genotypes.[15]

This may be why it has been so difficult to demonstrate that natural selection has changed more than a tiny fraction of genes during the transition from chimpanzee to modern human being. Changing just a few genes can have effects that totally transform an entire organism. Thus, most population geneticists – remembering linkage, pleiotropy, epistasis, and developmental complexity – reject evolutionary psychology as a theoretical paradigm: its predictions ignore how difficult gene-gene and gene-environment interactions make it for selection to operate on just one phenotypic attribute. If we had trillions of largely independent genes, then it might be possible for selection (were it strong enough and time available long enough) to program us to rape, be honest, detect cheaters, excel at calculus, or vote Republican. But the number of *independent* genes is much smaller than twenty-five thousand.

Perhaps the most interesting thing about all the attention paid to whether nature or nurture controls behaviors is not that individuals with identical genomes often behave very differently, but that those same individuals exposed to extremely similar environments also turn out to behave quite differently. This has been clearly demonstrated in mice, where genetically uniform strains exposed to laboratory environments made as identical as possible still behaved differently.[16] Indeed, nonidentical human siblings, who share half of their genes, the same parents, and apparently very similar environments, often seem more

15 M. F. Fraga et al., "Epigenetic Differences Arise During the Lifetime of Monozygotic Twins," *Proceedings of the National Academy of Sciences USA* 102 (2005): 10604 – 10609.

16 J. C. Crabbe, D. Wahlsten, and B. C. Dudek, "Genetics of Mouse Behavior: Interactions with Laboratory Environment," *Science* 284 (1999): 1670 – 1672.

unalike than unrelated people drawn from the same population. Think of all the 'isn't it weird that Johnny and Sammy Smith are so different' anecdotes – many more, it seems to us, than 'isn't it weird that Johnny and Sammy Smith are so similar.'

If genes don't 'determine' our behavior, how can it be that obvious aspects of our (or mice's) environments don't either? We don't know for sure, but we can make some guesses. One is that researchers have not yet identified key environmental variables that are subtle to them but central to a behaving organism – be it a mouse with a genome that makes it love alcohol or Johnny trying to get along with Sammy. Another is that prenatal influences may put genetically similar (or identical) individuals on quite different behavioral trajectories. There is a tendency to think, first there's fertilization, and then some nine months later a baby pops out. But, of course, an incredibly complex series of events takes place during those nine months: cell-cell, tissue-tissue, and organ-organ interactions; pulses of hormones; responses to pleasant and unpleasant stimuli such as voices heard through the uterine wall; and in some cases interactions with another fetus in the womb. Studies have already shown what dramatic effects prenatal environments can have. For instance, young female fetuses whose mothers had minimal diets during the Dutch famine of World War II grew up into women who were more obese than those whose mothers were well fed; they also had higher levels of 'bad' cholesterol. As more is learned about environmental influences in the womb it seems likely that many of the differences between siblings could be discovered to have prenatal origins.

Could there be another source of the sometimes dramatic differences among siblings, including identical twins? We hypothesize that there may be a 'sibling bifurcation' phenomenon, in which individuals having close relationships with others early in life, either pre- or postnatal, often seek different life courses. This could be related to such things as a kin-recognition/inbreeding avoidance system; attempts by parents, siblings, teachers, and peers to distinguish related individuals; genetic differences (between fraternal twins); birth-order effects; and so on.

We now know more than enough about the human genome and human development to see that the notion of 'genes for behaviors' is misguided. For complex traits such as normal behaviors, few cases have been found where a specific gene, or even many genes, greatly influences variation in the trait. It is clear that when genes influence traits, including behaviors, they only do so in ways that are affected by environments. Thus environments during any phase of life might alter the way in which an individual's genes function in those environments. This is, of course, a tribute to the marvelous plasticity of the human brain, which neurobiologists know changes in response to external and internal environments throughout life. It also makes ridiculous the claim that genes program our behaviors or, indeed, that genes are responsible for some specified fraction of any human behavior.

Tim Birkhead

Promiscuity

Darwin's theory of natural selection is so widely known it is almost a cliché, despite continually being misunderstood. His concept of sexual selection is less well known but no less important. Darwin developed the idea of sexual selection to account for the dramatic differences that often exist in the appearance and behavior of the sexes. The reason for these differences, he said, was competition for, or choice of, sexual partners. Typically, males compete among themselves for females, hence their larger body size and their weapons, such as antlers and spurs. Females, on the other hand, typically choose among males on the basis of the males' elaborate coloration, extravagant ornaments, or remarkable vocal repertoires.

One integral aspect of Darwin's concept of sexual selection was male promiscuity – the fact that, in many animals, males achieve high reproductive success by copulating with several different females. At the same time as he accepted male promiscuity as the norm and as an important component of sexual selection, Darwin regarded females as sexually monogamous and faithful to a partner for at least a single breeding attempt. By doing so he automatically assumed that sexual selection ceased once an individual of either sex had acquired a mating partner.

But Darwin knew it wasn't true that females were sexually monogamous, for in his various writings he referred to instances in which females had received sperm from more than one male. For example, in *The Descent of Man, and Selection in Relation to Sex* (1871), Darwin refers to a case his cousin William Darwin Fox recounted to him, of a female domestic goose that copulated with both a male domestic goose and a Chinese goose and hatched a brood of very obvious mixed paternity. Despite such clear evidence to the contrary, though, Charles Darwin stuck firmly to the story of female monogamy.

There are several reasons for this. First, although it was perfectly respectable to discuss sexuality, fertilization, and promiscuity among plants, it was

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less appropriate for a Victorian gentleman to discuss the sexual habits of female animals, including humans. Second, Darwin's grandfather, Erasmus Darwin, had been enthusiastic about reproduction, advocating sex for his hypochondriac female patients and himself siring several illegitimate offspring. At exactly the time Charles was writing *Descent* another illegitimate descendent of Erasmus had been discovered – hardly an opportune time to be discussing promiscuity. Third, and most important, Charles did not want to offend the womenfolk in his life, especially his wife Emma and daughter Henrietta. Etty, as she was known, helped proofread and check her father's writings but also acted as his censor, striking out anything she didn't approve of with her blue crayon. She did precisely that to Charles's brief biography of Erasmus Darwin – deleting the reference to Charles's grandfather's "ardent love of women." We get a further feel for what Charles was up against when we discover that, in later life, Etty tried single-handedly to remove the eponymous fungus *Phallus impudicus* from the British countryside because she thought it might have a bad influence on the maids.[1]

By stating that females were sexually monogamous, Charles Darwin precluded the possibility that sexual selection might continue after copulation. For a hundred years after *Descent*, sexual selection was thought to cease at mating. Then, in the late 1960s, as the selfish gene was just beginning to raise its revolutionary head, due largely to the work of George C. Williams, two young researchers, one on each side of the Atlantic, changed our view of reproduction forever.

Geoff Parker, then a Ph.D. student, studied the mating behavior of yellow dung flies in the meadows around Bristol, England. He watched as male after male copulated with the same female in what he recognized might be a fierce competition for paternity. Parker referred to this phenomenon as sperm competition: the competition between the sperm (or more correctly, the ejaculates) of different males to fertilize the eggs of a single female. Female dung flies appeared to be passive or indifferent, and because males were considerably larger and able to impose themselves on the females, there was no suggestion of female choice. At Harvard, another graduate student, Bob Trivers, observed the pigeons on his office window ledge as they went to roost, and was fascinated by the males' attempts to position themselves between their partner and any other male. Once considered models of monogamy, pigeons were – as Trivers noticed – exactly the opposite, with both sexes perpetually on the lookout for extrapair liaisons.

In 1970 Parker produced a citation classic with his paper "Sperm Competition and its Evolutionary Consequences in the Insects," and in 1972 Trivers did the same with his paper "Parental Investment and Sexual Selection."[2] The revolution in evolutionary thinking that Williams had initiated in the mid-1960s[3] took as its main premise the idea

1 G. Raverat, *Period Piece: A Cambridge Childhood* (London: Faber & Faber, 1952).

2 G. A. Parker, "Sperm Competition and its Evolutionary Consequences in the Insects," *Biological Reviews* 45 (1970): 525 – 567; R. L. Trivers, "Parental Investment and Sexual Selection," in *Sexual Selection and the Descent of Man 1871 – 1971*, ed. B. Campbell (Chicago: Aldine-Atherton, 1972), 136 – 179.

3 G. C. Williams, *Adaptation and Natural Selection* (Princeton, N.J.: Princeton University Press, 1966).

that individuals (rather than populations or species, as had previously been assumed) were the target in both natural and sexual selection. A natural development of this evolutionary viewpoint was that individuals of either sex had evolved to maximize their own reproductive success, even at the expense of members of their species and even their mating partners.

Initially, the focus of research was on males, and on sperm competition. Much has been made of this, especially by feminists. Undoubtedly there was some intellectual chauvinism, but the reality was that male behavior, so often lacking in sophistication, was much easier to study. To Parker, female dung flies appeared merely indifferent to their multiple copulation partners. Trivers was more obviously sexist and unashamedly told me that that was how most people (men) thought at that time.

The clearest evidence for Trivers's chauvinism came from his interpretation of a study that formed the basis of his classic 1972 paper.[4] In 1948 Angus Bateman published an important study of sexual selection in fruit flies.[5] Ignored by almost everyone, Bateman's paper was noticed by the evolutionary visionary Ernst Mayr, who pushed it in Trivers's direction. Bateman had measured the reproductive benefit of each sex copulating with multiple partners. The way Trivers portrayed Bateman's results was that the more females males copulated with, the more offspring they fathered; but for females it made no difference how many partners they had – after their first insemination their reproductive success remained unchanged.

But Trivers deliberately neglected part of Bateman's results. Because of a glitch in the experiment, some of the flies had received a different diet, so Bateman had kept the two sets of results separate. Trivers reported only the results from one set, ignoring the other, which showed that females that copulated with more than one male *did* produce more offspring. The benefits of promiscuity were fewer for females than they were for males, but they existed nonetheless. But since these results didn't fit with Trivers's preconceived ideas, he disregarded them.[6]

Had he publicized them, the study of female aspects of reproduction might have occurred much sooner than it did. However, they might also have done exactly the opposite and merely clouded the issue. Instead, for twenty years following Trivers's paper, researchers focused on male aspects of what we now call postcopulatory sexual selection, and started to consider female aspects only once those male-driven processes were reasonably well understood.

Geoff Parker recognized that, by assuming sexual selection ceased at the point of copulation, Darwin had missed the immense evolutionary potential of sperm competition. If females were inseminated by more than one male, he surmised, then sperm from those males would compete to fertilize a female's eggs – and the males that 'won' the competition would leave more descendants and would pass on their genes for those traits that made them successful.

In fact, it is more complex than this. When sperm competition occurs, selec-

4 R. Trivers, *Natural Selection and Social Theory* (Oxford: Oxford University Press, 2002).

5 A. J. Bateman, "Intrasexual Selection in *Drosophila*," *Heredity* 2 (1948): 349 – 368.

6 S. J. Arnold, "Bateman's Principles and the Measurement of Sexual Selection in Plants and Animals," *American Naturalist* 144 (1994): S126 – S149.

tion simultaneously favors males that successfully fertilize previously inseminated (but not yet fertilized) females, and those males that prevent other males from inseminating or fertilizing females they have just inseminated. Typically what happens in dung flies is after a male has finished transferring his sperm to a female, he remains attached to, but not in genital contact with, the female, in what Parker called 'the passive phase' of mating and what we now refer to as 'mate guarding.' Guarding provides time for the guarding male's sperm to fertilize at least some of the female's eggs. Other males attempt to usurp the guarding male, in what Parker called a 'takeover.'

As we'll see, selection favors males that successfully achieve a takeover. Selection, however, also favors guarding males that prevent takeovers; that is, it favors males that protect their paternity. Parker realized that these opposing selection pressures on males would result in the rapid evolution of adaptations to sperm competition. Mate guarding is an adaptation, and takeover a counteradaptation, to sperm competition.

These are just two of a multitude of adaptations and counteradaptations to sperm competition that spans behavior, physiology, and anatomy. Indeed, sperm competition provides a good evolutionary explanation for many previously unexplained reproductive phenomena: huge testicles, spiny penises, vast quantities of sperm, toxic semen, excessively prolonged or frequent copulation, and many others.

This brings us to the actual mechanism of sperm competition itself: how do sperm compete? As Geoff Parker noticed, male dung flies were always very keen to copulate, even with females that were already inseminated, suggesting to him that males must have some chance of fertilizing these females' eggs – otherwise there would be no advantage to this behavior. And without an evolutionary advantage such behavior would soon disappear.

There is an important point of biological information here. First, like many other animals, female dung flies store sperm before using it to fertilize their eggs. Any male that could somehow dispose of, or disable, these stored sperm and replace them with his own would be at a huge selective advantage.

Parker tested this idea using the only technology then available to determine the paternity of a female's offspring: he allowed females to copulate sequentially with two males, one of which was sterilized via a dose of radiation. Strictly speaking, the sterile males had functional sperm, but any eggs fertilized by their sperm failed to develop. As he predicted, regardless of whether the sterile male copulated first or second, the second (or last) male to copulate fertilized the majority of a female's eggs, a phenomenon he called "last male sperm precedence." Aristotle had noticed the same thing in chickens in 300 BC, and many studies conducted in the last thirty years have confirmed it in domestic birds.[7]

Last male sperm precedence explains why it is always worthwhile for a male to copulate with a previously inseminated female, and why, in Bateman's study, male fruit flies that copulated more sired more offspring.

Working out how last male sperm precedence occurs in the yellow dung fly proved to be difficult. Initially, Parker assumed that incoming sperm flushes out or displaces any existing sperm in

7 T. R. Birkhead, "Sperm Competition in Birds," *Reviews of Reproduction* 3 (1998): 123–129.

the female's storage structures, but in fact the process appears to be largely female driven. In response to new insemination, the female dung fly dumps the majority of previously stored sperm.

In birds, last male sperm precedence occurs in a different way. Female birds release sperm from their sperm-storage structures continually over the several days they are ovulating (typically each egg is fertilized twenty-four hours before it is laid). If two inseminations are sufficiently well separated in time, most of the sperm from the first insemination have been used by the time the second insemination occurs, and the second (or last) male 'wins' simply by having more sperm in the female's reproductive tract at the time of fertilization.

Sperm numbers are important and explain why, in species where sperm competition is intense (and females highly promiscuous), males tend to have relatively large testicles. Larger testicles make more sperm per unit time, and more sperm (larger ejaculates) outcompete smaller ones – all else being equal. Across much of the animal kingdom, including butterflies, birds, amphibians, reptiles, and mammals, relative testis size is an excellent predictor of the intensity of sperm competition.

All else is rarely equal, however, not least in terms of the quality of sperm. As well as favoring large numbers of sperm, promiscuity also favors high-quality sperm. In species where females are promiscuous, sperm need to be fast and effective. In our studies of domestic and feral fowl, in which sperm competition is rife, faster-swimming sperm outcompete slower sperm – all else being equal.[8] Paternity is decided by a combination of sperm quality and quantity.

What is surprising is that there should be any individuals at all with slow sperm. If sperm competition is intense, one might expect selection for sperm velocity to be so strong that all males possess fast sperm. But it isn't quite that simple. Dominant cockerels have preferential access to females (who want to copulate with them) and, as a result, can achieve reasonable reproductive success with low-velocity sperm. Subordinate males, on the other hand, who might only rarely get a chance to copulate, have to make the most of any opportunity and tend to have high-velocity sperm. Amazingly, a change in social status is followed by a corresponding change in sperm velocity.

So far we have ignored the effect of females on male fertilization success. Are females really just passive conduits for male gametes? This was the view back in the 1970s, but it has slowly become apparent that females play an important role in the way sperm perform. The change in outlook was slow because it was remarkably difficult to establish unequivocally whether females could influence fertilization. The process is referred to as 'cryptic female choice' – cryptic because it takes place out of sight inside the female's reproductive tract.

Human reproductive biologists first proposed the idea as long ago as the 1940s, but since it lacked evidence, the idea slipped quietly into obscurity. With the birth of behavioral ecology, the idea reemerged in the 1980s, but again was ignored, probably because researchers at

8 T. R. Birkhead, J. G. Martinez, T. Burke, and D. P. Froman, "Sperm Mobility Determines the Outcome of Sperm Competition in the Domestic Fowl," *Proceedings of the Royal Society B: Biological Sciences* 266 (1999): 1759 – 1764.

that time were still struggling to demonstrate precopulatory female choice and didn't want to be distracted by the technically much more difficult question of cryptic female choice. There was another problem. Most of those interested in these questions were behavioral ecologists, first and foremost field biologists with little knowledge or experience of what was going on inside the female reproductive tract. Eventually, however, in the 1990s they started to devise ingenious experiments to see whether females did have any control over whose sperm fertilized their eggs.

The first of these studies looked at whether females showed any preference for the sperm of close relatives (brothers) or that of nonrelatives, on the assumption that females would want to avoid inbreeding. But these investigations were difficult to design and to execute: to be certain that a female effect had occurred researchers had to be absolutely sure they had eliminated, or controlled for, all possible male effects. An example will make this clearer. Imagine we were unaware of the differences in sperm quality in the domestic fowl mentioned earlier. We might inseminate hens with a mixture comprising equal numbers of sperm from two cockerels and find that one male fertilized most of the eggs. Superficially it would appear that all females 'preferred' the sperm of one of the males (i.e., a female effect), when in fact it could have been due to a male effect – sperm quality.

My colleagues and I designed an experiment to examine whether female fowl could discriminate between the sperm of different males. We made a sperm mixture with equal numbers of live sperm from each of two males and then inseminated an appropriate amount into each of ten females. We collected and hatched the eggs, and conducted paternity tests on the chicks. If the pattern of paternity was similar across all ten hens there would be no evidence for any female effect. But, in fact, each time we did the experiment, a small number of females showed a pattern of paternity very different from that of the others, suggesting that those particular females preferred the sperm of one male over that of the other.[9] How they do this remains a mystery – but we suspect that they must be able to recognize (physiologically) proteins on the surface of the sperm that either facilitate or hamper (unconsciously, of course) the sperm's progress through the oviduct.

Because sperm competition is so intense in domestic fowl (and in their wild ancestor, the red jungle fowl), females have additional ways to control paternity. Females prefer to be inseminated by the dominant cockerel. Subordinate males, however, do not accept celibacy lightly, and seduce females whenever the dominant male is absent. On being approached by a subordinate male, females typically run away, but sometimes a subordinate male will capture a hen, holding her by the feathers on her nape. When this happens, the female shrieks for help, uttering a distinctive distress call that causes the dominant male to intervene hurriedly. We tested the efficacy of this distress call by playing recordings of it: If the dominant male was within earshot, he never failed to respond. If, however, the dominant was too far away, a subordinate could coerce a female into copulation and successfully inseminate her. When this occurs, the female has one last trick up her sleeve:

9 T. R. Birkhead, N. Chaline, J. D. Biggins, T. A. Burke, and T. Pizzari, "Nontransitivity of Paternity in a Bird," *Evolution* 58 (2004): 416 – 420.

she can eject the unwanted sperm. Even before the subordinate has dismounted from the female's back, she often squirts out most of his ejaculate.[10]

Most of what I have discussed so far has been concerned with the mechanisms of sperm competition: how sperm compete, how females bias paternity, and how sperm and the female reproductive tract interact. Traditionally, however, behavioral ecologists have focused on questions relating to the adaptive significance of particular behaviors or anatomical traits, asking how they enhance an individual's reproductive success.

The question of whether promiscuity is adaptive for males seemed at one time self-evident: more copulations meant more offspring, as in Bateman's fruit-fly study. It was more difficult to show that this was true in nature, but the development of molecular paternity tests during the mid-1980s made such field studies more tractable. Based on such paternity analyses, the few sufficiently detailed studies that have been conducted (mainly on birds) confirm that male promiscuity pays. It need not have done; any benefits of extrapair paternity could easily have been offset by cuckoldry.

The one major unanswered question is whether promiscuity is adaptive for females. As mentioned earlier, females were initially ignored. But then in the mid-1980s, in a study of a small North American bird, the black-capped chickadee, Susan Smith noticed that females went looking for extrapair copulations. Not only that, they seemed to go upmarket – seeking out males that were socially dominant to their partner – during the previous winter when they foraged together in small mixed-sex flocks. By providing the first clear evidence that females might benefit from their choice of extrapair copulation partner, Susan Smith's study launched a revolution in behavioral ecology. Within a short time other researchers were reporting females of 'their' species looking for promiscuous copulations, with the implication that doing so had an evolutionary benefit.[11]

What did females stand to gain? There were two possibilities: direct benefits for themselves or indirect (genetic) benefits for their offspring. A direct benefit might be food – females might trade sex for food. Some birds and insects, for example, perform courtship feeding, in which males present females with a precopulatory gift of some sort. Another direct benefit might be paternal care – the females of some species trade sex for assistance in raising offspring. By 'sex' here, I mean paternity and increased reproductive success for the extra-pair male.

Direct benefits may also accrue from sperm itself. For many insect species that lay large numbers of eggs, the possibility of a female running out of sperm is real. To avoid this they remate and replenish their sperm supplies at regular intervals. It would be too risky to wait until all their stored sperm has been used before remating, so females may routinely carry the sperm from different males. So, for many insects, a plentiful supply of sperm may be the main benefit of copulating with several different males.

10 T. Pizzari and T. R. Birkhead, "Female Fowl Eject Sperm of Subdominant Males," *Nature, London* 405 (2000): 787 – 789.

11 S. A. Smith, "Extra-Pair Copulations in Black-Capped Chickadees: The Role of the Female," *Behaviour* 107 (1988): 15 – 23; B. Kempenaers et al., "Extra-Pair Paternity Results from Female Preference for High Quality Males in the Blue Tit," *Nature* 357 (1992): 494 – 496.

For most other animals, females do not seem to acquire any direct benefits from being promiscuous. That leaves genetic benefits, but the concept of genetic benefits has a number of theoretical problems. Let's start by considering the main potential genetic benefits. The first possibility is that some males are genetically superior (that is, they possess genes that confer greater longevity or reproductive success) compared to others and females compete for them. Some females get to pair with superior males, but some have little choice but to accept a mediocre or inferior male in order to reproduce at all. In those cases females can modify their initial choice of partner by seeking extrapair copulations with a genetically superior male.

By doing so it is assumed that females will produce genetically superior sons. It has also been presumed that females identify these genetically superior males from their sexually selected displays – large tails, flashy colors, wonderful song. The theoretical snag is that if all females have their offspring fathered by these superior males the variation in genetic quality would be quickly used up. An analogy will make this clearer: if an animal breeder selects for a trait such as body size in cattle, the first few generations will exhibit a rapid increase in size, but as time goes on increases in size will become less and less as the genetic variation in size is used up.

A possible solution to this erosion of genetic variation and the question of what maintains genetic diversity in sexually selected traits involves a somewhat convoluted but nonetheless plausible argument. It is referred to as 'the paradox of the lek.'[12] A lek is a breeding arena in which males congregate to display. Females visit the lek, choose a partner, copulate, and then leave to rear their offspring entirely alone. There are (apparently) no direct benefits from her choice of male, only genetic ones, since all a male provides are sperm. The males of lekking species are often elaborately adorned, like birds of paradise, because sexual selection is intense and a few males fertilize the majority of females. A similar situation involving genetic benefits – in which females, like Susan Smith's chickadees, seek extrapair copulations – also occurs among socially monogamous birds.[13]

Here is the resolution to the lek paradox: if the expression of sexually selected traits is dependent on an animal's body condition or health, as seems to be the case (individuals in good condition produce bigger and better displays), and if there are large numbers of genes influencing condition, then mutations in condition may arise just as quickly as they are eroded through selection by females. The theory relating to this resolution of the lek paradox remains to be fully tested, but the results so far are encouraging.

A second possible advantage to promiscuity is genetic compatibility – whether your genes mesh well with those of your partner. A good genetic combination results in vigorous, healthy offspring; a bad one generates genetically defective offspring. A clear example in humans is the Rhesus factor (Rh): a Rh-negative mother and a Rh-positive father can result in hemolytic disease in the newborn (HDN). Another almost obvious example of genetic incompati-

12 M. Kirkpatrick and M. J. Ryan, "The Evolution of Mating Preferences and the Paradox of the Lek," *Nature* 350 (1991): 33 – 38.

13 A. Johnsen, V. Andersen, C. Sunding, and J. T. Lifjeld, "Female Bluethroats Enhance Offspring Immunocompetence Through Extra-Pair Copulations," *Nature* 406 (2000): 296 – 299.

bility is inbreeding – something Darwin, whose wife Emma was his cousin, wondered might explain the sickly natures and early deaths of some of his children. The problem with the genetic-compatibility idea, however, is that it isn't clear how a male would signal his compatibility (or otherwise) to a potential partner. On the other hand, he might not have to. If females are routinely promiscuous, then they could let physiological mechanisms in their reproductive tract sort out the compatible from the incompatible sperm – using the sperms' surface proteins as their guide.

Despite several possible genetic benefits to female promiscuity, the evidence is far from compelling. Some published studies – probably a biased subset – provide support for the idea of genetic benefits, but many studies fail to detect any effect at all. To date, we simply do not know why the females of many species apparently seek copulations with additional males. There is an interesting twist to this: Susan Smith's study launched a new wave of research that showed that female birds in particular sought extra copulation partners. As often occurs in science, enthusiasm for this particular idea probably led to a publication bias, overemphasizing how active females were in initiating promiscuous matings. With hindsight, it now seems that the evidence for female initiative is limited.[14]

Where does that leave us? With birds, which is what I know most about, I wonder whether, in those species that typically have around 10 to 15 percent extrapair paternity, extrapair paternity may simply be accidental and not adaptive. Females in the breeding season are primed for copulating, and may – as in Geoff Parker's dung flies – find it easier to acquiesce rather than waste a lot of time and energy avoiding male attention. Even if this is true, though, there are many other species where females are overtly promiscuous and produce broods or litters with multiple fathers – and where we still have no idea why.

I want to conclude with two additional points: genuine monogamy and humans. There appears to be a small number of species in which females are usually faithful to their partner. Seahorses (several species of them) provide the classic example. Since it is the male seahorse that cares for the eggs inside his brood pouch (transferred there by an egg tube from the female), and since the eggs are fertilized as they go into the brood pouch (or inside it), the opportunity for another male to introduce his sperm is extremely limited. The one seahorse-paternity study confirms that all the offspring in a single brood have but a single father. As predicted, male seahorses also have very small testes – so small, in fact, that they are extremely difficult to find. With no sperm competition and complete control over where their sperm go, males can afford to have tiny testes producing a small number of sperm. A rather different form of monogamy occurs in Hamadryas baboons: males are much larger than females and ferociously bully females into fidelity. Among birds, there is a handful of species, including the mute swan, where no extrapair paternity has been detected, but the reasons for this are currently unknown.

Finally, what about sperm competition and cryptic female choice in humans? As one might expect, this is a topic close to the hearts of researchers and nonre-

14 D. F. Westneat and I. R. K. Stewart, "Extra-Pair Paternity in Birds: Causes, Correlates and Conflict," *Annual Review of Ecology and Systematics* 34 (2003): 365–396.

searchers alike, and while there has been a great deal of speculation there is very little hard evidence. Obviously, some females are promiscuous, but the important question is whether female promiscuity is adaptive or sufficiently frequent to result in the evolution of specific adaptations. While the level of extrapair paternity might be a useful measure of promiscuity in birds and a good starting point for thinking about the evolution of promiscuity, equivalent data for human societies are, I believe, much less informative. Cultural circumstances have so dramatically changed human sex lives that it is difficult to infer anything from contemporary data.

The best indication of our inclination toward promiscuity is relative testis size. Compared with other primates, human testes are neither as large as those of the highly promiscuous chimpanzees, nor as small as those of the monogamous gorilla, suggesting that humans have evolved to cope with only a moderate degree of female promiscuity. Other morphological features further suggest that human males are poorly adapted to sperm competition: the rate of sperm production is relatively low, and ejaculate quality is abysmal, with many dead or deformed sperm. On the other hand, we do have a long penis for our body size (an indicator of sperm competition in some other animal groups – longer is better for placing sperm closer to the eggs). Evolutionary psychologists are also persuaded of the ubiquity of sperm competition by our powerful sexual jealousy and obsession with paternity, but, despite this, my overall impression is that sperm competition in humans has always been relatively modest.

What would Darwin have made of all this? Despite knowing, but not writing, about female promiscuity, Darwin never allowed himself to venture down this intellectual pathway. The nuts and bolts of reproduction were still poorly known at that time, which may have made it difficult to imagine postcopulatory sexual selection. On the other hand Darwin was no prude – he joked about the barnacle's enormous penis in a book he knew the public (and his wife and daughter) wouldn't read. My guess is that he would say the same thing Thomas Henry Huxley did on having natural selection explained to him: why didn't I think of that?

Joan Roughgarden

Challenging Darwin's theory of sexual selection

May a biologist in these polarized times dare suggest that Darwin is a bit wrong about anything? Even worse, does a biologist risk insult, ridicule, anger, and intimidation to suggest that Darwin is incorrect on a big issue? We have a test case before us. Darwin appears completely mistaken in his theory of sex roles, a subject called the 'theory of sexual selection.'[1]

In his 1871 book *The Descent of Man, and Selection in Relation to Sex*, Darwin wrote: "Males of almost all animals have stronger passions than females," and "the female . . . with the rarest of exceptions is less eager than the male . . . she is coy."[2] Notice that the exceptions are dismissed as empirically insignificant ("almost all," "rarest of exceptions"), so that, for all practical purposes, males are universally "passionate" and females collectively "coy."

To explain this claim, Darwin considered the joint mechanisms of male-male competition and female choice. He envisioned that males compete for access to females, while females choose superior males on the basis of success in male-male competition and/or perceived beauty. In effect, through their choice of mates, females breed their offspring to have their mates' desirable traits, "just as man can improve the breed of his game-cocks by the selection of those birds which are victorious in the cockpit." Another example: "Many female progenitors of the peacock must [have], by the continued preference of the most beautiful males, rendered the peacock the most splendid of living birds." From a masculinist perspective, acquisition of females is a just reward for victory in male-male combat. From a maternalist perspective, the duty of females is to bed

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1 J. Roughgarden, *Evolution's Rainbow: Diversity, Gender and Sexuality in Nature and People* (Berkeley: University of California Press, 2004).

2 C. Darwin, *The Descent of Man, and Selection in Relation to Sex*, facsimile edition (Princeton, N.J.: Princeton University Press, 1871).

the victors, thus endowing their offspring with valuable traits.

The Darwinian narrative of sex roles is not some quaint anachronism. Restated in today's biological jargon, the narrative is considered proven scientific fact. The geneticist Jerry Coyne, at the University of Chicago, declared: "Males, who can produce many offspring with only minimal investment, spread their genes most effectively by mating promiscuously. . . . Female reproductive output is far more constrained by the metabolic costs of producing eggs or offspring, and thus a female's interests are served more by mate quality than by mate quantity."[3] So the passionate male has become the promiscuous male, and the coy female the constrained female. Yet the spirit of this present-day narrative is identical to Darwin's of nearly 130 years ago, and the sexual conflict that flows from attributing different objectives to males and females remains the starting point for sexual-selection theory today just as it did in Darwin's time.

I have been foolhardy enough to suggest that this thoroughly entrenched theory of male-female relationships is biologically mistaken. The response to my proposal offers a revealing commentary on the willingness of evolutionary biologists to face up to contrary evidence and logic. Let us turn to the proposal and then to the responses.[4]

I refer to sexual selection today as a *system*, meaning a set of logically interconnected theoretical propositions with a truth status independent of the facts they were originally intended to explain. As contrary data appear, the theoretical propositions are updated. Thus the system cannot be challenged and becomes, in effect, tautological.

By using the word system, I also echo the phrase "sex-gender system," coined in 1974 by the anthropologist and gender theorist Gayle Rubin.[5] Rubin emphasized how expectations flowing from how a culture defines gender wind up "the part of social life which is the locus of the oppression of women, of sexual minorities." Although gender categories may not be constructed for the purpose of oppressing others, they end up authorizing such oppression by defining what counts as a norm and what counts as an exception, thereby privileging one over the other.

In place of sexual selection, I propose social selection. It is equally extensive but differs point by point from sexual selection. Social selection is selection for, and in the context of, the social infrastructure of a species within which offspring are produced and reared. The social strategies in the infrastructure generally include cooperation as much as – or more than – they do competition; and they revolve more around negotiation than 'winning.' Social selection, in my formulation, does not extend sexual selection but replaces it.

Ultimately, the evolutionary system of sex, gender, and sexuality that prevails determines our worldview of nature itself. Sexual selection's view of nature emphasizes conflict, deceit, and dirty

3 J. Coyne, "Charm Schools," *Times Literary Supplement*, July 30, 2004.

4 The following exposition of the proposal is condensed from a recent review, which should be consulted for further detail and references to primary literature: J. Roughgarden, "Social Selection vs. Sexual Selection: Comparison of Hypotheses," in Daniel Kleinman and Jo Handelsman, eds., *Controversies in Science and Technology*, vol. 2, *Genetics of Race and Gender* (Madison: University of Wisconsin Press, 2007).

5 Gayle Rubin, "A Contribution to the Critique of the Political Economy of Sex and Gender," *Dissemination* 1 (1) (1974): 6 – 13; 1 (2) (1974): 23 – 32.

gene pools. If this Darwinian picture of nature is true, so be it. But is it true?

To begin with, sexual selection and social selection differ in their accounts of the very origin of sexual reproduction and the sexes.

Origin of sexual reproduction. According to sexual selection, sexual reproduction evolved from asexual reproduction as a mechanism to cleanse the gene pool of deleterious mutations. According to social selection, sexual reproduction evolved from asexual reproduction to maintain a diverse gene pool needed for long-term population survival in an ever-fluctuating environment.

Origin of gametic male/female binary. The difference in size between the sperm and the egg is the basis for defining male and female in a sexually reproducing species. Sexual selection imagines the protosperm and protoegg playing a game against each other. Initially, both the protosperm and protoegg are the same size. But then the protosperm 'cheats,' becoming a little smaller so that more sperm can be produced with the leftover energy. This numerical advantage allows the smaller sperm to outcompete the less numerous sperm of the original size. The protoegg responds by increasing its size, restoring zygote viability to its original level. This compensating move is better than shrinking to try to match the smaller sperm; otherwise, the zygote would suffer a very deleterious double loss of investment. These responses of egg and sperm to each other culminate in one gamete – the protoegg – growing nearly as large as the zygote, and the other – the protosperm – becoming as tiny as possible.

In sexual selection, the distinction between male and female gametes arises from a battle: the sexes are created as combatants. But according to social selection, a parent divides the material it places into eggs and sperm to maximize the number of *gametic contacts* that produce viable zygotes. The number of gametic contacts increases as gametes become more numerous and form a large, dense cloud. The greatest number of viable zygotes is thus created when one of the gametes is close to the desired zygote size while the other is as small as possible.

Origin of whole-organism male/female binary. If a sexually reproducing species produces more than one type of gamete, each individual of that species (at least among multicellular organisms) commonly makes both male and female gametes at the same time, or at different times, during its life – a condition known as *hermaphrodism*. Species in which an individual generates only one size of gamete are *dioecious*. In these species, one can classify whole individuals as either male or female, depending on the size of the gametes an individual produces. Sexual selection takes a whole-organism binary as the starting point and views hermaphrodism as a special case arising in peculiar circumstances. Social selection, on the other hand, takes hermaphrodism as the starting point and sees dioecy as a specialization for the 'home delivery' of sperm.

The theories of sexual selection and social selection each tells its own central narrative of male/female social dynamics.

Universal sex roles. According to sexual selection, males and females conform to near-universal templates: Darwin's "passionate" male and "coy" female (or in today's jargon, the "promiscuous" male and the "constrained" female). Though there are no general surveys of reproductive habits across all dioecious animal species, it is evident that these

templates are, at best, unsubstantiated and, as generalizations, apparently false.

In insect species, for example, males are often as choosy as females. And in fish, surveys show that, of those species in which one or more parents care for the eggs, the male is more likely than the female to be the care provider. Birds often provide biparental care, whereas among mammals the female usually supplies the care.

It is hard, moreover, to distinguish 'care' from 'control.' Often, the parent who is caring for the eggs or young might actually be more concerned with the control of the young than in the provision of care for them.

No general pattern has actually been demonstrated about male/female sex roles throughout the animal kingdom, although the stereotypes that Darwin enunciated are widely accepted. Social selection believes that no necessary and universal sex roles exist; what each sex does is subject to negotiation in local circumstances. Any statistical regularity in sex roles may reflect a statistical frequency of circumstance, together with what constitutes a best bargain in such circumstances. Equally, if local ecology shows statistical regularities, so will the sex roles that emerge in those ecologies.

Purpose of reproductive social behavior. The sexual-selection narrative explains what happens within a reproductive social system primarily in terms of 'mating.' Within a mating-based system, natural selection arises from differences in 'mating success,' and particular behaviors are understood by how they contribute to attaining plentiful mating opportunities. Females are regarded as a 'limiting resource' for males, and males compete for access to, and control of, mating opportunities with females.

In fact, evolution does not depend on mating as such but on the number of offspring successfully reared. Sexual selection elevates one component of reproduction, namely mating, into an end in itself. Meanwhile, social selection views reproductive social behavior as comprising an 'offspring-rearing system.' Within this system, natural selection arises from differences in the number of offspring successfully reared, and particular behaviors are understood by how they contribute to building, or maintaining, the social infrastructure within which offspring are reared. The principal male-female social dynamic is to determine bargains and to exchange side-payments that establish control over offspring and manage the offspring-rearing social infrastructure.

Objective of female mate choice. According to sexual selection, females select mates with the goal of endowing their own sons with the traits they find attractive in their mates. Females thus ensure that their own sons are destined to succeed in the mating game – a rationale called the 'sexy son hypothesis.' In fact, data are scanty that female choice is motivated more by indirect future genetic benefits than by direct present-day ecological benefits. In reality, females choose males who provide food and/or protection, rendering the importance of genes moot.

Under social selection, a female chooses mates based on maximizing the number of young she can successfully produce and rear – with help from her mates and from the social infrastructure. The criterion for female choice is an expectation of direct benefits from a male discounted by the probability that the male will renege on, or somehow be prevented from, delivering those benefits. Thus, a premium will be placed on the compatibility and health of the prospective partner. Health is important not as an indicator of 'good genes' but as a sign of com-

petency to deliver promised direct benefits.

Male genetic quality. According to sexual selection, males can be ranked in a hierarchy of genetic quality. In addition to the good genes that females are supposedly seeking in their mates, they aim to avoid bad genes. But if, generation after generation, female choice weeds out males with bad genes, then eventually no bad genes should remain, which presents an internal contradiction in the logic of sexual selection. Therefore, sexual selection is logically compelled to concoct genetic schemes, typically involving high mutation rates spanning polygenic loci, to replenish the supply of bad genes that are being continually eliminated by female choice. These additional schemes have never been tested much less verified.

Social selection, in contrast, states no hierarchy of genetic quality among males exists. If genes matter at all to female choice, females are choosing for genetic compatibility, and not overall genetic quality. All males are equivalent in genetic quality, excepting a rare fraction that obviously contain deleterious mutations and are present in a mutation-selection balance (1 in 10^6).

Bateman's principle. In 1948, the English geneticist Angus Bateman published laboratory experiments with *Drosophila* that were presented as confirming Darwin's theory of sexual selection.[6] Bateman reported that a male's "fertility is seldom likely to be limited by sperm production but rather by the number of inseminations or the number of females available to him." Similarly, he claimed to have found in his flies an "undiscriminating eagerness in males and discriminating passivity in females" in accord with the sexual-selection narrative. As a result, in sexual selection, male fitness has come to be defined primarily in terms of the number of matings, or 'mating success,' and female fitness in terms of egg production, or 'fecundity.' In this way, males and females are conventionally assumed to be governed by different definitions of evolutionary fitness.

The Bateman experiments are a cornerstone of sexual selection and have been widely cited in papers and textbooks. Over the last five years, however, many critiques have revisited the 1948 Bateman paper and found that Bateman overstated his results. Sexual-selection advocates have quoted selectively from what Bateman did report and have sometimes even attributed to Bateman quotations that they made up out of thin air. In social selection, Bateman's principle is nonexistent. Instead, both males and females share the same definition of fitness, namely, number of offspring successfully reared.

Social selection departs from sexual selection in the way it models behavior in reproductive systems. Sexual selection relies on competitive evolutionary game theory, considering particular behaviors as strategies. The prisoner's dilemma game is an oft-cited example in which the strategies of play are either to cooperate or to defect. The 'payoff matrix' tabulates the payoff to each player for all combinations of these strategies. The solution to the game is an evolutionary stable strategy (ESS): a combination of strategies for both players such that a mutant allele for some other combination cannot increase when rare.

This is a single-tier approach in the sense that particular behaviors are themselves viewed directly as evolutionary strategies. The problem is that it requires thinking of particular behaviors

6 A. J. Bateman, "Intrasexual Selection in *Drosophila*," *Heredity* 2 (1948): 349 – 368.

as having a genetic basis, e.g., the gene 'for' cooperating, for defecting, for shyness, for aggressiveness, etc. Behaviors rarely have much direct genetic basis. But the single-tier approach forces narratives of genetic determinism.

Social selection approaches the modeling of social behavior as a two-tier problem: development on one tier, evolution on another. Particular behaviors develop as animals interact with one another, similar to how morphological structures develop through cell-cell contact during embryogenesis. A social system is a 'behavioral tissue': a system of phenotypes produced through interactive development.

In social selection, the developmental dynamics employ both cooperative and competitive game theory. Cooperative solutions mostly occur when parties play with coordinated tactics and with the perception of shared goals made possible through animal friendships. Even though a seemingly cooperative outcome may also result from competitive behavior, as in a standoff between weary combatants, the emphasis in social selection is on attaining cooperative outcomes through behavior that is explicitly cooperative, involving coordinated activities in pursuit of a shared goal. Social selection also envisions an evolutionary tier in which the payoff matrices and rules of play evolve based on traditional competitive evolutionary game theory. Particular social behaviors evolve indirectly as emergent properties from whatever payoff matrices and rules of play have themselves evolved. Thus, *evolution* produces the payoff matrix and rules of play, which then allow *development* to produce particular behaviors within the social infrastructure.

Social selection thus accounts for certain characteristics of sexual reproduction very differently from the way sexual selection views them.

Parental investment. According to sexual selection, the female has a higher parental investment than the male because the egg is bigger than the sperm. The sperm are considered 'cheap' and the egg expensive. This initial difference is then extrapolated to explain an entire suite of female and male behaviors, such as male promiscuity and female coyness.

Social selection, on the other hand, sees male and female parental investments as more or less the same initially. An ejaculate might typically contain 10^6 sperm while an egg is typically 10^6 times as large as a sperm. So the size of the ejaculate and egg are often about the same order of magnitude. Hence, male and female sex roles emerge not as a matter of logical necessity from gamete size, but from the local context.

Sexual conflict. The sexual-selection narrative regards a male and female as always fundamentally in conflict and male-female cooperation as a possible (and unlikely) secondary development. According to social selection, however, male and female mates begin with a cooperative relationship because they have committed themselves to a common 'bank account' of evolutionary success. Their offspring represent indivisible earnings. Hurting the other hurts oneself, and helping the other helps oneself, in terms of number of offspring successfully reared. As such, conflict develops only secondarily if a division of labor cannot be successfully negotiated.

Male promiscuity. According to sexual selection, males are naturally and universally promiscuous, reflecting the low parental investment of a sperm compared to an egg. In social selection, male promiscuity is a strategy of last resort that occurs when males are excluded from control of offspring rearing.

Monogamy. In sexual-selection theory, monogamy is a violation of the basic dictate that males should be promiscuous. Therefore, sexual selection explains away the instances of monogamous-pair bonds, including those of most birds and some mammals, as entrapment of males by females or as a default when no other mates are available.

Social selection distinguishes two distinct forms of monogamy: economic monogamy, an agreement to carry out the work of rearing offspring in teams of one male and one female, and genetic monogamy, an agreement not to mate outside the pair bond. Most monogamy is economic monogamy, and nothing requires economic monogamy and genetic monogamy to coincide. In social selection, economic monogamy emerges in ecological situations where the work of rearing offspring is most efficiently done in male-female teams rather than by solitary individuals or in teams of more than two individuals.

Extrapair parentage. Extrapair paternity (EPP) occurs when a male sires young in a nest other than the one he is working on with a female; extrapair maternity (EPM) occurs when a female deposits eggs in a nest other than the one she is working on with a male. Both EPPs and EPMs result in extrapair parentage. Sexual selection's primary literature describes extrapair parentage as 'cheating' on the pair bond: the male is said to be 'cuckolded'; offspring of extrapair parentage are said to be 'illegitimate'; and females who do not participate in extrapair copulations are said to be 'faithful.' This judgmental terminology reflects the failure to distinguish economic from genetic monogamy, and amounts to applying a contemporary definition of Western marriage to animals. Furthermore, EPPs are assumed to reflect the inevitable outcome of basic male promiscuity, whereas EPMs are described as 'sexual parasitism.' Indeed, sexual selection refers to the females who deposit eggs in a neighbor's nest as 'brood parasites.'

For social selection, extrapair parentage is a system of genetic side-payments that stabilizes the social arrangement of economic monogamy when individuals differ asymmetrically in their capacities to contribute to rearing offspring. Distributed parentage also spreads the risk of nest mortality across a network of nests, acting as a social-insurance policy.

Secondary sexual characteristics. According to sexual selection, females choose mates on the basis of secondary sexual characteristics like the peacock's tail and the stag's antlers so that their own sons will be similarly attractive and successful at mating. The 'beauty' of a male's ornaments is how she apprehends his good genes; they are, in effect, 'condition indicators' of genetic quality.

Social selection sees ornaments, both male and female, differently: they are 'admission tickets' to power-holding cliques that control the resources for successful rearing of offspring, including the opportunity for mating, safety of the young from predation risk, and access of the young to food. Accordingly, a peacock's tail, a rooster's comb, etc., facilitate male-male interactions, and females are indifferent to them.

Admission tickets are expensive because the advantages to membership in a clique reside in the power of monopoly, which is diluted when membership is expanded. By requiring a high price of admission, the monopolistic coalition is kept exclusive, maximizing the benefits to those within. Ornamental admission tickets belong to a class of traits called 'social-inclusionary traits' that are needed to participate in the social infrastruc-

ture within which offspring are reared. Other traits include those needed for communication and cognition within the social infrastructure. Not possessing such traits, or not participating in social-inclusionary behaviors, is reproductively lethal.

The strong natural selection imposed by the requirement of membership in power-holding cliques can produce the very fast evolution, including possibly runaway evolution, that has long been the signature of sexual selection. Admission tickets are not the only way to enter power-holding cliques, however. Conceivably, individuals might be recruited to join, and the admission ticket waived, if they supply capabilities or assets valued by the other members. But if the sole benefit from membership is monopolistic, then membership should require an expensive ticket.

Two phenomena in particular present challenges to sexual selection.

Sexual monomorphism. Species in which males and females are identical in appearance pose a direct contraction to Darwinian templates, which say males should be showy and females drab. Darwin dismissed these species as having females that lack an aesthetic sense. In social-selection theory, sexual monomorphism reflects the absence of same-sex power-holding cliques whose membership requires admission tickets. This should occur in ecological situations where the most economically efficient coalition is the coalition of the whole.

Sex-role reversal. Species in which the male is drab and the female showy, the reverse of the peacock/peahen comparison, also contradict the Darwinian 'norm.' In sex-role-reversed species, the male provides more parental investment than the female does by carrying and/or tending the eggs – so the males are in short supply for mating relative to females. In this situation, sexual selection claims that females compete with one another for access to males and become the showy sex, whereas the male remains drab, thus reversing the putative peacock story. This account, even if it were true, cannot be an *explanation* of sex-role reversal – it is merely a *redescription* of the phenomenon. Sexual selection does not say why the male in these species should happen to be the sex providing the higher parental investment. Moreover, the mere existence of sex-role-reversed species challenges a basic tenet of sexual selection – that sex roles can be traced to gamete size – because sex-role-reversed males, like all other males, produce tiny sperm. Thus, gamete size does not entail sex role.

Reversed sex roles are not especially problematic for social selection, because sex roles are always negotiated in local ecological situations anyway. It is in a male's interest to secure some control of the eggs, thereby retaining some control of his evolutionary destiny. In some ecological circumstances, doing so may mean the male winds up with more parental responsibility than the female does.

Social selection provides peripheral narratives for diversity in gender expression and sexuality.

Gender multiplicity. Many species have more than one type of male and female, so that comparing the males to just one template and the females to another is impossible. I call each such template a 'gender.' In many species of fish, lizards, and birds, for example, one male gender has a large body size at reproductive age but must survive several years to attain that size, thereby suffering a high cumulative risk of mortality. But once large, such a male can command a territory

and defend eggs laid in it. Another gender of males reaches reproductive age sooner, does not defend territories, and fertilizes eggs that are in the territories defended by large males. These species exhibit two male and one female genders.

A three-male pattern is observed in some fish and birds, where the large male solicits the help of a medium-sized male. The pair together maintains the territory and participates jointly in courtship with females. The large male allows the medium male to fertilize some of the eggs in the territory. A third type – the small male – meanwhile remains as a competitor to the large- and medium-sized males, fertilizing some of their eggs in spite of their attempts to chase him away.

These species with multiple male and female genders all defy any attempt to apply sexual-selection theory directly because that theory posits only one template each for male and for female appearance and behavior. As a result, sexual selection theory has been augmented with additional narratives to account for more than one gender per sex.

The problem with sexual selection, though, is that it takes the large territory-holding male gender as the reference male, while considering the other genders of males as 'alternative mating strategies' and defining them as 'sexual parasites.' A pejorative language masquerades as description throughout these peripheral narratives of sexual selection. Sexual selection terms the small non-territory-holding male a 'sneaker' who 'steals' copulations that rightfully belong to the territory-holding male. It depicts the sneaker as stealthily entering the large male's territory through a back door.

In fact, small males are often more numerous than large males, so the small male typifies 'maleness' in the species more than the large male does; and the small males often band together in the open to chase away the large male and fertilize eggs in the territory, rather than entering singly and stealthily.

Social selection, in contrast, extends economic theory for the elemental one-male-one-female economic team to larger teams with more 'social niches.' A reproductive social group subsumes the concept of a 'family,' which is a reproductive social group whose members happen to be genetically related. In a reproductive social group, some members are 'prezygotic helpers' – animals that assist in bringing about courtship and mating – together with 'postzygotic helpers' – members who remain at the nest to help rear the offspring that have already been born. Those not included in the reproductive social group's coalition form other arrangements to oppose it, either singly or in coalitions of their own.

In this conceptualization, coalitions may form containing medium-sized males who assist in recruiting females to the nests of the large males who control eggs by means of controlling territory. A large-male/medium-male coalition may then be opposed by a small-male coalition that competes to control the eggs. The complex social dynamics for these scenarios can be approached with cooperative game theory, which deals with the formation and dissolution of coalitions and with the distribution of the team's payoff among its members.

Feminine males. In species with multiple male genders, one gender often has colors or markings somewhat resembling those of females. In popular writing, I have termed these males 'feminine males.' In sexual selection, feminine males are called 'female mimics' – sexual parasites who steal the reproductive

investment of territory-holding males through deceit. A female mimic is disguised as a female to fool the territory-holding male into allowing him to enter the territory-holding male's harem and mate with his females.

This story has not been demonstrated. The capacity of a feminine male to fool a territory-holding male into 'thinking' it is a female implausibly requires gullibility by the territory-holding male as well as craftiness by the feminine male. In fact, the territory-holding male is often a visual predator with well-honed skills at sizing up and identifying prey from a distance; he is not likely to be fooled by a feminine male who only imperfectly resembles a female. Instead, the courtship between the territory-holding male and the feminine male is perhaps best thought of as a job interview prior to joining the team, rather than an elaborate deception.

According to social selection, markings and colors on animals represent 'body English' – how animals tell one another what their social role is, what their intentions are, and what activities they promise to perform. Feminine males are simply participating in a conversation on topics and with words used more frequently by females than by masculine males.

Masculine females. In sexual selection, masculine females are discussed under the rubric of 'female ornaments' – hanging skin flaps (wattles), colored patches of feathers, antlers, and so forth – usually considered male ornaments. Darwin dismissed out-of-place ornaments as male traits accidentally expressed in females – a developmental error. According to social selection, however, masculine females are simply the reverse of feminine males, namely, a female using body English to converse on topics and with words used more frequently by males than by feminine females. Such conversations might involve establishing and defending territories in species where these tasks are sometimes carried out by females. Masculine females appear underreported because feminine males draw more sensational attention.

Homosexuality. Biologists are just now starting to appreciate the extent of homosexuality as a natural part of the social systems of animals in their native habitats. Homosexual behavior is now documented in the primary literature for over three hundred species of vertebrates, not to mention invertebrates; and many cases are reported in news media, popular magazines, and wildlife, agricultural, or hobbyist sources. In some species, homosexuality is mostly between males; in others, mostly between females; and in still others, both. In some, homosexuality is relatively uncommon, occurring in about 10 percent of matings; and in others it is as common as heterosexual matings, accounting for 50 percent of all matings.

Sexual selection explains homosexuality as an inadvertent mistake, as deceit, or as a deleterious trait maintained through peculiar population-genetic mechanisms that promote the persistence of bad genes. A typical deceit narrative postulates that a small male sneaks into the territory of a large male, tires the large male by acquiescing to homosexual copulation, and then proceeds to mate with the females in the large male's harem. This behavioral narrative credits homosexual behavior as adaptive to the small participant, but views it as exploitation – the gay animal exploits the straight animal.

Meanwhile, population-genetic narratives of homosexuality consistently portray homosexuality as a genetic defect or a maladaptive disease maintained by peculiar genetic schemes, such as sexual-

ly antagonistic selection, in which the genes that cause homosexuality decrease fitness in one sex but are maintained in the population because they increase fitness in the other sex. These approaches attempt to encode a homophobic narrative of homosexuality as deleterious and pathological into the hypothesis structure of evolutionary biology, and uncritically ignore the many alternative adaptive hypotheses for homosexuality in the behavioral literature.

According to social selection, not only is homosexuality natural and adaptive, but its explanatory narrative focuses on positive contributions to both parties. Homosexuality is grouped with many other social behaviors involving physical intimacy, such as mutual grooming, mutual preening, sleeping together, rubbing tongues together, and even making interlocking calls and other vocalizations. These behaviors allow two animals to work together as a team, to coordinate their actions so they make moves simultaneously. Furthermore, these behaviors allow animals a tactile sense of each other's welfare. Since, in social selection, the outcomes of cooperative game theory are realized through team play and perception of team welfare, homosexuality is one of the physically intimate behaviors between animals that enable team play.

How might one apply these contrasting theories to the human case?

Human attractiveness. If the theory of sexual selection applies to humans, women are supposed to find handsome men who display traits indicating their genetic quality. Conversely, men are supposed to be promiscuous. According to social selection, males and females choose each other equally, with the criterion for both being compatibility of circumstance, temperament, and inclination that underlies effectiveness at raising offspring in the context of a human social infrastructure.

Human brain. Sexual selection posits the human brain as a counterpart of the peacock's tail, an ornament used by men to attract women. One imagines a man using his big brain to compose lovely sonnets to woo his mate. The problem then is to explain why women have brains. Is a woman's brain a 'female ornament,' as out of place in a woman as a gaudy tail on a peahen? Sexual selection postulates that females use their brains to appreciate the brains of males – only big-brained women are turned on by the sonnets of big-brained men. Social selection, on the other hand, views the human brain as a social-inclusionary trait, a trait needed to participate in the social infrastructure within which offspring are reared. This trait is equally necessary in both men and women because both share the work of rearing offspring.

One might have anticipated that evolutionary biologists would react with glee to an alternative theory to sexual selection. After all, challenges to the theory of relativity, or to the theoretical basis of gravity, elicit calls on Congress to fund expensive experimental facilities lest billiard balls suddenly change trajectories or gravity suddenly evaporate. If sexual selection is wrong, then surely we need to get the matter right lest sex itself disappear. This threat to our personal security seems grave enough to usher in a bonanza of funding so that evolutionary biology might champion the noble mission of making the world safe for sex.

But no, rather than seizing the research opportunity that an alternative to sexual selection provides, evolutionary biologists have, for the most

part, tried to discredit me personally as biased. Even before my book *Evolution's Rainbow* was published, the editorial staff of *Nature* in 2003 encouraged a young journalist, Virginia Gewin, to write: "Some scientists privately wonder if – whether she likes to admit it or not – Roughgarden's own experiences of social exclusion have biased her view of the natural world."[7] When the book appeared in 2004, Alison Jolly's review in *Science* identified me as a "transsexual professor" in the second sentence.[8] Then Sarah Hrdy's review in *Nature* continued with, "This evolutionary biologist becomes a woman, and only then do the problems occur to her."[9] A month later, Robin Dunbar ridiculed my book in *Trends in Ecology and Evolution* (TREE): "Readers of TREE will no doubt be pleased to know that sexual selection is dead so they can now get on with research into more useful topics."[10] Dunbar concludes with the admonition, "It is almost impossible to retain a sense of dispassionate objectivity when you see yourself as an object of your own research." Dunbar is happily unaware that this applies to him as well.

Jerry Coyne followed up in the *Times Literary Supplement*. After outing my former name in the second sentence of his review, he charges that my "laundry list is biased. She ignores the much larger number of species that do conform to sexual selection theory, focusing entirely on the exceptions." In fact, no one knows how many species conform to Darwinian sex-role templates, and many thousands do not, as I have already discussed. Coyne accuses me of being anthropomorphic but then goes on himself to illustrate sexual-selection theory with a human example: "The Guinness Book of Records awards the laurels for reproductive output to a Moroccan emperor who sired more than 900 offspring. The female record – though in some ways more remarkable – is a mere sixty-nine."

Michael Ruse, a philosopher who has written books advocating Darwinism, continued in the *Toronto Globe and Mail*. He dismisses *Evolution's Rainbow* as a "cryptic autobiography" and "polemic" against sexual-selection theory directed to campus audiences in "areas like cultural studies that are big into . . . the hegemony of heterosexism and all that sort of thing."[11] Ruse also plays the transsexual card, excusing himself by saying, "Normally, one would not start discussing a person's thesis by talking about the person herself, but in this case it is both legitimate and necessary." He goes on to argue that the concept of gender cannot be widened to include animals because a bullfrog could never say, "I was a man trapped in a woman's body." Ruse objects to theorizing that homosexuality in animals evolved to promote bonds because this cannot explain human "bathhouse culture."

The gold medal for insult goes to a Peter Conrad writing in a U.K. Sunday newspaper, *The Observer*, *Guardian Unlimited*. He declares *Evolution's Rainbow* to be a "practical joke," refers to San Francisco as "frisky," and disparages my "strange allegorical surname" by

7 V. Gewin, "Joan Roughgarden Profile: A Plea for Diversity," *Nature* 422 (2003): 368 – 369.

8 A. Jolly, "The Wide Spectrum of Sex and Gender," *Science* 304 (2004): 965 – 966.

9 S. Hrdy, "Sexual Diversity and the Gender Agenda," *Nature* 429 (2004): 19 – 21.

10 R. Dunbar, "Is Sexual Selection Dead?" *Trends in Ecology and Evolution* 19 (2004): 289 – 290.

11 M. Ruse, "Why Not a Third Sex? And a Fourth, and . . . " *Toronto Globe and Mail*, July 10, 2004.

claiming my life consists of "tending her mutated physique as if it were a rough garden that has now been weeded and manicured into femininity."[12]

Another angry defense of sexual selection was broadcast by Michael Ghiselin in the magazine *California Wild*. Ghiselin claims a previous article of mine in the same magazine "gives no indication of the author's ulterior motivations for writing it."[13] He proceeds to out me as someone who "at age 51 . . . had himself transformed into Joan Roughgarden" and dismisses *Evolution's Rainbow* as "a work of self-justification." Meanwhile, Giselin privileges himself as an "honest seeker after truth" who does not "want to see the issues misrepresented."

Similarly, together with collaborators, I recently presented in *Science* our two-tier alternative to sexual-selection theory, introducing cooperative game theory for the behavioral tier, as well as conventional competitive game theory for the evolutionary tier.[14] It evoked ten indignant letters of reply that were also published in *Science*, representing over forty authors.[15] Nick Atkinson of *The Scientist* contacted the sexual-selection defenders and recorded comments ranging from "the 'new' theory is merely part of the existing body of Darwinian sexual selection theory," from Kate Lessells of the Netherlands Institute of Ecology, and "sexual selection theory . . . happily includes all of the points Roughgarden et al. try and make," from David Shuker at the University of Edinburgh, to "many people felt that this was completely shoddy science and poor scholarship, all motivated by a personal agenda," from Troy Day at Queens University in Canada.[16] Put together, these comments claim at once that social selection is part of sexual selection and also bad scholarship, a position sexual selectionists should find discomforting.

Sexual selectionists also attempt to intimidate by noting I have been the "target" of critiques "involving more than 50 distinguished behavioral ecologists," according to a recent anonymous grant reviewer, as though I should now be silent. The panel summary then charges that "the PI [Roughgarden] does a major disservice to the field and to her own research . . . . The panel feels that the PI is setting up a straw man." Is sexual selection a straw man?

In response to this devastating reception, I sought to change my name and escape to Tierra del Fuego. But the village elders there declined my visa application. Having now been declared *persona non grata* even to the ends of the earth, I am left no choice but to stand my ground. Darwin's theory of sexual selection is locker-room bravado projected onto animals and then retrieved as though a fact of nature.

Fortunately, the relentless dirge of anger directed against *Evolution's Rainbow* was punctuated briefly in 2005, when the book received thoughtful and extensive reviews by Robert Dorit in *The*

12 P. Conrad, "Frisky in Frisco," *The Observer, Guardian Unlimited*, August 1, 2004.

13 J. Roughgarden, "The Myth of Sexual Selection," *California Wild* (Summer 2005); M. Ghiselin, "Sexual Selection," *California Wild* (Winter 2005).

14 J. Roughgarden, M. Oishi, and E. Akçay, "Reproductive Social Behavior: Cooperative Games to Replace Sexual Selection," *Science* 311 (2006): 965 – 969.

15 Etta Kavanagh, ed., "Debating Sexual Selection and Mating Strategies," *Science* 312 (2006): 689 – 697.

16 Nick Atkinson, "Sexual Selection Alternative Slammed: Biologists Write to *Science* to Defend the Theory of Sexual Selection," *The Scientist*, May 5, 2006.

American Scientist and Douglas Futuyma in *Evolution*.[17]

The criticisms of *Evolution's Rainbow* and later work do not deal with substantive issues, and instead employ personal attack to deflect attention from the seriousness of sexual selection's limitations. I have evidently stumbled upon a Darwingate. The invective in the criticisms may signal unease at unraveling a coverup, a fear that decades of professional and personal investment in the sexual-selection narratives will collapse.

The invective may also scratch the vein of a deep-seated transphobia among evolutionary biologists. Legitimizing diverse expressions of gender and sexuality is clearly threatening. Ghiselin issues the threat explicitly:

> Had Roughgarden simply argued that there is more to reproductive strategies than just male combat and female choice, and presented some reinterpretations of the data, there would have been no reason to respond. But here we have an effort to discredit perfectly good science.

Thus, it would be okay to add a little fluff to sexual selection to account for gay and gender-bending animals, so long as I do not touch the central narrative.

I invite readers to consider the possibility that sexual selection is completely wrong because it started out on the wrong track, and that refusing to reconsider sexual selection's grounding assumptions is leading subsequent research to compound the original errors. Only by devising and testing alternative evolutionary theories of reproductive social behavior can we truly strengthen evolutionary biology.

17 R. Dorit, "Rethinking Sex," *American Scientist* 92 (5) (September – October 2004); D. Futuyma, "Celebrating Diversity in Sexuality and Gender," *Evolution* 59 (2005): 1156 – 1159.

Brian Charlesworth

Why bother? The evolutionary genetics of sex

It is an astonishing finding – derived from more than a century of painstaking research into the cellular basis of reproduction in a huge variety of organisms – that sex is the most prevalent mode of reproduction among the great division of life (the *eukaryotes*), which includes animals, green plants, algae, fungi, and protozoa.[1]

To geneticists, sexual reproduction is the formation of a new individual from a cell (*zygote*) produced by the union of two different cells (*gametes*). In the case of animals, the gametes are an egg and a sperm. When the resulting individual reproduces, its gametes contain a patchwork of genetic information derived from each of the two gametes that generated it (a process called *recombination*). Recombination happens regardless of whether the zygote divides to form many separate single-celled individuals (as in simple organisms, like yeast), or whether the daughter cells remain associated to produce a complex multicellular organism, like an oak tree or a person. In contrast, with asexual reproduction, a single parent produces offspring that are usually exact genetic replicates of itself.

We have good grounds for believing that regular sexual reproduction evolved very early in the history of the eukaryotes, and that most instances of asexual reproduction among them are the result of subsequent evolution. All mammals and all birds reproduce sexually, but only

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1 I thank Deborah Charlesworth for her comments on the manuscript. J. Maynard Smith, *The Evolution of Sex* (Cambridge: Cambridge University Press, 1978); G. Bell, *The Masterpiece of Nature* (London: Croom-Helm, 1982). A regular cycle of sexual reproduction is absent from the other division of life (*prokaryotes*), which encompasses bacteria and viruses. There are, however, often detectable exchanges of pieces of genetic information between individuals within prokaryote populations, involving a variety of processes that act as a substitute for sex. See J. Maynard Smith, N. H. Smith, M. O'Rourke, and B. G. Spratt, "How Clonal are Bacteria?" *Proceedings of the National Academy of Sciences* 90 (1993): 4384 – 4388.

a few dozen species of reptiles, amphibia, and fish reproduce asexually.[2] Similarly, only about 0.1 percent of the over three hundred thousand species of flowering plants are thought to reproduce asexually.[3]

Most asexual species seem to be of recent evolutionary origin, since they have close sexual relatives and evidently have not had time to proliferate into diverse forms.[4] There are only one or two cases where an asexual group of multicellular organisms seems to have been around long enough to diversify, most notably the Bdelloid rotifers. These minute animals, which live in transient freshwater habitats (such as drops of water on mosses), have been classified into several hundred species on the basis of anatomical and molecular differences among them. No males have ever been found – and study of their genomic makeup supports the view that they represent an ancient asexual group, many millions of years old.[5] Nonetheless, the Bdelloid rotifers represent the exception, and not the rule.

Asexuality seems to be more common among single-celled eukaryotes, like protozoa, but the difficulty of studying their life cycles in nature makes it hard to exclude the cryptic occurrence of sex. And even so, regular sexual reproduction is widely distributed among single-celled eukaryotes. The common features of the cellular and molecular mechanisms involved in sexual reproduction in these and multicellular eukaryotes show that the cellular machinery involved in sexual reproduction probably had a single origin around the time of the evolution of the first eukaryotes, about two billion years or so ago.

The big question about sex is: why bother? It seems much simpler for organisms to produce offspring without going to the trouble of making gametes, which in the case of animals like ourselves can only meet each other as a result of elaborate behavioral and anatomical adaptations. Why should there be males? Why don't women simply produce babies in the same way as Bdelloid rotifers: an egg is generated by the same process of cell division that makes the cells of the rest of the body; it then develops into an offspring. Indeed, why not just split in half and regenerate the missing half, as some flatworms do?

These questions are not new: as Edward Gibbon maliciously pointed out, the early fathers of the Christian church were sorely troubled by the question of why God had not provided human beings with "some harmless mode of vegetation" with which to propagate themselves. Their objections to sex were, of course, purely moral. But even the amoral intellectual framework of neo-Darwinian evolutionary biology has raised a searching question concerning the prevalence of sex – or, more specifically, about its so-called twofold cost, which John Maynard Smith brought to the attention of biologists in 1971.[6] One can

2 Maynard Smith, *The Evolution of Sex*; Bell, *The Masterpiece of Nature*.

3 A. M. Koltunow, "Apomixis – Molecular Strategies for the Generation of Genetically Identical Seeds Without Fertilization," *Plant Physiology* 108 (1995): 1345 – 1352.

4 Maynard Smith, *The Evolution of Sex*; Bell, *The Masterpiece of Nature*.

5 I. Arkhipova and M. Meselson, "Deleterious Transposable Elements and the Extinction of Asexuals," *Bioessays* 27 (2005): 76 – 85.

6 J. Maynard Smith, "The Origin and Maintenance of Sex," in G. C. Williams, ed., *Group Selection* (Chicago: Aldine-Atherton, 1971), 163 – 175.

understand this cost by considering a sexual population with an equal number of males and females in each generation. Now imagine that within this population a mutation arises that causes females to reproduce asexually by means of all-female offspring. If the mutation has no other effect, the average number of offspring per mother will be unchanged. The mutant females will thus produce twice as many daughters as their sexual competitors. A simple calculation shows that the frequency of the mutants within the female population will double each generation while they are still rare, and that they will spread rapidly through the population, replacing the sexual females and causing the extinction of males.

We can make a similar but slightly more complicated argument for hermaphrodite organisms, which include most flowering plants and many marine invertebrates. Here the benefit of a mutation that produces asexual eggs is closer to one-and-a-half-fold than twofold – still a substantial advantage.[7] A mutation that causes fertilization of the egg cells by the male gametes of the same individual, without significantly reducing the individual's ability to fertilize others' eggs, also has a considerable advantage.[8] But though many hermaphrodites can fertilize themselves, the majority of hermaphrodite species reproduce primarily by matings between separate individuals (*outcrossing*).

The results of these exercises in population-genetic calculations show how surprising it is that sexual species are so common and have not rapidly evolved either asexual reproduction or (in the case of hermaphrodites) complete self-fertilization. The question of why hermaphrodites avoid self-fertilization has turned out to be the easier one to answer, as was shown by Charles Darwin himself. The answer lies in the phenomenon of *inbreeding depression*: the viability and fertility of the progeny of matings between close relatives are usually much lower than those of the progeny of matings between unrelated individuals. Darwin compared experimentally produced individuals, which had been created either by self-fertilization or outcrossing in many different species of plants. He found an almost universal tendency for the performance (survival, size, seed production) of the self-fertilized progeny to be much worse than that of the outcrossed progeny.[9] He concluded, rightly, that natural selection disfavors self-fertilization. Subsequent calculations have shown that a reduction of about 50 percent in fitness to self-fertilized progeny will prevent the spread of a mutation that causes self-fertilization.[10] Much larger reductions are often observed in outcrossing species.[11] Oddly, until the 1970s, botanists working on

7 D. G. Lloyd, "Benefits and Handicaps of Sexual Reproduction," *Evolutionary Biology* 13 (1980): 69 – 111; B. Charlesworth, "The Cost of Sex in Relation to Mating System," *Journal of Theoretical Biology* 84 (1980): 655 – 671.

8 R. A. Fisher, "Average Excess and Average Effect of a Gene Substitution," *Annals of Eugenics* 11 (1941): 31 – 38.

9 C. R. Darwin, *The Effects of Cross and Self Fertilisation in the Vegetable Kingdom* (London: John Murray, 1876).

10 Lloyd, "Benefits and Handicaps of Sexual Reproduction"; Charlesworth, "The Cost of Sex in Relation to Mating System."

11 C. Goodwillie, S. Kalisz, and C. G. Eckert, "The Evolutionary Enigma of Mixed Mating Systems in Plants: Occurrence, Theoretical Explanations and Empirical Evidence," *Annual Reviews of Ecology, Evolution and Systematics* 36 (2005): 47 – 79; S. C. H. Barrett, "The Evolution of Plant Sexual Diversity," *Nature Reviews Genetics* 3 (2002): 274 – 284.

the mating systems of plants largely ignored Darwin's explanation, perhaps because they failed to grasp the implications of population genetics for understanding evolution.

This explanation of the prevalence of outcrossing raises two further questions. First: why are all hermaphrodite species not highly outcrossing? Second: what causes inbreeding depression? There are, indeed, many examples of hermaphrodite species that reproduce nearly exclusively by self-fertilization, including the nematode worm *Caenorhabditis elegans* and the plant *Arabidopsis thaliana*, two of the most important 'model organisms' used in the study of cellular and developmental processes. Just as with asexuality, highly inbred species seem often to have originated fairly recently in evolutionary time from outcrossing relatives.[12] This is true of the two I just mentioned.

As was also clear to Darwin, the probable cause of a transition from outcrossing to inbreeding is difficulty in obtaining mates: if you cannot find someone else to fertilize your eggs, it is better to fertilize them yourself, even if the offspring are of inferior quality. This situation can arise when a species invades a new habitat where population density is low. As expected on this idea, oceanic island populations are rich in inbreeders compared with animals and plant populations on the mainland from which the colonizing species came. Many other geographical patterns associated with breeding systems support this interpretation.[13] Thus, it seems likely that inbreeding depression will generally maintain outcrossing, unless fertilization success in outcrossing falls below a threshold value, underneath which there is a net reproductive advantage to inbreeding.

Darwin, however, did not have a convincing explanation for inbreeding depression. But modern genetics has led to the realization that inbreeding makes individuals *homozygous*. In other words, the copy of a given gene received through the egg is identical to that received through the sperm. If this gene carries a harmful mutation, which happens at a low but not entirely negligible frequency, the offspring will receive only the mutant type. In an outcrossing population, on the other hand, a rare harmful mutation will nearly always be carried in a single dose, since the copy of the gene in the other gamete that forms an individual will usually be normal.

The exposure of harmful mutations in a gene in double dose, with no normal copy present, is thought to be a major source of inbreeding depression.[14] Although such mutations are individually very rare within a population, there are so many genes in the genome (about twenty-five thousand in the case of humans) that, collectively, we all carry several hundred harmful mutations (different ones are present in different people).[15] Most of these have very small effects on fitness, but one or two among the mutations an individual carries can be lethal when made homozygous, as experiments on the effects of inbreeding in fruit flies and fish have demonstrated.[16]

12 Ibid.

13 Ibid.

14 B. Charlesworth and D. Charlesworth, "The Genetic Basis of Inbreeding Depression," *Genetical Research* 74 (1999): 329–340.

15 S. Sunyaev et al., "Prediction of Deleterious Human Alleles," *Human Molecular Genetics* 10 (2001): 591–597.

16 M. J. Simmons and J. F. Crow, "Mutations Affecting Fitness in *Drosophila* Populations,"

We therefore have a well-supported theory of what controls evolutionary transitions from outbreeding to inbreeding in hermaphrodites. Similar considerations probably apply to the less intense forms of inbreeding found in some species with separate sexes. We now need to ask if there are factors that can overcome the twofold cost of sex, and maintain sexual reproduction against mutations causing asexual reproduction, analogous to the effect of inbreeding depression in preventing the spread of mutations causing inbreeding. There has been a long and hard search for these, and it is fair to say that there is still no consensus about which of them is the most important.

It is worth making a couple of points before discussing this question in detail. First, we know that mammals cannot reproduce asexually, because a mammal needs both a paternal and a maternal complement of genes in order to develop successfully from an egg. This is because of a phenomenon known as *imprinting*: some genes are temporarily altered chemically during gamete formation in such a way that they only produce functional products if they enter the zygote through the sperm, others only if they enter through the egg.[17] While only a small minority of the total set of genes is imprinted, failure to express both copies of some of the imprinted genes results in death. It is therefore impossible for a mammalian female to reproduce like a Bdelloid rotifer. We need look no further for an explanation of mammalian sexuality than this developmental requirement. But while the reasons for imprinting are of great interest, and a matter of ongoing debate, they do not concern us here. Imprinting does not provide a universal explanation of the maintenance of sex, since other groups of animals and plants do not have imprinting and contain many examples of asexual reproduction among them.

A second point is that the problem of a large cost of sex does not apply to the origin of sex. The comparative evidence already discussed suggests that sexual reproduction first evolved among single-celled eukaryotes, which lacked any differentiation of gametes into male and female, i.e., all gametes were of approximately equal size, as is the case today in many single-celled organisms.[18] With no asymmetry of gamete size, there is only a slight automatic advantage to asexual reproduction.[19] This means that a small advantage to a genetic variant conferring the ability to reproduce sexually would allow it to spread. In principle, therefore, we can explain the origin of sex by identifying the sources of such an advantage.

Annual Review of Genetics 11 (1977): 49 – 78; A. McCune et al., "A Low Genomic Number of Recessive Lethals in Natural Populations of Bluefin Killifish and Zebrafish," *Science* 296 (2002): 2398 – 2401.

17 I. M. Morison, J. P. Ramsay, and H. G. Spencer, "A Census of Mammalian Imprinting," *Trends in Genetics* 21 (2005): 457 – 465.

18 The distinction between male and female gametes is an ancient one, but it is not a requirement for the sexual fusion of gametes. Once sex evolved, there was probably selection pressure in many (but not all) groups for some individuals to produce numerous, small, mobile gametes (the male gametes), and others to produce a few, large, immobile ones (female gametes). See Maynard Smith, *The Evolution of Sex*; M. G. Bulmer and G. A. Parker, "The Evolution of Anisogamy: A Game-Theoretic Approach," *Proceedings of the Royal Society B* 269 (2002): 2381 – 2388.

19 Maynard Smith, *The Evolution of Sex*; Charlesworth, "The Cost of Sex in Relation to Mating System."

We still have to solve the problem of how sex is maintained in the face of its cost in species with male and female gametes. One solution is to appeal to the differential extinction of asexual populations.[20] Imagine the following situation: we have a set of sexually reproducing species, among which from time to time a member is successfully invaded by an asexual mutant. However, the asexual species do not do as well as their sexual rivals, in terms of their long-term ability to survive extinction, and so they eventually disappear. With the right balance between this species-level disadvantage and the rate of conversion from sex to asex, the majority of species will remain sexual.

This explanation fits many of the broad patterns of the distribution of asexuality. Similar patterns apply to highly inbreeding species; once a species has become highly inbreeding, it behaves in many ways as though it is asexual. This is because individuals that are homozygous for most of their genes produce offspring that are genetically nearly identical to themselves. It seems that the long-term evolutionary fate of both inbreeders and asexuals may be such that extinction is much more likely for them than for their outcrossing, sexual relatives.[21]

Evolutionary biologists are, for good reason, rather hostile to the idea that selection among species plays a major role in evolution, compared with selection among individuals. As R. A. Fisher once wrote, "Unless individual advantage can be shown, natural selection affords no explanation of structures or instincts which appear to be beneficial to the species."[22] However, even Fisher was prepared to make an exception for "sexuality itself" and proposed an explanation for the maintenance of sex based on the inability of asexual species to evolve as rapidly as sexual rivals.[23]

It may, therefore, be sufficient to look for factors that confer a quite modest advantage to sexual reproduction, not necessarily large enough to prevent invasion by an asexual mutant, but which cumulatively increase chances of survival in the long run. There is no shortage of candidates; indeed, as the Grand Inquisitor said in *The Gondoliers*, "[T]here is no probable, possible shadow of doubt – no possible doubt whatever . . . " that we have identified the major candidates. As in his case, however, we do not know which is the right one, and of course the different possibilities are not mutually exclusive. I will only briefly survey some of the major theories under discussion, as well as some of the relevant empirical evidence.[24]

The major advantage of sexual reproduction is the fact that genetic recombination can only occur with sex. Briefly mentioned at the beginning of this essay, this process now needs to be defined more precisely. Gametes are hap-

20 Maynard Smith, *The Evolution of Sex*.

21 Ibid.; Barrett, "The Evolution of Plant Sexual Diversity."

22 Fisher, "Average Excess."

23 R. A. Fisher, *The Genetical Theory of Natural Selection. A Complete Variorum Edition* (Oxford: Oxford University Press, 1999).

24 Maynard Smith, *The Evolution of Sex*; Bell, *The Masterpiece of Nature*; R. E. Michod and B. R. Levin, eds., *The Evolution of Sex* (Sunderland, Mass.: Sinauer, 1988); N. H. Barton and B. Charlesworth, "Why Sex and Recombination?" *Science* 281 (1998): 1986 – 1990; S. P. Otto and T. Lenormand, "Resolving the Paradox of Sex and Recombination," *Nature Reviews Genetics* 3 (2002): 256 – 261.

loid cells – they contain only one copy of each gene in the genome. The genes are parts of DNA molecules called *chromosomes*, and each chromosome carries a set of hundreds or thousands of genes concerned with different cellular functions. (In the human genome, there are twenty-three different chromosomes in an egg or a sperm cell.) In a primitive unicellular organism, such as the green alga *Chlamydomonas*, the two gametes fuse to form a zygote. The zygote is thus *diploid*, i.e., it contains two sets of chromosomes, one from each parental gamete. After a resting phase, the zygote then undergoes two cell divisions called *meiosis*, but each chromosome only undergoes one round of division. The number of chromosomes is thereby reduced to the haploid number. If this did not happen, chromosome numbers would double at each cycle of sexual reproduction.

An extraordinary thing happens at the first division of meiosis: each pair of maternal and paternal chromosomes comes together, and the partners line up beside each other. A number of breaks occur at the same place on each partner, and these are repaired in such a way that the material on each partner is now partly maternal and partly paternal, in a reciprocal pattern. The resulting products then part from each other at the first division of the cell. This is followed by the second division, resulting in four haploid cells, in which each chromosome is made up of segments of paternal and maternal material. These cells go on dividing by the normal cell division process, in which chromosomes split into two daughter chromosomes. Eventually, these differentiate into gametes, which fuse with other gametes to restart the cycle.

This basic pattern is found throughout the single-celled eukaryotes, forming a major part of the evidence for the ancient origin of sex. Much the same holds true for animals like ourselves, except that with us the diploid zygote divides by normal cell divisions to produce the diploid cells that make up most of our body. Meiosis is postponed until the production of eggs or sperm in the reproductive organs.

Accompanying the process of sexual fusion of cells is, therefore, a process of mingling of material from maternal and paternal chromosomes. This is why no two people in the world are exactly alike genetically, except for identical twins. To see this, consider the case of a mating between two *Chlamydomonas* gametes, which differ at two different locations on a chromosome. One gamete is *AB* and the other is *ab*, where the alternatives at each site are *A* versus *a* and *B* versus *b*, respectively. The zygote will contain both *AB* and *ab*. In the absence of recombination, the gametes derived from this zygote will be either *AB* or *ab*, with equal probability. But with recombination, we will also see the combinations *Ab* and *aB*. The frequency with which these are found is the *recombination frequency* for the two locations – and it is higher, the larger the distance between them on the chromosome.

Geneticists discovered recombination by carrying out crosses in which they could detect the presence of the variants at the two locations because they affected visible properties of the individuals carrying them. We can measure recombination frequencies by counting the numbers of offspring of the four different types. Exactly the same holds for humans as for *Chlamydomonas*, except that our diploidy and small family sizes make it much harder to measure recombination. Genes at distant locations on the same chromosome, and genes on differ-

ent chromosomes (which behave independently of each other during meiosis), have recombination frequencies of 50 percent. Locations very close to each other on a human chromosome typically have a recombination frequency of around one in one hundred million.

Recombination through sexual reproduction allows the production of all possible combinations of variants at different locations in the genome. This has some staggering implications. Suppose we have one thousand locations in the genome, each with two different variants in the population. The number of possible types of gametes that can exist is then 2 raised to the power of 1000, i.e., approximately 10 followed by 300 noughts. It is currently estimated that there are about six million variants at chromosomal sites in human populations, so the true number of combinations is something like 10 followed by 1.8 million noughts.

But if there were no sex and no recombination, new mutations would remain associated with whatever genetic variant they happened to be combined with originally. If in our example the population were initially *ab*, a mutation to *A* would create *ab* and *Ab*. The population is likely to be mostly *ab* for a long time, so that a mutation from *b* to *B* would probably arise in an *ab* gamete, giving just three types in the population (*ab*, *Ab*, and *aB*). The combination *AB* can be generated only by a (very unlikely) further mutation event, or by recombination in zygotes that carry both *aB* and *Ab*. This is not possible if there is no sexual reproduction, or if the population is highly inbred (in the latter case, nearly all zygotes carry identical pairs of gametes, so that recombination has no effect). Indeed, populations that reproduce asexually, or by very close inbreeding, characteristically show far fewer combinations of variants at different locations than do sexual populations, just as this argument predicts.

Now, if *A* and *B* represent variants that confer higher fitness on their carriers, the combination *AB* is likely to be the fittest of the four, yet it is unlikely to be produced in the absence of sex and recombination. This suggests that these facilitate the action of natural selection, by speeding up the production of selectively favorable combinations of genetic variants. This idea was first clearly stated around 1930 by R. A. Fisher[25] and H. J. Muller,[26] and still forms the core of much thinking about the evolutionary advantage of sex.

This effect can be realized in numerous different situations. One is when a population faces selection pressure to adapt to a new environment. Under a wide range of circumstances, sex and recombination then help to accelerate adaptation. Moreover, mathematical models demonstrate that genetic factors that influence the frequency of recombination also increase in frequency in the population under these conditions, because they become associated with the favorable gene combinations they create.[27] Environments that continually change – such as those created by interactions between hosts and their parasites, which are constantly adapting to each other – are especially likely to create selection pressures of this kind. Some have suggested that selection pres-

25 Fisher, *The Genetical Theory of Natural Selection*.

26 H. J. Muller, "Some Genetic Aspects of Sex," *American Naturalist* 66 (1932): 118 – 138.

27 Barton and Charlesworth, "Why Sex and Recombination?"; Otto and Lenormand, "Resolving the Paradox of Sex and Recombination."

sures from parasites may be the major factor favoring sex.[28]

The possibility that adaptation to a new environment promotes increased recombination has been demonstrated by experiments involving selection for traits such as DDT resistance in flies: these have shown increases in recombination frequencies in addition to the trait under selection.[29] A recent experiment on flour beetles revealed a similar effect of selection for resistance to a parasite.[30] Furthermore, experiments where a novel environment challenges *Chlamydomonas* populations show that populations that are allowed to reproduce sexually evolve faster than populations that can only reproduce asexually.[31] Therefore, a body of experimental data supports the plausibility of this type of mechanism, although it falls short of proving that it is indeed the main cause of the origin and maintenance of sex.

Recombination also allows more efficient removal of harmful mutations from the genome. While natural selection usually keeps these mutations at very low frequencies, again the sheer number of genes in the genome ensures that the total number of such mutations in the population is very large. Mathematical models demonstrate that it is harder for the population to remove deleterious mutations from the genome in the absence of recombination, creating a selection pressure to maintain recombination frequencies at a nonzero level.[32] These models predict that if recombination stops, harmful mutations would eventually become more prevalent, even spreading throughout the species.[33]

The Y chromosomes of many species with separate sexes, including humans, provide a test case. Here, males have a Y chromosome and an X chromosome, which pair up at meiosis but only recombine over a very small portion of their length. Females have two X chromosomes, which recombine normally with each other at meiosis. In mammals, the Y carries a gene that causes individuals to develop as males; in the absence of an intact Y chromosome, an embryo will develop as a female. Thus, the Y chromosome determines gender. But, paradoxically, its lack of recombination means that most of the Y behaves like an asexual genome. This makes it very vulnerable to the accumulation of harmful mutations. Despite clear evidence from some remaining genetic similarities that the human X and Y chromosomes were once almost identical in genetic makeup (about two hundred million years ago), only a handful of genes out of the thousand or so that were originally present on the Y now remains – thus, it is *degenerate*.[34]

28 Barton and Charlesworth, "Why Sex and Recombination?"; Otto and Lenormand, "Resolving the Paradox of Sex and Recombination"; W. D. Hamilton, "Sex Versus Non-sex Versus Parasite," *Oikos* 35 (1980): 282 – 290.

29 S. P. Otto and N. H. Barton, "Selection for Recombination in Small Populations," *Evolution* 55 (2001): 1921 – 1931.

30 O. Fischer and P. Schmid-Hempel, "Selection by Parasites May Increase Host Recombination Frequency," *Biology Letters* 1 (2005): 193 – 195.

31 N. Colegrave, "Sex Releases the Speed Limit on Evolution," *Nature* 420 (2002): 664 – 666.

32 Barton and Charlesworth, "Why Sex and Recombination?"; Otto and Lenormand, "Resolving the Paradox of Sex and Recombination."

33 W. R. Rice, "Experimental Tests of the Adaptive Significance of Sexual Reproduction," *Nature Reviews Genetics* 3 (2002): 241 – 251.

34 B. T. Lahn and D. C. Page, "Four Evolutionary Strata on the Human X Chromosome," *Sci-*

This pattern has been observed repeatedly in other groups where Y chromosomes have evolved, quite independently of each other.[35] In a species of fruit fly called *Drosophila miranda*, a whole chromosome has become attached to the Y chromosome, and is inherited in exactly the same way as the original Y. It is, however, only about one million years old, giving us an opportunity to study the early stages of its degeneration.[36] Harmful genetic changes on the new Y chromosome have clearly accumulated:[37] about one-third of the genes that have been examined contain mutations that destroy their function, and all of the genes seem to have some minor but harmful mutations.[38] The evolution of Y chromosomes thus provides particularly striking evidence that the removal of recombination from a large part of the genome leads to its gradual evolutionary decline.

In this case, the survival of the population is not endangered, since selection has acted to compensate for the degeneration of the Y by raising the rate at which gene products arise from the unimpaired X chromosome in males.[39] However, in an asexually reproducing species, it seems likely that the accumulation of harmful mutations would continue until the species suffers a serious loss of fitness. Coupled with the reduced ability to adapt to changes in the environment, the apparent inability of most asexual or highly inbreeding species to maintain themselves does not seem surprising. Indeed, it is actually the persistence of apparently ancient asexual groups, like the Bdelloid rotifers, that raises the most challenging questions about the evolutionary significance of sex.[40]

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ence 286 (1999): 964 – 967; D. Charlesworth, B. Charlesworth, and G. Marais, "Steps in the Evolution of Heteromorphic Sex Chromosomes," *Heredity* 95 (2005): 118 – 128.

35 Ibid.

36 Ibid.; M. Steinemann and S. Steinemann, "Enigma of Y Chromosome Degeneration: Neo-Y and Neo-X Chromosomes of *Drosophila miranda* a Model for Sex Chromosome Evolution," *Genetica* 102/103 (1998): 409 – 420; D. Bachtrog, "Sex Chromosome Evolution: Molecular Aspects of Y Chromosome Degeneration in *Drosophila*," *Genome Research* 15 (2005): 1393 – 1401.

37 Steinemann and Steinemann, "Enigma of Y Chromosome Degeneration."

38 Bachtrog, "Sex Chromosome Evolution."

39 I. Marín, M. L. Siegal, and B. S. Baker, "The Evolution of Dosage Compensation Mechanisms," *Bioessays* 22 (2000): 1106 – 1114.

40 Maynard Smith, *The Evolution of Sex*; Arkhipova and Meselson, "Deleterious Transposable Elements."

Anne Fausto-Sterling

Frameworks of desire

Genes versus choice. A quick and dirty search of newspaper stories covering scientific research on homosexuality shows that the popular press has settled on this analytic framework to explain homosexuality: either genes cause homosexuality, or homosexuals choose their lifestyle.[1]

The mischief that follows such a formulation is broad-based and more than a little pernicious. Religious fundamentalists and gay activists alike use the genes-choice opposition to argue their case either for or against full citizenship for homosexuals. Biological research now arbitrates civil legal proceedings, and the idea that moral status depends on the state of our genes overrides the historical and well-argued view that we are "endowed by [our] Creator with certain unalienable Rights . . . ." Moreover, rather than framing research projects in terms of the whole of human desire, we neglect to examine one form, heterosexuality, in favor of uncovering the causes of the 'deviant' other, homosexuality.

Intellectually, this is just the tip of the iceberg. When we invoke formulae such as oppositional rather than developmental, innate versus learned, genetic versus chosen, early-onset versus adolescent experience, a gay gene versus a straight gene, hardwired versus flexible, nature versus nurture, normal versus deviant, the subtleties of human behavior disappear.

Linear though it is, even Kinsey's scale has six gradations of sexual expression; and Kinsey understood the importance of the life cycle as a proper framework for analyzing human desire. Academics – be they biologists, social scientists,[2] or cultural theorists – have become locked into an oppositional framework. As a result, they are asking the wrong questions

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1 I used the keywords 'genes' and 'homosexuality' in the Lexis-Nexis academic database and searched general newspaper articles for the past two years. In well over one hundred articles, this is the framework for analysis.

2 I except some anthropologists from the broad-brush claim.

and offering intellectually impoverished accounts of the emergence and development of human desire.

A steady patter of research papers linking genes to homosexuality rains down on us, hitting first the scientific journals; then soaking through to the newspapers, blogs, and television news; and finally growing like mold, often wildly reshaped from the initial tiny spore into the mycelia of popular discourse. As intellectual efforts, each of these articles has technical strengths and weaknesses – one can always criticize the sample size, or the method of recruiting study subjects, or the statistical test employed. But most of them share a similar – and problematic – analytical framework.

We can expose this general framework by considering one recent and widely reported article, "A Genomewide Scan of Male Sexual Orientation," authored by six scientists from five prestigious research institutions dotting the United States from California to Washington, D.C.[3] The article introduces the problem by citing scholarly research linking biological events or genetic structures to male-male sexual orientation. While the authors, Brian Mustanski and his colleagues, concede that the evidence is incomplete (they note the limited number of studies that attempt to locate specific genes related to homosexuality) and that nonbiological factors must also be involved (they mention, for example, two recent twin studies that "report moderate heritability estimates[4] with the remaining variability being explained by nonshared environmental influences"[5]), they ultimately argue that the linkages suggested by such studies are important. Since they believe that many genes are likely to be involved, they decided to scan the entire genome (X, Y, and all of the autosomes) in an attempt to fish out a set of genes related in some way to male sexual orientation.

The authors hoped to avoid false positives caused by "gay men who identify as heterosexual"[6] by only studying self-identified gay men. But the idea that there are gay men who identify as heterosexual suggests that there is some biological essence of gayness that can exist genetically and therefore be measured independently of identity and behavior. This begs the definitional question. The state of being gay (in adulthood) might, in fact, reasonably include identity, behavior, and/or desire.

Indeed, in their groundbreaking work, *The Social Organization of Sexuality*, E. O. Laumann and his colleagues studied the interrelation of these components of homosexuality in 143 men who reported any inkling of same-sex desire. Of the men surveyed, 44 percent expressed homosexual desire but not identity or behavior, while 24 percent reported having all three of these components. Another 6 percent expressed desire and behavior but not identity, 22 percent expressed behavior but not desire or identity, 2 percent had only the identity, and 1 percent had the identity and desire but not the behavior.

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3 B. S. Mustanski et al., "A Genomewide Scan of Male Sexual Orientation," *Human Genetics* 116 (4) (2005): 272 – 278.

4 See Kaplan's discussion of the use and misuse of the concept of heritability in Jonathan Kaplan, *The Limits and Lies of Human Genetic Research: Dangers for Social Policy* (New York: Routledge, 2000). S. E. Lerman et al., "Sex Assignment in Cases of Ambiguous Genitalia and its Outcome," *Urology* 55 (2000): 8 – 12.

5 Mustanski et al., "A Genomewide Scan," 273.

6 Ibid.

So Mustanski and colleagues selected a subset of men who, judging from the Laumann survey, would comprise only 27 percent of men expressing some component of homosexuality. Thus, even if the authors were to find genetic linkages, genetic studies of this sort give insufficient theoretical attention to the possible meanings of such findings.

The study also compares the DNA of gay men with those of their heterosexual brothers. Since all siblings share 50 percent of their DNA, the DNA regions (genes) that are present in higher frequency in the genomes of the gay brothers then become regions of interest, as potentially related to male homosexuality. But to find the brothers for the study, the authors advertised in homophile publications, and the mean Kinsey score for their sample was 5.46.[7] Again, this sample would represent, according to the Laumann study, only about one-quarter of men expressing or feeling some aspect of homosexuality.

As Mustanski and his colleagues freely acknowledge, their findings are merely suggestive, providing trails to be followed rather than explanations to be had. In their own words, they identify "candidate genes for further exploration" and hope that any future molecular analysis of "genes involved in sexual orientation could greatly advance our understanding of human variation, evolution and brain development."[8] But here, they reflect the point of view of most classical genetic studies. From Thomas Hunt Morgan's first analysis of the white-eyed fruit-fly mutant to present-day dissection of genes involved in embryo formation or disease, the geneticist's method is to study the mutant in order to understand normal processes. Although Mustanski and his colleagues prefer to consider homosexuality as part of the natural variation of the human species, this fig leaf cannot hide the basic framework of 'normal versus mutant,' which emphasizes fixed typologies rather than biological processes and life-cycle analyses.

If some sociologists can frame homosexuality in ways that better appreciate its complexities, why can't biologists? After all, the tools exist within their field: biologists know how to look at behavior or cellular states as processes or emergences rather than as static categories. In studying the role of gene networks in the process of embryonic development, for example, Eric Davidson and his colleagues have pinpointed 'feed-forward' genetic networks that define cell transitions as the fertilized egg divides and the resulting cells differentiate into specialized tissues. The process is self-generating, involves hundreds of genetic elements and their feedback loops, and progresses historically – each new cellular state provides the necessary conditions for the next one until a stable feedback loop is established.[9] Using a more complex version of a cybernetic thermostat regulation loop, the system maintains a stable differentiated state under a broad range of (though not all) conditions. Conceptually similar approaches have been employed to devise models of the emergence of perceptual competence in de-

7 0=exclusively heterosexual, and 6=exclusively homosexual.

8 Mustanski et al., "A Genomewide Scan," 277.

9 E. H. Davidson et al., "A Genomic Regulatory Network for Development," *Science* 295 (5560) (2002): 1669 – 1678; E. H. Davidson, *The Regulatory Genome: Gene Regulatory Networks in Development and Evolution* (New York: Academic Press, 2006).

veloping human infants.[10] Such dynamic models have room for specific information about gene action during neural development – the sort of information Mustanski and his colleagues seek – but they provide a more productive framework for understanding human desire as a developmental process rather than a typological state.[11]

The Mustanski article illustrates one other – and quite central – component used in biological approaches to the study of homosexuality: the imposition of a sex/gender schematic. The formal analogies are (1) 'male:female' is as 'heterosexual male:homosexual male'; (2) 'male:female' is as 'lesbian:heterosexual female'; and (3) 'masculinity:feminity' is as 'straight male or lesbian:gay male or straight woman.' This is the logic that led Simon LeVay to study the hypothalamus in gay men, hoping to find the same differences in the brains of gay versus straight men that others had reported when comparing the brains of (presumably straight) men and women.[12] The Mustanski paper cites a number of studies based on this concept – a concept that is also often embraced by and acted out within the gay community. The stereotypes seen on *Will and Grace*, or in discussions about butch and femme lesbians, may derive from particular, but certainly far from universal, practices within the gay community. But are they a reasonable basis for biological investigations of homosexuality?

Theo Sandfort recently reviewed academic accounts of the relationship between gender and sexual orientation.[13] He argues that we now understand homosexuality to have multiple and not always synchronous components (attraction, orientation, behavior, self-identification) *and* varied expression according to gender, ethnicity, social class, and culture. In other words, the concepts of masculinity and femininity are no longer seen as bipolar. Rather, "it has become good practice to discuss them as multidimensional phenomena . . . [as] femininities and masculinities."[14] He then places the origin, in American psychology, of the idea that homosexual men are feminine and lesbians masculine, in the work of Lewis M. Terman and Catherine C. Miles, published in 1936. Sandfort reminds us that Terman and Miles identified homosexual men who did not fit this pattern of opposites, but failed to theorize about masculine gay men. Subsequent citations of their work followed suit, and the unquestioned link of male homosexuality to femininity was born. More recent and more multifaceted attempts to correlate gender expression with sexual orientation have yielded correspondingly more complex results.

10 D. Mareschal and S. P. Johnson, "Learning to Perceive Object Unity: A Connectionist Account," *Developmental Science* 5 (2) (2002): 151 – 172.

11 M. D. Lewis, "Self-Organizing Individual Differences in Brain Development," *Developmental Review* 25 (2005): 252 – 277.

12 S. LeVay, "A Difference in Hypothalamic Structure Between Heterosexual and Homosexual Men," *Science* 253 (1991): 1034 – 1037; W. Byne et al., "The Interstitial Nuclei of the Human Anterior Hypothalamus: An Investigation of Sexual Variation in Volume and Cell Size, Number and Density," *Brain Research* 856 (1 – 2) (2000): 254 – 258.

13 T. G. M. Sandfort, "Sexual Orientation and Gender: Stereotypes and Beyond," *Archives of Sexual Behavior* 34 (6) (2005): 595 – 611.

14 Ibid., 599. For a longer discussion of some of the subtleties involved, see also J. H. Gagnon, *An Interpretation of Desire: Essays in the Study of Sexuality* (Chicago: University of Chicago Press, 2004).

Current changes in gay and lesbian subcultures also contribute to the discussion. Among gay men, there has been a move away from femininity, as evidenced by the new gay macho, leathermen, and web sites such as www.straightacting.com ("your masculine gay guy hangout," "a site for guys who like sports and change their own car oil"). An analogous site – http://lesbiansclick.com/Butch-Femme/index.html – offers, as the URL suggests, information and connections for feminine lesbians. At this point, we do not have clear answers to the question of the relationship between gender (masculinity and femininity) and homosexuality, making it difficult to interpret biological studies premised on the idea that gay men are more like (straight) women and gay women more like (straight) men.

Sandfort recommends three research areas that, if carefully investigated, might help us add gender intelligently to a framework for understanding the development of human desire. First, he suggests we learn more about how different groups (men, women, homosexual, heterosexual) understand the concepts of masculinity and femininity. Do self-perceptions correlate with external perceptions? Second, he asks how the social and cultural environment (including gay subcultures that value male femininity and female masculinity) influence individual perceptions of masculinity and femininity. Third, he wonders what the consequences of gender perception and identification are. How do they contribute to sexual practices and desires? And, I would add, do the behaviors train brain circuits or otherwise influence brain development rather than (or in addition to) vice versa?

The 'genes versus choice' opposition is also wanting on the 'choice' side. Most people can understand why the word 'choice' is bad in this context. First, it is easily used – especially in the popular and political arena – to deny rights. This usage implies that just as a person can 'choose' not to commit a crime and thus avoid prosecution, so, too, a person can choose not to be gay and thus avoid homophobic violence or losing out on social benefits afforded to straight people. 'Choice' also carries with it the connotation of conscious control and easy changeability; yet few homosexuals believe that they chose their state of desire. Indeed, the history of homosexuality is filled with stories of people who tried for years to become straight before accepting that, for whatever reasons, they felt how they felt.[15] Nor can heterosexuals choose to change their states of desire. Even those who argue that being gay is a choice would vehemently deny that they could make such a choice.

Rather than defend this oversimplification of choice, academics prefer to frame the opposition to biology in terms of social construction. They point out that regardless of where our sexual desires and our gender senses originate, they are not easily changed. Just as biology does not really imply permanence or determinism, social construction does not necessarily imply flexibility or impermanence. But as with the biologist, the social constructionist has yet to offer a coherent account of the development of individual desire. The conventional constructionists do not explain how the body comes to feel desire, to respond to touch, or to quiver when a person to whom it is attracted walks through the door. Indeed, to date, attempts to offer such accounts have found little empirical support.

15 M. Duberman, *Cures: A Gay Man's Odyssey* (New York: Dutton, 1991).

In *The Mismeasure of Desire*, philosopher Edward Stein reviews a number of constructionist approaches to understanding the origins of sexual desire. Theories based on experience (rather than genes) fall into three major categories: early sexual experience, family dynamics, and childhood gender roles. Early sexual experiences might be either pleasant or unpleasant, and thus might provide positive or negative feedback for either heterosexuality or homosexuality. Such experiences might include seduction or (in this modern era of priestly scandal) sexual aggression – or a chance encounter involving mutual desire. This latter scenario suggests that even young or preadolescent children may have unformed or partly formed sexual desires, and that the chance acting-out of these desires (i.e., the innocent childhood games of 'playing doctor' or kissing under the table) might carve a psychic groove that entrains future encounters.

Stein then analyzes two forms of the second category of explanation, family dynamics. The best known of these are theories stemming from Freud's Oedipal triangle. In Freud's view, male homosexuality appears in families with a strong mother and a distant father, while (male) heterosexuality results from strong paternal identification and, in adulthood, the replacement by other women of the mother as love object. This theory, it should be noted, is unusual in that it attempts to explain heterosexuality as well as homosexuality, although, as many have commented, Freud's theories of female sexuality are more inchoate. Less well known are a variety of sociobiological theories that employ the concept of parental manipulation. According to such theories, parents subconsciously realize that it would be advantageous (evolutionarily speaking) to focus on the reproductive success of some offspring over others. If parents could manipulate the development of homosexuality in some children, so that they forgo reproduction in favor of supporting their siblings, parents could continue their genetic line by increasing the survival chances and reproductive possibilities of selected grandchildren.

Stein considers a third category of experiential theories: childhood gender roles. This approach examines the extent to which children engage in gender-typical behaviors – understood to be culturally specific. Those who are gender typical are thought to become trained in some way by this typicality; such training in turn leads to the development of heterosexual identity and desire. Gender-atypical behavior, on the other hand, is thought to shape adult sexual desire in atypical directions. It is for this reason that many parents who spot early gender-atypical play in a child try hard to change such behavior in hopes of staving off future homosexuality. Some cite early gender atypicality as proof of a biological cause, the logic being that behaviors in the very young must be caused by something genetic, since a two- or three-year-old would be too little to have been influenced by experience. There are other evidential categories – e.g., twin studies, comparative anthropology, and the study of the history of sexuality – that are used by both sides of the genes versus experience, nature versus nurture debate. That the same considerable scholarship supports both sides of supposedly incompatible theories provides more evidence that the analytical framework needs revision.

What evidence exists for the varieties of experiential theories of desire? In the now classical study *Sexual Preference: Its Development in Men and Women*, Alan Bell, Martin Weinberg, and Sue Hammer-

smith interviewed hundreds of gay, lesbian, and straight men and women living in San Francisco. The bulk of interviewees said that childhood and adolescent sexual expression reflected their felt desires but did not determine them. The results also did not find evidence for the Freudian family dynamic or the parental manipulation theories of sexual formation. Subsequent studies have confirmed these findings.

The San Francisco project found what they claimed was a "powerful link between [childhood] gender nonconformity and the development of homosexuality."[16] Men and women who reported childhood gender atypical behaviors were more likely to become homosexual than those who did not. While the study was quick to note that a significant minority of the homosexual study participants was not gender atypical growing up and some of the heterosexual participants were gender atypical in childhood, it nonetheless rested its conclusions on aggregate statistics. Its conclusions, however, cannot be taken at face value.

The Bell, Weinberg, and Hammersmith study, like Kinsey before them and a number since, depends on memory, on retrospection. This approach to understanding the origins of human behaviors deserves some commentary. A retrospective study asks its participants to review, reconsider, reexamine the past. Anyone who engages in such an exercise does so in the light of present knowledge and experience. Current events may provoke new memories; old memories may take on new meanings; and old memories, when reevoked and reconsidered, may get re-stored in the brain in new form. Thus, the very act of asking a person to remember past experiences begins a process of reformulating the present.

Two anecdotes, one personal and one from a recent longitudinal study of coming-out stories, illustrate the 'memory as evidence' problem. When I was a little girl I went off to camp in the country. I was interested in natural history and also navigated socially by developing a niche and staying in it. One summer, I combined niche development with a crush on the (male) camp counselor in charge of the nature 'museum' (a little cabin with found natural objects), and I devoted myself to catching snakes and insects and collecting mushrooms and the like. At the end of the summer, some of the group of girls I had met made little wooden gravestones for each of us. Mine read: "In memory of Anne who liked bugs better than boys." I was twelve at the time. I understood the comment to be about my interest in nature (nobody knew about my crush on the counselor) and remembered it in that way as I made my way through graduate school in biology, met and married my biologist husband, and became a professor of genetics. But fast forward thirty-odd years from the day my little girl friends wrote my epitaph, and I could be found separated from my husband, living on my own, and courting women (one of whom I eventually married). During that transitional courting period, I came upon my miniature grave marker lying in a box of childhood treasures and read it with new insight. Of course it meant that I had been pegged as gay all along. My little friends knew it, but it took me all that time to understand their message. (Or could they have just been writing about bugs after all?) Memories get rewritten; new narratives are scripted.

16 Alan P. Bell, Martin S. Weinberg, and Sue Kiefer Hammersmith, *Sexual Preference: Its Development in Men and Women* (Bloomington: Indiana University Press, 1981), 188.

Lisa M. Diamond offers a more theoretical and formal version of my story as she reflects on her own research on sexual identity formation.[17] Consider three interviews over five years with the same lesbian woman. In the first interview the woman remembers being different as a child, a tomboy, uninterested in dating men. But she only began to think of difference in terms of sexuality in college, after meeting a lot of gay people. Two years later, in the second interview, she remembers being scared by her childhood crushes on female camp counselors. This time around she remembers linking her difference to sexual feelings even as a child. In the five-year follow-up interview her memories are quite explicitly sexual. Diamond asks if one of the versions is the "true" one, and concludes that "the very process of telling self-stories . . . engages multiple psychological mechanisms that promote later consistency by organizing and consolidating preferred versions of events."[18]

Retrospective accounts, be they in formal academic studies or stories swapped with friends or collections of coming-out tales, present a dilemma. On the one hand how better to find out about experiences and emotions than from the very people who are doing and feeling. If feminists did nothing else for academia, they successfully and rightly insisted that science cannot figure out why people do what they do, or how they feel what they feel, without taking into account what the feeling and experiencing individuals themselves have to say. This is the fundamental lesson about women's health care that the many successful editions of *Our Bodies, Ourselves* taught. It is no more acceptable to develop theories of homosexuality without considering what homosexuals themselves have to say. And yet, memory is unreliable. It is not an objective arbiter of past truths but rather a reconciler of past and present. Reconciliation is a lifelong process, and it matters both when in the life cycle a memory is elicited as well as in what culture and historical period.

If we have not figured out how to make proper use of retrospective studies, perhaps prospective studies offer a better approach. As it turns out, there are not many prospective studies to draw on, and the most oft-cited ones, especially by Richard Green and his colleagues, have been roundly criticized. Green studied so-called sissy boys, brought to his psychiatric practice by parents concerned that their sons' gender nonconformity heralded future homosexuality. He was able to follow up on no more than two-thirds of his original sample of sixty feminine boys and found that, compared to controls, a significant number became either homosexual or transsexual as adults. Psychiatrist Ken Zucker confirms these general trends. But questions remain: What happened to the one-third or so children he lost track of? Perhaps they resolved their early gender issues and grew up heterosexual. And how are we to understand the fact that these children were brought to researchers' attention by parents worried about their children's gender nonconformity?

In theory we should be able to design prospective studies that better examine the relationship between early gender nonconformity and later sexuality. The results would be important, but we would be left, still, with the twin prob-

17 L. M. Diamond, "Careful What You Ask For: Reconsidering Feminist Epistemology and Autobiographical Narrative in Research on Sexual Identity Formation," *Signs* 31 (2) (2006): 471 – 489.

18 Ibid., 478.

lems of process and bodies. What leads to gender nonconformity in young children, and how do these early behaviors relate to the emergence at later ages of particular desires? In others words, what are the processes by which desire becomes inherent to the body? And, of course, we would still need to consider how homosexual desire emerges in individuals who were gender conformists as young children as well as how heterosexual desire forms in both gender typical and gender atypical children.

Our current theories are too narrowly framed. They are shaped by the demands of empirical science and by the politics of sexuality. Geneticists simplify their study population to improve their chances of finding important genes while social scientists hone the quality of their survey instruments to improve statistical power. Psychiatrists study the children who land on their doorsteps because it is reasonable to do so and some information seems better than none. Gay activists tell coming-out stories and welcome the scientific approaches that affirm personal memories and feelings. Anti-rights groups write their own narratives and embrace supporting scientific results. It is, quite frankly, a mess.

But it needn't be. Instead of using a dead-end framework to churn out more data, we should debate what it is we want to understand about human sexuality, argue about the forms of knowledge we seek, and consider what the best ways of pursuing such knowledge might be. At the very least, geneticists, neuroscientists, psychologists, sociologists, anthropologists, and humanists of a variety of stripes need to collaborate to move forward. If this does not become an interdisciplinary conversation, then we will be having the same debate fifty years from now.

So what do we want to know and how do we find it out? First, I suggest that we take a page from contemporary dynamic-systems theories. Dynamic systems are complex and interactive. They are also self-organizing and self-maintaining. In some periods of their development they are unstable in that each current state produces the conditions for the next developmental moment[19] – the so-called feed-forward networks. But dynamic systems can also be self-stabilizing. And stability is one feature of human desire that requires explanation. Sexual preference, while not necessarily a permanent feature of a person's psyche, is very stable, as the failure of many decades of efforts to 'cure' people of same-sex desire shows.

On the other hand, dynamic systems can destabilize. If enough of the inter-supporting subunits are disrupted, the entire system can become chaotic; eventually it restabilizes. The new stable state can produce the same types of desire, or a new set of desires may emerge. This, I would argue, is what happens when someone 'changes' sexual preference. The current way of explaining a change in desire appeals to a hidden essence that finally works its way to the surface. Hence people 'discover' that they were always gay but did not know it, and announce that their true nature has finally been revealed. The revelation model is at the heart of endless hours of friendly gossip within the gay community about so-and-so who is surely gay but doesn't know it. It's fun, but offers little sub-

19 For general reading on dynamic systems, consult E. Thelen and L. B. Smith, *A Dynamic Systems Approach to the Development of Cognition and Action* (Cambridge, Mass.: MIT Press, 1994); S. Camazine et al., *Self-Organization in Biological Systems* (Princeton, N.J.: Princeton University Press, 2001).

stance with which to understand human development – both its stability and its mutability.

If we are to understand desire as a dynamic system, we must learn more about the underlying components that produce a stable state (or become destabilized). There are many levels of organization to consider, from the subcellular to the sociocultural. Here I want to displace genes. They don't belong at the bottom of the pyramid or as the first arrow in a linear array of causes. Rather, they belong in the middle. Genes don't cause; they respond. It is important to understand gene activity as a reaction to a particular environment or experience. I use environment very broadly here to include both a cellular environment, say, in the developing embryo, and behaviors and experiences that stimulate gene activity.

The enormous and growing literature on neural plasticity is exemplary. From birth through adolescence, the density of synapses in the human brain – a measure of increasing complexity, connectivity, and specificity – more than doubles. Recent work in the neurosciences shows that central nervous system development is dynamic and activity-dependent. In other words, throughout childhood, the brain grows, and nerve cells make and lose and remake and stabilize multiple connections in response to experiences and behaviors. Gene activity mediates these events but does not cause them in a directional sense.

A dynamic approach, potentially, can give us purchase on the question of how we come to embody desire. While the early and mid-twentieth-century work of philosophers, physiologists, psychiatrists, and psychologists such as Paul Schilder, Douwe Tiersma, and M. Merleau-Ponty should be revisited in this context, I want in this shorter piece to consider the idea of incorporating practices. N. Katherine Hayles[20] distinguishes between inscription, which she likens to Foucauldian discourse, and incorporation. Incorporating practices are repeated actions that become part of bodily memory. Learning to ride a bike is an archetypal example. We start out unable to balance on two wheels, but by trying and trying again, we eventually learn to balance without conscious thought. Our body has memorized the feeling; our muscles and nerves know what to do. Let me articulate the concept in the language of contemporary neuroscience: We form new neural networks, and we expand and train neuromuscular connections. Sometimes the memory is maintained primarily in the peripheral nervous system; other times the neural network involves the brain.

Several features of incorporated knowledge are conceptually interesting for an understanding of the development of human desire. First, there are improvisational elements: incorporation is contextual rather than abstract. Second, incorporated knowledge is, literally, sedimented in the body and thus resists change. Third, because it is habitual, it is not part of conscious memory. But – and this is the fourth point – because it is contextual, sedimented, and nonconscious, it is possible, through the human capacity to narrate our own lives, for it to become a part of our conscious thought as well. In proper cybernetic thinking our narrations of desire can in turn modify incorporated knowledge.

All of which places us at the beginning of a new effort to understand human sexuality. The information already gathered using previous methods and con-

20 N. K. Hayles, "The Materiality of Informatics," *Configurations: A Journal of Literature Science and Technology* 1 (Winter 1993): 147 – 170.

cepts may be of some use in helping to shape new research frameworks, even though I argue that we must radically shift gears, abandoning the old ways and forging new approaches. I urge scholars from the sciences, social sciences, and humanities to devote their energies to developing newly framed analytical projects in discussion with one another. I believe we can recoup the energy lost by continued devotion to the old nature versus nurture, genes versus choice debate and charge our batteries with ideas that promise an understanding of human sexuality as something complex, ever changing, and more delectable for its very dynamism.

Elizabeth Benedict

What I learned about sex on the Internet

A decade ago, I had the peculiar distinction of being dubbed "The Sex Priestess of the Ivy League" by the sassy *New York Observer*. I was teaching in Princeton's creative writing program and promoting a new book, *The Joy of Writing Sex: A Guide for Fiction Writers*, a serious approach to writing sex scenes in literary fiction. Not long after that, there would be more to my moniker than *The Observer* – or my students – knew. For the next two years, while instructing my young charges in the elements of serious fiction, I wrote a monthly column called "Girl Talk," under a pseudonym, for the Japanese edition of *Playboy*. Each piece was a mini-play starring four saucy New York women in their twenties – though I hadn't seen my own for some time – who met at trendy bars and ski lodges to discuss their latest sexual exploits. It was lively banter and a smidgen of soft-core porn.

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I hadn't sought out either publication. Until a publisher asked me to write *The Joy of Writing Sex*, I kept busy teaching and writing literary novels (each with a few sex scenes), book reviews, and the occasional travel piece or personal essay. But the publisher's idea appealed to me. Before I knew it, I was conceptualizing theories and strategies involved in writing about sex, collecting examples from contemporary work, and interviewing writers including Russell Banks, John Updike, Dorothy Allison, and Alan Hollinghurst. In New York, I happened to meet a Japanese editor and book scout and sent her the finished manuscript, hoping she might interest a Japanese publisher. Instead, she phoned me some time later with a far more exotic invitation.

Japanese *Playboy* needed a monthly woman columnist after their New York-based writer suddenly quit. Was I interested? At first I was flummoxed. Writing about sex in fiction came easily to me, but what could I possibly dream up, month after month, that would hold in thrall tens of thousands of randy Japanese men? I balked until she mentioned the mini-play format, which suits my taste for writing dialogue, and the hypergenerous fee – every month for a year. Surely, I could think of something. Once

I did some novelist's research into the sex lives of Gen Xers and New York's latest hot spots, I was turning out my spicy columns the morning they were due. Readers were happy. I was prosperous. The contract continued for a second year, until the editor in Tokyo moved to Venice.

Her departure coincided with the end of my four-year appointment at Princton in 1998. Perhaps as a result of this series of losses – the job, *Playboy*, and the cherished Sex Priestess title – my body soon lurched into another phase, the phase of losing all the estrogen I'd been born with, and then the phase of taking little blue pills every day that gave me back the estrogen in another form. All of these events spanned the period in which we witnessed the collapse of the NASDAQ, where I'd put my *Playboy* winnings; the election of George Bush; September 11; and the warning, issued by the NIH on July 2, 2002, that the little blue pills, also known as hormone-replacement therapy, caused small but distinct increases in a virulent strain of breast cancer, and we all had to stop taking them.

It was one thing for a part-time sex-writing expert to lose a cushy magazine gig and a teaching job with a pension, but quite another to lose the essential hormone that regulates libido and keeps the equipment working. A woman minus her estrogen is like a car with no oil – and no shock absorbers. With my estrogen flowing, in real or synthetic form, it had been easy to imagine the hyperbolic escapades that filled my monthly column. But without it coursing through my blood, I could barely remember what desire felt like. Or do I mean I didn't want to remember, didn't want to be reminded of what was no longer there? Gone was the World Trade Center, gone was my libido.

In this maelstrom of loss, I conflated the personal, the political, and the grim news of the day, more and more of which I began to consume online. Soon after the invasion of Iraq began, I became aware of a slew of alternate news sites, ballast against the media's lust for Shock and Awe and Annihilation and for the neocon con job: sites like www.mediawhoresonline.com, since retired, and www.buzzflash.com, still going strong. Instead of going to sleep with J., my partner of many years, I found myself staying up late many nights, reading the latest flood of news about what had become the great drama of our time, Bush-Cheney-Rove vs. the United States of America – and the Rest of Humanity. In my nightly haze of anxiety and disbelief, I occasionally remembered a friend's funny story. "My wife and I had a huge fight," he said. "I left the house and went to the movies. The theater was mobbed. I said to myself, 'All these people had fights with their wives?'" Adopting his twisted logic, I became convinced that the political landscape had cast a pall on *everyone's* sex life, on those, anyway, who were paying attention. Wasn't everyone awake till all hours reading the same alarming news I was reading – and if not, why not? I sent frantic emails to reporters, I fretted, I worked on political campaigns when the time came. Sex? It had a familiar ring, like the word 'gramophone,' but as a living concept – well, in my addled, scared, estrogen-starved, 3 a.m. brain, it had begun to sound passé. It had begun to sound very September 10.

Reader, I am trying to explain how the former Sex Priestess of the Ivy League came to the abject place I found myself on a recent night: googling the word 'sex.' After midnight. Alone in the living room. Ashamed of typing in those three little letters, as though I had no better

offers at that hour. As though I were desperate. When in fact I was only . . . curious . . . to see what everyone else was up to while my own libido languished.

There is more going on than I had imagined. On my first try, Google coughs up 733,000,000 entries. (I've since learned the number varies enormously, some days down to a mere 44,000,000.) The top entry is "Sex Etc." at www.sxetc.org, "a website by teens for teens" that's straightforward and informational. The quote of the day: "'I give masturbation two thumbs up.' – Ian, 13, Hancock, NY." Reassuring, that the gods of Google have somehow made it easy for the most vulnerable sex consumers to have access to so many facts put forward by people they can trust.

The next entry is "Salon.com Sex Index," leading to all of *Salon*'s entries on the topic, notably www.shoperotictv.com, where I watch an advertising video that appears on TV (not sure what channel), in which two straight-faced women cheerfully sell a Turbo Stroker ($89.99, marked down from $99.99), a mechanical vagina in a canister. It's topped with pink rubbery lips, into which a man can put 'himself' and experience a mechanical squeeze similar to a real woman and/or Portnoy's cored apple. (What a hoot! I'm tempted to wake J. from his sleep – but what if he wants to order one? I suppose I wouldn't blame him.)

Next I find Wikipedia's exhaustive and exhausting entry on 'sexual intercourse,' and then the home page for *Playboy*, where I find, alas, no links to my alma mater in Tokyo. The *Playboy* entry makes me feel nostalgic for the bright, shining days when I made as much money per hour as Bill Clinton's lawyers. But then it's on to the next entry, a tilt toward the sinister: "Sex Addicts Anonymous." The dark sides of sex soon assert themselves on every page of Google, in the prolific Sex Offender Public Registry sites. The first such site belongs to the U.S. Department of Justice. DOJ insignia appear beside the name of our beloved attorney general, Alberto R. Gonzales. But in order to find out where the rapists live in my neighborhood, I must click an 'I Agree' box, and there's no telling what I'm signing up for when I do this. Next: the home pages for *Sex in the City*; the Museum of Sex; the Sex Pistols; the EEOC Sex Discrimination office, which I am surprised still exists; and SWOP USA, the Sex Workers Outreach Program, announcing its upcoming State of Women's Health Conference, in Toledo, Ohio.

The next eight or nine pages are pretty dreary (Frequently Asked Questions about Sex, and lists of sex offenders in Maine, Tennessee, New York, Oklahoma, etc.) until I spot "Anal Sex According to the Word of God." The URL – www.sexinchrist.com – leads me to what must be some of the more bizarre FAQs ever written:

Anal Sex in Accordance with God's Will

Are you saving yourself for your wedding night? The Devil wants you to fail, that's why he puts stumbling blocks in your way. But God wants you to succeed, and that's why he has given us an alternative to intercourse before marriage: anal sex. Through anal sex, you can satisfy your body's needs, while you avoid the risk of unwanted pregnancy and still keep yourself pure for marriage.

You may be shocked at first by this idea. Isn't anal sex (sodomy) forbidden by the Bible? Isn't anal sex dirty? What's the difference between having anal sex before marriage and having regular intercourse?

I thought the Bible said anal sex was a sin.

This is a common misconception. Anal sex is confusing to many Christians because of the attention paid to the Bible's condemnation of homosexual acts. However, it's important to realize that these often-quoted scriptures refer only to sexual acts between two men. Nowhere does the Bible forbid anal sex between a male and female.

In fact, many biblical passages allude to the act of anal sex between men and women. Lamentations 2:10 describes how "the virgins of Jerusalem have bowed their heads to the ground," indicating how virginal maidens should position themselves to receive anal sex. Another suggestive scripture tells of a woman's pride in her "valley" (referring to her buttocks and the cleft between them) and entices her lover to ejaculate against her backside: "How boastful you are about the valleys! O backsliding daughter who trusts in her treasures, [saying,] ' Who will come against me?' (Jeremiah 49:4) And in the Song of Songs, the lover urges his mate to allow him to enter her from behind: "Draw me after you, let us make haste." (Song of Solomon 1:4)

The site tackles, and mostly endorses, adultery, masturbation, pornography, even 'fisting'; and each page is presented with a straight face and plenty of Biblical quotes. But the most bizarre Q&As come from readers, who have a page of their own. A colloquy on Christianity and swallowing semen leads to this:

This is complete blasphemy. You must take this down. To suggest that the Lord Jesus Christ propositioned a woman for a blow job is preposterous. You are sinning against God by twisting the words of His son. You need to take this down, for your own good.

We did not mean to suggest that Jesus was propositioning the woman at the well or asked her to give him a blow job. Of course not! Jesus would never do that. In fact, he refuses to give her the "living water" himself. When she asks him to give her the living water (semen), Christ tells the woman to get her husband. This is so he (Christ) could instruct her on how to give a blow job to her husband and receive the living water from her husband. Thank you for your concern, and we hope this clarifies matters.

Shame on me, I find myself engaged and amused. In a world of unimaginable sexual abundance and license – consider those 733,000,000 Google entries – this bizarre site somehow manages to be truly over the top. To whom does it belong? There are no 'Contact Us' or 'Who We Are' tabs, no links beyond the site. That it's an elaborate joke makes the most sense, a prankster trying to infuriate the Bible thumpers. Another possibility: an obsessive guy trying hard to convince his Christian wife that anal sex – and porn and adultery and fist fucking – are kosher. Maybe it's the work of a solitary, tormented man dreaming of a perfect world, where he can be a good Christian and a guilt-free perv, if only the right woman comes along.

Or maybe – contrary to the usual publicity – sexinchrist.com represents one tributary of the Christian mainstream. In this spirit of inquiry, I google 'sex + Christ,' and in 0.19 seconds, I'm blessed with 23,300,000 entries. Curiouser and curiouser: sexinchrist.com is the top listing.

An advertisement on the right side of the page tempts me at once: "Christian Porn." The site is a pitch for his-and-her e-books called *Sexual Satisfaction for the Christian Husband* and *Sexual Satisfaction*

for the Christian Wife by Robert Irwin and Susan Irwin. Seems they were married for thirteen years, happily except for the awkwardness in the boudoir, before his intensive study – "bookshelves . . . lined with books, manuals and medical journals" – led to a sexual awakening for both of them. The 'his' page tells readers that by reading his book, they can learn to experience "pleasure so overwhelming that your wife will want sex as often as you do! . . . hours-long lovemaking sessions . . . multiple (and simultaneous) orgasms in a single evening," and that they will be "capable of maintaining a single erection, literally, indefinitely." The wife's corresponding page ("Christian Wives Click Here") promises that "you too can experience sex that is an intense, frequent and spiritual event . . . including orgasms (for both of you) that are so overwhelming that you will be amazed that such pleasure exists in this world. And, best of all . . . you will not have to embarrass yourself (as we did many times) by having to look for this information in a bookstore. You won't have to hide any books from anyone, trying to avoid explaining your interest in such matters." In the book, readers can also learn "how to help your husband to become your dream lover . . . . how to become a 'sexual explorer,' while always pleasing God."

At the end of Robert's and Susan's letters is a spiritual note: "P.S. You did not find this site by chance. With God, there are no 'coincidences.' You were meant to find this site because God cares about you, your marriage . . . and your sexual satisfaction!" Both books together, $49.00.

God also seems to care about my Christian sex education, and only a moment later I'm inspired to google the phrase 'Christian pornography.' Ten thousand six hundred listings pop up in 0.28 seconds. What gets top billing? Sexinchrist.com. At the bottom of the page is evidence of the true Christian way: www.uncontrolledthoughts.com, which promises to help us get rid of the desire for pornography and the nasty habit of masturbation. Unlike sexinchrist.com, this site includes an address (in Midway, Utah), a phone number, and a God-fearing rallying point: "Never masturbate again!!! Believe it or not, you can do without it."

But on the World Wide Web, it's nearly impossible to do without pornography for long. It was porn, after all, which gave the World Wide Web its most profitable product early on; it was porn that was, almost a decade ago, a $10 to $14 billion-a-year business, according to a 1998 study.[1] At the top of page two on my Christian porn search, I find "Pornography Blogs: Many Great Pornography Blogs to Read," which includes "173 blog articles about Christian pornography." The home page leads to a flashing billboard:

> The world of pornography blogged 'til it's raw
> CLICK HERE TO SEE MY 22
> FAVORITE NUDE CELEBRITIES!
> famous celebrities you may have never seen naked!

When I open this page, among the celebrities I may have never seen naked is:

> JENNA BUSH
> The President's Daughter
> missing bikini bottoms!
> click here to join us inside to watch all of the celebrity videos
> See her and Thousands
> More For Just a Buck!

1 Frank Rich, "Naked Capitalists," *New York Times*, May 20, 2001.

On the one hand, I'm relieved that all of my searching has finally – finally! – led me to something more risqué than the Turbo Stroker: some actual porn, at least I assume that's what I'd see if I were willing to enter my credit card number into the system. But who knows what list of perverts or criminals I might end up on? Still, at 2 a.m., having nearly encountered the First Child in a compromising position, I'm emboldened to throw caution to the wind: then and there I decide to google the real thing, 'pornography.' I get 17,000,000 hits. And then 'porn' – 117,500,000. Both first pages turn up what we might expect – except for "#1 Christian Porn Site" at www.xxxchurch.com. These repentant sinners have turned uncontrolled-thoughts.com into a spiffy cottage industry with a sharp-looking website. The most heavily flogged item is a tee shirt ($15.00), whose message, "Christians Don't Masturbate," is broadcast in bright red letters on black cloth and, best of all, set on a gray imprint of a large hand. The problems with masturbation are that "it is a selfish act that pleases no one but yourself" (clearly the writers have put it to limited use) and that 76 percent of masturbators are aided in sin by pornography. It's unclear whether porn is bad because it leads to masturbation, or masturbation is bad because it leads to porn.

Yet the graphically engaging site includes more than just tee shirts and bad advice. There is a section, "Just For Pastors," with a slew of statistics about how susceptible pastors are to porn, and a slick video called "Pastors and Porn," starring lifechurch.tv pastor Craig Groeschel. He's a surprisingly handsome, hunky guy – considering the depths of his sexual hang-ups – who tells us that images of pornography he viewed as a child and young man have remained "burned on the hard drive" of his mind. He admits that every site on his computer is monitored by "someone else," lest it lead him to the naughty places (117,000,000 sites – a lot of temptation by any reckoning). He won't travel anywhere alone. "I've had to put in necessary safeguards to remain pure," he confides. Is it just masturbation he fears in that lonely hotel room – or is it some of the other big naughties that get so many squeaky-clean preachers into so much trouble? (Ask observant friend S. to view video and psych out Craig's interests.)

In a nearly 3 a.m. epiphany, it dawns on me that sexinchrist.com might well be one man's cheeky answer to Craig's purity campaign. Who knows? It might even be the work of Craig Groeschel. *This* is why he needs a chaperone. This blasphemous website is why he can't be trusted alone in a Comfort Inn. No telling what other passages he might find in a Gideon Bible, what other sins could be washed away with the right chapters and verses. Wonder who travels with him so he doesn't have to travel alone?

When I return to the Google 'porn' listings, the right-hand column of advertisements includes a surprise. The top ad – "Help the Children" – is an organization promoting children's rights in India. The other ads are more predictable, but they have a plucky variety I hadn't expected: "Get Laid," "Sexy Russian Brides," "See Photos of Hot Women," "Mobile Sex."

Before I'm tempted to revert to my true Internet addiction, left-wing political websites of the www.antiwar.com variety, I do one final Google search for plain old ordinary 'sex,' and find a listing so quaint it makes me smile: "Treehugger: TreeHuggerTV. In the same week that THTV released this How To

Buy A Green Sex Toy video, Greenpeace issued a warning about the toxicity of sex toys . . . ."

Yet another sweet one turns up, like a daffodil blooming in April: "CNN.com – Mouthy parrot 'reveals sex secret.' A computer programmer found out his girlfriend was having an affair when his pet parrot kept repeating her lover's name, British media reported Tuesday."

Touching. An antitechnology story: no pastor-to-pastor Quick Time videos, no photos of Jenna uncloaked, no battery-operated vaginas, no porn videos you can watch on your new Treo. A parrot who chirps the Other Man's name. Hooray for unbridled, unchaperoned Mother Nature, even when she gets you into trouble.

Who knows how the mind works in a state of Google stimulation? The condition may soon require its own word. Perhaps: Googlelation? Such disorders could become a new entry in the DSM compendium. Christian pastors are afraid of their own penises and everyone else's, and perhaps I ought to be afraid of what I'm doing: studying the fearful, the obsessive, and the flat-out pornographers. A friend jokes: "If there are 800,000,000 websites for 'sex,' there are a total of 900,000,000 websites." Actually, 'money' and 'war' both beat 'sex' by a mile. Tonight 'war' kicks out 1.02 billion websites; 'money' 1.3 billion. 'Sex' is chump change. Perhaps 'sex' will be no more than a comma in the history books, as President Bush recently said of the war in Iraq. Even if the porn industry has doubled or tripled since the 1998 study, it's nothing compared to the hundreds of billions – or is it trillions? – that 'war' generates.

Some seven years ago, as the Internet took off and my mother's brain started to shut down, she said something quite endearing: "Before the evening gets away from us, could you tell me what 'dot-com' means?" It's part of an address on the Internet, I explained, knowing it wouldn't make much sense to her. I showed her what it was all about once or twice on my laptop, but the information went no farther than her short-term memory bank. Reading this piece, she would have to ask: What does 'Google' mean? What does 'www' mean? What does it mean 'to kick out 1.2 billion websites'?

But of course she would know what 'sex' means. Everyone knows what sex is. Or we used to, when it was a less complicated proposition. Well, it was never uncomplicated, except for the mechanics. Now the mechanical dimension offers a few more choices than were previously available, including this one: me sitting in my living room staring at a screen in my lap, with X million shots of genitals and/or sex videos available to me with no more than a few typing strokes on the keyboard, all of this possible while the man I share a bed with sleeps in the other room. I'm not sure my mother would know what this means. She would assume that there is something amiss. But is there?

George Bataille didn't have this technology or this scenario in mind when he wrote, in 1957: "The human spirit is prey to the most astounding impulses. Man goes constantly in fear of himself. His erotic urges terrify him. The saint turns from the voluptuary in alarm; she does not know that his unacknowledgeable passions and her own are really one." Alone in the living room, I realize I fall somewhere on the continuum between the hyperactive Internet pornographers and the terrified Reverend Craig Groeschel, whose erotic urges frighten him into a state of endless torment. I'd be delighted to have a few more erotic

urges, but far fewer than 17,000,000. The libidos of millions of women have changed since the hormone-replacement news in 2002. And in roughly the same time period, sex and sexuality have undergone alteration, too. Frank Rich, the Sex Priest of *The New York Times*, or at least the man who's followed changes in the adult-entertainment business over the years with a vengeance, describes the phenomenon:

> The cliché has it that when the formerly contraband becomes accepted, it loses its cachet. With sex, that's not really an option. What does seem to be happening is a digitalization of sex – and not only in the sense that porn is distributed digitally, whether by Internet or DVD or television or spam. In a more profound sense, the erotic is being figuratively and literally dismembered as it is broken down into its various discrete bytes, like albums that are atomized into their individual songs to be downloaded from the Web.[2]

"Lucy in the Sky with Diamonds" exists independently of *Sergeant Pepper's Lonely Hearts Club Band*. An image of a shiny erect penis thrusts in the center of my computer screen, unconnected not only to a body and a human being but even from the pretense of narrative that used to accompany porn. This miniature iteration of porn is a far cry from more narrative-driven examples of pornography that were current circa 1967, when Susan Sontag published "The Pornographic Imagination." She defended the literary value of *Story of O* and did not defend the literary value of the ribald novel *Candy*, but from this distance, they both have the heft of *Middlemarch* when lined up against the 6,790,000 offerings that appear when you google 'hot porn.' Is the reason I'm not aroused – the reason I'm so turned off – because this form of stimulation is so 'digitalized,' so far from storytelling, or because I'm short on estrogen? Someone – millions of someones – are having a good time. Or so the unfathomable abundance leads you to believe. The truth might well be that only a few million hardcore porn lovers – or fewer than that – are dipping regularly into the well. In fact, there are probably more people trying to sell porn on the Internet than there are buyers of it.

Oh, for the good old days. Back when I was the Sex Priestess of the Ivy League, sex was still, as far as I can remember, an activity people wanted to do with other people, not with their computers. Google was the embryonic ambition of two Stanford graduate students. And the word 'war' was employed more often on our shores as a metaphor than as a series of real-life conflagrations that will embroil the U.S. military for the foreseeable future. Tonight there are 324,000 entries on Google that contain the phrase 'war without end,' and that, too, is an expression I'm sure my mother would have difficulty grasping. The clock on my computer tells me it's 3:00 a.m. on the nose, and I am suddenly a little bit lonely and more than a little sad. But before I turn out the lights and slip into the other room, into my side of the bed, I'm inspired to do one last search for the night. Astonishingly, in a matter of 0.34 seconds, some of my melancholy lifts. 'Women + low libido + remedies' turns up 92,400 possibilities. Who knew? There must be something in all those gigabytes that will do the trick. (Leave note for J. to see when he wakes up in the morning: *Guess what? The drought is over.*)

2 Frank Rich, "Finally, Porn Does Time," *New York Times*, July 27, 2003.

Wendy Doniger

Reading the "Kamasutra": the strange & the familiar

The *Kamasutra* is the oldest extant Hindu textbook of erotic love, and one of the oldest in the world. It is not, as most people think, a book about the positions in sexual intercourse. It is a book about the art of living – finding a partner, maintaining power in a marriage, committing adultery, living as or with a courtesan, using drugs – and also about the positions in sexual intercourse. It was composed in Sanskrit, the literary language of ancient India, probably sometime in the second half of the third century of the Common Era, in North India, perhaps in Pataliputra (near the present city of Patna, in Bihar).

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Virtually nothing is known about the author, Vatsyayana Mallanaga, other than his name and what little we learn from the text. Nor do we know anything about Yashodhara, who wrote the definitive commentary in the thirteenth century. But Vatsyayana tells us something important about his text, namely, that it is a distillation of the works of a number of authors who preceded him, authors whose texts have not come down to us. Vatsyayana cites them often – sometimes in agreement, sometimes in disagreement – though his own voice always comes through, as ringmaster over the many acts he incorporates in his sexual circus.

The *Kamasutra* was therefore certainly not the first of its genre, nor was it the last. But the many textbooks of eroticism that follow it eliminate most of the *Kamasutra*'s encyclopedic social and psychological narratives and concentrate primarily on the sexual positions, of which they describe many more than are found in the *Kamasutra*.

Conspicuous by its absence, however, is what Europeans call the 'missionary' position, which the *Kamasutra* mentions briefly but without enthusiasm: "In the 'cup,' both partners stretch out both of their two legs straight. There are two variants: the 'cup lying on the side' or

'the cup supine.'" (2.6.16 – 17) The commentator, too, scorns this position: "How does he penetrate her in this position? It is so easy that there is nothing to worry about!" So much for what Europeans generally regarded as the default position.

By contrast, the default position for ancient Indian men and women – overwhelmingly favored in illustrations of the *Kamasutra* – is something entirely different, as Monty Python used to say. The *Kamasutra* describes three variants:

> Her head thrown down, her pelvis raised up, she is "wide open." Without lowering her thighs, suspending them while spreading them wide apart, she receives him in the "yawning" position. Parting her thighs around his sides, at the same time she pulls her knees back around her own sides, in the "Junoesque" position, which can only be done with practice. (2.6.8, 10 – 11)

Some variants of these positions are more complex. In some, her thighs are bent back so far that, in effect, he enters her from the rear even though she is facing him: "When he raises her pelvis and thrusts into her from below, violently, it is called 'grinding down.'" (2.8.24) Significantly, this is the position that the *Kamasutra* advises a man to use when the woman's genitals are much smaller than his.

Size, and its importance, becomes apparent from the very start of the part of the text describing the sexual act:

> The man is called a "hare," "bull," or "stallion," according to the size of his sexual organ; a woman, however, is called a "doe," "mare," or "elephant cow." And so there are three equal couplings, between sexual partners of similar size, and six unequal ones, between sexual partners of dissimilar size. (2.1.1)

And when the text describes the possible positions, it uses these sizes keyed to animal types as its basic referents:

> At the moment of passion, in a coupling where the man is larger than the woman, a "doe" positions herself in such a way as to stretch herself open inside. A "doe" generally has three positions to choose from: the "wide open," the "yawning," or the "Junoesque." (2.6.1, 7)

The man's fear that his penis is not big enough – the recurrent leitmotif of spam on the Internet today – had apparently already raised its ugly head in ancient India. As a result, the doe became the favored woman, the ideal erotic partner.

The initial passage defining the three sizes continues: "The equal couplings are the best, the one when the man is much larger or much smaller than the woman are the worst, and the rest are intermediate. Even in the medium ones, it is better for the man to be larger than the woman." (2.1.1, 3 – 4) Thus two different, conflicting agendas are set forth from the start: ideally, equal is best, but in fact the man has to be bigger, because women are by nature bigger. The biggest woman (the elephant cow) is much larger than the biggest man (the stallion).

The problem of satisfaction posed by the greater size of women is not easily solved, in part because it is not physical but mental. No proto-Kinsey went around in ancient India measuring women's vulvas. It is a matter of fantasy, apparently a cross-cultural human fantasy, and it is not about physiology (for which the *Kamasutra* offers physical correctives) but about desire. And desire is affected not merely by size but also by intensity and duration:

> A man has dull sexual energy if, at the time of making love, his enthusiasm is indifferent, his virility small, and he cannot

> bear to be wounded, and a man has average or fierce sexual energy in the opposite circumstances. The same goes for the woman. And so, just as with size, so with temperament, too, there are nine sorts of couplings. And similarly, with respect to endurance, men are quick, average, and long-lasting. (2.1.5 – 8, 30 – 31)

The passage then concludes that the woman should reach her climax first. Why? The commentator explains:

> The best case is when the man and woman achieve their sexual pleasure at the same time, because that is an equal coupling. But if it does not happen at the same time, and the man reaches his climax first, his banner is no longer at full mast, and the woman does not reach her climax. Therefore, if the coupling is unequal rather than equal, the woman should be treated with kisses, embraces, and so forth, in such a way that she achieves her sexual pleasure first. When the woman reaches her climax first, the man, remaining inside her, puts on speed and reaches his own climax.

So the problem of fit is merely one aspect of the greater problem of satisfaction. Just as mares are bigger than hares, the logic goes, so, the commentator points out in the context of an argument about female orgasm, women have far more desire than men: "Women want a climax that takes a long time to produce, because their desire is eight times that of a man. Given these conditions, it is perfectly right to say that 'a fair-eyed woman cannot be sated by men,' because men's desire is just one-eighth of women's." (2.1.19) Here he is quoting a well-known Sanskrit saying: "A fire is never sated by any amount of logs, nor the ocean by the rivers that flow into it; death cannot be sated by all the creatures in the world, nor a fair-eyed woman by any amount of men." In another text, a female-to-male bisexual says that when she was a woman, she had eight times as much pleasure (*kama*) as a man, which could also be translated as eight times as much desire.[1]

But the *Kamasutra* had its ways of coping with satisfaction, a kind of end-run around the obstacle of size. Just as there are ways for a doe to expand, so, too, the *Kamasutra* assures us, "In a coupling where the man is smaller, an 'elephant cow' contracts herself inside . . . . Sex tools may also be used." (2.1.3, 6) (The commentator helpfully remarks, "If he is larger than she is, there is no need for sex tools.") The "grinding down" position, in which the woman bends her thighs so close to her chest that the man enters her from below, is particularly effective for this: "He thrusts from below into the lower part of her vagina, violently, because the itch is most extensive in the lower part of the vagina." (2.8.24) The *Kamasutra* also provides an extensive collection of recipes that are the ancient Indian equivalent of Viagra, a combination of drugs and surgical procedures to increase the size of the penis; and just as the doe may use drugs to expand, the elephant cow may use drugs to contract: "An ointment made of the white flowers of the 'cuckoos'-eye' caper bush makes an 'elephant-cow' contract tightly for one night." (7.2.36)

At this point, it might seem that ancient India had come to terms with what Freud called penis envy (referring to women, though Woody Allen wisely remarked that it is more of a problem for

1 Wendy Doniger, *Splitting the Difference: Gender and Myth in Ancient Greece and India* (Chicago: University of Chicago Press, 1999), 287 – 292 (the tale of Chudala, in the *Yogavasistha*). Some Greek texts maintain that Teiresias, too, said that women have not just more pleasure, but *nine times* as much pleasure as men – thereby one-upping the Indian ante. Ibid., 293.

men). Perhaps size does not matter after all?

Well, no. A counterweight to the problem of desire is the problem of vulnerability. It turns out that a man may be caught between the Scylla of a woman who is too big, producing a kind of sexual agoraphobia, and the Charybdis of a woman who is too small, inspiring a kind of sexual claustrophobia. Let us return to our ideal woman, the doe, and look again at the first position recommended for her, the "wide open" position. It turns out to be rather dangerous. The commentator warns:

> When she is making love with the man's penis inside her, she should slide back with her hips; or when the man is making love with her he should slide back little by little, so that they do not press together too tightly. For if he moves inside her too roughly, she can be injured, and the man's foreskin can be torn off, which physicians call "ruptured foreskin."

So the small woman may be too small. But it gets worse: the too-large woman may also become too small, by overcompensating, as it were, for her size. The elephant cow is encouraged to employ a sexual position that catapults her unsuspecting partner from the frying pan of insatiable enormity to the fire of strangulating tightness. It begins, disarmingly, with the harmless missionary position:

> Both partners stretch out both of their two legs straight. If, as soon as he has penetrated her, he squeezes her two thighs together tightly, it becomes the "squeeze." If she then crosses her thighs, it becomes the "circle." In the "mare's trap," which can only be done with practice, she grasps him, like a mare, so tightly that he cannot move. (2.6.13 – 20)

There is also a variation with the woman on top: "When she grasps him in the 'mare's trap' position and draws him more deeply into her or contracts around him and holds him there for a long time, that is the 'tongs.'" (2.8.33) The commentator adds helpfully: "She uses the lips of the vagina as a tongs."

This is the only sexual position that the *Kamasutra* associates with a mare, and, confusingly, it is reserved for the "elephant cow" rather than the "mare" woman. The confusion arises because the horse, hypersexualized, is the only animal that appears on both the male and the female sides of the initial triads of men and women. Though the male and female equines are not paired – the stallion is the largest male, while the mare is merely the middle-sized woman – Hindu mythology regards the mare as sexually dangerous, bursting with repressed violence: the doomsday fire is lodged in the mouth of a mare who wanders on the floor of the ocean, waiting for the moment when she will be released to burn everything to ashes.[2] The mare is the sexual animal par excellence; the commentator on the *Kamasutra*, glossing the phrase "two people of the same species" (in the argument that women have the same sort of climax as men), offers this example, surely not at random: "Two people of different species, such as a man and a mare, would have different kinds of sensual pleasure; and so he specifies the same species, the human species." (2.1.24)

The conflation, in an animal image, of the woman who is too big with the woman who traps you (and is, in that sense, too small) begins in ancient India in a text from about 900 BCE:

2 Wendy Doniger O'Flaherty, *Siva: The Erotic Ascetic* (London and Oxford: Oxford University Press, 1973), 289 – 292.

> Long-Tongue was a demoness who had vaginas on every limb of her body. To subdue her, the god Indra equipped his grandson with penises on every limb and sent him to her. As soon as he had his way with her, he remained firmly stuck in her; Indra then ran at her and struck her down with his thunderbolt.[3]

Long-Tongue is a dog, and she and the grandson of Indra (the ancient Indian counterpart of Zeus/Wotan/Odin, a notorious womanizer) get stuck together as dogs sometimes do; in this case, it spells her death, and not his, but clearly it is an image of excess that corresponds to her excessively numerous vaginas, each one presumably demanding to be satisfied. So this is the catch-22: if the woman is too big, you cannot satisfy her, but if she is too small (*or* too big), you may be injured and/or trapped inside her.

This example points as well to the tendency to identify women, more than men, as animals, as is also assumed in a passage from the *Kamasutra* that makes women, in contrast with men, creatures both explicitly likened to animals and said to speak a meaningless animal language:

> There are eight kinds of screaming: whimpering, groaning, babbling, crying, panting, shrieking, or sobbing. And there are various sounds that have meaning, such as "Mother!" "Stop!" "Let go!" "Enough!" As a major part of moaning she may use, according to her imagination, the cries of the dove, cuckoo, green pigeon, parrot, bee, nightingale, goose, duck, and partridge. He strikes her on her back with his fist when she is seated on his lap. Then she pretends to be unable to bear it and beats him in return, while groaning, crying, or babbling. If she protests, he strikes her on the head until she sobs, using a hand whose fingers are slightly bent, which is called the "outstretched hand." At this she babbles with sounds inside her mouth, and she sobs. When the sex ends, there is panting and crying. Shrieking is a sound like a bamboo splitting, and sobbing sounds like a berry falling into water. Always, if a man tries to force his kisses and so forth on her, she moans and does the very same thing back to him. When a man in the throes of passion slaps a woman repeatedly, she uses words like "Stop!" or "Let me go!" or "Enough!" or "Mother!" and utters screams mixed with labored breathing, panting, crying, and groaning. As passion nears its end, he beats her extremely quickly, until the climax. At this, she begins to babble, fast, like a partridge or a goose. Those are the ways of groaning and slapping. (2.7.1-21)

It is worth noting that these women make the noises of birds, never of mammals, let alone the mammals that characterize the three paradigmatic sizes of women. Moreover, one of the birds whose babbling the sexual woman imitates – the parrot – appears elsewhere in the *Kamasutra* as one of the two birds who can be taught to speak like humans. (1.3.15, 1.4.8, 6.1.15) The passage about slapping and groaning inculcates what we now recognize as the rape mentality – 'her mouth says no, but her eyes say yes' – a dangerous line of thought that leads ultimately to places where we now no longer want to be: disregarding a woman's protests against rape. And this treatment of women is justified by a combination of the official naming of women after oversized animals and the

3 *Jaiminiya Brahmana*, 1.161 – 163. Wendy Doniger O'Flaherty, *Tales of Sex and Violence: Folklore, Sacrifice, and Danger in the Jaiminiya Brahmana* (Chicago: University of Chicago Press, 1985), 101.

expectation that in the throes of passion women will speak like animals, meaninglessly.

The practice of naming the sexual movements after animals – the "boar's thrust," the "bull's thrust," "frolicking like a sparrow" (2.8.27 – 29) – also implies that there is a very basic sense in which sex, even when done according to the book, as it were, is bestial. But despite its recurrent zoological terminology, the *Kamasutra* argues that people are not animals, and that the sexuality of animals is different from that of humans. The very passages in which people are advised, for the sake of variety, to imitate the sexual behavior of animals, or in which women are told to mimic the cries of animals, imply that such behavior is, by definition, different from ours.

Vatsyayana distinguishes human sexuality from animal sexuality in the argument that he puts forward at the very beginning to justify his text:

> Scholars say: "Since even animals manage sex by themselves, and since it goes on all the time, it should not have to be handled with the help of a text." Vatsyayana says: Because a man and a woman depend upon one another in sex, it requires a method, and this method is learnt from the *Kamasutra*. The mating of animals, by contrast, is not based upon any method, because they are not fenced in, they mate only when the females are in their fertile season and until they achieve their goal, and they act without thinking about it first. (1.2.16 – 20)

Humans, whose sexuality is more complex than that of animals, are more repressed – "fenced in," as the text puts it. Therefore, they have a different sexuality from animals, and need a text for it, where animals do not. The *Kamasutra*'s claim to fame is precisely that it has found ways – positions, tools, drugs – to deal with the mind as well as the body, to satisfy women not only of any size but of any degree of desire. Vatsyayana's words in such passages do not seem to reflect male anxiety at all; the women are depicted not as enormous monsters but as pliant and manipulatable sources of great pleasure. *Vive la différence*: because we are not animals, we can use culture – more precisely, the technique of the *Kamasutra* – to overcome our baser instincts, which must surely include male phallic anxiety.

But culture, in the *Kamasutra*'s sense, belonged to those who had leisure and means, time and money, none of which was in short supply for the text's primary intended audience, an urban (and urbane) elite consisting of princes, high state officials, and wealthy merchants. The production of manuscripts, especially illuminated manuscripts, was necessarily an elite matter; men of wealth and power, kings and merchants, would commission texts of the *Kamasutra* to be copied out for their private use.

The protagonist of the *Kamasutra* is such a man. Literally a "man-about-town" (*nagaraka*, from the Sanskrit *nagara*, 'city'), he lives "in a city, a capital city, a market town, or some large gathering where there are good people, or wherever he has to stay to make a living." (1.4.2) He has, as we say of a certain type of man today, no visible source of income. Vatsyayana tells us, at the start of the section describing "The Lifestyle of the Man-about-Town," that the playboy finances his lifestyle by "using the money that he has obtained from gifts, conquest, trade, or wages, or from inheritance, or from both." (1.4.1) His companions may have quite realistic money problems (1.4.31 – 33); his wife is entrusted with all the household management, including the finances; and his mistresses work hard to make and keep their

money. But we never see the man-about-town at work:

> This is how he spends a typical day. First is his morning toilet: He gets up in the morning, relieves himself, cleans his teeth, applies fragrant oils in small quantities, as well as incense, garlands, bees' wax and red lac, looks at his face in a mirror, takes some mouthwash, and attends to the things that need to be done. He bathes every day, has his limbs rubbed with oil every second day, a foam bath every third day, his face shaved every fourth day, and his body hair removed every fifth or tenth day. All of this is done without fail. And he continually cleans the sweat from his armpits. In the morning and afternoon he eats. (1.4.5 – 7)

Now, ready to face the day, he goes to work:

> After eating, he passes the time teaching his parrots and mynah birds to speak; goes to quail-fights, cock-fights, and ram-fights; engages in various arts and games; and passes the time with his libertine, pander, and clown. And he takes a nap. In the late afternoon, he gets dressed up and goes to salons to amuse himself. And in the evening, there is music and singing. After that, on the bed in a bedroom carefully decorated and perfumed by sweet-smelling incense, he and his friends await the women who are slipping out for a rendezvous with them. He sends female messengers for them or goes to get them himself. And when the women arrive, he and his friends greet them with gentle conversation and courtesies that charm the mind and heart. If rain has soaked the clothing of women who have slipped out for a rendezvous in bad weather, he changes their clothes himself, or gets some of his friends to serve them. That is what he does by day and night. (1.4.8 – 13)

Busy teaching his birds to talk, he never drops in to check things at the shop, let alone visit his mother. Throughout the text, his one concern is the pursuit of pleasure.

That is not to say, however, that the pursuit of pleasure didn't require its own work. Vatsyayana details the sixty-four arts that need to be learned by anyone who is truly serious about pleasure:

> singing; playing musical instruments; dancing; painting; cutting leaves into shapes; making lines on the floor with rice-powder and flowers; arranging flowers; coloring the teeth, clothes, and limbs; making jeweled floors; preparing beds; making music on the rims of glasses of water; playing water sports; unusual techniques; making garlands and stringing necklaces; making diadems and headbands; making costumes; making various earrings; mixing perfumes; putting on jewelry; doing conjuring tricks; practicing sorcery; sleight of hand; preparing various forms of vegetables, soups, and other things to eat; preparing wines, fruit juices, and other things to drink; needlework; weaving; playing the lute and the drum; telling jokes and riddles; completing words; reciting difficult words; reading aloud; staging plays and dialogues; completing verses; making things out of cloth, wood, and cane; wood-working; carpentry; architecture; the ability to test gold and silver; metallurgy; knowledge of the color and form of jewels; skill at nurturing trees; knowledge of ram fights, cockfights, and quail fights; teaching parrots and mynah birds to talk; skill at rubbing, massaging, and hairdressing; the ability to speak in sign language; understanding languages made to seem foreign; knowledge of local dialects; skill at making flower carts; knowledge of omens; alphabets for use in making magical diagrams; alphabets for memorizing; group

> recitation; improvising poetry; dictionaries and thesauruses; knowledge of metre; literary work; the art of impersonation; the art of using clothes for disguise; special forms of gambling; the game of dice; children's games; etiquette; the science of strategy; and the cultivation of athletic skills. (1.3.15)

And while we are still reeling from this list, Vatsyayana immediately reminds us that there is, in addition, an entirely different cluster of sixty-four arts of love (1.3.16), which include eight forms of each of the main erotic activities: embracing, kissing, scratching, biting, sexual positions, moaning, the woman playing the man's part, and oral sex. (2.8.4 – 5) A rapid calculation brings the tab to 128 arts, a curriculum that one could hardly master even after the equivalent of two Ph.D.s and a long apprenticeship – and one that not many could afford.

So the lovers must be rich, yes, but not necessarily upper class. When the text says that the man may get his money from "gifts, conquest, trade, or wages, or from inheritance, or from both," the commentator explains, "If he is a Brahmin, he gets his money from gifts; a king or warrior, from conquest; a commoner, from trade; and a servant, from wages earned by working as an artisan, a traveling bard, or something of that sort." (1.4.1) Brahmin, warrior, commoner, and servant are the four basic classes, or *varnas*, of India. Indeed, the *Kamasutra* is almost unique in classical Sanskrit literature in its almost total disregard of caste, though of course power relations of many kinds – gender, wealth, political position, as well as caste – are implicit throughout the text. But *varna* is mentioned just twice, first in a single sentence admitting that it is of concern only when you marry a wife who will bear you legal sons, and can be disregarded in all other erotic situations (1.5.1); and later in a passage about what we would call rough trade:

> "Sex with a coarse servant" takes place with a lower-class female water-carrier or house-servant, until the climax; in this kind of sex, he does not bother with the acts of civility. Similarly, "sex with a peasant" takes place between a courtesan and a country bumpkin, until the climax, or between a man-about-town and women from the countryside, cow-herding villages, or countries beyond the borders. (2.10.22 – 25)

Vatsyayana disapproves of sexual relations with rural and tribal women because they could have adverse effects on the erotic refinement and sensibility of the cultivated man-about-town; he would have been baffled by any Lady Chatterji's sexual transports with a gamekeeper. But for all the rest of the world of pleasure, class is irrelevant. Where classical texts of Hindu social law might have said that you make love differently to women of high and low classes, Vatsyayana just says that you make love differently to women of delicate or rough temperaments. Size matters, and money matters, but status does not.

Two worlds intersect for us in the *Kamasutra*: sex and ancient India. We assume that the understanding of sex will be familiar to us, since sex is universal, and that the representations of ancient India will be strange to us, since that world existed long ago and in a galaxy far away. This is largely the case, but there are interesting reversals of expectations: some sexual matters are strange (for, as you will recall, Vatsyayana argues that sex for human beings is a matter of culture not nature), or even sometimes repugnant to us, while some cultural

matters are strangely familiar or, if unfamiliar, still charming and comprehensible, reassuring us that the people of ancient India took their trousers off one leg at a time, just like us. Consider the description of the man's day: his morning toilet is much like ours, but we do not, alas, schedule in things like teaching mynah birds to speak. It is the constant intersection of these perceptions – "How very odd!" "Oh, I know just how she feels." "How can anyone do that?" "Ah, I remember doing that once, years ago." – that constitutes the strange appeal of the *Kamasutra*.

Take the matter of male anxiety about penis size and its prevalence on the Internet – a link between us and them. The *Kamasutra* tackles the problem aggressively:

> The people of the South pierce a boy's penis just like his ears. A young man has it cut with a knife and then stands in water as long as the blood flows. To keep the opening clear, he has sexual intercourse that very night, continuously. Then, after an interval of one day, he cleans the opening with astringent decoctions. He enlarges it by putting larger and larger spears of reeds and ivory-tree wood in it, and he cleans it with a piece of sugar-cane coated with honey. After that, he enlarges it by inserting a tube of lead with a protruding knot on the end, and he lubricates it with the oil of the marking-nut. He inserts into the enlarged opening sex tools made in various shapes. They must be able to bear a lot of use, and may be soft or rough according to individual preferences. (7.2.14 – 24)

And if that doesn't work, try this:

> Rub your penis with the bristles of insects born in trees, then massage it with oil for ten nights, then rub it again and massage it again. When it swells up as the result of this treatment, lie down on a cot with your face down and let your penis hang down from a hole in the cot. Then you may assuage the pain with cool astringents and, by stages, finish the treatment. This swelling, which lasts for a lifetime, is the one that voluptuaries call "prickled." (7.2.25 – 27)

Granted, I have chosen extreme surgical examples, but the pharmaceutical recommendations, though less grotesque, are hardly more practical:

> If you coat your penis with an ointment made with powdered white thorn-apple, black pepper, and long pepper, mixed with honey, you put your sexual partner in your power. If you pulverize a female "circle-maker" buzzard that died a natural death, and mix the powder with honey and gooseberry; or if you cut the knotty roots of the milkwort and milk-hedge plants into pieces, coat them with a powder of red arsenic and sulfur, dry and pulverize the mixture seven times, mix it with honey, and spread it on your penis, you put your sexual partner in your power. (7.1.25, 27, 28)

The commentator's comment on this – "Do this in such a way that the woman you want does not realize, 'A man with something spread on his penis is making love to me'" – has inspired at least one reader to remark, "Any woman who would let you make love to her with all that stuff smeared on you would have to be madly in love with you already." Passages like this make us think, as a Victorian gentleman cited by Hilaire Belloc remarked after seeing Shakespeare's *Antony and Cleopatra*, "How different, how very different, from the home life of our own dear Queen."

But we may also recognize, and admire, the precision with which Vatsyayana tells us how to detect when a

woman has reached a climax (or, perhaps, if we assume, as I think we should, that the text is intended for women, too, he is telling the woman how to fake it):

> The signs that a woman is reaching her climax are that her limbs become limp, her eyes close, she loses all sense of shame, and she takes him deeper and deeper inside her. She flails her hands about, sweats, bites, will not let him get up, kicks him, and continues to move over the man even after he has finished making love. (2.8.17 – 18)

He also knew about what we call the G-spot (after the German gynecologist Ernst Graefenberg): "When her eyes roll when she feels him in certain spots, he presses her in just those spots." (1.8.16) Vatsyayana quotes a predecessor who said, "This is the secret of young women" – and, indeed, it remained a secret in Europe until well into the 1980s.

Contrary to expectation, there are moments of recognition in the realm of culture, too. There is the passage in which the boy teases the girl when they are swimming together, diving down and coming up near her, touching her, and then diving down again. (3.4.6) This was already an old trick when I was a young girl at summer camp in the Adirondacks. European readers must surely also recognize the man who tells the woman on whom he's set his sights "about an erotic dream, pretending that it was about another woman" (3.4.9), and the woman who does the same thing. (5.4.54) I felt a guilty pang of familiarity when I read the passage suggesting that a woman interested in getting a man's attention in a crowded room might find some pretext to take something from him, making sure to brush him with her breast as she reaches across him. (2.2.8 – 9) This is an amazingly intimate thing to know about a culture, far more intimate than knowing that you can stand on one leg or another when you make love.

Sometimes the unfamiliar and the familiar are cheek by jowl: the culture-specific list of women the wife must not associate with, which include a Buddhist nun and a magician who uses love-sorcery worked with roots (4.1.9), is followed in the very next passage by the woman who is cooking for her man and finds out "this is what he likes, this is what he hates, this is good for him, this is bad for him," a consideration that must resonate with many contemporary readers.

One part of the text that surely speaks to the modern reader is the advice on ways to seduce a married woman. In the would-be adulterer's meditations on reasons to do this, there are self-deceptive arguments that still make sense in our world:

> "There is no danger involved in my having this woman, and there is a chance of wealth. And since I am useless, I have exhausted all means of making a living. Such as I am, I will get a lot of money from her in this way, with very little trouble." Or, "This woman is madly in love with me and knows all my weaknesses. If I reject her, she will ruin me by publicly exposing my faults; or she will accuse me of some fault which I do not in fact have, but which will be easy to believe of me and hard to clear myself of, and this will be the ruin of me." (1.5.12 – 14)

Meanwhile, another passage brilliantly imagines the resistance of a woman who is tempted to commit adultery, in ways that rival the psychologizing of John Updike and Gustave Flaubert:

> She gets angry and thinks, "He is propositioning me in an insulting way"; or she fears, "He will soon go away. There is no future in it; his thoughts are attached to

> someone else"; or she is nervous, thinking, "He does not conceal his signals"; or she fears, "His advances are just a tease"; or she is diffident, thinking, "How glamorous he is"; or she becomes shy when she thinks, "He is a man-about-town, accomplished in all the arts"; or she feels, "He has always treated me just as a friend"; or she cannot bear him, thinking, "He does not know the right time and place," or she does not respect him, thinking, "He is an object of contempt"; or she despises him when she thinks, "Even though I have given him signals, he does not understand"; or she feels sympathy for him and thinks, "I would not want anything unpleasant to happen to him because of me"; or she becomes depressed when she sees her own shortcomings, or afraid when she thinks, "If I am discovered, my own people will throw me out"; or scornful, thinking, "He has gray hair"; or she worries, "My husband has employed him to test me"; or she has regard for morality. (5.1.23, 25, 26, 28, 29, 31, 32, 33, 34, 35, 37, 37 – 41)

The woman's thoughts on such subjects as how to get a lover and how to tell when he is cooling toward her also ring remarkably true in the twenty-first century. My favorite is the passage on the devious devices that a woman can use to make her lover leave her, rather than simply kicking him out:

> She does for him what he does not want, and she does repeatedly what he has criticized. She talks about things he does not know about. She shows no amazement, but only contempt, for the things he does know about. She intentionally distorts the meaning of what he says. She laughs when he has not made a joke, and when he has made a joke, she laughs about something else. When he is talking, she looks at her entourage with sidelong glances and slaps them. And when she has interrupted his story, she tells other stories. She talks in public about the bad habits and vices that he cannot give up. She asks for things that should not be asked for. She punctures his pride. She ignores him. She criticizes men who have the same faults. And she stalls when they are alone together. And at the end, the release happens of itself. (6.3.39 – 44)

A little inside joke that does not survive the cross-cultural translation is the word used for 'release,' *moksha*, which generally refers to a person's spiritual release from the world of transmigration; there may be an intended irony in its use here to designate the release of a man from a woman's thrall. The rest comes through loud and clear, however: the woman employs what some would call passive-aggressive behavior to indicate that it is time to hit the road, Jack. There is no male equivalent for this passage, presumably because a man would not have to resort to such subterfuges: he would just throw the woman out. This, too, has not changed very much.

Our reaction to the central subject, the act of love, should surely be one of recognition, of familiarity, but no. Here, rather than in the cultural setting, is where we are, unexpectedly, brought up short by the unfamiliar. The *Kamasutra* describes a number of contortions that "require practice," as the text puts it mildly, and these are the positions that generally make people laugh out loud at the mention of the *Kamasutra*. Reviews of books dealing with the *Kamasutra* in recent years have had titles like "Assume the Position" and *Position Impossible*. A recent cartoon depicts "The *Kamasutra* Relaxasizer Lounger, 165 positions."[4]

4 Mr. Boffo cartoon by Joe Martin, Inc., distributed by Universal Press Syndicate; published in the *Chicago Tribune*, September 29, 2000. A salesman is saying to a customer, "Most people just buy it to get the catalogue."

Cosmopolitan magazine published two editions of its "Cosmo *Kamasutra*," offering "12 brand-new mattress-quaking sex styles," each with its numerical "degree of difficulty," including positions called "the backstairs boogie," "the octopus," "the mermaid," "the spider web," and "the rock'n' roll."[5] There is a *Kamasutra* wristwatch that displays a different position every hour. A recent Roz Chast cartoon entitled "The Kama Sutra of Grilled Cheese" included the following menu:

> #14: The Righteous Lion. With a firm but loving hand, guide your cheese to a slice of bread. Top with another slice of bread, and place on hot, well-lubricated griddle. Fry until bread and cheese become one. #39: Buddha in Paradise: When the time is right, position your cheese atop a slice of bread. Run under the broiler until the cheese yields up its life force and is transformed. #58: The Lotus: While your cheese is melting in the microwave, your bread should be toasting in the toaster. If all goes well, both will arrive at the crucial stage simultaneously, and can be united. Next Week: The Kama Sutra of Peanut Butter and Jelly.[6]

The satirical journal *The Onion* ran a parody about a couple whose "inability to execute The Totally Auspicious Position, along with countless other ancient Indian erotic positions, took them to new heights of sexual dissatisfaction."[7] The authors of these jokes had in mind positions like ones that Vatsyayana attributes to his rival Suvarnanabha:

> Now for those of Suvarnanabha: When both thighs of the woman are raised, it is called the "curve." When the man holds her legs up, it is the "yawn." When he does that but also flexes her legs at the knees, it is the "high-squeeze." When he does that but stretches out one of her feet, it is the "half-squeeze." When one of her feet is placed on the man's shoulder and the other is stretched out, and they alternate again and again, this is called "splitting the bamboo." When one of her legs is raised above her head and the other leg is stretched out, it is called "impaling on a stake," and can only be done with practice. When both of her legs are flexed at the knees and placed on her own abdomen, it is the "crab." When her thighs are raised and crossed, it is the "squeeze." When she opens her knees and crosses her calves, it is the "lotus seat." When he turns around with his back to her, and she embraces his back, that is called "rotating," and can only be done with practice. (2.6.23 – 33)

Clearly, even Vatsyayana regards these as over the top, which is why he blames them on someone else. What are we to make of these gymnastics? Did people in ancient India really make love like that? I think not. True, they did have yoga, and great practitioners of yoga can make their bodies do things that most of us would not think possible (or even, perhaps, desirable). But just because one *can* do it is no reason that one *should* do it. (Or, as Vatsyayana remarks at the end of his Viagra passage, "The statement that 'There is a text for this' does not justify a practice." [7.2.55]). I think the answer lies elsewhere: "Vatsyayana says: Even passion demands variety. And it is through variety that partners inspire passion in one another. It is their infinite variety that makes courtesans and their lovers remain desirable to one another.

5 "The Cosmo *Kamasutra*," *Cosmopolitan*, September 1998; "The Cosmo *Kamasutra*, #2," *Cosmopolitan*, September 1999, 256 – 259.

6 *The New Yorker*, September 10, 2001, 78.

7 "Tantric Sex Class Opens Up Whole New World of Unfulfillment for Local Couple," *The Onion*, March 30 – April 5, 2000, 8.

Even in archery and in other martial arts, the textbooks insist on variety. How much more is this true of sex!" (2.4.25)

The user's-manual approach does not account for positions that do not invite imitation. These may simply be the artist's free-ranging fantasies on a theme of sexual possibilities: they are not instructive but inspiring, and inspired. They represent a literally no-holds-barred exploration of the theoretical possibilities of human heterosexual coupling, much as the profusion of compound animals – heads of ducks on bodies of lions, or torsos of women on the bodies of fish, and so forth – pushed back the walls of our imagination of the variety of known and unknown animal species. It is a fantasy literature, an artistic and imaginative, rather than physical or sexual, exploration of coupling. Since there is nothing like this in the Western tradition, it strikes us as weird in the same way that the passage about enlarging the penis boggles our imagination.

But when compared to European pornography, this is, after all, mild stuff. There is no discussion of everyday topics of many European publications, such as bondage or golden showers. The text is, rather, a virtual sexual *pas de deux* as Balanchine might have choreographed it, an extended meditation on some of the ways that a naked man and a naked woman (or, rarely, several men and/or women) might move their limbs while making love. It depicts an idealized world of sex that is the antecedent of Erica Jong's "zipless fuck" or the capitalist fantasies of Hugh Hefner's glossy Playboy empire. And though sexual reality may in fact be universal – there are, after all, just so many places that you can put your genitals – sexual fantasy seems to be highly cultural. This, then, is what is new to us in the brave new world of these ancient images.

Stanley Corngold

Kafka & sex

On one occasion Kafka composed a story with a sexual intensity that perhaps no other writer has ever experienced. The story is "The Judgment," which Kafka wrote in one go on the eve of Yom Kippur, the Day of Judgment, 1912. He described the event in his diary the next morning:

> I wrote this story "The Judgment" in a single push during the night of the 22nd-23rd, from ten o'clock until six o'clock in the morning. My legs had grown so stiff from sitting that I could just barely pull them out from under the desk. The terrible strain and joy as the story developed in front of me, as if I were advancing through a body of water. Several times during this night I carried my own weight on my back. How everything can be risked, how a great fire is ready for everything, for the strangest inspirations, and they disappear in this fire and rise up again . . . . It is only in this context that writing can be done, only with this kind of coherence, with such a complete unfolding of the body and the soul.

The story ends with the hero's leap, with gymnastic nimbleness, from a bridge resembling the Charles Bridge into a river resembling the Moldau, obedient to his father's judgment, which sentenced him to death by drowning. The following day, Kafka read the story aloud to a company of friends and relatives and felt the passion again: "Toward the end my hand was moving uncontrollably about and actually before my face. There were tears in my eyes. The indubitableness of the story was confirmed."

How might this sort of "indubitableness" be illustrated? Kafka's friend and editor, Max Brod, remembered that "Franz himself provided three commentaries to this story, the first in conversation with me. He once said to me, as I recall, quite without provocation, 'Do you know what the concluding sentence means?'" (It reads, "At this moment the traffic going over the bridge was nothing short of infinite.") "Kafka said, 'I was thinking here of a strong ejaculation.'"

For Kafka, writing, when it went well, was fucking, but his remark to Brod ac-

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tually channels more than one sexual current. In one sense, the process of writing the story is the naked metaphor of fucking: according to his remark, the process ends in an ejaculation. But in a diary entry written early the next year – the third commentary to which Brod refers – Kafka raised the stakes of the metaphor exponentially:

> February 11, 1913. After correcting proofs of "The Judgment," I shall write up all the connections that have dawned on me, as best as I still remember them. This is necessary, because the story came out of me like a regular birth, covered with filth and mucus, and only I have the hand that can penetrate to the body of it and the desire to.

The imagery of penetration persists, but the ejaculation has proved instantly fertile. In the course of a single night, Kafka has fertilized the nucleus of a story and made his words coalesce, grow, and force themselves out of him in a violent thrust. It is a feat even greater than what he had hoped for a year before:

> If I were ever able to write something large and whole, well shaped from beginning to end, then in the end the story would never be able to detach itself from me, and it would be possible for me calmly and with open eyes, as a blood relation of a healthy story, to hear it read ....

At this point, we see him resisting the more frequently heard desire to let the story be born. "Go," wrote Ezra Pound, of his "songs," in "Ité," in 1913:

> ...seek your praise from the young and from the intolerant,
> Move among the lovers of perfection alone.
> Seek ever to stand in the hard Sophoclean light
> And take your wounds from it gladly.

But Kafka, like a jealous mother, wants the pregnancy beyond term. This too, too solid story must not be born, must not break out through the skin of the paper. It would be stillborn; it must lodge where it has been conceived.

"The Judgment," then, represents a leap upward in sexual maturation. "Many emotions carried along in the writing," the entry of February 11, 1913, continues, "for example, the joy that I shall have something beautiful for Max's *Arkadia*." He presents his friend with the beautiful baby to which he's given birth.

Still, the poem as baby is a disturbing metaphor. We have Mallarmé's account of an icy, tortured, perfumed night issuing into the "Don du poème." There is Yeats, also stricken, writing in the vein of *aut libri aut liberi* ("either books or freeborn sons"):

> Pardon that for a barren passion's sake,
> Although I have come close on forty-nine,
> I have no child, I have nothing but a book,
> Nothing but that to prove your blood and mine.

Kafka was twenty-nine in 1912. While in the following twelve years, until his early death, he would produce a few small books, he had no children and wrote often of the anguish of a death without true progeny.

Ejaculation and birth are the chief metaphors of Kafka's early writing. But another motive of great interest very likely connects the work of Yom Kippur eve with a strong ejaculation.

In a diary entry in late 1911, the day after Yom Kippur of the year before he wrote "The Judgment," Kafka caricatured the Kol Nidre evening service that ushers in the ceremony. "The Altneu Synagogue yesterday. Kol Nidre. Suppressed murmur of the stock market. In the entry, boxes with the inscription:

'Merciful gifts secretly left assuage the wrath of the bereft.'" And then he mentions recognizing among the members of the congregation "the family of a brothel owner." The brothel is the well-known Salon Suha, the house probably in question when he wrote the year before, "I passed by the brothel as though past the house of a beloved." It was indubitably the house he more than passed by the very night before Kol Nidre 1912; his diary says that he spent his evening there.

So, here, if it were necessary, is further proof that with Kafka nothing sexual is simple (in the sense of being unentangled with its opposite). There are no true opposites in this domain, certainly not sex with women and sex with literature. "My antipathy to antitheses is certain," Kafka noted in his journal that same year; and as if he were besotted with this very antithesis of sex with women and sex with literature, he wrote of antitheses in an eye-catching way:

> Admittedly, [antitheses] generate thoroughness, fullness, completeness, but only like a figure on the "wheel of life" [a toy with a revolving wheel]; we have chased our little idea around the circle. As different as they can be, they also lack nuance; they grow under one's hand as if bloated by water, beginning with a prospect onto boundlessness and always ending up the same medium size. They curl up, cannot be straightened, they offer no leads ....

Whatever agent of antithesis could Kafka have had in mind? And what house was Kafka thinking of when he wrote in an early story, in the voice of a hero resembling his own:

> Certainly I stood here obstinately in front of the house but just as obstinately I hesitated to go up .... I want to leave, want to mount the steps, if necessary, by turning somersaults. From that company I promise myself everything that I lack, the organization of my powers, above all, for which the sort of intensification that is the only possibility for this bachelor on the street is insufficient.

Not all of Kafka's sexuality was sublimated in literature, but a great deal was – and the sublimation was an intense affair. As a young writer Kafka took Flaubert for his master in matters of style; afterward, he followed stylistic paths of his own, like the animal fable and the fivefold allegory, which led him past his master and to greater effect. But Kafka also took Flaubert as a model of one who 'became' literature. Kafka's German nonce word for this state of being is *Schriftstellersein*: the condition of being [nothing but] a writer.

In the end, he again went past his master in the inventiveness and extremity of his claims to be nothing but literature. Evoking the intensity with which he cared for writing, he wrote to his fiancée Felice Bauer, "Not a bent for writing, my dearest Felice, not a bent, but my entire self. A bent can be uprooted and crushed. But this is what I am." In acquainting her father with his qualities as a future son-in-law, he wrote, "My whole being is directed towards literature; I have followed this direction unswervingly until my thirtieth year, and the moment I abandon it I cease to live. ... Literature is not one of my interests, I am literature." He enjoined himself to "live as ascetically as possible, more ascetically than a bachelor, that is the only possible way for me to endure marriage," before adding the good question, "But she?" Kafka heard the answer elliptically in Flaubert's cry to Louise Colet: "I tried to love you and do love you in a way that isn't the way of lovers." Kafka loved Felice, if that is the word, as an

erotic hitching post of sorts. If he could attach his active sexuality to her as his fiancée, the woman with whom he would one day share a bed, then that much of his drive could be cathected, stilled, apportioned. The rest would be free for the literature that he *was*.

But what would the reality of domestic sex be like? Kafka warns Felice elegantly by praising to her the poem "In the Dead of the Night," by Yüan Tzu-tsai (1716 – 1797), not incidentally quoting a biographical comment by Yüan's editor: "Very talented and precocious, had a brilliant career in the civil service. He was uncommonly versatile both as man and artist."

> Bent over my book in the cold night
> I forgot to go to bed in time.
> The perfumes of my gold-embroidered quilt
> have already evaporated, the fireplace is extinct.
> My beautiful mistress, who hitherto has struggled
> to control her wrath, snatches away the lamp,
> And asks: Do you know how late it is?

The poem made a strong impression on Kafka, and he analyzed it relentlessly in the course of their correspondence. Meanwhile, it says very plainly all that needs to be said about his unmarriageableness, the undomesticable character of the writing he sought to do.

So this oxymoronic process works as follows: For Kafka, writing excluded regulated heterosexual sex. He feared marriage because he could not spend his nights in bed; he needed at least his nights for another sort of "nightwork," as he put it. But then again – the oxymoron advances – this writing thing is peculiarly like lust, and it does take place in bed, beginning with a dream: "What will be my fate as a writer is very simple. My talent for portraying my dreamlike inner life has thrust all matters into the background . . . ."

Kafka is gripped by his writing-lust, even as the devil in it decides it must exclude another's body. Is it sex? There is no better analogy for this pleasure than

> the reward for service to the devil – this descent to the dark powers, this unshackling of spirits bound by nature, these dubious embraces and whatever else may go on below, of which one no longer knows anything above ground when one writes one's stories in the sunshine.

What we are dealing with, then, is a less than harmless sublimation of the sexual drive. Kafka is a great retheorist of sublimation: there is nothing clearly 'sublime' about it. How could there be? The implications of this metamorphosis are not innocent. Certainly they are not innocent as soon as the body is involved. For the body of this man, who was always young – he complained that his face did not age, and in actual fact he was never older than forty-one, when he died – is, not exceptionally, a furnace of sexual energies. What happens when this furnace is made to produce script? What sort of script comes out of such unnatural fire, "a fire in which everything is consumed and everything rises up again"? We can expect that that fire will be in some sense banked or angled. The technical word for this event is 'perversion.' But this term is only a cipher for what remains to be observed in Kafka and his work.

If sex is a drive, then the drive must be figured as originally simple. In such a state it is called an instinct, on a par with the instinct of self-preservation. Of course, such an origin, in the human infant, is only a gleam in a metaphysician's (no reader's) eye. But following

the point that Jean Laplanche has notably elaborated, the infant's instinct to take milk from the breast is exceeded from the start by the sexual pleasure it gets from the play of its mouth and fingers with the breast. Thereafter, both aims are commingled, and infantile sexuality is anaclitic, a drive shored up by an instinct. Neither of these pulsions takes its way again in separation from the other: 'feeding' on the other's body in taking pleasure from it is no mere metaphor.

As we see even in Kafka's sublimated – read, scriptive – account of these relations, the sexuality of writing is anaclitic on feeding as well. Consider his fervid desire "to write all my anxiety entirely out of me, write it into the depths of the paper just as it comes out of the depths of me, or write it down in such a way that I could incorporate what I had written into me completely."

The dramatist Kleist, whom Kafka adored, is famous for rhyming, in his *Penthesilea*, the word *Küsse* (kisses) with *Bisse* (bites), as his Amazon queen, madly in love with Achilles, proceeds literally to tear him into bite-size pieces:

> I did not kiss, but tore him? …
> So it was a mistake. Kisses, bites,
> They sound alike, and those who deeply love
> Can reach for one as well as for the other
> ….

In its voraciousness, the writing intensity might very well be correlated with love at its highest pitch: "early-stage intense romantic love." To the celebrated essay "Reward, Motivation, and Emotion Systems Associated with Early-Stage Intense Romantic Love,"[1] Helen Fisher, a coauthor, commented: "When you're in the throes of this romantic love, it's overwhelming, you're out of control, you're irrational."[2] Now consider the reflections of Kafka's *frère semblable*, the dog who contemplates the history of his 'researches': his visions "show at least how far we can get when we are completely out of our senses (*bei völligem Außer-sich-sein*)."

"When rejected," continues Fisher, "some people contemplate … suicide. This drive for romantic love can be stronger than the will to live."[3] Kafka's diaries speak often of the suicidal despair that followed on his being "thrown out" of writing.

"A growing body of literature," remarks the neurophysiologist Hans Breiter, "puts this intellectual construct of love directly onto the same axis as homeostatic rewards such as food, warmth, craving for drugs."[4] The mortal antagonists in "The Burrow," one of whom is an architect-builder, confront one another "with a new and different sort of hunger."

In Kafka's case, we can concede a second-order sublimation of the sexual drive that substitutes the word, the script, the corpus of the letter for the other's body. It is not only the schizophrenic who plays with language. Kafka's play is visible at the level of his topics – his stories, which invariably advert to the writing passion, are sex-besotted

1 Arthur Aron et al., "Reward, Motivation, and Emotion Systems Associated with Early-Stage Intense Romantic Love," *The Journal of Neurophysiology* (2005) 94: 327 – 337.

2 Comment cited in Benedict Carey, "Watching New Love as It Sears the Brain," *New York Times*, May 31, 2005, http://www.nytimes.com/2005/05/31/health/psychology/31love.html?ex=1154577600&en=45b436a5284b877b&ei=5070.

3 Ibid.

4 Ibid.

– and at the level of the letter. The torture scene in "In the Penal Colony," in which the naked prisoner, lying on his belly, is punctuated by rows of needles, then by a "graver," then by a spike driven into his head, includes the incision into his body of unending "ornaments" – tropes or perversions. "So the genuine script has to be surrounded by many, many ornaments," explains the officer; "the real script encircles the body only in a narrow belt; the rest of the body is meant for adornments." In the course of the punishment, the mortal body of the victim is literally abraded by the incised letters – and they are "ornaments," they are beautiful.

Through all the letters and stories Kafka sent to his fiancée Felice Bauer, he is at work offering her a verbal body in place of his actual, unavailable body. It is like the *clothed body* the hero Raban in the story "Wedding Preparations in the Country" sends out to get married in, in lieu of his own body, which remains in bed in the form of "a beautiful beetle." But the verbal body is not opaque – it is transparent to a meaning; in this sense, Kafka sublimates his empirical body to a nakedness of breath and light. Writing to erase the text of desire, Kafka grows beautiful. In an early diary entry, he speaks of this "I":

> Already, what protected me seemed to dissolve here in the city. I was beautiful in the early days, for this dissolution takes place as an apotheosis, in which everything that holds us to life flies away, but even in flying away illumines us for the last time with its human light.

Readers of Kafka's masterpiece *The Castle* have always been taken aback by the scene of K.'s brutal intercourse with Frieda.

> There [on the floor with Frieda, in a puddle of beer] hours passed, hours of breathing together, of hearts beating together, hours in which K. again and again had the feeling that he was going astray or so deep in a foreign place as no man ever before him, a foreign place [or a foreign woman] in which even the air had no ingredient of the air of home, in which one must suffocate on foreignness and in whose absurd allurements one could still do nothing more than go further, go further astray.

A remarkable feature of this passage is the reference to "the foreign element" (*die Fremde*), which evokes 'Frieda' nominally, and hence is this woman: the outlandish foreignness that K. registers is his swoon into the spaces of the woman's body. Here, his skills as land surveyor (*Vermesser*) fail him; all that survives is his insolence (*Vermessenheit*). The woman in this novel is an adjacent plot but is connected by quite visible threads to the main topic of the all-encompassing ministry. How?

Everything of importance relates to the connection to Klamm that K. seeks and thence to the castle. (The word for 'connection,' which abounds in *The Castle*, is *Verbindung*, which, in certain cognates, also refers to a marriage-engagement.) We know that K. conceives of Frieda as the connector to this higher connector. That association comes about when Frieda is summoned to Klamm by letter, the medial form of the summons that castle authorities issue to girls whom they mean to rape. Frieda, then, as the chosen recipient of a letter from Klamm, is the metonymy of that empowering letter, K.'s summons: when Frieda receives K., he receives, as it were, a letter from Klamm.

We will, of course, be immediately reminded of Kafka's struggle to remain connected, and engaged, to Felice Bauer

(Frieda Brandenfeld of "The Judgment") – who existed for him chiefly as the recipient of his letters. And, of course, the entire project of becoming engaged to Felice was conceived under the plan of furthering his writing, a goal represented in this novel as 'entering' the castle – the house of writerly being – *Schriftstellersein*. Kafka was not the least bit innocent of the notion that the letter to a woman might keep her engaged: "If it were true," he wrote to Max Brod, as early as July 1912, "that one could hold (also: become engaged to) girls by means of writing script?" The mingling of script with the woman's body comes allusively to the fore in the idiom of the castle-world: "Official decisions are shy like young girls." The castle is a single entanglement of visible sex with women and sex as script.

Is such script, with its 'adornments,' a kind of music? In an extraordinary diary entry, Kafka speaks of his ability "to ring simple, or contrapuntal, or a whole orchestration of changes on my theme." Here, we have the association of writing, music, and sex, but what have these categories to do with one another?

In a famous passage from the diaries, these terms are connected at the outset, with music and sex in interesting league against writing: "When it became clear in my organism that writing was the most productive direction for my being to take, everything rushed in that direction and left empty all those abilities which were directed toward the joys of sex, eating, drinking, philosophical reflection, and above all music."[5] Knowing that Kafka is proof against antithesis, we will rightly assume that these joys were not unknown to him, but they had to be set into rhetorical opposition with literature.

Toward the end of his life, in letters to his lover Milena Jesenská, Kafka discussed his exceptional relation to music. On June 14, 1920, he speaks of his being "completely unmusical," indeed, of being "unmusical with a completeness that I have never before encountered in the whole of my experience." A second letter, written a month later, links his unmusicality to his writing: "I have a certain strength, and if one wanted to designate it briefly and vaguely, it is my being unmusical." The renunciation of music is complete; being unmusical is the condition of becoming literature, a point beautifully confirmed by the context of this last-named letter to Milena. Kafka has been imagining Milena's tormented eyes from a photograph of her he has seen, and he is filled with grief. Of this strength (for literature) that lies in his being unmusical, he promptly adds: "But it is not so great that I at any rate now can continue writing . . . . A sort of flood of suffering and love takes me and carries me away from writing." This brings music closer to a type of bodily consciousness – an involuntary, emotion-laden consciousness that murmurs through us every day, the perpetual swash of sentiment and *ressentiment*, with its occasional peaks of longing and falls of dread. We are brought closer to that sense of music as a sort of "emotional state like excitement or affection" that Kafka feared.

But what more does music have to do with sex? Let us ask the question in a provocative modality – sex with men. In one instance, Kafka accuses himself, through the mask called "He," of "bursting [with his writing] the chain of the

5 Recent scholarship would favor a revision of this translation in light of an illegitimately editorially inserted comma in the manuscript. The text now reads, at the close: " . . . foremost toward the joys of sex, eating, drinking, and the philosophical reflection [performed by] music."

generations, breaking off for the first time down into all its depths the music of the world . . . . " According to learned authority – I speak of Günter Mecke, whose *Franz Kafkas offenbares Geheimnis* (*Franz Kafka's Open Secret*) is something of a revelation – being "unmusical" belongs to the argot of gay sex at the turn of the century, meaning "incapable of heterosexual relations."[6]

Kafka's fiction is saturated with homoerotic images, and Mecke is intent on arguing for more than Kafka's literary homoeroticism – his homosexuality, his painfully suppressed homosexuality, with the attendant view that his entire corpus is a coded elaboration of this predicament. This can sound like the thesis of a crank – some of its elaborations are far-fetched – but as a working hypothesis it is no less fertile in finding the solutions to particular cruxes than other totalizing hypotheses, such as Kafka's Judaism or socialism or Oedipal neurosis.

Consider Kafka's story "A Fratricide," in which a figure by the odd name of Schmar waits to surprise another, presumably his brother of some sort, with a knife into the belly:

> "Wese!" screams Schmar, standing on tiptoe, his arm thrust upward, his knife sharply lowered, "Wese! Julia waits in vain!" And into the throat from the right, and into the throat from the left, and a third thrust deep into the belly, Schmar sticks his knife. Water rats, slit open, produce a sound like Wese's.

This is dreadful, and it is dreadful as well because it is so hard to understand 'Schmar' and 'Wese.' These are not ordinary names. Here, Mecke has a suggestion difficult to resist. 'Schmar' would be the short form of *Schmarotzer*, which means 'parasite.' The word abounds in Kafka's early writings. But *Schmarotzer* has a code meaning as well in the gay argot of Prague German at the *fin de siècle*. It means 'gay,' with a veneer of the nastiness that can mask humorous familiarity when exchanged between members of an ostracized group.

So there is 'Schmar' as gay – and 'Wese'? His name may very well be the curt form of *Gewesener* – 'one who has been [one].' One what? 'A warm *brother*,' which in the jargon then and now means a gay man – in this instance, one who has been gay and now pretends not to be and has married Julia. So, with a sort of knife, a knife with a hot, glowing 'shaft,' one warm brother stabs another who has been, in former times, an 'old beer buddy,' and who now for his betrayal of his kind, according to a certain mad logic, asks to be raped and killed.

I know no other reading of this story that makes so much sense. It picks out its code, although this code must by no means refer to the behavior of the empirical person, the writer Kafka. For the gay code, while striking, is one of *many* cultural allegories that Kafka inscribes in this story. 'Schmar' also points to the word *Schmarre*, a dueling slash, and hence to the tension between German and Jew in the dueling fraternities of the Prague universities. Or, again, 'Wese' is the root of German words that signify 'rot' and 'decay' and points ahead to the dilapidated castle in the novel of that name – a castle belonging to the departed Count Westwest. The story mimics the rapidity and violence of the new Expressionist film, and so it is a medial allusion. The homosexual code belongs to a repertoire of cultural codes that fill each of Kafka's stories and novels.

The repertoire is vast: Kafka covers the codes of his time with uncanny com-

6 Günter Mecke, *Franz Kafkas offenbares Geheimnis. Eine Psychopathographie* (Munich: Wilhelm Fink Verlag, 1982), 76.

prehensiveness; he embraces them and plays with them, though with a certain wildness and exhilaration, knowing they are meant to be consumed for his pleasure. While writing the finale of the "The Judgment" – thinking, as Brod reported, "of a strong ejaculation" – Kafka noted, "How everything can be said, how for everything, for the strangest fancies, there waits a great fire in which they perish and rise up again." Benno Wagner characterizes this process with quieter words, finding in it a feeling for "the risk of the journey, the importance of small differences, oftentimes with laughter."[7] Kafka was aware of his dilettantism, hyperconscious of the pleasure in the word and in the deed. Writing, for him, was bliss, and because he was a great theorist of writing, he was also a great theorist of sexual pleasure.

7 "'No One Indicates The Direction': The Question of Leadership in Kafka's Later Stories," *Kafka's Selected Stories*, ed. and trans. Stanley Corngold (New York: Norton, 2007), 320.

Terry Castle

The lesbianism of Philip Larkin

"Love variously doth various minds inspire," wrote Dryden, but for many of us true sexual eccentricity remains difficult to comprehend. We still don't have the words. Granted, in most modern liberal societies, you can use the terms *gay* or *straight* and people will know (or think they know) what you mean. But anything more convoluted than plain old *homosexual* or *heterosexual* can be hard to grasp. (*Bisexual* doesn't help much: many sensible people remain unconvinced that this elusive state of being even exists.) For a while I've kept a list in my head of famous people whose sexual proclivities I myself find *inexpressible* – so odd and incoherent I can't begin to plumb their inner lives. Greta Garbo, Virginia Woolf, T. E. Lawrence, the Duke of Windsor, Marlon Brando, Simone de Beauvoir, Michael Jackson, and Andy Warhol have been on the list for some time; Condoleeza Rice may join them soon. Futile my attempts to pigeonhole such individuals: they seem to transcend – if not nullify – conventional taxonomies.

Pious readers will already be spluttering: *how presumptuous to 'label' someone else's sexual inclinations!* The truth is, however, Everybody Does It, and when it comes to understanding the very greatest writers and artists, some empathetic conjecture regarding the psychosexual factors involved in creativity seems to be necessary. Would life be better if Wilde had not raised the issue of Shakespeare's sexuality in "In Praise of Mr. W. H."? If Freud had not explored the homoerotic themes he found in the works of Michelangelo and Leonardo da Vinci?

And it is hard to approach the work of Philip Larkin (1922 – 1985) – considered by many the greatest English poet of the second half of the twentieth century – without acknowledging *his* particular brand of sexual eccentricity. The quintessential Establishment poet – he was offered the Poet Laureateship in 1984 –

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Larkin is usually thought of as a straight, if not blokish, man of letters. He portrays himself as such in numerous poems, though not in any vainglorious way. On the contrary, the rhetorical pose usually cultivated – indeed now regarded as typically Larkinesque – is that of shy (if sardonic) English bachelor: reclusive, timid, physically unattractive to women, envious of other men's romantic successes. At its most poignant, to be Larkinesque is to feel excluded from the family life and ordinary sexual happiness granted to others. ("For Dockery a son, for me nothing.") For those who love Larkin, this rueful evocation of sexual loneliness, tempered always with subtle intransigence and a wildly uncensored wit, is just what they love him *for*:

> Sexual intercourse began
> In nineteen sixty-three
> (Which was rather late for me) –
> Between the end of the *Chatterley* ban
> And the Beatles' first LP.

Despite tiresome overquotation the rhymes never go stale, nor do they lose their odd power to console. Yet, however bleak the (real or imagined) erotic life, Larkin's 'normality' would seem to be a given. As the poet has his frustrated stand-in say in "Round Another Point" – an unpublished *débat* between two young men on the subject of women, sex, and marriage – "I want to screw decent girls of my own sort without being made to feel a criminal about it."

Since the poet's death, however, some unexpected kinks in the Larkin persona have come to light. Pixillating indeed was the revelation, in Andrew Motion's 1993 biography, that the bespectacled author of *The Whitsun Weddings* was an avid, even compulsive, consumer of lesbian porn, especially the kind involving frolicking English schoolgirls in gym slips and hockey pads.

The lesbianism of Philip Larkin

But downright electrifying was the news that, after finishing his final term at St. John's College, Oxford, in 1943, the young poet, then twenty-one, had spent several months writing such stories himself, under the pseudonym 'Brunette Coleman.' Brunette was in fact a full-blown comic persona: the imaginary sister of Blanche Coleman, the platinum-blonde leader of a 1940s 'all-girl' swing band in whom the jazz-loving Larkin took both a musical and prurient interest. Unlike her real-world sister, the fictional Brunette was supposedly tweedy, bookish, and sentimental – a prolific author of Angela Brazil–style schoolgirl novels and one of those mawkish middle-aged English lesbians whose imperfectly suppressed homosexuality is plain to everyone but themselves. Her works, it seemed, were an odd mixture of the lecherous and the dotty. Amazingly enough, the Brunette manuscripts had survived, Motion disclosed, and were to be found along with other unpublished works in the Larkin archive at the Brynmor Jones Library, Hull University, where Larkin had served with great distinction as Head Librarian for almost thirty years.

Sensing curiosity – or at least titillation – among Larkin readers, Faber, Larkin's long-time publisher, made the complete Brunette oeuvre available in a 2002 volume called *Trouble at Willow Gables and Other Fiction*, edited by James Booth. 'Brunette's' literary corpus consisted of five works: *Trouble at Willow Gables* and *Michaelmas Term at St. Bride's* (two fully elaborated parody-school stories, full of games mistresses, mash notes, and lubricious hijinks after lights out); *Sugar and Spice* (a set of fey sapphic poems modeled – with suitable languor – on the "Femmes damnées" poems in Baudelaire's *Les fleurs du mal*); *Ante Meridien* (a fragment of autobiography in

which Brunette reminisces about her Cornish childhood in the blowsy she-male manner of Daphne du Maurier); and "What Are We Writing For?" (an artistic manifesto, supposedly composed at the instigation of her live-in protégée, Jacinth, wherein Brunette defends the genre of popular girls' school fiction against "penny-a-liners" who flout the time-honored rules of the form). In printed form, they run to nearly three hundred densely packed pages and, along with his jazz writings, could be said to represent, however risibly, the otherwise costive Larkin's most fluent and sustained literary endeavor.

It's hard, of course, to keep the usual scholarly po-face. Why – at the very outset of Larkin's estimable career – this protracted muddy detour across the playing fields of Lesbos? A postadolescent liking for scabrous fun is one thing, but what inspires an ambitious young poet, already sizing up his chances in the great literary game, to impersonate at such length – and with such conspicuous *dedication* – a leering, half-mad, sapphistically inclined author of books for girls? The editor of the *Girls' Own Paper*, last heard from in 1956, has yet to address the question.

Conservative poetry lovers have been displeased by the whole business. In "Green Self-Conscious Spurts," a stunningly humorless piece about Larkin's early work recently in the *TLS*, Adam Kirsch dismisses the posthumous publication of *Trouble at Willow Gables* as "strictly unnecessary, and potentially damaging to [Larkin's] reputation." As punishment for prissiness – not to mention the frigid little blast of homophobia – Kirsch should no doubt be required to sit on it and rotate.

But one also wants to disagree with him profoundly. The Brunette phase speaks volumes about the paradoxical process by which Philip Larkin became 'Larkinesque' – modern English poetry's reigning bard of erotic frustration and depressive (if verse-enabling) self-deprecation. Homosexual women have long been associated with sexual failure and fiasco: Sappho grieves for her faithless girls; Olivia loses Viola; Sister George is cuckolded and killed off. In *The Well of Loneliness*, Radclyffe Hall's classic lesbian potboiler from 1928 – a book I'm convinced Larkin knew well – the luckless heroine, a supposedly famous writer, ends up suicidal and alone. Brunette Coleman, spinster-sapphist-*cum*-panto-dame, no doubt seemed a marvelous comic invention in 1943. Yet by impersonating her so fully and strangely the young Larkin was also plumbing his own well of loneliness, gaining imaginative and emotional purchase on an ever-deepening sense of sexual alienation. The literary results would be beautiful, witty, and original, but it was a sad business nonetheless. What begins in play ends in *tristesse*, or so the lives of the poets teach us, and the 'trouble at Willow Gables' was enough to be getting on with for a sensitive soul named Larkin.

It seems important to emphasize from the start the *lesbianism* of the Larkin persona. Unconvincing is the attempt of Larkin scholars to explain away the Brunette fantasy by associating it (vaguely enough) with male homoeroticism. In his introduction to *Trouble at Willow Gables*, James Booth suggests that when Larkin began composing the Brunette material he "was not far from his own days as a shy 'homosexual' schoolboy" and still "undirected" in his sexuality. By impersonating Brunette, he was simply "working out," even seeking to exorcize, residual homoerotic feelings for boys, left over from his experiences at King Henry VIII School, the Coventry gram-

mar school he attended from 1930 to 1939. The Willow Gables milieu, Booth claims, "is not fundamentally different from that of the implicitly homosexual boys' school of Isherwood's *Lions and Shadows* or Julian Hall's *The Senior Commoner*, both of which Larkin read and admired at the time." The last-mentioned even contains a scene, he notes, in which one senior boy asks another if a reportedly winsome member of the junior school is "a brunette."

Yet the theory depends – rather too patly – on a view that male and female homosexuality are, libidinally speaking, but two sides of the same coin and that one can automatically stand in for the other. The adolescent Larkin may well have had feelings for other boys, but the somewhat hackneyed biographical story line applied here – After 'Normal' Schoolboy Crushes British Male Writer Goes Straight and Stays Straight (More or Less) – strikes me as a bit cursory and cartoonish, and not only because it has been attributed over the years, with a broad brush, to everybody from Robert Graves and Siegfried Sassoon to Evelyn Waugh, David Garnett, Cyril Connolly, Stephen Spender, Graham Greene, and (indeed) Larkin's friend, Kingsley Amis. Larkin himself claimed to be bewildered by his evolving fantasy life: "Homosexuality," he wrote to Amis in September 1943, "has been completely replaced by lesbianism in my character at the moment – I don't know why."

To be interested in lesbianism is, de facto, to be interested in *women* – in liking women and thinking about women, in thinking about women liking other women, and in liking to think about women liking other women. And just as there are women whose particular psychosexual idiosyncrasy is to hanker obscurely after homosexual men – 'fag hags' in rude parlance – there are likewise men, otherwise seemingly heterosexual, who become oddly transfixed by homosexual women. The sheer connoisseurship, even pedantry, that Larkin brought to the sapphic theme – not to mention the curious crystallization of his own nascent poetic identity around that of Brunette – suggests exactly this sort of unusual yet generative symbolic investment.

Larkin's preoccupation was from the start a profoundly literary one. The young Larkin was an ardent reader, first of all, of popular girls' school fiction – a genre notorious since the late nineteenth century for its barely sublimated sapphic inflections. His knowledge of "this exciting field of composition" (as Brunette calls it) seems to have been freakishly extensive, taking in everyone from Charlotte Brontë to Angela Brazil. However, not for Larkin was the sophisticated artistry of Brontë, or that of Colette, whose cheerfully salacious *Claudine* novels perhaps constituted, around the turn of the century, the aesthetic apotheosis of the genre. Larkin's tastes were at once more juvenile and down-market: he preferred the ostensibly innocent works produced by earnest female hacks for fourteen- or fifteen-year-old girls. Thus Dorothy Vicary's *Niece of the Headmistress* (1939) and Nancy Breary's *Two Thrilling Terms* (1944) were special favorites; Larkin owned copies of both. But to judge by Brunette's writings, he was acquainted with a truly startling number of other girls' school stories: Brazil's *The Jolliest Term on Record*, *The Fortunes of Philippa*, and *A Pair of Schoolgirls*; Dorita Fairlie Bruce's popular *Dimsie Moves Up* (1921) and *Dimsie Moves Up Again* (1922); Elsie J. Oxenham's *The Abbey Girls Win Through* (1928); Phyllis Matthewman's *The Queerness of Rusty: A Dinneswood Book* (1941); Joy Francis's *The Girls of the Rose Dormitory* (1942); and Judith Grey's *Christmas*

Term at Chillinghurst (1942), among others.

No doubt the fixation had its lubricious dimension. In a 1945 letter to Amis, Larkin describes a conversation in which he and Bruce Montgomery planned a fanciful "little library of short novels," each of which was to focus on a different "sexual perversion." The labors were to be divided between them according to personal preferences. "Dropping ONANISM as too trite," he writes, "[Montgomery] put in a claim for SADISM and SODOMY (male) while I bagged LESBIANISM and ANAL EROTICISM. He brought up MIXOSCOPY, and we discussed for some time PAEDERASTY and what I call WILLOWGABLISMUS." By WILLOWGABLISMUS Larkin is no doubt referring to the kinky schoolgirl sexplay so often featured in the male pornographic imagination. Booth suggests that of all the school stories he had read, Larkin especially favored the Vicary book, *Niece of the Headmistress*, because it has "an unusually legible erotic subtext."

Yet what Larkin appears to have prized about the girls' school story was not so much any outright kink as an odd, overall, seemingly *unintended* suggestiveness: the comic way that novelists like Vicary and Bruce managed to set up titillating situations without ever seeming to be aware that they were doing so. Larkin took obvious delight in just how easily a prurient reader might convert a supposedly nice story into a naughty one. 'Nice' and 'naughty' seem to have been curiously proximate categories for him, as a famous Larkin anecdote suggests. In the introduction to the 1963 reprint of *Jill* (1946) – the first of the two 'serious' novels he published immediately following the Brunette phase (*A Girl in Winter* is the other) – Larkin describes a letter from Kingsley Amis, written just after *Jill*'s publication, in which Amis reported seeing a copy of *Jill* in a seedy Oxford bookshop lodged "between *Naked and Unashamed* and *High-Heeled Yvonne*." As Larkin explains, it was most likely the reputation of his publisher, Reginald Ashley Caton, that had won *Jill* its place on the X-rated shelf. Caton "divided his publishing activity between poetry and what then passed for pornography," Larkin writes, "often of a homosexual tinge," and *Jill*'s own dust jacket bore adverts for such intriguing titles as "*Climbing Boy*, *Barbarian Boy*, *A Diary of the Teens by A Boy*, and so on."

The image of the chaste *Jill* indecently wedged in between works of a less decorous nature no doubt appealed to Larkin-the-librarian's subversive side. (One can't help thinking how much time he must have spent reshelving misplaced books early in his career.) But it also indicates how permeable the conceptual boundary between the 'polite' and the 'pornographic' sometimes was for him. The modes were, as it were, thrust up against one another – like two strangers in a crowded Underground train – and when the action involved schoolgirls, one kind of writing could all too easily morph into the other. In fact, the more sentimental and old-maidish the story writer's attitude, the more the fictional *mise-en-scène* seemed to lend itself to obscene embellishment.

At first glance the Brunette Coleman writings might be thought to promote exactly this kind of salacious comic dissonance. The 'proximity' ploy works perhaps most effectively in "What Are We Writing For?" – Brunette's supposed artistic manifesto. This Dame-Ednaish little treatise is a satiric mini-masterpiece – in a class with works by Wodehouse, Waugh, or Grossmith. Ostensibly a call for a more scrupulous regard to

craft – Brunette chastises "slovenly" sister novelists for dashing off stories "with the radio playing and a cigarette in the mouth" – it exposes, fairly flagrantly, its spinster-author's sublimated obsession with the school story's homoerotic conventions. Thus Brunette's quasi-neoclassical aesthetic strictures: *no stories set in day schools* (scenes of nocturnal conspiracy, illicit biscuit-eating, and pajama-clad hair-stroking are essential, she argues, to the "excitement" of the genre); *no episodes set outside the school* (too reminiscent of tiresome boy-girl "Adventure" stories), and, above all, *few, if any, male characters*:

> The essence of the story we are writing is that "our little corner" becomes a microcosm. I cannot stress strongly enough the need for the elimination of all irrelevancies. There must be no men, no boy cousins, no neighbouring boys' schools, no (Oh, Elsie J. Oxenham!) coeducation. Uncles and fathers must be admitted with the greatest circumspection. And as for fiancés and husbands (Oh, Elsie J. Oxenham!) – they are so *tabu* that I hardly dare mention the matter.

Brunette recommends instead a sequestered all-girl milieu: "a closed, single-sexed world, which Mr. Orwell would doubtless call a womb-replica, or something equally coarse." A handsome "Jehovah"-like headmistress should be in charge – one who delivers awards and punishments publicly, in accordance with a clearly defined "moral code." Head Girls, in turn, are to be "beautiful, strict and fair" – especially when required to administer "thrashings" – and villainesses demonstrably wicked:

> Remember Satan, and Iago, and Lady Macbeth! Let the villainess be vicious and savage: let her scheme to overthrow game captaincies and firm friendships, and spread slackness through the Hockey XI! Let us . . . remember the dictum of Baudelaire: 'There are in the young girl all the despicable qualities of the footpad and the schoolboy.' Alas! it is only too true!

The lesbianism of Philip Larkin

Finally, the writer must seek to imbue her narrative with "body" and "fervour." "Vast webs of friendships, hatreds, loyalties, indecisions, schemings, plottings, quarrelings, reconciliations, and adorations must arise: incredible self-torturings and divided allegiances must lie behind that white, strained little fourth-form face. And behind all must stand the school itself – the rooms, the dripping trees, the crumbling stone fountain, the noise of water in the pipes as the Early Bath List undress." In the juvenile bosom of a Dimsie or Millicent, the emotions of Phèdre or Andromache.

Oddly enough, neither *Trouble at Willow Gables* nor *Michaelmas Term at St. Bride's* holds to such Homo-Rhapsodical Unities. Like Dorita Fairlie Bruce's *Dimsie* novels, Brunette's fictions share the same *dramatis personae*: a heroine named Marie Moore, whose older sister Philippa is "Captain of the School" and a leather-belt fetishist; Myfanwy, the devoted "chum" with whom Marie is often seen cuddling; Margaret, a secret gambling addict who prefers off-track betting to more usual schoolgirl pursuits; Hilary Russell, aesthete, lesbian seductress-in-training, and supposed "villainess"; and Mary Beech, the hulking, slightly moronic captain of the Hockey Second XI who is the principal object of Hilary's lascivious wiles. In *Trouble at Willow Gables*, the main action revolves around a mysterious theft: someone has stolen five pounds intended for the new Gymnasium Fund (an endowment sponsored by one "Lord Amis"). In *Michaelmas Term at St. Bride's* – a sequel of sorts – Marie, Myfanwy,

and the rest are seen adjusting, somewhat imperfectly, to their first term at St. Bride's, a fictional Oxford women's college rather like Somerville or St. Hugh's. Larkin intriguingly uses different surnames in the second tale: "Marie Moore" becomes "Marie Woolf," and her sister "Philippa Woolf."

A certain slapstick porniness surfaces, to be sure, at various points in both stories. When the Fourth Form gets rambunctious while undressing for bed in *Trouble at Willow Gables*, a plump prefect named Ursula restores order by "sweeping up and down the lines of beds" flicking offenders with a leather belt –

> She had considerable skill in doing this, and there was a hasty scuffling and stripping and knotting of pyjama cords as she toured from girl to girl like a well-made Nemesis. Myfanwy returned to her bed with as much dignity as was compatible with a stung bottom: Marie's head was buried in the pillow.

In a later episode, after a wild argument-cum-wrestling match with Philippa, the belt fetishist, poor Marie ends up "lying face downwards on Philippa's silken knees," her "velvet skirt folded neatly round her waist," while Philippa administers a dreadful "thrashing" using one of the thirty-seven "exotic" belts in her collection – one sporting "a curious metal buckle, which Philippa rightly adjudged would add an awful sting to the lashes."

Yet such questionable moments apart, one can't help noticing how curiously *un*erotic the 'Brunette' stories are – how often they seem merely diffident and strange. For a would-be pornographer, even a very soft-core one, the young Larkin seems painfully lacking in seigneurial aplomb. Titillating situations fizzle; characters who one might expect to deliver some smutty business – the jaded Hilary for example – turn out to be surprisingly maladroit. In *Willow Gables* the one schoolmate Hilary succeeds in bedding (the racing-form addict Margaret Tattenham) is hers only through blackmail, and the lovemaking is never described. The overall mood is one of *tristesse* – as when Hilary, oppressed by her inability to land her main prey (Mary Beech) during an intimate late-night tutoring session, succumbs to the mopes as soon as Mary leaves her room:

> Lighting a cigarette, she stretched herself on the sofa, rubbing her cheek caressively on the cushion Mary had warmed, and murmuring idiotically to herself: "She was here, and is gone. The young lioness was here and is gone . . . " After that she undressed slowly, munching a biscuit, and read *Mademoiselle de Maupin* in bed till a very late hour.

The fact that Larkin describes the thwarted prefect as feeling – rather unappetizingly – like a "jelly newly tipped out onto a plate" adds another element of anticlimax to the scene.

In *Michaelmas Term at St. Bride's*, the absence of WILLOWGABLISMUS is even more pronounced. Most of the *Willow Gables* characters, it's true, reappear: Hilary is again on the scene; likewise, Mary Beech (now called Burch), who discovers to her horror, upon arriving for her "fresher" term at St. Bride's, that she will be sharing rooms with her former persecutor. Marie, Myfanwy, and Philippa also return, the last-mentioned with collection of leather belts intact. In the fine old nice-turned-naughty tradition of *Willow Gables* Philippa at one point even invites her little sister into her college rooms clad only in "socks and nail varnish."

But the Oxford setting changes everything – not least of all because *men*, odious men, now intrude upon the action.

In so allowing Brunette necessarily flouts the very "*tabu*" marked in "What Are We Writing For?" as fundamental to the girls' school genre: that no male character ever penetrate the all-female "womb-replica" of the school. Can the famed university on the Isis in fact be considered a 'school' in the Angela Brazil sense? Even the redoubtable Dorothy Sayers twigged it: Oxford could hardly be mistaken for a lesbian hothouse.

Dire and bewildering is Brunette's turn, for the men of *Michaelmas Term* are clammy chaps of the sort British tabloids are wont to refer to as "sex-pests." Not even hardened tribades like Hilary Russell can avoid them. The perplexing relationship Hilary develops over the course of the fragment with the "Creature" – a tall, weak-eyed, chronically doleful male undergraduate who after being "thrashed hollow" by her in a game of table tennis becomes her abject swain – is emblematic. Despite the abuse heaped on him – Hilary likes to "minimize his masculine qualities" and make him cry – the Creature pursues her with masochistic ardor, asserting at every turn that "in a previous existence [she] had been a Roman empress, who had personally chastised a Christian slave, of whom [he] was a reincarnation." Hilary seems to tolerate his damp-palmed presence: not only does she allow the Creature to ply her with cocktails, theater tickets, and expensive meals at the Randolph, she's even willing on occasion to let him "inspect, reverently, the strength of her muscles."

This oddly stagnant relationship – like other boy-girl unions in the sequel – seems to destroy whatever minimal narrative coherence *Michaelmas Term* might be said to possess. Larkin-as-Brunette seems unsure what to do with his rapidly multiplying quasi-heterosexual couples, and the story breaks off abruptly in a welter of half-hearted 'metafictional' incidents. (When Marie finds Pat – the school skivvy from *Trouble at Willow Gables* – tending bar in an Oxford pub and asks her why she isn't still working at the school, Pat replies: "That story's over now, Miss Marie, [. . .] Willow Gables doesn't exist anymore.") Significantly, the Creature's love-dream remains unrequited at the breaking-off point: we last see him alone in the same pub's infernal "Smoke Room," soddenly "picking out in an incompetent fashion a negro twelve-bar blues."

Much could be said about *Michaelmas Term at St. Bride's*, but perhaps the tale's most immediately striking feature is the transparent, almost algebraic way it announces Larkin's poetic identification with what might be called the 'Sappho-position' – that of sex-starved, ugly, erotically luckless pseudo-man. One is hardly surprised to read in Motion's biography that as a St. John's undergraduate Larkin was himself soundly "thrashed" in a game of table tennis by an Amazonian friend named Hilary; or that in letters to male friends he referred to the young woman to whom he was briefly and unhappily engaged in 1950 – Ruth Bowman – as the "School Captain." (Panic-stricken, he rescinded his proposal after three weeks.)

Like Brunette, the Creature is no doubt a self-inscription. In fact the two *personae* seem oddly to interact, if not merge, at the end of *Michaelmas Term*. The same pub in which the Creature plays his feckless tune – or so the metafictional Pat tells Marie – was once frequented by "the woman that writes all these books." ("Haven't you ever met her, Miss Marie? I saw her once. She used to come in here and drink. Very tall she was, and beautifully dressed.") The Creature is nothing less than a quasi-male Brunette – studious, melancholic, rapidly balding (as

Larkin himself was by the mid-1940s), partial to alcohol, jazz, and adolescent girls.

Watching the Creature's slotting into the Sappho position, one senses, rather more ominously than in *Trouble at Willow Gables*, the self-critical, even self-punishing, aspect of Larkin's cross-sex identification. At the deepest level the poet's affinity with female homosexuality was a bleak one, and perhaps could not have been otherwise. Love between women, after all, is hardly an unexplored or uncontroversial theme in mainstream Western literature. However harshly or obliquely, over the centuries a host of writers have approached the topic: not just Sappho, obviously, but also Ovid, Juvenal, Martial, Ariosto, Shakespeare, Ben Jonson, Donne, Dryden, Aphra Behn, Pope, Fielding, John Cleland, Diderot, Sade, Laclos, Maria Edgeworth, Coleridge, Gautier, Baudelaire, Emily Dickinson, Balzac, Verlaine, Maupassant, Zola, Swinburne, Hardy, Henry James, Wedekind, Proust, Strindberg, Colette, H.D., Ronald Firbank, Amy Lowell, Cather, Stein, Woolf, Katherine Mansfield, D. H. Lawrence, Rosamond Lehmann, Radclyffe Hall, Djuna Barnes, Daphne Du Maurier, Dorothy Sayers, Elizabeth Bowen, Wyndham Lewis, Hemingway, William Carlos Williams, Lillian Hellman, Graham Greene, Marguerite Yourcenar, Sartre, de Beauvoir, Elizabeth Bishop, Jane Bowles, Iris Murdoch, *et multi alia*.

However oddly assorted, what almost all of the works in the Western lesbian canon share – including even the more worldly or forgiving – is a sense of the *unviability* of female same-sex love. To yearn for a woman, it would seem, is to fall victim to an *amor impossibilia*. Passionate Sappho, alas, set the pattern: watching her former beloved simper on the wedding dais with her new husband – as in "Peer of the Gods," the celebrated "Fragment 31" – the poet becomes dizzy, breathless, and fears she will expire from the pain.

The logic of the *amor impossibilia* operates just as harshly elsewhere. When the cross-dressing Rosalind is reunited with her lover Orlando in *As You Like It*, Phebe, the gullible shepherdess who has fallen in love with her, is fobbed off on oafish Silvius. In Balzac's *The Girl with the Golden Eyes*, both the wicked Marquise de Réal and Paquita, her female lover, end up stabbed to death. The eponymous heroine of Swinburne's lurid *Lesbia Brandon* (1877) expires in agony, worn out by unnatural practices. In both Wedekind's *Lulu* and Berg's opera, the lesbian Countess Geschwitz, hopelessly besotted with the *femme fatale* of the title, is murdered by Jack the Ripper in the drama's final scene. And in *The Fox* (1929), one of several campy lucubrations on female homosexuality by D. H. Lawrence, March, the more childish and charmless member of a quasi-lesbian couple, is abandoned by her companion for a man and crushed by a falling tree. Radclyffe Hall, as usual, trumps everyone in the Utter Misery Department: after four hundred pages of rejection, insult, and sexual frustration, Stephen Gordon – mannish heroine of *The Well of Loneliness* – not only loses her lover to a man, but succumbs at novel's end to "the terrible nerves of the invert." She is last seen lurching suicidally through Paris from one squalid dyke bar to another.

Nowhere is the doomed nature of female same-sex love more explicit, finally, than in what one might call (*pace* Brunette) the School Story for Grown-Ups: the explicitly homoerotic tale – often female-authored and autobiographical – set in a girls' boarding school or college. Enough of these 'serious' school fictions exist to constitute a distinct subgenre of

lesbian writing: Colette's *Claudine à l'école* (1900), Gertrude Stein's *Q.E.D.* (1903), Henry Handel Richardson's *The Getting of Wisdom* (1910), Clemence Dane's *Regiment of Women* (1915), Christa Winsloe's *The Child Manuela* (source for the classic German cult film *Mädchen in Uniform* [1933]), Antonia White's *Frost in May* (1933), Lillian Hellman's *The Childrens' Hour* (1934), Dorothy Strachey's *Olivia* (1949), May Sarton's *The Small Room* (1961), Muriel Spark's *The Prime of Miss Jean Brodie* (1961), and Violette Leduc's *Thérèse and Isabelle* (1964) are only some of many.

These 'adult' school narratives are almost always dysphoric in tendency. Some, like Dane's *Regiment of Women* and Strachey's *Olivia*, are toxic little tales of female-on-female abuse: a charismatic teacher seduces a susceptible young student and then turns on her; an older and more sophisticated girl entangles one younger or more naive in an 'unhealthy' friendship. In other works, the homoerotic bond between two female characters is destroyed by an intruder-male. Thus, in Dorothy Baker's melodramatic *Trio* (1948), the student-heroine, seduced by an unsavory female French professor – a specialist in nineteenth-century "decadent" verse! – is saved from a life of *Fleurs du mal* perversion by a strapping young fellow who falls in love with her and threatens the professor with exposure. The latter, understandably dismayed, shoots herself at novel's end.

The repetitive, ruthlessly end-stopped pattern is clear, and for Larkin the bad news plainly resonated. In the brutal and bittersweet narratives of lesbian desire Larkin found a doom-laden prediction of what was to become the central and most painful theme of his imaginative and emotional life: **no girls for you**. The pain of the discovery was no doubt sublimated, covered over with misogyny and a lot of schoolboy smuttiness; it would likewise be transformed soon enough into a matchless poetic endeavor. But however much he intended the Brunette oeuvre as collegiate spoof – an experiment, egged on by Amis, in the higher prurience – he could not help castigating his own deepest longings: *You wish to be loved? Dream on, bloke: you will fail – pathetically – while real men succeed. Better not to bother. Drink; listen to jazz; write poems; accept privation as your lot*. Pretending to be a middle-aged invert named Brunette was a bookish young man's way of neutering himself at the starting gate. No Enormous Yes, or even a tiny yes, in the Larkin love-and-sex game: sadness, loss, and loneliness – the original Sapphic hat trick – seemed from the beginning the main thing on offer.

How far from Brunette, burbling spinster-sapphist, to the chilled-to-the-bone speakers of "Mr. Bleaney" or "The Whitsun Weddings"?

In his introduction to *Trouble at Willow Gables*, Booth suggests that the Baudelaire knock-offs in *Sugar and Spice* – the "slim sheaf" of verses attributed to Brunette – are already recognizably Larkinesque in mood and manner: "Technically," he declares, the Brunette poems are "among the finest poems Larkin wrote during the decade, with an assured delicacy of tone far beyond anything in *The North Ship*." He cites the opening lines of "The School in August" –

> The cloakroom pegs are empty now,
> And locked the classroom door,
> The hollow desks are dim with dust,
> And slow across the floor
> A sunbeam creeps between the chairs
> Till the sun shines no more.

– and notes how closely they anticipate the "empty rooms" in such characteris-

tic Larkin poems as "Home is So Sad," "Friday Night in the Royal Station Hotel," and "The Old Fools." One has to agree: against all expectation, the Brunette poems are spare, elegiac, ominously good. Above all, somewhat anachronistically, they already display the mature poet's weary autumnal sense of *Ubi sunt*:

> Who did their hair before this glass?
> Who scratched "Elaine loves Jill"
> One drowsy summer sewing class
> With scissors on the sill?
> Who practised this piano
> Whose notes are now so still?
>
> Ah, notices are taken down,
> And scorebooks stowed away,
> And seniors grow tomorrow
> From the juniors today,
> And even swimming groups can fade,
> Games mistresses turn grey.

The echo in the last line here of Pope's *Rape of the Lock* – "But since, alas! frail Beauty must decay, / Curl'd or uncurl'd, since Locks will turn to grey" – is apposite, for Larkin's sense of erotic alienation, of gauche unsuitedness for carnal love, rivals the satirist's. (Pope was tiny, wry-necked, and hunchbacked.) What other two English male poets have felt themselves so bitterly excluded from "sugar and spice and everything nice"?

There's Amis-style mischief, too, of course – as in "Ballade des Dames du Temps Jadis," a Villon pastiche to which 'Brunette' appends instructions for reading the poem aloud. The opening quatrain –

> Tell me, into what far lands
> They are gone, whom once I knew
> With tennis-racquets in their hands,
> And gym-shoes, dabbled with the dew?

– is to be delivered, we learn, "*with a sense of 'old, unhappy, far-off things.'*" Another should be read "*lingeringly*"; and another, "*with something of 'the monstrous crying of wind' – Yeats, of course.*" As for the bittersweet envoi, it requires a "*rising to, and falling from, an ecstasy of nostalgia.*"

Yet looming up, too, in silhouette, like a tall evening shadow cast forward in time – the solitary witness of masterworks to come:

> A group of us have flattened the long grass
> Where through the day we watched the
> wickets fall
> Far from the pav. Wenda has left her hat,
> And only I remain, now they are gone,
> To notice how the evening sun can show
> The unsuspected hollows in the field,
> When it is all deserted.
> ("Fourth Former Loquitur")

One doesn't want to make the Brunette oeuvre sound more sanitary than it is. Though no Humbert Humbert or Henry Darger, Larkin played his sapphic game in part to camouflage what many still regard as an unwholesome preference for underage girls. In *Trouble at Willow Gables*, when Hilary Russell deliquesces over Mary Beech's "shell-like ears," "tawny hair," and "bare white ankles emerging from woolly slippers," one can't help but sense – somewhat queasily – the storyteller's own preoccupation with the barely pubescent:

> Hilary thought, as so often before she had thought, that there was nothing so beautiful in the world as a fourteen-year-old schoolgirl: the uncosmetic'd charm depended on the early flowering into a quiet beauty of soft, silken skin, ribboned hair, print dresses, socks and sensible shoes and a serious outlook on a world limited by puppies, horses, a few simple ideas, and changing Mummy's book at Boots. How anyone could regard the version of six years later as in any way superior beat Hil-

> ary to a frazzle: it was preferring a painted savage dressed in bangles and skins, chockfull of feminine wiles, dodges, and other dishonesties directed to the same degrading sexual end, to a being who lived a life so simple and rounded-off in its purity that it only remained for it to be shattered – as it was.

The mock-heroic rhetoric used to monumentalize such fixations – "Hilary had a vision of [Mary] embodying the purity of youth, dressed in white tennis things and haloed with a netball stand, surrounded, like a goddess of plenty, with hockey-sticks, cricket-pads, and other impedimenta" – does not entirely obviate the rather nasty wet-dream quality.

That said, for me at least, the lubriciousness is okay – and stays okay – when I consider what it led to. I don't mean only Larkin's poetry. It would take a far longer essay than this one to begin to measure the greatness of *Jill* (1946), the extraordinary 'Oxford novel' Larkin began writing immediately after jettisoning the Brunette persona. Though oddly neglected, even by Larkin aficionados, *Jill* is perhaps the most exquisite and self-lacerating male-authored English fiction of the postwar period. But it is also, I'd like to conclude by asserting, the work in which the poet's sapphic identification shows itself most poignantly and irreversibly.

By *self-lacerating* I simply mean honest and self-revealing to a shocking, painful, poetic degree. True, Larkin always insisted that the story of John Kemp – a shy scholarship student from the Midlands who arrives at Oxford in wartime and becomes disastrously obsessed with the schoolgirl cousin of his roommate's girlfriend – had little connection with his own university experiences. But the autobiographical aspect of *Jill* is glaring and signaled above all by Larkin's flagrant recycling (and darkening) of his Willow Gables material. In *Jill*'s central and strangest sequence, the otherwise timid Kemp – hoping to impress Christopher, his crass and carousing roommate – tells him (falsely) that he, Kemp, has an adorable younger sister named Jill. When Chris expresses mild curiosity, Kemp begins embellishing wildly. Jill and he have always been very close, he explains: "She's fond of poetry – that line. And it's funny, she's very sensitive. She had a great friend at school called Patsy – Patsy Hammond. They were really awfully thick. Then a year ago she went back to school as usual after the holidays and found that Patsy had gone to America with her people and wasn't coming back again. She was awfully cut up: hardly wrote for weeks." Chris asks what school and Kemp promptly fabricates one: "Willow Gables, the place is called. It's not very big."

Christopher will evince no further interest in Kemp or his supposed sibling – he's cynically pursuing a rather fast young woman named Elizabeth – but Kemp, shunned by Chris and his friends over the next weeks, becomes increasingly obsessed with his nonexistent 'sister':

> [She] was fifteen, and slight, her long fine dark honey-coloured hair fell to her shoulders and was bound by a white ribbon. Her dress was white. Her face was not like Elizabeth's, coarse for all its make-up, but serious-looking, delicate in shape and beautiful in repose, with high cheekbones: when she laughed these cheekbones were most noticeable and her expression became almost savage.

The fantasy 'Jill,' one can't help noticing, is an almost exact replica of the "uncosmetic'd" schoolgirl admired by Hilary Russell in *Michaelmas Term*. And soon enough, Pygmalion-like, Kemp begins

writing a story about her. In this strange twelve-page tale-within-a-tale, Kemp imagines 'Jill' at Willow Gables, shortly after the departure of Patsy Hammond. Jill is lonely and falling in love from a distance, it seems, with another girl, a tall and introverted prefect named 'Minerva Strachey,' whose air of dignified solitude intrigues the heroine. The story breaks off abruptly: Jill's father dies suddenly, and when she returns to school following his funeral, she is met at the station by Minerva, who has been sent by the headmistress to accompany her back in a cab. Minerva is sympathetic but reticent: when Jill, sadly overwrought, declares she hates school, has no friends, and wants to be like Minerva – "able to get on without anyone else" – the prefect rebuffs the obvious overture. "[Jill] saw that Minerva had indicated that her detachment, even though it was admired, must still be respected; that loneliness was not to be abandoned at the first chance of friendship, but was a thing to be cherished in itself."

This last appalling notation – that loneliness is to be cherished in itself – might be said to encapsulate the zero-sum vision of the mature Larkin. For Kemp, of course, solitary fantasy leads to a kind of self-obliteration: he sees an attractive young schoolgirl in an Oxford bookshop; imagines, uncannily, that she is his 'Jill' come to life; and starts stalking her in an inept yet sinister fashion. When he finds out that she is the fifteen-year-old cousin of Christopher's girlfriend Elizabeth and that her name is *Gillian* he simply becomes all the more infatuated. At the end of the fiction, having drunkenly tried to kiss Jill/Gillian on the stairwell outside a party in someone's room, the hapless Kemp is excoriated by Elizabeth, punched in the face by Christopher, and thrown into a freezing fountain by a gang of loutish revelers. He is last seen, having succumbed to pneumonia, abject and feverish in the Oxford infirmary – dimly conscious that "the love [he and Jill] had shared was dead." Confused about "whether she had accepted him or not," Kemp can see "no difference" – alarmingly – "between love fulfilled and love unfulfilled."

Might Kemp's suffering be construed as *lesbian* in nature? Time and again Larkin makes the lesbian subtext impossible to miss. The aborted connections in the embedded school tale – Jill and Patsy, Jill and Minerva – provide a homoerotic matrix of course for Kemp's own doomed infatuation: even before seeing Gillian, he already inhabits his own private Willow Gables, a dream-world of impotence, fear, and impinging loss. (Psychologically speaking, the interpolated tale seems at once uncanny and overdetermined: it is as if Kemp both wants to *have* Jill and to *be* Jill.) Striking, too, are the book's other invocations of *amor impossibilia*. Sitting impatiently through a comic film in an Oxford cinema because 'Jill' is in the theater across the street with Elizabeth and Chris, Kemp, like a sort of down-market Sidney, experiences precisely those symptoms of love-anguish itemized – so momentously for English poetry – in Sappho's "Fragment 31":

> The enormous shadows gesticulated before him and he sat with his eyes shut, hearing only the intermittent remarks of the characters and the sounds of the action. It was curious how little speech there was. A squalling childish voice said something and everyone laughed: this was followed by a long interval of banging, scraping, and rending, interspersed with studiedly familiar noises – the tinkling of glass against decanter, the slamming of a car door. He opened his eyes for a moment, saw a man and a girl driv-

> ing through the country, and shut them again. When he thought of Jill being so near, only across the street, with people he knew, yet where he was not with her and could not see her, his breath came faster and a curious physical unease affected him and he wanted to stretch.

Nor does Larkin ignore the English Sappho, the lugubrious Radclyffe Hall. The word 'loneliness' resounds throughout *Jill*, ever more numbingly. One's sense of the repetition is largely subliminal: one feels it as a sort of low-level textual *headache*. Yet every now and then Larkin sets the word off talismanically – as when Kemp watches 'Jill' ride away on her bicycle after seeing her for the first time in the bookshop:

> He stopped under a tree, looking this way and that. And if he found her name and address, what then? He would not dare to approach her again after his rudeness that afternoon. All that would remain for him to do would be to discover her real life, to follow her about and not be noticed, to make lists of the clothes she wore and the places she went to, to make her the purpose of his life once more .... In this quest his loneliness would be an asset: it would be mobility and even charm.

Later, having discovered her identity and waited in vain to see her, he feels "hollow with grief, as if there were *a great well of aloneness* inside him that could never be filled up" (my italics). A case could even be made that *Jill*'s tragibuffoonish next-to-last scene – the tossing of the drunken Kemp into the fountain – is a kind of mock-heroic literalization of Hall's title: Kemp finds his own well of loneliness, bathetically, in the middle of a college quadrangle, above which "stars [march] frostily across the sky."

The lesbianism of Philip Larkin

Can Philip Larkin be forgiven? In a startling rant after *Trouble at Willow Gables* was posthumously published in 2002, a critic for the *Guardian* sent Larkin to "the back of the class" – first for writing porn she felt wasn't "saucy" enough, and then, somewhat unfairly, for having been glum, bald, and bespectacled. The fact that since his death he had been exposed as a "man with ... urges" struck her as "pretty funny," she revealed, for

> after all, with skin the colour of soft curd cheese and his curranty eyes blinking out from behind a couple of jam-jar bottoms, Larkin was hardly made for sex. The first time Monica Jones clapped eyes on the man who was to be her lover for more than three decades, she turned to her companion and said: "He looks like a snorer."

Now, from what I have written one perhaps might conclude – wrongly – that the adult Larkin had no sex life at all. Such was not the case, as Motion's biography made clear in the 1990s. Yet the description above of Larkin as the "lover" of Monica Jones for over three decades produces a somewhat distorted image of both poet and work. Though obviously of long duration, the intimacy with Jones, a lecturer at the University of Leicester and subsequently Larkin's literary executor, does not strike one as primarily eros-driven. Nor indeed do the poet's other somewhat sketchy affairs – including an elderly fling with Betty Mackereth, his secretary at the Bryn Jones Library in the 1970s. Judging by photographs, none of these girlfriends was either young or conventionally beautiful; not a single 'Jill' among them. On the contrary – especially to the lesbian eye – several have a curiously mannish 'Brunette' look. With fifteen-year-olds out of the running, it would

seem, Larkin made do with his own little crew of middle-aged spinsters. The "loaf-haired" Betty – risibly described as such in the poem "Toads Revisited" – looks like a rangy, somewhat weather-beaten games mistress. And so, one might add, did Larkin's mother Eva – another Larkinesque brunette to whom he remained devoted all his life.

Yet whatever the 'real' circumstances, what matters is the inner life. I find the dysphoric sense of self – and of the erotic – revealed in Larkin's poetry rather more sympathetic than the comments of erstwhile critics. Who is to judge who is "made for sex" and who isn't? A lack of pulchritude does not always spell carnal frustration: Jean-Paul Sartre was pretty hideous – Larkin a George Clooney in comparison – but in Sartre's case trollish looks seem not to have diverted him from a lengthy career as the Casanova of the Left Bank. What differs, obviously, is whether one has the necessary full-forwardness and *esprit* – especially when social conventions, rightly or wrongly, set up barriers to fulfillment. Philip Larkin was as "made for sex" as anyone else, which is not to say it came to him easily. In the character of Brunette Coleman he created someone whose loneliness, obliquely observed, mirrored his own – indeed, *was* his own. Was he entirely aware of what he was doing? Perhaps not. But he knew enough to know he needed her – needed to smoke her cigarettes and write her stories, to dream of Willow Gables in her company, and in the waywardness of her desire find a way into his own.

Lawrence Cohen

Song for Pushkin

Sitting among wild young men
I am lost in my thoughts.

– Aleksandr Pushkin

An imagined Russia – Soviet or otherwise – along with an imagined America have at times over the past century served as vehicles of hope in India as elsewhere. The American writer Jhumpa Lahiri tells the story of Gogol, the resentful son of Bengali migrants to Boston named by a father whose copy of the Russian's works had once saved him from a train wreck. The story I recount here centers not on an Indian-origin Gogol but on an 'America-returned' Pushkin. But it, too, is an account of hope and the limit to hope, set in the aftermath of a time when India, America, and Russia stood as parallel dream-worlds offering a receptive humanity the future. If it is an account of homosexuality, it is because homosexuality has come to serve as a privileged marker both of hope and its limit in the aftermath of the three worlds. If it is an account told as a song, it is a song in the sense of the Sanskrit *gita* and how I would render it, as the recognition of an ethical universe one is asked to call into being. I sing in the face of Pushkin's death. Ethics as a performative practice is offered here as a kind of mourning.

The account: two men, Pushkin Chandra and Kuldeep, were found murdered on August 14, 2004, in New Delhi, at Chandra's *barsati*, a small apartment adjoining his parents' residence. The Chandras lived in a gated enclave known as Anand Lok, the Bliss World, in the south of the giant city. Within days, residents of Delhi, as well as a globally dispersed public stitched together through the consumption of Delhi-based media, were being offered frequent and lurid reporting on what quickly became known as the Pushkin Affair.

The attention was based in part on Chandra's social position; accounts referred to his father's career in the prestigious Indian Administrative Service and to the posh surroundings of Anand Lok. But the extensive coverage emerged pri-

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marily because Chandra and presumably Kuldeep were assumed to have enjoyed homosexual (or in newspaper Hindi, *samalaingik*) relations, and because they were from distinct social classes. Kuldeep was understood to be a Hindi or Punjabi speaker of a 'laboring class' background, and, like at least one of the alleged killers, was noted to be from the uncivil peasant culture of towns dominated by the Jat caste in the state of Haryana, just to the south of New Delhi. Chandra, scion of the Bliss World, had done his graduate training in management in the United States.

This class distinction between the men, registered through what anthropologist Donald Moore has called an "ethno-spatial fix" that here stitched together Haryana, the presumed incivility of Jats, and the inability to speak fluent English, became *ipso facto* evidence that the crime pointed to a 'nexus' linking wealthy gay men, poor boys, and criminal mafia. The *Hindustan Times* ran the headline "Pushkin Murder Uncovers Gigolo Trail." The once-staid *Times of India* was exultant: "Gay Murders Tip of Sordid Sleazeberg." Within hours of the murders, the relation between Chandra and the killers was inverted in the court of Delhi-based media: Chandra became a kingpin of vice, the murderers offered some kind of rough justice, and Kuldeep was as much a victim of Chandra as of whoever garroted them. An instant ethnography of Delhi homosexuality – offered as a violent and predatory demimonde abetted by the international privilege of jet-setting activists – was mobilized on nightly news reports.

The primary evidence of Chandra's criminal career was a cache of erotic photographs, allegedly of men having sex in Chandra's flat and elsewhere, along with pornographic films on disc. Video-disc pornography, imported and homegrown, is widely available in Indian cities and towns – not only, as a decade earlier, in urban border and transit zones like bus- or train-station stalls but also in shops and bazaars at the center. But the photographs, both mementoes of parties and more explicitly sexual shots, were seen by the police as highly suggestive of a nexus linking extramarital sex to trafficking in poor men's bodies. That Chandra, or perhaps Kuldeep, might have just liked to take sexy photos was never publicly contemplated.

Soon a wide range of actors now ubiquitous in large Indian cities – in particular, human-rights activists and representatives of lesbian and gay groups – decried this near-instant inversion of criminality, which led to a smaller second wave of articles by Delhi media, now reporting on themselves. When in late 2004 I interviewed journalists working for the English news channel of the NDTV cable network, one of the agencies that more aggressively pursued the story on the homosexuality-trafficking nexus, they argued it was their more down-market Hindi news channel colleagues who were responsible for this new tabloid style. Rereading newspapers suggested otherwise.

These accusations and counteraccusations were in turn followed by a backlash, a still-smaller third wave of pieces more aggressively condemning Chandra as representative of the criminal-homosexual nexus. In an editorial by Swapan Dasgupta slyly entitled, "The Problem is *Not* Homosexuality," and widely circulated on Internet sites targeting the South Asian infotech diaspora, the author argues that it is not homosexuality in itself that gives offense but rather the politically correct refusal to recognize its persistent affinity with criminality. The problem, in short, is the nexus.

The effect of all this publicity was pronounced: many of Chandra's friends were subjected to intense police interrogation; family and friends became guilty by association; and the sexual and social lives of men having sex with men in Delhi were curtailed. Large gay parties and the gay night at an upscale pub were all shut down; park cruising and sex work were heavily policed; and AIDS organizations focusing on men having sex with men were attacked in the press as abetting trafficking. Months went by before the coverage abated.

And just as the cloud of the Pushkin Affair finally appeared to be lifting, and Chandra's friends saw a possible end to the interrogations, the academics appeared, asking more questions and trying to make sense of it all: thus my trip to Delhi.

I knew Pushkin; I did not know Kuldeep. Pushkin was the childhood friend of a close friend of mine, and I had briefly met him when he was studying business in the United States. We had other friends in common through overlapping gay and AIDS-prevention circles in both Delhi and Bombay. A number of U.S.-based academics I know had been close to Pushkin's parents.

Writing this essay reflects my belief that what was at stake in the moment of the Pushkin Affair demands considerable reflection. The task for the anthropologist, Arthur Kleinman has persistently argued, is to attend to "what is at stake," or "what really matters." For the many mutual friends of the subject of this essay and its author, what mattered was the dignity of a man, his family, and the world he was taken to stand for. For the human-rights and queer activists, what mattered in the Pushkin Affair was the global expansion of an ugly cultural anxiety they could name as homophobia, linked to the generation of sexual panics by new forms of media. For journalists like Swapan Dasgupta, what mattered was India's ability to resist an inauthentic and violent cosmopolitanism centered on the proliferation of nongovernmental organizations (NGOs) in the place of a national order of culture and development. 'Homosexuality,' for Dasgupta, stood for the celebration of hedonism, the *sine qua non* of a more general state of selfishness transforming civil norms into criminality. That Chandra, fresh on his American training, went to work for foreign humanitarian agencies, including the United States Agency for International Development (USAID), and that his vocal supporters were often tied to NGOs based or funded from abroad, only led credence to what seemed an affinity between global humanitarianism and the loss of a local moral world.

But I want to suggest that what may matter in the Pushkin Affair takes us beyond an urgent contest between human rights and the localized invocation of a lost world. It takes us to the contemporary remaking of a persistent sense of 'India' as an irrevocably split world. This remaking in turn may help us rethink the conditions for an ethical life that I, being of my place and time, will call queer. Such an ethical life may provisionally be framed as standing outside of, and at times against, the institution of marriage or the norm, emergent in India, of the modern heterosexual couple. The variant of this life that I know best, figured between men, is often organized around the figure of the friend, or that of the teacher or master – and centers on what is alternately a gift or a demand that one may variously describe as sex or, in Hindi, as *khel* (play, something outside of the order of duty) and *masti* (intoxicating, addictive, and carefree pleasure).

Like the normative forms against which it stands as one kind of margin, this claim to an ethical life in the world the Delhi journalists attempted to portray as criminal and sleazy can become something else: a lie or an alibi. By 'alibi' I am not acceding to the terms of the journalists. Perhaps the best way to hint at what I mean is by citing the critical language of another, sometimes overlapping world, the one occupied by Pushkin, Kuldeep, their killers, and at times myself: that of the *hijras*, the 'eunuchs' or 'third gender' of South Asia. Hijras often name the stakes in the forms of life they craft in terms of what I might call the double to queer existence: there are true (*asli*) hijras, and there are false (*nakli*) ones. The anthropology of hijra life has tended to portray the relation between true hijras (who are intersexed or have had the operation, or have been accepted into the community by a hijra guru) and false hijras (who dress and dance as women but are not a third gender, or have not been accepted into the community) in terms of denunciation. But the border between authentic and inauthentic hijra embodiment, or belonging, is as much an improvisational exercise in creating a form of life under varied conditions of patronage and violence as it is a difference constitutive of sexual ethnicity.

In North America, queer debate in the first years of the millennium has centered on the question of 'gay marriage' and its threat as a project to a kind of queer authenticity rooted in a counterethic of sexual generosity and a disruption of normative temporality. The possibility of a differentiation between the counternorm of sexual friendship versus the norm of marriage as the condition and limit, respectively, of an ethical project may seem to call for a denunciation of the latter as inauthentic queer life. But my invocation of *asli* and *nakli*, not as denouncing those forms of queer life that fail to maintain a counternorm but constituting the conditions under which persons craft a relation between norms and counternorms, seems relevant to a more capacious engagement with the trouble with gay marriage.

The split world I briefly mentioned, and will argue for, is of course a commonplace of analyses of both the violence and, after Hegel, the insight of a colonized, racial, or postcolonial 'condition' – and like all commonplaces risks a slide into banality. But the split I register in relation to the Pushkin Affair is contingent not axiomatic, an iterated sense of a universe cleft into hemispheres of violence and of beauty, an *entente* between urban administrative and capitalist elites (the so-called civil or beautiful) and rural and small-town peasants and landlords (the presumptively uncivil or violent). I turn first to violence, the figuration of incivility.

I have suggested that the key figure in the accusation against Pushkin, and almost immediately against all homosexuals, was the 'nexus' between homosexuality and criminality. This figure of a nexus, ubiquitous in political reportage, suggests an affinity or attachment in which a civil institution is deformed by an underlying relation to criminalized interest. A brief review of Indian newspapers and magazines since 2000 offers hundreds of variations on the nexus, with innumerable components coupled together, in themselves operating as what Lévi-Strauss would term "floating signifiers." (They include politicians, the drug trade, the Congress Party, Pakistan, ivory smugglers, the Communist parties, doctors, North Korea, the United States, 'insurgents,' 'agents,' 'terrorists,' 'mafias,' China, the HIV virus, Bollywood,

the Reliance Corporation, Israel, builders, the environment, the CIA, Al Qaeda, cricketers, evil, science, 'anti-peace elements,' piracy, sex work, the Bangladesh army, the market, national security, the AIADMK Party, investment bankers, energy, food, marriage, and globalization.) Nexuses of all sorts abound, and the sense of a nexus is meaningful independent of its particular components.

However, what Dasgupta calls homosexuality – within the logic of the nexus – is not just another entity deformed by unsavory attachment to corrupting elements. Rather, it has come to stand metonymically for the nexus itself, for the threat to civil society, whether that civility is represented as a threatened modernity, a threatened tradition, or a threatened hybrid between the two. The degradation of Pushkin's memory, and his friends and family, was propelled by a particular collective sense of sublimity that entrepreneurial media could seize upon: that even in the gated enclaves of the rich, in the bosom of the civil service, in the World of Bliss, corruption wildly devastates, producing orgies of violence.

If there is another ubiquitous word for this threat within dispersed contemporary discourses on the problem of incivility, it is an unexpected one: feudalism. Citations of feudalism dog political reportage, but these do not refer to specific Indian historiographic debates, such as whether European feudalism was exceptional or whether the concept can fruitfully be applied to, say, the India of the fourth century of the Common Era, or of the eighth, or of the tenth through thirteenth.

Rather, the temporal referent of the feudalism I am describing is split – an era just past, an epoch just dawning. But in general, this 'feudal' is less some antediluvian, or even recent, epoch than a miasma or plague that ever threatens to overwhelm the frail tissue of urban civility. Such a feudalism is less temporally than spatially represented. The plague has a privileged location in much reportage: it lies in the hinterland generally, thus the discussion of the Haryanvi Jat villages where Chandra's lover and one of his killers came from, and particularly in the eastern Indian state of Bihar, *fons et origo* of the feudal. It lies also in that state's erstwhile Chief Minister, the arguable champion of the 'backward' castes Lallu Prasad Yadav. Hence 'Lallooization' and 'Biharization' are familiar terms for feudalization as a process and threat.

Backwardness completes the trio of terms standing at the verge of civility. Far more than the nexus or the feudal, the backward is reflexively elaborated and enjoys a sort of national conversation. India's most prominent debate on entitlements and distributive justice centers on the problem of how many school admissions, political seats, and state jobs should be 'reserved' for persons legally marked as backward. Backwardness in this context signifies persons belonging to low castes. Since the late 1980s, the question has been whether or not reservations should be extended from so-called Untouchables, or Scheduled Castes (SCs), to the less marginal Other Backward Castes (OBCs). Fierce debates rage over whether OBCs are as backward as their classification suggests, and over the motivation of politicians in extending reservations. In reservations debate, backwardness signifies lack of equal opportunity or a caste label that allows one to make a pretense of such lack. But while the fight over who can claim the otherwise ignominious label of backward continues, what backwardness exactly consists of is less clear.

Lawrence Cohen on sex

Let me illustrate how backwardness, feudalism, and the nexus came to be attached to dominant understandings and representations of same-sex desire toward the end of the twentieth century and into the present one.

In 1997, I was living in the city of Lucknow, the capital of the populous state of Uttar Pradesh to the east of Delhi and to the west of that acme of legible backwardness, Bihar. U.P., as it is known, is said to take a close second to Bihar in the rankings of feudal rot, and I have heard journalists in conversation refer to 'U.P.-ization' as an analogue of Biharization. The moment I describe has me talking with a reporter named Deepak Sharma, who had penned a story on the murder of a local physical education instructor, Frederic Gomes, at the prestigious La Martinière School.

Earlier that summer, Gomes was shot to death, apparently while asleep at night in his bungalow, behind the main complex of school buildings. La Martinière is built around Constantia, the palace and tomb of the Enlightenment mercenary and aesthete Claude Martin, who had been under the patronage of the ruling dynasty of Awadh at their height. The structure, extraordinary in its mixing of genres, is frequently described by British historians and travel writers as exemplary of some larger truth. William Dalrymple writes lovingly of La Martinière as

> perhaps the most gloriously hybrid building in India, part Nawabi fantasy and part Gothic colonial barracks. Just as Martin himself combined the lifestyle of a Muslim prince with the interests of a renaissance man – writing Persian couplets and maintaining an observatory, experimenting with map making and botany, hot air balloons and even bladder surgery – so his mausoleum mixes Georgian colonnades with the loopholes and turrets of a mediaeval castle; Palladian arcades rise to Mughal copulas; inside brightly coloured Nawabi plasterwork enclose Wedgwood plaques of classical European Gods and Goddesses . . . . In its willful extravagance and sheer strangeness, Constantia embodies like no other building the opulence, restlessness, and open-mindedness of a city which lay on the fault line between East and West, the old world of the Nawabs and the new world of the Raj.

Some of this same description reappears in "East of Eton," another Dalrymple piece on the school and the Gomes murder, in which the oddness of young men trained to recite English poetry and to take the British side in recitations of the 1857 "Mutiny" is used to exemplify a milieu in which time stands still until shattered by the violence of a new order.

After the murder of Gomes, many disparate rumors circulated, several in the tabloid Hindi press: Gomes was involved in local drug mafia. Gomes had discovered a student involved in the drug mafia. Gomes was involved with notorious women. Gomes was involved with a male student. Gomes was involved with a male student and a notorious woman. Sharma, who was then writing for the English paper *The Pioneer*, wrote a piece summing up all of these rumors, which was entitled "Gomes was a gay."

I was in the city working with a new 'gay group' called Friends India, which was started by a group of largely 'married gays' (to borrow the parlance of Delhi and Bombay). By the time I met its leaders, Friends India was run by a younger idealistic and unmarried Shia schoolteacher and an older married and retired Hindu military man, one of the original founders. Whereas many elite Anglophone men in Delhi used to refer

to gays as other elites who liked sex with men, and to straights as the working-class men they had sex with, the erotic axis of difference in Lucknow seemed to be more pederastic. Gays were older men who liked *chikna* boys. A *chikna* boy was a 'smart' or 'smooth' teenager, one who was thought to cultivate the gaze of older interested men for both pleasure and personal advancement. One day, I turned to *The Pioneer* and saw Sharma's headline, followed by additional information: Gomes was not only "a gay," he was a womanizer and in the drug trade, and so forth.

How could Mr. Gomes have been both a womanizer and gay? But even as I asked Sharma this question, I knew at least one likely answer: 'gay' for men here and at this time still suggested as much a general excess of desire as a specific object choice – not just a wife but women, not just women but boys. Sharma laughed and said pretty much the same. I don't necessarily believe all of these rumors, he told me. That's the point: the papers have gone crazy, accusing Gomes of every offense in the book. That's why I wrote the article. But then why, I asked, finally figuring out the question, did you summarize "every offense" with "Gomes was a gay"?

Sharma looked a bit sheepish. I didn't mean that he was a gay, he said to me. But the poor fellow was murdered, and suddenly he was being accused of everything. Somehow "Gomes was a gay" seemed the best was to say this.

Sharma then offered an elaboration of the particular nexus connecting Lucknow, La Martinière, homosexuality, women, and drugs. Again: a crime has been committed in a place that stands for all the civil promise of an old order, revealing secret connections that deform that promise. "It's not about homosexuality itself," Sharma said, "but it is all about Pathans." This conversation was a few years before the post-9/11 American invasion of Afghanistan had resuscitated the colonial ethnography of Pukhtoon or Pathan proclivities to pederasty and violence. What do you mean, I asked, my words and Sharma's recalled some hours later in my notebook. Sharma argued that the Pathan culture of Malihabad was taking over places like La Martinière. Malihabad was a town not far from Lucknow, long settled by Pathans who had migrated into north India. Heroin, Sharma told me, is the key. Pathans are key players in moving heroin from Afghanistan and Pakistan through India. Malihabad is flush with new money. The Pathans now are all sending their children to places like La Martinière. Its culture is changing: drugs, money, guns, and womanizing are all part of it. And of course, he continued *sotto voce*, Pathans are famous for enjoying homosex.

Sharma's account framed Lucknow through its famed school as a cynosure of the moral world of British liberalism. This world faced deformation, here localized not as Bihar but as a neighboring town. The illicit connections binding the local order to viral influence in this case were not NGOs but the older interregional networks of the Pathans.

Sharma's editor, a former sociologist, happened to come in on our conversation near the end. The business about Pathans, he told me, is all rot. It is all about land tenure. I'm from Punjab and my wife is from Bengal, he said by way of explanation, regions bordering the badlands of U.P. and Bihar to the northwest and southeast. We don't have all this homosex there. But here in U.P. you find it everywhere.

I asked why his homeland and his wife's differed so from the states of U.P. and Bihar that they straddled. His re-

sponse was not ethnos tied to contemporary flows (Pathans, heroin, traffic, new money, old predilections) but cultures of discipline and punishment formed over the *longue durée* of colonial and postcolonial infrastructure. The forms of taxation and land tenure that the British established here in the Gangetic plains, he told me, were particularly oppressive; they set in motion a culture of such extreme oppression that not only women but also men are at risk for sexual violation at the hands of dominant landholding groups. Rape of male landless laborers and other economically marginal men has become a tool frequently used to discipline them. He described this particularity of "U.P. and Bihar" as a "feudal culture."

The *feudal* here was not an emergent state but an effect of the colonial period. The editor's argument was framed in secular terms, drawing as much on examples from the Hindu ruling cultures of cities like Varanasi and Patna as the Muslim ones of Lucknow and Faizabad. However, the feudal landlordism he described is a particular feature of modern nationalist critiques of the pederastic culture of Islamic aristocratic life, where as in the writer Premchand's famous short story (and Satyajit Ray's film), "The Chess Players," the homoeroticism may often be an implicit figure of libertinage that is part of a set of excessive attachments including games and womanizing. A generation of historiography framed the erstwhile rulers of Lucknow, the *navabs* of Awadh, as effete and licentious. The very term *navabi shauk* – princely inclination or desire – implies a fondness for younger men.

The feudal thus carries a double valence – an imminent condition of civil collapse and an archaic condition of agrarian excess. It draws variously on spatial, temporal, and communal referents that frame it as the condition of somewhere or someone else. But for places denigrated as persistently backward, it can mark a form of identification and ensuing politics. Thus during his tenure in the late 1990s Bihar's former Chief Minister Laloo Prasad Yadav could patronize the *launda nautch*, cross-dressing young men who dance and provide sex for male guests at weddings, as a 'populist' measure to secure his reputation as a man of the people. In Varanasi, in the east of Uttar Pradesh near the Bihar border, 'homosex' (the term that moves easily between English and Hindi) was frequently described to me as a feature either of Muslim Pathan towns to the north or Hindu dominant-caste landlords in Bihar to the east, but it was also claimed by a number of local satirists and writers as a distinctive feature of the antinomian quality of the city's cultural milieu. Against the pretensions of a dominant national order associated with the metropolitan city and its forms of consumption, backwardness might mark itself as a state of authenticity set against a different kind of excess, and the figure of homosex could mark something other than degeneration.

But one must immediately qualify the gender of such homosex. When I asked a senior minister of Laloo's Rashtriya Janata Dal Party why, despite metropolitan condemnation, his party had hired dancing boys, he told me that the party's base respects women, unlike the urban elites who oppose it. "In *orchestra* weddings," he said, referring to the usual wedding bands popular in the state capital of Patna and elsewhere in the country, "ladies dance for the wedding party. But in our rural areas we have the idea that we must respect our daughters. To dance is human (*nautch to hota hai, is duniya mein*), but boys dance as it is not proper for ladies to do so."

This sense that metropolitan culture challenges the normative order of gender and honor may be a commonplace of agrarian social change: in India in the period of neoliberal economic and social transformation, one of the more potent vehicles of political theater has been the metropolitan or international challenge to women's comportment in the form of lesbian rejection of familial norms. Thus, a local land contractor and gangster in Varanasi who participated avidly in organizing the annual carnival celebration of Holi, and who spoke approvingly of sex between men as a familiar feature of the order of pleasure and violence that regulates political life in the city, was outspoken in attacking Deepa Mehta, the Indo-Canadian director of what he called the "lesbian film" *Fire*. The film was an attack on Indian and particularly Hindu men, he told me, and he was happy, he said, to orchestrate the protests against her when she first tried to film *Water* in Varanasi. Unlike a number of other parts of the world being transformed in the aftermath of the cold war, India did not experience significant political attacks on sex between men as part of the challenge to cosmopolitan inauthenticity.

The minor backlash, the 'third wave' of reporting after the deaths of Kuldeep and Chandra, suggests the possibility of a shifting field of sexual publicity. Political gain, or national purification, through the condemnation or prosecution of sex between men is not an entirely novel feature of Indian modernity over the past century. In the 1930s there was controversy over the writer Ugra's depiction of pederasty (in which M. K. Gandhi himself intervened to suggest that the predatory violence of such desire was set against the self-transforming goals of *satyagraha*), and more recently there were prosecutions of AIDS activists, and later 'married gays,' in Lucknow as violating Section 377 of the Indian Penal Code prohibiting carnal intercourse against the order of nature. A commonplace of postcolonial studies frames the cause for sodomitical anxiety as a constitutive feature of the sexual imaginary of British colonialism, and yet the danger of arguments that reduce the contingency of current sexual politics to the persistence of the colonial wound is to reduce an engaged diagnosis of the present to the binarism of Europe versus an imaginary precolonial world. The virulence of forensic publicity in the face of the Anand Lok murders demands more. In particular, it demands attention to the other face of homosex's current publicity.

If the *feudal* characterizes modernity as a fragile temporality ever ready to slide into the life of the nexus, a kind of Hobbesian Warre, I want to argue for feudalism's persistent opposition to a contrastive state I will term *fashion*. It is in the implosion of feudalism and fashion as modes of knowing the world that I want to locate the refusal to mourn for Pushkin.

Chandra's guilt was clinched in the court of the media by the presence of the sexual photographs and the claim that he was a commercial trafficker in images of young men. Though unsubstantiated (and, according to many men in Delhi and Bombay who were part of his circle of friends and who appeared in some of the photographs, simply untrue), the claim resonated because the photographs called to mind a different staple of contemporary publicity, that of so-called modeling scams.

Beginning in the early 1990s, the potential fungibility of good looks under the sign of 'style' began to underwrite the extensive commitment of petty

bourgeois youth in small towns and large cities to modeling as a practice. News about top models, and the designers and impresarios that elevate them to celebrity, became an everyday feature in Hindi and English papers in north India, and exemplary stories of fantastic careers in the new field of *fashion* proliferated.

Beauty as a project and demand is one way to think about the differential stakes in futurity. In small towns across the subcontinent, market streets are now lined with shop fronts offering hopeful futures. Computer institutes and English-language tutors have been joined by fashion and modeling schools. On the Internet, dozens of websites featuring the photos and biodata of many thousands of young women and men from India and Pakistan stitch these localized aspirations into a national and transnational scene of hope.

If any of the pedagogies of hope has come to stand metonymically for the rest, it is not computers but *fashion*. Fashion designers are avidly followed in the press, not only on Page Three, the society news, but even in the reportage of national affairs, as when exchange between India and Pakistan is enhanced by the gift of a *sherwani* coat by Pakistan's 'top designer' to the Indian prime minister. Fashion, like computers, is the *entrée* into a kind of flexible citizenship. The National Institute of Fashion Technology (NIFT) vies with the famed Indian Institutes of Technology (IITs) in the competitiveness of its entrance exams and the global scale of the future it produces. Even the unlettered can hope to become models.

But as fashion has proliferated as a master narrative of hope, hope's limit has also appeared, as a seamy underside to fashion. With all the new publicity of fashion's possibility come repeated exposes and other narratives of *nakli* or counterfeit opportunities, i.e., stories of casting couches and would-be models tricked into prostitution. The primary victim of modeling's counterfeit hope is usually a young *mamuli larki*, an ordinary or 'middle-class' girl much like Jassi, the heroine of the top soap opera of 2004, *Jassi Jaisi Koi Nahin*. (*Jassi* was based on the Colombian *telenovela Yo Soy Betty La Fea*; an American version, *Ugly Betty*, appeared in 2006.) The heroine of all three is a young woman of modest means who discovers her 'inner beauty' and emerges as an international star of fashion, but the road to fashion's new hope is lined with traps. In the Indian soap, Jassi's photograph – the sign and vehicle of what I am calling both the fungibility and the hope of fashion – is repeatedly utilized by villains of various sorts to do her harm.

But the exemplary body of fashion's hope is as often male as it is female, despite the importance of the beauty queen as a dominant figuration of this hope on the national scale. Beauty appears to be too risky a strategy for *mamuli* young women: as in the 2005 Hindi film *Bunty aur Babli*, in which a spunky girl with dreams of stardom runs away from home to try out for a fashion show only to be told that the price for entry is sex with the organizer.

If women are less available than men within certain narrative forms to demonstrate fashion's fungibility, accounts of the transvaluation of ordinary male subjects often distinguish *fashion* as elite apparatus from *style* as its creative appropriation. Crudely, within the logic of contemporary Hindi film (and the Hindi pulp 'sexology' and 'true crime' magazines studied by scholars like anthropologist Sanjay Srivastava), 'fashion' is to 'style' both as women are to men and as the rich are to the poor.

Fashion bespeaks the radical innovation and mastery of codes of distinction, as the spectacular order both of the nation (the beauty queen winning for India and propelling the national physiognomy onto the global stage, or the fashion designer as a surprisingly ubiquitous object of exchange in periodic thaws between India and Pakistan) and of the global commodity (Indian fashion competing with the best of New York or Milan). Within media pitched to imagined *mamuli* audiences, fashion has a double edge: it inevitably calls to mind a predatory moral economy of sexual harassment; individualist 'selfishness' and *shauk* (desire, inclination) set against the reproduction of extended family values; and the fetishization of money and other antifamily and antitradition object relations.

'Style,' as the citation of fashion, allows for more comfortable ambivalence. Many relatively inexpensive commodities, particularly clothing, are marked by the generic brand 'Style.' Style, in other words, carries the expansive equity of the generic, or *mamuli*, within new symbolic economies of value. Many of the young men I interviewed over the past decade in north Indian towns and the metros of Delhi and Mumbai use style to describe a certain kind of hope and its actualization. Linked to English-language and computer skills as much as to the dance moves or sartorial capital that might land one a career in the evergreen world of the cinema, style marks the site of an actual politics of symbolic and social capital as opposed to fashion, its imagined limit.

This distinction helps us understand the position of one of the most prominent culture heroes associated with the new order of the potential, if risky, convertibility of hope and style, and in turn the invention of Pushkin as trafficker in the sexualized deformation of young men's hope.

From the late 1980s onward, I began to notice references in elite Indian media to a 'new masculinity' that was globally competitive, not some hypermasculine order, as predicted by scholars like Ashis Nandy, but a softer and more androgynous elite form. "The new Indian man is unafraid to get a facial" was one of the sillier variants on the theme. This globally fungible masculinity was of course set against the imagined violence of the backward or feudal, and one of its avatars was the male fashion designer. Designers, so the account went, were masters of the code of the new global order, but – and here was the full measure of their heroism – they were also exponents of the particularity and imagined global popularity of *Indian* fashion, what became known as 'the ethnic.' The fashion designer thus represented a new kind of actor, globally positioned and yet *at home*, in every sense, in the world.

But many stories generated by attention to this new hero turned out to be grim: again, accounts of fake institutes taking parents' money and running, of 'casting couches' for aspiring youth, and of modeling as a front for luring youth into pornography and prostitution. If popular film featured women as the victims of the age of *nakli* fashion, art film with its realism turned as well to the sexual exploitation of men. Thus in the 2005 film *Page Three*, a reporter asks her gay best friend to help out her aspiring actor boyfriend find work in the industry, only to discover them sleeping together as the price for assistance; and in the 2004 *Let's Enjoy*, a Jat and working-class gym instructor – an 'ordinary' man and would-be model – sneaks into a fancy Delhi 'farmhouse party' (these private estates to the south of the city have become synonymous with elite parties,

drugs, and sex) in the hopes of being discovered, only to discover that the gay fashion designer present is only interested in sleeping with him.

Much was made in the press of the screenplays for realist films like *Page Three* and *Let's Enjoy* as *romans à clef* based on actual events. The predatory gay fashion designer story was understood as a familiar feature of the new economy, with many journalists and screenwriters citing actual cases, to the extent that their ever more conventional features began constituting a new urban legend. But if the 'gay' as the relation and the limit of neoliberal hope features heavily as a figure of such realism in film, it fails to do so as a figure of the feudal or backward, the deforming outside to the civil. When the nexus is treated in film – usually staged as stories of crime syndicates or the corruptions of politics – the narrative is usually offered in an epic or tragic mode, and the stock scene of the deformation of a heterosexual love affair is not, as in *Page Three*, accompanied by a gay subplot. In part, this may be because the citation of effeminate or 'gay' characters in cinematic accounts of crime and punishment draws on a long-standing comic convention of subverting the claims to authority of the police, criminals, or other representatives of local sovereign power through camp, present in the regional dramatic traditions of western and northern India: *nautanki*, *tamasha*, and others. One of the more popular of many examples is the 1991 *Mast Kalander*, featuring both a very swish Pinkoo, the man-crazy son of a notorious gangster, and the police officer who is madly, if campily, in love with him. The homosexually predatory landlord, gangster, or politician as a dramatic rather than comic figure therefore moved from the tabloid media into literature (in the works of Vikram Chandra, Pankaj Mishra, and Makarand Paranjape, for example) rather than film, targeted to and consumed by a more elite audience fearing the loss of a well-circumscribed civil society.

In the wake of the accusations following the deaths of Chandra and Kuldeep, I have offered a different mapping of 'the global gay' than either colleagues who focus on how AIDS and other vectors of globalization produce a transnational gay culture, or those attentive to the breaks and disparities between the variously queer practices and identifications that have proliferated globally from the late 1980s to the present. Despite the emergence of vigorous social movements and a wide range of political, humanitarian, and intellectual and expressive projects, neither queer sexual cultures nor institutional or popular responses to them have been the dominant representations of 'homosex' or 'the gay.' Rather, the elaboration of two figures – on the one hand, the sodomitical and usually rural threat to civil society, and on the other, the figure of the gay limit to youthful hope – bracket commitments to order, or the ordinary, as imaginable norms of an Indian future. The violence with which the two young men were killed could be immediately inverted into an account of how Pushkin embodied the corrupt nexus that perverts the hope of ordinary men because the available forensics superimposed on them these two figures: the sodomitical nexus, and the gay limit to beauty's hope.

Whatever the relation between Pushkin Chandra and Kuldeep, and between either of them and their two killers, and whatever the desires behind the incriminating photos, homosex in Delhi has been the vehicle of social mobility, understanding, pleasure, and love across the deep sense of a status divide that

has led so many sociologists and philosophers from abroad to label hierarchy India's preeminent genius or curse. It has also been the site of commerce and exploitation, to the point where I have many times heard elite men in the capital refers to 'gays' as men like themselves and 'straights' as the working- or service-class men they pass around like *kula* among themselves. Homosex may offer far greater possibilities for the undoing of status exclusions than do the various marriage systems of a twenty-first century society, but it carries no imperative for any such undoing. Status differentials, on the contrary, are often the site where erotic attraction as well as opportunity emerges.

What might it mean to speak of the 'ethical,' then, in the face of the accusations and counteraccusations marking the Pushkin Affair? The task here is neither to secure nor redeem Chandra's damaged person. Two men are brutally killed, two others await judgment, a family and friends are devastated, and various experts get their twenty minutes. That a well-off young man sought sexual connection with working-class Jats and vice versa invokes a moral world in which status differentials are loosened, if not undone, through sexual fellowship. It also invokes the shared desire of many elite men for 'rough trade,' and the extensive opportunities for enacting violence in either direction across a status divide. Fetishes, if that is what we have come to, never have politics a priori: heterosexual desire *tout court* is the most significant example. If the persistent desire for the other across a gender, race, or class differential always traverses the ground of a prior violence, there may be work to be done that neither presumes denunciation nor a commitment to commensurability as the dominant value. This work is what I mean by engaging forms as both *asli* and *nakli*, as both authentic and somehow not so. It is not fair to ask any of this of Pushkin: it may be helpful to ask it of ourselves as his survivors. But any such work is hard to entertain when homosex is required to stand for the nexus, and gay life for the limit to hope.

Annals by Greil Marcus

A trip to Hibbing High School

"As I went out – " Those are the first words of "Ain't Talkin'," the last song on Bob Dylan's *Modern Times*, released in the fall of 2006. It's a great opening line for anything: a song, a tall tale, a fable, a novel, a soliloquy. The world opens at the feet of that line. How one gets there – to the point where those words can take on their true authority, raise suspense like a curtain, and make anyone want to know what happens next – is what I want to look for.

For me this road opened in the spring of 2005, upstairs in the once-famous, now-shut Cody's Books on Telegraph Avenue in Berkeley. I was giving a reading from a book about Bob Dylan's "Like a Rolling Stone." Older guys, people my age, were talking about the shows they'd seen in 1965 – Dylan had played Berkeley on his first tour with a band that December. People were asking questions – or making speeches. The old saw came up: "How does someone like Bob Dylan come out of a place like Hibbing, Minnesota, a worn-out mining town in the middle of nowhere?"

A woman stood up. She was about thirty-five, maybe forty, definitely younger than the people who'd been talking. Her face was dark with indignation. "Have any of you ever *been* to Hibbing?" she said. There was a general shaking of heads and murmuring of no's – from me and everyone else. "You ought to be ashamed of yourselves," the woman said. "You don't know what you're talking about. If you'd been to Hibbing, you'd know why Bob Dylan came from there. There's poetry on the *walls*. Everywhere you look. There are bars where arguments between socialists and the IWW, between Communists and Trotskyists, arguments that started a hundred years ago, are still going on. It's *there* – and it was there when Bob Dylan was there."

"I don't remember the rest of what she said," my wife said when I asked her about that night. "I was already planning our trip."

Along with our younger daughter and her husband, who live in Minneapolis,

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we arrived in Hibbing a year later, coincidentally during Dylan Days, a now-annual weekend celebration of Bob Dylan's birthday, in this case his sixty-fifth. There was a bus trip, the premiere of a new movie, and a sort-of Bob Dylan Idol contest at a restaurant called Zimmy's. But we went straight to the high school. On the bus tour the next day, we went back. And that was the shock: Hibbing High.

In his revelatory 1993 essay "When We Were Good: Class and Culture in the Folk Revival," the historian Robert Cantwell takes you by the hand, guides you back, and reveals the new America that rose up out of World War II. "If you were born between, roughly, 1941 and 1948," he says – "born, that is, into the new postwar middle class" –

> you grew up in a reality perplexingly divided by the intermingling of an emerging mass society and a decaying industrial culture . . . . Obscurely taking shape around you, of a definite order and texture, was an environment of new neighborhoods, new schools, new businesses, new forms of recreation and entertainment, and new technologies that in the course of the 1950s would virtually abolish the world in which your parents had grown up.

That sentence is typical of Cantwell's style: apparently obvious social changes charted into the realm of familiarity, then a hammer coming down – as you are feeling your way into your own world, your parents' world is *abolished*.

Growing up in the certified postwar suburban towns of Palo Alto and Menlo Park in California, I lived some of this life. Though Bob Dylan did not grow up in the suburbs – despite David Hajdu's dismissal of Dylan, in his book *Positively 4th Street*, as "a Jewish kid from the suburbs," Hibbing is not close enough to Duluth, or any other city, to be a suburb of anything – he lived some of this life, too.

Cantwell moves on to talk about how the new prosperity of the 1950s was likely paradise to your parents, how their aspirations became your seeming inevitabilities: "Very likely, you saw yourself growing up to be a doctor or a lawyer, scientist or engineer, teacher, nurse, or mother – pictures held up to you at school and at home as pictures of your special destiny." And, Cantwell says,

> You probably attended, too, an overcrowded public school, typically a building built shortly before World War I . . . [you] may have had to share a desk with another student, and in addition to the normal fire and tornado drills had from time to time to crawl under your desk in order to shield yourself from the imagined explosion of an atomic bomb.

So, Cantwell writes, "in this vision of consumer Valhalla there was a lingering note of caution, even of dread" – but let's go back to the schools.

The public schools I attended – Elizabeth Van Auken Elementary School (now Ohlone School) in Palo Alto, and Menlo Atherton High School in Menlo Park – were not built before World War I. They were built in the early 1950s, part of the world that was already changing. The past was still there: Miss Van Auken, a beloved former teacher, was always present to celebrate the school's birthday. When our third-grade class read the Little House books, we wrote Laura Ingalls Wilder and she wrote back.

But the past was fading as new houses went up all around the school. A few miles away, Menlo Atherton High was a sleek, modern plant: one story, flat roofs, huge banks of windows in every classroom, lawns everywhere, and three parking lots, one reserved strictly for

members of the senior class. The school produced Olympic swimmers in the early 1960s; a few years later Lindsey Buckingham and Stevie Nicks would graduate and, a few years after that, make Fleetwood Mac the biggest band in the world. The school sparkled with suburban money, rock-and-roll cool, surfer swagger, and San Francisco ambition – and compared to Hibbing High School it was a shack.

"I know Hibbing," Harry Truman said in 1947, when he was introduced to Hibbing's John Galeb, the National Commander of Disabled American Veterans. "That's where the high school has gold doorknobs." Outside of Washington, D.C., it was the most impressive public building I'd ever seen.

In aerial photographs, it's a colossus: four stories, 93 feet high, with wings 180 feet long flying out from a 416 foot front. From the ground it is more than anything a monument to benign authority, a giant hand welcoming the town, all of its generations, into a cave where the treasure is buried, all the knowledge of mankind. It speaks for the community, for its faith in education not only as a road to success, wealth, security, reputation, and honor, but as a good in itself. This town, the building says, will have the best school in the world.

In the plaza before the building there is a spire, a war memorial. On its four sides, as you turn from one panel to another, are the names of those students from Hibbing High who died in World War I, World War II, the Korean and Vietnam Wars – and, on the last panel, with no names, a commemoration of the terrorist attacks of 2001. Past the memorial are steps worthy of a state capitol leading to the entrance of the building. It was late Friday afternoon; there were no students around, but the doors were open.

Hibbing High School was built near the end of the era when Hibbing was known as "the richest village in the world." A crusading mayor, Victor Power, enforced mineral taxes on U.S. Steel, operator of the huge iron-ore pit mines that surrounded the original Hibbing. Elected after a general strike in 1913, he fought off the mine company's allies in the state legislature and the courts in battle after battle. When ore was discovered under the town itself, Power and others forced the company to spend sixteen million dollars to move the whole town – houses, hotels, churches, public buildings – four miles south. The bigger buildings were cut in quarters and reassembled in the new Hibbing like Legos.

Tax revenues had mounted over the years in the old north Hibbing; at one point, the story goes, when a social-improvement society took up donations for poor families, none could be found. But in the new south Hibbing, in a maneuver aimed at building support for lower corporate tax rates in the future, the mining company offered even more money in the form of donations, or bribes: school-board members directed most of it to what became Hibbing High, which Mayor Power had demanded as part of the price of moving the town.

With prosperity seemingly assured, the town turned out Victor Power in favor of a mayor closer to the mines. Soon a law was passed limiting public spending to a hundred dollars per capita per year; then the limit was lowered, and lowered again. The tax base of the town began to crumble; with World War II, when the town was not allowed to tax mineral production, and after, when the mines were nearly played out, the tax base all but collapsed. Ultimately, the mines shifted from iron ore to taconite, low-grade pellets that today find a mar-

ket in China, but Hibbing never recovered. In the 1950s it was a dying town, the school a seventh wonder of a time that had passed, a ziggurat built by a forgotten king. Yet it was still a ziggurat.

When it opened in 1924, Hibbing High School had cost four million dollars, an unimaginable sum for the time. At first it was the ultimate consolidated school, from kindergarten through junior college. There were three gyms, two indoor running tracks, and every kind of shop that in the years to come would be commonplace in American high schools – as well as an electronics shop, an auto shop, a conservatory. There was a full-time doctor, dentist, and nurse. There were extensive programs in music, art, and theater. But more than eight decades later, you didn't have to know any of this to catch the glow of the place.

Climbing the enclosed stairway that followed the expanse of outdoor steps, we saw not a hint of graffiti, not a sign of deterioration in the intricate colored tile designs on the walls and the ceilings, in the curving woodwork. We gazed up at old-fashioned but still majestic murals depicting the history of Minnesota, with bold trappers surrounded by submissive Indians, huge trees and roaming animals, the forest, and the emerging towns. It was strange, the pristine condition of the place. It spoke not for emptiness, for Hibbing High as a version of Pompeii High – though the school, with a capacity of over two thousand, was down to six hundred students, up from four hundred only a few years before – and, somehow, you knew the state of the building didn't speak for discipline. You could sense self-respect, passed down over the years.

We followed the empty corridors in search of the legendary auditorium. A custodian let us in and told us the stories. Seating for eighteen hundred, and stained glass everywhere, even in the form of blazing candles on the fire box. In large, gilded paintings in the back, the muses waited; they smiled over the proscenium arch, too, over a stage that, in imitation of thousands of years of ancestors, had the weight of immortality hammered into its boards. "No wonder he turned into Bob Dylan," said a visitor the next day, when the bus tour stopped at the school, speaking of the talent show Dylan played here with his high-school band the Golden Chords. No matter that the power was cut on the noise they were making: anybody on that stage could see kingdoms waiting.

There were huge chandeliers, imported from Czechoslovakia, forty thousand dollars each when they were shipped across the Atlantic in the 1920s, a quarter of a million, half-a-million each today: not merely irreplaceable, but unthinkable. We weren't in Hibbing, a redundant mining town in northern Minnesota; we were in the opera house in Buenos Aires. Yet we were in Hibbing; there were high-school Bob Dylan artifacts in a case just down the hall. There were more in the public library some blocks away, in a small exhibit in the basement. Scattered among commonplace talismans, oddities, and revelations were the lyrics to the Golden Chords' "Big Black Train" from 1958, a rewrite of Elvis's 1954 "Mystery Train," credited to Monte Edwardson, LeRoy Hoikkala, and Bob Zimmerman:

> Well, big black train, coming down the line
> Well, big black train, coming down the line
> Well, you got my woman, you bring her back to me
> Well, that cute little chick is the girl I want to see

Well, I've been waiting for a long long time
Well, I've been waiting for a long long time
Well, I've been looking for my baby
Searching down the line

Well, here comes the train, yeah it's coming down the line
Well, here comes the train, yeah it's coming down the line
Well, you see my baby is finally coming home

The next day, walking up and down Howard Street, the main street of Hibbing, we looked for the poetry on the walls. "A NEW LIFE," read an ad for an insurance company – was that it? Was there anything in that beer sign that could be twisted into a metaphor? What was the woman in Berkeley talking about? Later we found out that the walls with the poetry were in the high school itself.

In the school library there were busts and chiseled words of wisdom and murals. The murals told the story of the mining industry, all in the style of what Daniel Pinkwater, in his young-adult novel *Young Adults*, called "heroic realism." There were sixteen life-size workers, representing the nationalities that formed Hibbing: native-born Americans, Finns, Swedes, Italians, Norwegians, Croatians, Serbs, Slovenians, Austrians, Germans, Jews, French, Poles, Russians, Armenians, Bulgarians, and more. There was a huge mine on the left, a misty steelworks on the right, and, in the middle, to take the fruit of Hibbing to the corners of the earth, Lake Superior. With art-nouveau dots between each word, the inscription over the mine quoted Tennyson's "Oenone" –

LIFTING·THE·HIDDEN·IRON·THAT·
GLIMPSES·IN·LABOURED·MINES·
UNDRAINABLE·OF·ORE

– while over the factory one could read

THEY·FORCE·THE·BURNT·AND·YET·
UNBLOODED·STEEL·TO·DO·THEIR·
WILL

That was the poetry on the walls – but not even this was the real poetry in Hibbing. The real poetry was in the classroom.

After stopping by the auditorium and the library, the tour made its way upstairs to Room 204, where for five years in the 1950s B. J. Rolfzen taught English at Hibbing High – after that, he taught for twenty-five years at Hibbing Community College. Eighty-three in May of 2006, and slowed down by a stroke, getting around in a motorized wheelchair, Rolfzen sat on the desk in the small, suddenly steamy room, as forty or more people crowded in. There was a small podium in front of him. Presumably we were there to hear his reminiscences about the former Bob Zimmerman – or, as Rolfzen called him, and never anything else, Robert. Rolfzen held up a slate where he'd chalked lines from "Floater," from Dylan's 2001 "*Love and Theft*": "Gotta sit up near the teacher / If you want to learn anything." Rolfzen pointed to the tour member who was sitting in the seat directly in front of the desk. "I always stood in front of the desk, never behind it," he said. "And that's where Robert always sat."

He talked about Dylan's "Not Dark Yet," from his 1997 *Time Out of Mind*: "'I was born here and I'll die here / Against my will.'" "I'm with him. I'll stay right here. I don't care what's on the other side," Rolfzen said, a teacher thrilled to be learning from a student. With that

out of the way, Rolfzen proceeded to teach a class in poetry.

He handed out a photocopied booklet of poems by Wordsworth, Frost, Carver, the Minneapolis poet Colleen Sheehy, and himself; moving back and forth for more than half an hour, he returned again and again to the eight lines of William Carlos Williams's "The Red Wheelbarrow."

so much depends
upon
a red wheel
barrow

glazed with rain
water

beside the white
chickens

He kept reading it, changing inflections, until the words seemed to dance out of order, shifting their meanings. Each time, a different word seemed to take over the poem. "Rain," he would say, opening up the poem one way; "beside," he'd say, and an entirely different drama seemed underway. Finally he came full circle. "So much depends / upon a red wheel barrow," he said. "*So much depends*. This isn't about *rain*. It's not about *chickens*. So much depends on the decisions we make. My decision to enlist in the Navy in 1941, when I was seventeen. My decision to teach. *So much depends* on the decisions you've made, and will make."

The poem stayed in the air: the loudness of the first line faded into "beside the white chickens," not because they were unimportant, but because from "so much depends," from the decision with which the poem began, the poem, like a life, could have gone anywhere; it was simply that in this case the poem happened to go toward chickens, before it went off the page, to wherever it went next. Rolfzen made the eight lines particular and universal, unlikely and fated; he made them apply to everyone in the room, or rather led each person to apply them to him or herself. This was not the sort of teacher you encounter every day – or even in a lifetime.

Bits and pieces of the Great Depression still lie about," Rolfzen wrote in *The Spring of My Life*, a memoir of the 1930s he published himself in 2004 – but, he said, "one day of the Great Depression can never be understood or appreciated by those who have not lived it."[1] Nevertheless, he tried to make whoever might read his book understand. He went back to the village of Melrose, Minnesota, where he was born and grew up. He spoke quietly, flatly, sardonically of a family that was poor beyond poverty: "Life during the Great Depression was not a complex life. It was a simple one. No health insurance needed to be paid, no life insurance, no car insurance, no savings for a college education or any education beyond high school, no savings account, no automobile needed to be purchased, no gas was necessary to buy, no utilities beyond the $3.00 a month my dad paid for six 25 watt bulbs."[2] There were eleven children; B. J. – then Boniface – slept in a bed with three brothers.

His father was an electrical worker and a drunk: the "most frightening day," Rolfzen writes, was payday, when his father would stagger home, then and every day until the money ran out.[3] One day he tried to kill himself by grabbing high-voltage lines; instead he lost both

1 B. J. Rolfzen, *The Spring of My Life* (Hibbing, Minn.: Bang Printing, 2004), 95.

2 Ibid., 93.

3 Ibid., 19.

arms just below the elbow, and sent the family onto relief. "I never saw my mother with a coin in her hand," Rolfzen writes; everything they bought they bought on credit against fifty dollars a month. There was a family of four that boarded up the windows of its house to keep out the cold, but the Rolfzens would not advertise their misery, even if the windows sometimes broke and, before they could be replaced, maybe not until winter passed, maybe not for months after that, snow piled up in the room where Rolfzen slept.

All through the book, through its continual memories of privation and idyll – of catching bullheads, playing marbles, picking berries, working on a farm for three months at the age of sixteen for four cents a day, or the toe of a boy's shoe falling off as he walked to school – one can feel Rolfzen holding his rage in check. His rage against his father, against the cold, against the plague that was on the land, against the alcoholism that followed from his father to his brothers, against the Catholic elementary school he was named for, St. Boniface, run by nuns who "enjoyed causing pain,"[4] a place where students were threatened with hell for every errant act – where "religion was a senseless, heartless and unforgiving practice. I still bear its scars."[5]

"In times behind, I too / wished I'd lived / in the hungry Thirties," Bob Dylan wrote in 1964 in "Eleven Outlined Epitaphs," his notes to *The Times They Are A-Changin'*. "Rode freight trains for kicks / Got beat up for laughs / I was making my own depression," he wrote the year before in "My Life in a Stolen Moment" – speaking of leaving Hibbing, leaving the University of Minnesota, traveling west, trying to learn how to live on his own. "I cannot remember ever having a conversation with my father about anything," Rolfzen writes[6] – but you can imagine him having conversations about the thirties with Robert. Maybe especially about the tramp armies that passed through Melrose, starting every day at ten when the train pulled in, twenty men or more riding on top of the box cars, jumping from the doors, men who had abandoned their families, who broke into abandoned buildings and knocked on the Rolfzens' back door begging for food – "My mother never refused them," Rolfzen writes. With whatever they could scavenge, they headed to a hollow near the tracks, the place called the Bums' Nest or the Jungle. As a boy, Rolfzen was there, watching and listening, but he will not allow a moment of romance, freedom, or escape: "Theirs was a controlled camaraderie with limited laughter. Each man was alone on these tracks that led to nowhere . . . . And so they left. More would arrive the next day. One gentleman in particular I remember. An old bent man dressed in a long shabby coat, a tattered hat on his head and a cane in his hand. The last time I saw him, he was headed west along the railroad tracks, headed for an empty world."[7]

This is not how the song of the open road goes – and while Bob Dylan has sung that song as much as anyone, as the road opened it also forked, even from the start. "At the end of the great English epic *Paradise Lost*," Rolfzen writes, "Milton observes the departure of Adam and Eve from the Garden, and as he

4 Ibid., 48.

5 Ibid., 54.

6 Ibid., 18.

7 Ibid., 33.

observes their leaving by the Eastern Gate, he utters these beautiful words: 'The world was all before them.'"[8] *So much depends* – think of "Bob Dylan's Dream," from *The Freewheelin' Bob Dylan*, in 1963. There he is, twenty-two, "riding on a train going west," dreaming of his true friends, his soul mates – and then suddenly he is an old man. He and his friends have long since vanished to each other. Their roads haven't split so much as crumbled, disappeared – "shattered," he sings. How was it that, in 1963, his voice and guitar calling up a smoky, out-of-focus portrait, Bob Dylan was already looking back, from forty, fifty, sixty years later?

"As I went out – " With those first words for "Ain't Talkin'" – not only the longest song on *Modern Times*, and the strongest, but the only performance on the album where you don't hear calculation – Bob Dylan disappears. Someone other than the singer you think you know seems to be singing the song. He doesn't seem to know what effects to use, what they might even be for. It's the only song on the album, really, without an ending – and with those first four words, a cloud is cast. The singer doesn't know what's going to happen – and it's the way he expects that nothing will happen, the way he communicates an innocence you instantly don't trust, that steels you for the story that he's about to tell, or that's about to sweep him up. He walks out into "the mystic garden." He stares at the flowers on the vines. He passes a fountain. Someone hits him from behind.

This is when the world opens up before him – because he can't go back. There is only one reason to travel this road: revenge.

For the only time on *Modern Times*, the music doesn't orchestrate, doesn't pump, doesn't give itself away with its first note. Led by Tony Garnier's cello and Donnie Herron's viola, the band curls around the singer's voice even as he curls around the band's quiet, retreating, resolute sound, as if the whole song is the opening and closing of a fist, over and over again, the slow rhythm turning lyrics that are pretentious, even precious, on the page into a kind of oracular bar talk, the old drunk who's there every night and never speaks finally telling his story. "I practice a faith that's long abandoned," he says, and that might be the most frightening line Bob Dylan has written in years. "That's been destroyed," Dylan told Doon Arbus in 1997, speaking of "the secret community" of "like-minded people" he found in the early sixties, a fellowship of those who felt themselves "outside and downtrodden," a community that "spread out across America" – "I don't know who destroyed it."

"I know, in my mind, I'm still a member of a secret community. I might be the only one," Dylan said then; in "Ain't Talkin'" the singer moves down his road of patience and blood. You can sense his head turning from side to side as he tells you why his head is bursting: "If I catch my opponents ever sleeping / I'll just slaughter 'em where they lie." He snaps off the line casually, as if it's hardly worth the time it takes to say, as if he's done it before, William Munny in *Unforgiven* killing children on his way to wherever he is – what he'll do to get wherever it is he's going will be nothing to that. God doesn't care: "The gardener," the singer says to a woman he finds in the mystic garden, "is gone."

Now, Bob Dylan didn't need B. J. Rolfzen's tales of the tramp armies that

8 Ibid., 76 – 77.

passed through Melrose during the Great Depression to catch a feel for "tracks that led to nowhere." Empathy has always been the genie of his work, the tones of his voice, his sense of rhythm, his feel for how to fill up a line or leave it half empty, his sense of when to ride a melody and when to bury it, so that it might dissolve all of a listener's defenses – and this is what allowed Dylan, in 1962 at the Gaslight Café in Greenwich Village, at home in that secret community of tradition and mystery, to become not only the pining lover in the old ballad "Handsome Molly," but also Handsome Molly herself.

There's no tracing that quality of empathy to anything – *so much depends* – but if effects like these had causes, then there would be people doing the same on every corner, in any time. On the way to Hibbing, we stopped at an antique store; shoved in among a shelf of children's books was a small, cracked volume called *From Lincoln to Coolidge*, published in 1924, a collection of news dispatches, excerpts from Congressional hearings, and speeches, among them the speech Woodrow Wilson gave to dedicate Abraham Lincoln's birthplace in Hodgenville, Kentucky, in 1916. "This is the sacred mystery of democracy," Wilson said, "that its richest fruits spring up out of soils that no man has prepared and in circumstances amidst which they are least expected."

That is the truth, and that is the mystery. In the case of Bob Dylan, as with any person who does things others don't do, the mystery is always there. But from the overwhelming fact of the pure size of Hibbing High School, from the ambition and vision placed in the murals in its entryway, from the poetry on the walls to the poetry in the classroom, perhaps to memories recounted after everyone else had gone – or memories picked up by a student from the way a teacher moved, hesitated over a word, dropped hints he never quite turned into stories – these soils were not unprepared at all.

Poems by Charles Simic

Darkened Chessboard

With the night already fallen,
It's hard to see who is playing,
Who is watching the game
At the little table in the park
Where no one says a word
Engrossed as they are in the next move.

Their dinners are getting cold.
The wives they left behind
Are worrying themselves sick
While they dither here
On the lookout for the white Queen
Last seen with a black pawn.

Secret History

Of the light in my room:
Its mood swings,
Dark-morning glooms,
Summer ecstasies.

Spider on the wall,
Lamp burning late,
Shoes left by the bed,
I'm your humble scribe.

Dust balls, simple souls
Conferring in the corner.
The pearl earring she lost,
Still to be found.

Silence of falling snow,
Night vanishing without trace,
Only to return.
I'm your humble scribe.

Charles Simic, a Fellow of the American Academy since 2002, is professor of English at the University of New Hampshire. He has published more than sixty books, including "Unending Blues" (1986), "The World Doesn't End: Prose Poems" (1990), which received the Pulitzer Prize for Poetry, "A Wedding in Hell" (1994), "Walking the Black Cat" (1996), a finalist for the National Book Award, "Jackstraws" (1999), a New York Times Notable Book of the Year, "The Book of Gods and Devils" (2000), and "My Noiseless Entourage" (2005).

Fiction by Peggy Newland

Clowns

When Mama couldn't have another baby, I knew I could find her one.

"Going out," I told Mama that first time, but she said nothing as usual, only staring out the kitchen window at the empty field in the back lot. And Daddy, he was never home back then. He knew to stay away until early evening. And then he'd sit in the garage with the radio turned low until Mama screamed for him.

I filled my pockets with stones from the river, just in case, and then I took one of the burlap sacks from the shed because that's what I'd seen on television shows when you didn't want the person knowing where he or she was going. I even got my room ready. My bed shoved away from the window so nobody would jump out, chairs piled into a corner, and some stolen jars of peanut butter, jelly, and crackers in my closet. Because you'd never know what the kid would want. And I always wanted peanut butter and jelly. But not on crackers. Bread gets black gunk on it once it gets old so the kid would have to do with crackers until he was ready to be introduced to the family.

Those stones in my pockets, that sack under my tee shirt. And soon you'll be happy, I wanted to say to Mama as I watched her from the shed. But I didn't. I just went.

"One, two, three . . ." I whispered in the park.

"Four, five, six." In the supermarket where Mrs. Johnston told me to go home, stop hanging around by the shopping carts.

"Seven, eight, nine," I yelled through an abandoned junkyard where the stream ran yellow and purple from the paper company.

And I picked up one of the dead birds. And I brought it back and put it in that closet with the peanut butter and jelly, but then Mama found it a week later and told me no more dead things in the house. Ever. And she stayed in bed for the next two days so I didn't even go

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to school at all. I watched more of the crime shows, twisting the antenna my way so the fuzz would disappear and I'd see a clear picture.

But then Daddy made me go back.

And Jimmy Richards smeared some dog shit in my hair at recess and nobody did nothing about that. They're just used to me smelling.

My first sister stayed alive for one day and twelve hours. I saw her once on Mama's bed and she had pink lips and black hair and tiny fingers that looked like tiny bicycle spokes. Mama whispered to her chest Liza, Liza, Liza, when they took my sister away, because they'd named her after my grandmother Elizabeth. And Daddy drank a full bottle of whiskey and pulled the refrigerator door off of its hinges.

The second and fourth babies died right in Mama's belly.

And the third was deformed so they had to throw her away.

They only had me.

And that wasn't a family, my Mama told me.

I had to look harder. The circus, I thought, all kids love circuses, especially the Tallahassee Shriners Circus, all those clowns on race cars and miniature trucks. All those animals in line. The popcorn, the peanuts.

I saw one easily. Followed him for a while. Grabbed him just when the mother had had enough, turning away to get herself a Coke at the stand. She wanted to hit him I could tell. Because she'd balled her hands into fists just like Daddy.

That kid and I scootched under the circus tent and I covered his ears when his Mama screamed for him.

He was an ugly kid, real snotty and blowing bubbles out of his mouth until I gave him one of my stones from the river to suck on. Then his eyes got real big and blue, and he stared at me like he knew what I was up to.

"You don't know," I whispered to those eyes of his as I watched the clown feet flipping past us in their large painted shoes. "Red, blue, yellow," I told that kid as I tried to get him into my burlap sack. But he was strong, that one, pushing at me with his arms, kicking me with his fat boy legs. So I finally just held him tight against my stomach behind those bleachers as the clowns got their unicycles ready and the elephants were taken outside. This shut him up.

The worst thing about Mama losing all those babies was that we had to go to church a lot. I never liked kneeling on the wood floors or having to wear socks with my shoes. And Mama's face always scared me when she bit through the flesh of Christ at communion: it'd go all waxy and peaceful, and she'd look dead like my sisters. Mama didn't want me to pinch her, but I couldn't help it, I'd pinch her over and over again. And some father, usually a man behind us, would run his hands down my spine to calm me and say come on now, son. Which I didn't like.

I only have one daddy.

That kid squirmed in my lap so I rolled back and forth behind those bleachers until he lay limp again in my arms. The elephants still paraded past, and the dust rose in that flesh-colored light, so I held that baby's nose closed for a minute so he wouldn't breathe up the dirt.

"There's nobody coming in here today," one clown said. His painted red smile couldn't hide his frown as he clicked his teeth and propped his hat on his head.

"Fuck 'em," another said. "We're still getting paid."

"But I like having lots of people," a girl clown said, and she was just in front of us so I gave that baby another stone to suck on because I didn't want him making any noises.

"Yeah, you do," two of those clowns laughed, and they elbowed each other and stomped their flapping feet, making even more dust than the elephants. But I didn't hold the kid's nose closed this time. I didn't want him to make those buggy eyes again.

"Shut up, you," that girl clown said, and she swished her polka dot skirt around and around until I could see her red lace bloomers through the slats of those bleachers; and one of those clowns grabbed her right on the ass, holding his hand there while she giggled, the others hooting and shouting at them with their white faces and orange wigs and open red mouths.

I covered that kid's eyes because he shouldn't be seeing stuff like that.

"You want to be my baby brother?" I asked real quiet.

He chewed on those rocks and didn't answer me. So I told him about Mama and how lonely she was for another baby and how our house was real nice, with a backyard and everything but no swing set just yet, and how Mama could make good cookies in the oven when she was feeling up to it. Which wasn't often now. If ever. "But maybe that'd change if she had you," I whispered because two of those clowns were getting closer. I held my hand over the kid's mouth.

"How about it, Lucy?" the boy clown asked, that girl clown still twirling and then the boy clown coming closer to her, pressing her against the squashed bleachers. His black eyebrows arched up and down as that kid and I stared up at them.

"Yeah," the girl clown said. "But just do it fast." And he pulled off his big white gloves and got his hand down her shirt, and she let him, and then they were on the ground, her bloomers down past her knees; and I had to use the burlap sack this time, put it right over the kid's head, because I'd only seen this in the magazines my daddy kept behind the workbench in the garage, girls doing all sort of things with carrots and others girls – never anything like this, that boy clown holding her down and both of them with their smeared smiles. "Shhh …" I said to that kid, and when I tried to put another stone from the river into his mouth, he bit me. It hurt so bad. And I couldn't hold it in any longer.

Mama used to let me sleep with her, but now she sleeps with her doll that the pink ladies at the hospital gave to her two months ago. That doll is called a Cupie Doll, and it's naked and has a dimpled face and a plastic curl on her forehead, and when you turn her upside down, she giggles at you. Almost like she's alive but she's not. They say it helps with her memory, makes her quiet in the late afternoons when I go out for my walks. But sometimes nothing helps.

My thumb was bloody when that kid got done with me, and he looked all proud of himself in the bottom of that burlap sack so I tied it up with my rubber band. I also kept those around, too, rubber bands, because they are so useful in a pinch. But then that kid started wailing, real high and screeching, and there was no way to shut him up so I screeched right along with him.

And then those dirty clowns found us.

"Jesus Christ," the boy clown said, and his teeth were crooked and wrong-looking as he swatted at me. "What the

hell . . . " His gloved hand got me, twisted my neck around, and I rolled into a tight ball like I do with Daddy.

"Stop it, Ray, " that girl clown said, and she jumped right on his head, which he didn't like, because he shrugged her off and she fell in the dirt, her legs all akimbo, and there was a rip in her striped pantyhose things but no blood. Ray the clown just humping himself up and out of there. Which I was glad at. He left his gloves though, and I couldn't stop staring at them even with that kid in the bag rolling around by my feet. "What are you doing back here?" the girl clown said, and she had kindly eyes although you couldn't see them so good through all the black eyelash stuff.

I couldn't say too much because I was still crying from that kid biting my thumb so hard.

"It's okay, honey," that girl clown said as she came close, and when she bent over, I could see down her clown dress; and she had brown nipples like Mama so I knew she was probably nice. But also a little bit sad. The girls in Daddy's magazines all have pink ones and they're smiling, so I guess if you've got pink, you're happy, and if you're brown, you just get sad.

I showed her my thumb.

"Where's your family?" she asked. And her hands were smooth when she held my hand.

"I'm looking," I said, but I was having trouble with my lips as usual. And then that kid kicked his leg out, and the girl clown touched the bag so I pushed the bag toward her, smiling. "Here," I said. And she opened the bag. And that kid looked up at us and spit the last of the stones from the river out of his mouth.

"Holy . . . " And that girl clown lifted that kid into her arms. And I thought of how happy my Mama would be holding another baby, how maybe she'd smile and her face would light up; and then, because she was feeling so good, she might make some chocolate chip bars in celebration, and then Daddy would come home because he'd smell that sugar and cream from the kitchen, and his stomach would rumble right along with mine. We'd eat all those chocolate chip bars in one sitting because we would finally be a whole family. And then we'd get that swing set.

But that kid ruined it. He shit himself, and it came out the side of his little sailor suit onto that girl clown's polka dot skirt, but she didn't care, her face all puckered up with her smudged eyes as she smelled his head. Her not caring that his yellow shit was sliding down her clown outfit, and him with his mouth wide open like that dead bird's.

"You can have him," I told that girl clown.

But she wasn't listening to me. She wasn't even noticing me. She stood in that dust and sighed over and over again as that kid kicked and swatted; and even when I pulled at her orange clown sleeves, even when I kicked my boot at her clown foot, she just stayed in the broken light of that empty tent and rocked that kid like they were the only things left in the world.

Maybe our family didn't really need a baby.

Maybe someone a little bit older.

So instead of bringing home a baby for Mama that day, I stole that boy clown's gloves. And kept them underneath my bed with the bird nests and fishing lures and a couple of Daddy's magazines.

Our house sits at the end of a dirt road next to the old fairgrounds. Sometimes I run around the track where they used to have horse races, but usually it's too much for me now because I lose my breath and I always have to get back to

Mama because you never know what she'll get into next, turning on the stove, trying to push her hand through the plate glass. There used to be so many cars and trucks and animals coming our way, up our road, during Kinstown Days, but now it's just brambles and ivy over the oaks and brush mostly hiding our little pink house. That's why I like it. Because we're hidden now, Mama and I. No one coming around anymore.

I grabbed a two-year-old from the Kinstown Days Fair once and kept him in our basement for three days. But he wouldn't eat the peanut-butter-and-jelly crackers, and he cried so much Mama thought she was hearing ghosts of her dead babies so I had to take him back. Because Daddy didn't like it when Mama got that way, scratching at her face and tearing through the kitchen in just her underwear. I gave him a fishing lure, one without a sharp hook and left him in the oxen barn, sleeping in a pile of hay like baby Jesus in the manger. Only older. And the next day, it was all in the news. A miracle had occurred at Kinstown Days, and that boy was given a parade and everything. But I didn't care because Mama kept her clothes on and just got back to staring out the window. And Daddy came back to his shed again.

Then I met Sherry. And she was real pretty. Three years younger and new to our school, and no one liked her because she had half a burned face and had to wear an eye patch. But she had a nice voice, and she'd tell me her secrets and so I'd tell her mine, about Mama and all those dead babies and how we didn't have a full family yet, and she told me that her uncle had three wives and she might get to be the fourth if she stayed quiet and followed the rules of doctrine. I nodded my head along with her, and she patted my back about the dead babies, and she liked peanut-butter-and-jelly crackers just as much as me.

I invited her home one day and Mama tried not to scream, but a little bit came out anyway.

"It's okay," Sherry said, and I was real proud of her because Mama settled just hearing Sherry's nice voice and poured her some juice in the Sleeping Beauty cup she kept for just this purpose. But Mama wouldn't look her in the face.

Sherry stayed for dinner and Daddy even came in from the shed, and it was like we were a normal family, the table set for four instead of three.

"Sherry's from Utah," I told Daddy, but he was handing Sherry a napkin, telling her to put it on her lap and smiling real big. Mama was still at the table, which was good because usually after Daddy came in, she left for her bedroom.

"Where you from?" Daddy asked Sherry even though I just told him.

And she explained that they'd moved to be closer to family and that they liked it here in Florida except for all the trees. "There's too many here," Sherry said, her words so soft that Mama looked up and touched her elbow to go on. "They almost swallow you up."

And Daddy laughed at that one, bending down to the ground when Sherry dropped her napkin on the floor.

Mama likes me to cream her beef and stew her prunes, and so I do both with the clown gloves on. It keeps the heat away and also gives her a little laugh because I can act the part so well. Being that I've had a lot of practice. I take extra special care of them, putting them in my locked cabinet in Daddy's old shed.

"Now you see it, now you don't," I tell her, hiding a dripping prune inside one glove, and she throws her head back be-

cause she likes it when I make things disappear.

"Where'd you put it?" Mama asks.

But sometimes I don't show her, like today, because I'm a little tired of Mama's games, and I have to have my secrets too.

"I don't have nothing," I tell her. And I wave those gloves in her face, and she tries to grab one off of me and so I tell her no, Mama, no.

"Don't you do that," Mama says. And our kitchen clock ticks, and the siren sounds at the mill, and her face is wrapped up tight in her bright red lipstick and pink blush. Then she throws her plate of beef on the floor so I have to get the mop out.

"Why you'd go on and do that?" I ask.

But Mama's back staring into her hands, and it's almost time for my walk to school where I help clean on carnival days.

Sherry let me kiss her on the cheek. She let me touch her kneecap. But she wouldn't let me peel back her eye patch.

"No," she said in that voice of hers. So I pressed my face to hers, and she opened her mouth, and I could feel her tongue on my teeth in tiny circles, and it made me have goose bumps down my arms and up my legs. "No," she said when my hand went down the backside of her pants, and it ricocheted in echoes down my throat, no, no, no, until it was like I had part of her inside me.

"I love you," I told her, and she kept nodding her head as I walked her home, trying to hold her hand. But she wouldn't let me. I hugged her tight just before we got to her yard but she whispered that her daddy would see us so I stopped and watched her walk away.

There is one picture of me in the house. It used to sit on Mama's bureau, Mama, me, and the sister I found us, but not Daddy. Then one day she threw it at me and I don't know where the picture went. Mama won't tell me. Even though I've asked her many times.

And this makes me mad.

I don't like it when I get mad because then I do naughty things.

Daddy always wanted to be around Sherry whenever Sherry came over, and he'd drape his arm over her shoulder and push her in a new tire swing he'd just put up, and he'd take her out for ice cream some nights. Even after Mama made her chocolate chip layer bars and her macaroon cookies, Daddy would take Sherry out for that ice cream. And he'd never bring any of it home for Mama and I.

"Mama, when they coming back you think?" But Mama just stared off past the littered fields to the highway and shrugged her shoulders. "When you think?"

"Hush," she told me. And she left the porch. To throw the cookies away.

One afternoon, I hid in the back of his truck, covering myself up with a blanket that smelled of hay and dirt and old milk, and I heard Sherry singing her songs. Her voice like some angel's even with the wind howling and Daddy's muffler belching out its exhaust as he drove off down the highway. Her voice coming over me so much that I felt raised up in the sky with the clouds and the sun and trees swishing past, almost like I was in heaven. And then, when I sat up to sing along with her, I saw Daddy kissing on Sherry, and Daddy saw me and pulled over and said for me to get out, get out of his truck, and Sherry didn't do anything except stare back at me from the rearview as they drove off down the road. For their ice creams together.

They picked me up fifteen minutes later, this time with ice cream cones for Mama and me. But Mama wouldn't come out of her room. Even with Daddy pleading with her. Banging on her door. And finally stomping around the kitchen. Mama's ice cream melted on the kitchen table until I licked it up like a dog just to make Sherry laugh.

"What the hells wrong with you," Daddy yelled when Sherry couldn't stop laughing at my face covered with chocolate and fudge ripple. "Fucking reject . . ." And he banged the kitchen door off its hinges, and that's when Sherry started crying. Tears soaking that patch.

I chased after her when she ran home but she was faster.

Mama says the babies are screaming at her again. And that they're spitting. And taking her food away. And that their faces are dirty and that their breath stinks. I tell her that I'm not seeing any of them, and I hand her that Cupie doll but that's not working anymore. Just last night, she tore its head off and there was that doll baby head in my closet and Mama in the corner, and I tried to comfort her the best I could. But she told me to go away, just get away. And that made me cry.

"I'm trying, Mama," I tell her.

And she turns her back on me because it's been so many years and nothing has changed. We're still not a family.

They came and got Daddy. Three policemen and a sheriff, and they locked his hands together and pushed his head down when they got him into the flashing cruiser and they drove away.

"Sherry told on him," Mama whispered.

"Where're they taking him?" I asked, but Mama just kept saying she told, she told, as she turned around the mirrors and piled Daddy's clothes on the porch and got her Bible out. I cried for two hours straight, from 6:00 p.m. until 8:00 p.m., and didn't even eat the supper Mama set out on the floor of my room.

"Eat your biscuits," Mama said when she came in to kiss me goodnight, and her face was raw and pink, her nose especially. She pulled my covers back, and we huddled underneath Nana's quilt. Just the two of us.

"Too old," she whispered directly into my ear.

And that made sense to me.

We had to find one just right. Not too old, not too young. Just right.

And then they'd let Daddy come home.

Some days, I walk right past Sherry's old house and I see the bush I waited in for her. Mulberry, and it's dying now, the leaves just falling off on the ground around my boots. But I don't kick at them. I watch them settle on the grass and think about how her face felt in my hands and that she loved my magic tricks, the one with the Queen of Hearts the most. The windows to her house boarded over now, and I'm still sorry I did that back then. With the rock. Smashing that glass so it fell in bright colors around my feet and then running off because Sherry wasn't there and wasn't ever coming back again.

I scrubbed the toilet and threw the old plates in the backwoods. I hid the newspapers under the bed and banged on the couch cushions. I combed back my hair and took down the fly traps from the kitchen ceiling. Because Mama said a social worker was coming and that social worker was going to take me away if we didn't watch ourselves. That I'd have to

live with the Fosters family if I said one word about anything bad.

"She's here," Mama whispered in her good red dress with her shoes laced up, but I didn't want to go answer it.

"I'm scared," I told her, but she pushed me to the door anyway.

The social worker was real pretty with a yellow skirt and brown shoes and her hair in a bun just like Mama's when she goes to church. I told her that I liked her hair, and when I reached over to touch her bun she backed away.

"I love my Mama," I said.

"Of course you do," the social worker said, but she wasn't smiling any longer, and she wasn't drinking the juice Mama gave her in the Cinderella cup, and she wasn't sitting down on the couch I just dusted off.

"I miss my Daddy."

"I'm sure you do," she said, but then the cats started crying in the basement, two of them in heat, and I was afraid she'd look down in there so I clapped my hands over my head and pointed out the window at a starling chasing a band of crows around.

"Watch," I told her. And soon those oily crows circled around and attacked that tiny starling, and she disappeared from sight. I threw Mama's leftover toast out the door, and we all watched the crows fight over the scraps.

"It might be better . . ." the social worker started to say, but Mama told her to get the hell out of her house this instant, that she would smack the shit out of her if she didn't leave this very instant. And that social worker did. Even with the cats screaming real loud in that basement and with the crows biting at each other over the bread and with Mama pulling at my hand, she left, and the house was quiet and gentle again, Mama even getting back into her bathrobe and slippers.

"Here comes that starling again," I told Mama after I'd changed out of my church pants.

And she took that as a sign.

They let me volunteer on carnival days at the school because I have my clown outfit and I wear my gloves, which all the kids like. Especially when I do magic tricks on the edge of the playground and the kids line up, but they're not patient, no, they scream about being first, and hurry up, and they push, they push the ones in front.

"Okay, kids," I say to them, but the one on my lap pokes his finger into my makeup, and I don't like it at all. "Stop that." And I stare into his face and frown, which makes him cry. His mother pulls him off my lap, and she's got that look I don't like, her eyebrows all knitted together, her lips sucked inside her mouth.

"No, I don't want to go . . ." that kid screeches, and I cover my ears, which makes the other kids laugh. I scoop another one into my lap and show him the quarter trick.

"Look, it's been here the whole time," I mumble, and he doesn't care what I say, he just wants my quarter. "Here." The kid grabs it and runs. When he gets far enough away, he sticks his tongue out at me, but I know enough to look away from him.

"I'm next," a little girl says, as she stands in front of me with her hand open.

"Here," I say as I pat my knee.

"Just the quarter." Her eyes are the color of an abandoned garden, weedy and yellow, and she balances first on one foot, then the other.

She reminds me of my sister.

"What's your name?" I ask her, as the other mothers pull their kids away, too, because a Jesus band is singing on the

main stage and there's soon to be a raffle for a homemade quilt and a free rototilling.

But she just keeps her hand out.

"Sherry?"

"No, it's not Sherry."

"Becky?"

"Give me the fucking quarter, Clown Man."

"How old are you?" I pull out a dollar. And smile at her. Then I pull out another.

And she looks sideways toward the crowd before she snatches my money.

"Let's go to Disney World," Mama said that night, and she was already dressed and holding a suitcase and a big plastic garbage bag.

"But . . ." I was confused. The house was dark and my clock said 3:25 a.m., and that was too early to be getting out of pajamas and heading out the door.

"Now." And Mama's face meant business so I got up and gave Mama some underwear and some socks and two shirts and my white gloves, and she stuffed them into her garbage bag.

There were no stars in the sky and the trees shook their branches when we left in Daddy's truck. Mama's mouth stayed closed the whole time, and she didn't once look back to the house. Even when I told her I'd left my turkey feather and my fishing lures in the closet.

Her name is Nita and she hates Florida.

"Give me another dollar," she says so I hand her another. She sticks it down her pants.

"It's sunny here today," I tell her, but she laughs in my face.

"You're a retard."

"I know," I say as I look down at my flippy shoes, the ones the school donated to me last year because my sneakers wore out. The Jesus band is gone and the stage is empty. Garbage is everywhere, and I know I have a long night ahead of me because the school likes the field neat for the next day. And I don't mind picking up. Because you never know what you'll find left. You never know what people throw away.

"You like Disney World?" I ask.

"Loser World?"

"Mickey Mouse is not a loser," I tell her.

"You're a loser." And when she laughs this time, her face cracks wide open and her braces shine in the late-day sun.

"You're pretty," I say, and this stops her from laughing, which makes me sad. I like it when everyone is smiling and having a fun time.

"No, I'm not." And she rubs her elbows with her hands.

Everything was so bright and colorful, and there was music coming out from the plastic trees and garbage cans and streetlights and even the teacup ride that went around and around and around. Mama didn't want to go on rides anymore and just wanted to sit on a bench with her Sleeping Beauty cup full of soda.

"Please," I asked her, but she waved her hand at me and covered her eyes. The princesses scared her, Tigger made her scream, and there were too many people in bright tee shirts. Ants, she called them, ants. Mama wasn't doing so well, and we hadn't even gotten to Fantasyland yet.

"Go." And Mama lay herself down on the bench, her drink balanced on her belly.

I drank Coke after Coke and went on ride after ride, especially Space Mountain, which whizzed you around in the dark and shot you through holes in the universe. But soon, I had to pee, and I

didn't want to but knew it was a good idea.

Nita follows me into the field even when I tell her no again and again. But she thinks she's so funny, skipping right along with me.

"So you live with your mother?" she asks. But I've already answered her. Many times. "How old are you?"

"You should go home."

"My parents suck."

"That's not very nice to say." And I rub my eyes until there are spots of white behind my eyelids.

"I'm not very nice." She throws a can toward my garbage bag, but it misses so she throws another. This one goes in, and I make the mistake of looking up at her to congratulate her basketball shot. Her eyes make my knees tremble.

"You haven't been on Space Mountain yet?" I asked that boy, but he was still pulling at his sister's hand as she screamed and hollered about getting an ice cream and wanting to see Snow White.

"Snow White will kill you," he said to his sister, and she glared back at him.

"Shut up, Nate."

"Quit being a fucking bitch," the boy said. A father coming into the bathroom with his son scowled at me like I'd just cussed.

"Control that kid," he said to me as he pulled his son outside.

"Don't cuss or else I'm telling Dad," Nate's sister said.

"He's not here now, is he?"

But his sister just ignored him and asked me, "Snow White's nice, isn't she?"

And of course I said yes. Everyone loves Snow White and the Seven Dwarves, and everyone loves Cinderella and Sleeping Beauty and Ariel and all of those princesses in their castles. "She's beautiful," I told her and she nodded right along with me.

"Come on," her brother said. "Go pee."

"I don't want to."

"Go or else I'm gonna . . . "

Two men flushed and left, and the bathroom was silent. Except for Aladdin's "A Whole New World" coming out over the speakers.

"Gonna what?"

"Gonna . . . "

"When you go on Space Mountain, try to sit in the front because that's the fastest seat," I said, standing between him and his sister because Nate had just balled his fists up and he had yellow eyes that reminded me of a wolf.

"I don't want to go to Space Mountain. Mom said I didn't have to and I'm not doing it," his sister said, banging her sneaker down on the floor.

"Yes, you are, Becky."

"No."

"Yes."

"Dad said he wasn't going on with you, he told me . . . " And she smiled a pockmarked smile, her eyes swelling up bright blue. "So tough luck."

And Nate kicked her in the shin. "Screw you," he said, running out the door. And Becky and I just stood there waiting for him to come back. But he never did.

And so I helped her.

"I have to go home now," I say.

"Back to your Mommy?" She jerks her neck around.

I nod my head yes.

"Back to your Daddy?"

I shake my head no. And I give her the last of my money.

"Are you a pervert?" she asks. And that's when I take my hands out of my pockets and hold them to my chest.

Becky drank all my milk. She ate all the cereal. She started calling me names and running in circles, hitting me with her wooden spoon, and Mama didn't do anything. Mama clapped her hands and pounded her feet on the floor and urged Becky to run faster and faster around me, and Becky did.

"She's perfect," Mama said, and Mama would comb her hair and line the stuffed animals up for her in our trailer and they'd have tea parties until all hours of the night. She didn't need sleep, my sister, and she never tried to run away. She sat in Mama's lap and twirled her ponytail into circles, and Mama made her chocolate layer bars and vanilla cream pies, and she'd let my sister eat whatever she wanted.

When Mama bought Becky a swing set, I started looking for Daddy. Every day I'd sit at the window just waiting for him to round the corner, but he never did.

"We're finally a family," Mama said one night.

"But Daddy's not here." And she looked at me as if I was gray and rotten. Something to be thrown away.

"He's not coming back." And she rocked Becky back and forth. "Not coming back, not coming back . . ."

"But Mama," I said.

"Don't 'but Mama' me," she said, and Becky nodded her head and sucked on her blanket. "Go." And she pointed to the screened-in porch. Where the Florida beetles waited and the crickets chirped and the heat came at me all night even with the breeze. There wasn't room in her bed no more. She wanted to sleep just with Becky. Because I was too big.

And when I heard Mama snoring, I got the burlap bag out and some Florida seashells. And I took Becky away on a bus. I used my clown gloves.

When I get home, there's the nurse and she's got a policeman with her, and they're standing on the porch, and Mama is howling out my name but she knows I'm not home. She knows I don't come back until late because I always go for the fireworks this time of year. They've started up Kinston Days again, and I know the place to sit. I told Nita all about it, how the colors just explode right in front of your eyes and flutter down around you, but still she ran off. They all run off, don't they, if you let them. It's just a matter of knowing when. And how they'll do it. But other times, it's just being resourceful enough to keep them. For a while.

I walk right past the house and into the bright lights.

And traffic is lined up both sides of the highway.

Samuel Weber

on Benjamin's '-abilities'

One of the most important tendencies to emerge in literary studies over the past few decades has been the extension of its techniques – close reading, rhetorical textual analysis, and, more generally, analyzing and interpreting so-called signifying processes – to nonliterary objects and artifacts. The results of this extension have not been one-way. At the same time that techniques of literary analysis have refined the interpretation of nonliterary artifacts, confrontation with nonlinguistic, nondiscursive media has made literary critics aware of the distinctive characteristics of their own medium in ways that were not previously available to them. It has also called into question some of the most powerfully entrenched conceptual polarities that have traditionally informed literary studies, and aesthetics more generally: namely, form/content, fiction/reality, author/audience, genre/work.

Much of this development, whose immediate causes can be retraced to the impact of structuralist semiotics in the 1960s, was already at work long before Saussure's notion of linguistic value as differential signification was rediscovered by Roland Barthes, Jacques Derrida, and Jacques Lacan – to name just a few of those whose writings contributed to a new sense of textuality in general, and of literary textuality in particular.

One of the most prescient of their precursors was Walter Benjamin. Trained in philosophy, literary studies, and art history, Benjamin articulated an approach to the newer media of photography, film, and radio. These, in turn, have exercised an increasing influence upon a variety of fields and practices, including those today ranged under the general rubric of 'cultural studies' and 'media studies.'

For many years I have been reading Benjamin's writing with an eye to understanding just what it was that enabled him, a scholar trained in traditional disciplines, to pass so effectively from an analysis of 'old' media to an interpretation of 'new' media. I have become convinced that part of the secret lies in fact that we must include among the 'old' media not just those that were institutionalized as the objects of academic 'aesthetic' disciplines – such as literature, painting, theater, architecture, and music – but also, and perhaps above all, *space*, *time*, and *language*. (To be sure, the latter three were also studied by disciplines, namely, geography, geometry, history, and linguistics, but they were

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not instantiated in what might be called 'aesthetic objects' as were the former.)

When traditional media are defined in this way, it becomes clear that they are not simply wiped away or suspended by some radical "epistemological break" – a notion derived from the French historian of science Georges Canguilhem and popularized by Michel Foucault. Rather, they come to be *reconfigured* by the so-called new media. What is 'new' about these media is thus better understood as a recombination than as a *creatio ex nihilo*.

If this conception of the 'new' is retained, then it would have considerable implications for the construction of the 'new' disciplines of 'media studies.' For instance, the study of language, literature, art, philosophy, etc. – rather than being simply superseded by that of television, Internet, film, radio, etc. – would have to be integrated into those disciplines. A major task would then become *selecting* and *organizing* rather than *purifying* the new discipline of all traces of the older, so-called obsolete ones. This would hold true not only for philosophy, as the study of the history of concepts, including those employed in aesthetics, but for other disciplines as well, such as economics and history (including those of technology, science, military strategy, etc.).

From this point of view, the study of Walter Benjamin that I am currently completing involves more than the examination of the work of a single writer and critic, however interesting. For the problems that Benjamin's writing engages and articulates concern an unusual yet exemplary experience of the interplay between old and new media. Benjamin, who was extremely attuned to the problem of *experience* in its relation to media, insisted, from his earliest writings on, that experience could and should not be reduced to a function of *cognition*, exemplified for him in the Critical Philosophy of Kant. Instead, Benjamin held that experience was a function not just of concepts but also, and above all, of language.

This, in turn, required him to rethink traditional conceptions of language in order to extricate both the theory and the practice of language from what he considered to be the impasse of a certain humanism, which ultimately subordinated language as a vehicle either of *meaning* or of *being* – but in both cases of a problematic and unreflected theology, however 'secularized' its form.

This dual and complementary effort to rethink language, both as theory and as practice, impelled Benjamin to develop an alternative approach that would no longer consider language as either an instrument (of designation, expression, or meaning) or a self-contained *logos* (creating or performing that which it named). The alternative toward which he found himself drawn (although by no means in an entirely consistent or deliberate manner) was that of determining language as a 'medium' – but in a sense that broke with the traditional denotation of the word. For Benjamin, language as medium was not simply an interval or bridge *between* fixed poles or places: subject and object, man and world, God and the universe. Rather, he developed a notion of *linguistic mediality* as a movement of *division* and of *separation* – of what I call 'parting with' as the condition of a *sharing* and *imparting*.

All of this, and more, is condensed in the German word he used, *Mitteilbarkeit* – often translated simply as 'communication.' Since Benjamin insisted that we are not to understand language primarily and essentially as a conveyor belt of meanings, this translation is unsatisfactory. A more literal rendition is helpful. When literally rendered in English, the

Note by Samuel Weber

German word *says* (although does not obviously *mean*) something like 'parting' or 'partitioning with.' *Teilen* means to divide; and *mit-* is generally equivalent to 'with' (or co-). This suggests that language divides and divests itself in order to impart.

But translating *Mitteilbarkeit* as 'parting with' brings to the fore something rather curious in the English expression. We normally understand to 'part with' as to separate from something, to give it up or relinquish it. But if this is the meaning of the expression, then why or how should it employ the preposition 'with,' which usually suggests some kind of 'togetherness' – precisely what the 'parting' (or even *Teilen*, in the sense of *division*) seems to exclude?

If imparting, 'communicating,' is one of language's essential functions, then this can only happen if the medium can 'part with' itself in order to 'impart.' In parting *with* itself, language establishes a relation to itself – one precisely of separation, division, alteration. As signifying medium, language only 'is' in taking leave of 'itself.' That is to say, of its ability to *stay the same over time*, to return to its point of departure, and thus to be self-identical in any given instant.

But this is tantamount to saying that language can never be described or pointed to in the present indicative. As 'parting with,' it is always in the process of taking leave of whatever 'state' it happens to be in. It is a 'medium,' not in occupying a middle ground between two poles or two presences, but rather in *exposing* any present meaning that it seems to articulate as a *potentiality* forever to come – in short, as an '-ability.'

It is just this '-ability' – which defines the mediality of the medium, whether language or other – that orients my study of Benjamin. This 'orientation' is, however, forever changing, just as the notion of mediality as 'parting with' implies change and alteration. It is therefore appropriate that this '-ability' articulates itself in Benjamin's writing practice not as a noun, but as a *suffix*. As a suffix, it stamps the noun with the irreducible quality of possibility.

Perhaps this is why Benjamin recurs again and again to this suffix in formulating many of his most decisive concepts. Beginning with 'impart-ability' (in German, as we have noted, *Mitteilbarkeit*), Benjamin, throughout his writings, develops a series of such '-abilities,' or, in German, *-barkeiten*. These include: *Bestimmbarkeit* (determin-ability), *Kritisier-barkeit* (criticiz-ability), *Übersetz-barkeit* (translat-ability), *Zitierbarkeit* (cit-ability), *Reproduzier-barkeit* (reproduc-ibility), *Erkenn-barkeit* (know-ability). As a suffix, such '-abilities' relativize the substantive, or noun, that they follow, and on which they, literally, *depend*, to which they are *appended*. What is designated as an *-ability* is thus never self-sufficient or self-subsistent, never fully realized or realizable: its reality depends on the future, but on a future in which the reader is inevitably implicated.

To determine mediality as an -ability constitutes therefore not just a constative description of a medium, nor even a performance of it, in the sense of its actualization. Rather, it entails an appeal to readers or listeners, who find themselves addressed by this -ability, to participate in a process of partitioning that involves a readiness to take leave of the present or, better, to allow what is present to *part with itself* and to make room for something else. As -ability, mediality thus always entails the process by which intramediality becomes *intermediality*, opening itself to the advent of other media.

From this perspective, the 'work of art,' traditionally understood as the *in-*

dividual instantiation of a genre – a 'novel' or a 'tragedy' – tends to appear as the always *singular* displacement or translation of other media. The "epic theater" of Brecht, for instance, is interpreted by Benjamin as the staging of what he calls – or rather, cites as – "the citability of gesture." Citability, usually associated with language and in particular with written texts, *parts* with this medium in order to enter into relation *with* 'gesture,' involving a bodily movement that points away from where it is situated. Whether or not this movement is *consummated* depends not on itself but on others: audience, readers, or interpreters. Benjamin's -abilities always involve such an appeal to transformative reinscription on the part of those others who are its destined addressees.

It is no accident that old and new media converge in Benjamin's discussion of Brecht's theater. Theater spans the gap between old and new media, between "cult" and "exhibition value," as Benjamin calls it in his essay "The Work of Art in the Age of its Technical Reproducibility." For the great resource of theater, old as well as new, is, according to Benjamin, that of "exposing the present" (*Exponierung des Anwesenden*). And it is such exposure, in which all enclosure becomes unhinged, that marks Benjamin's theory of media no less than the mediality of his writing, which is always exposing the established sense of the words it uses by turning them inside-out.

This is obviously a very different conception of 'medium' and of 'mediality' than those that are familiar to many today. But to the extent that they provide an alternative scheme for approaching the instability of representations in the audiovisual media, they will hopefully prove useful for a reconsideration of those media, including the uses to which they are generally put.

William F. Baker

on the state of American television

It elects presidents. It wins wars. It is both a mirror and an engine of our culture. Television is, undeniably, an extremely influential force in our country. And television viewing has never been more a part of our lives. Last year, Nielsen Media Research reported that during the 2004 – 2005 season, the average U.S. household tuned in for eight hours and eleven minutes per day. This is 2.7 percent higher than the previous season, 12.5 percent higher than ten years ago, and the highest levels since Nielsen Media Research began measuring television viewing in the 1950s.

However, instability, invention, and revision are now at work in every aspect of the medium – from content to viewer-

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Note by William F. Baker

ship to legislation to, of course, the driver behind it all, technology. In short, television is in a state of revolution.

If you are of a certain age, you remember when American television was defined by three networks (plus public television and a few scratchy channels that, with luck, you could pick up on the UHF band). Those three networks – CBS, NBC, and ABC – *were* television. They showed us the first moon landing, the Vietnam War, the Kennedy assassination, the Beatles, the Watergate hearings – the events that defined modern America. They offered something unprecedented: a mesmerizing glimpse of history in the making. We watched them together, free of charge, and they gave us a common media ground to stand on; we were a nation united by a glowing box in the corner of the living room.

The monolithic nature of television in those years was part of its power and its value. But it was also a liability. The networks were run by big corporations beholden to shareholders who expected a return on their investments. So they sold commercials, and they appealed to the largest common denominator. By their very nature, they represented the mainstream, the salable, the profitable.

Public television was created precisely as a reaction to the entrenched, corporate media establishment. Commercial-free, subsidized with government funds, and dedicated to the arts, education, and intellectual exploration, public television was the lone alternative to the Big Three – and the only television provider with a public-service mission.

Of course, because they used the public airwaves, the networks made *some* concession to public service, as required under the Communications Act of 1934. But because programming like news and public affairs was not profitable, they offered it reluctantly, and it was only under the watchful eye of the FCC that they remained in compliance.

Throughout the 1960s and 1970s, that was largely the story of American television. Three big commercial networks used the public airwaves mostly as a source of revenue, but offered a unifying national experience and some nominal public-service programming. Public television, with its independent, community-based stations, offered the only real alternative.

In the final years of the 1960s, though, moves were being made in Washington to begin a cycle of deregulation that would eventually reform nearly every aspect of American industry – including television. This became perfectly clear in 1984, when FCC Chairman Mark Fowler famously declared, "It's time to move away from thinking of broadcasters as trustees and time to treat them the way that everyone else in this society does, that is, as a business. Television is just another appliance. It's a toaster with pictures."

Notably, the deregulatory attitude of Reaganomics coincided with a technological breakthrough. The introduction of the personal computer – and its underlying digital technology – would transform the media in ways that few could imagine.

The effects of these economic and technological forces wouldn't become completely clear for another decade or so, but the appearance of cable in the 1980s was the first sign of what was to come. Because cable emerged under a separate regulatory regime, cable operators were not – and are not – bound by the same strict rules that governed broadcasters. Cable operators are not obliged to devote part of their schedules to public service; they do not have to observe FCC regulations regarding indecency; and they are not limited by the

ownership caps designed to keep broadcasters from dominating particular markets. Consequently, cable channels were free to expand rapidly and introduce a range of programming not generally available to broadcasters.

As cable proliferated, new channels sprang up seemingly overnight. Faced with an ever-growing menu of choices, American audiences began to splinter. Channels were targeted to ever-smaller groups defined by demographics or specific interests: MTV for teenagers, A&E for arts lovers, CNN for newshounds. The dominance of the Big Three networks slowly began to erode. With the arrival of cable, television would no longer unite Americans under a big tent. Rather, it would set up scores of smaller tents catering to narrower sets of tastes.

The collateral trends of deregulation and the emergence of digital technology intersected in the Telecommunications Act of 1996. The first major telecom act in over sixty years, it sought to open American media to free-market competition – a move that many saw as necessary to enable Americans to take full advantage of what was becoming known as 'the information superhighway.'

For some years, significant barriers had separated the lanes on this information superhighway. Television, the Internet, and voice and data communications all traveled along their own routes. But by the end of the millennium, the lanes began to merge. The Internet increasingly became a part of our daily lives. Streaming audio and video clips began to appear on web sites. In media circles, the word on everyone's lips was 'convergence.' We started to think less about television programs and computer programs – and more in terms of content and access to that content.

The ice really cracked with the introduction of the digital video recorder (DVR), which overturned the traditional television-scheduling model. No longer did viewers have to make appointments at specified hours to watch their favorite shows. Armed with a DVR, they became the programmers. And on the heels of the DVR, the entire world of media seemed to have broken open.

Over the past year, we have seen major Internet companies like Google and Yahoo set themselves up as television distributors, taking advantage of the web, the video iPod, and the omnipresent cell phone to deliver traditional television content. Following their lead, the 'old' media networks, as well as PBS, have been moving their content to these new distribution channels, in what amounts to a digital land rush for the new millennium.

Meanwhile, technology is revolutionizing not only viewing and distribution but production as well. Where it used to require dozens of technicians to make a television program, now one person can do it all. With an inexpensive camera, you can capture beautiful digital images and sound – even fabulous high-definition images. With a notebook computer and consumer software, you can edit footage. And when you're done, you can upload your program to the web, where a potentially unlimited number of viewers can watch it. This has led to the explosion of so-called social network sites – such as YouTube – which build communities around shared amateur videos.

But it's not all just for fun and socializing. Commercial news organizations across the country are adopting this technology to bring new immediacy to their programming as well. They are even enlisting citizen correspondents to submit footage – often captured with the video cameras built into cell phones. So the difference between amateur and professional is becoming increasingly

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blurred – yet another wall that the digital revolution is tearing down.

New developments and innovations are emerging on an almost daily basis, and the traditional notion of television is quickly taking its place in media history alongside vinyl LPs and videotapes. It's an exciting time but a problematic, and even dangerous, time as well.

It's clear that the digital revolution is introducing a democratic potential into American media. More programs are available, and more people can participate in the creation and sharing of television. That's positive. But the effects of deregulation, if anything, are stronger than ever before. The toaster has become portable and interactive and downloadable, but it's still a toaster. And corporate America is hungry for toast.

So, even as we experience this democratization of the media, we are also witnessing massive consolidation. Newspapers, television groups, movie studios, and web sites are merging with telephone and wireless companies, Internet service providers, and cable companies. Thus, while the public has access to thousands of channels, the reality is that a few giant companies control the vast majority of information Americans consume. The prime objective of big media continues to be increasing shareholder value, and the public-service obligation of the commercial media is all but nonexistent. Cost cutting at the corporate level has led to staff reductions and closings of local newsrooms. Fewer reporters and editors mean lower-quality news, as does the cutthroat race to air with 'breaking stories' in a society where information travels at the speed of light.

A whole web of related pressures is at work as American media transforms. Indecency and political bias have caused firestorms in the halls of Congress. Internet, cable, and phone companies are locked in pitched battles over who should control the distribution channels. And the commercial model is threatening to collapse in the face of ad-skipping and time-shifting technologies. In short, there are titanic struggles taking place in the media today. Profits versus First Amendment responsibilities. Viewer expectations versus economic realities. Political forces versus technological innovation.

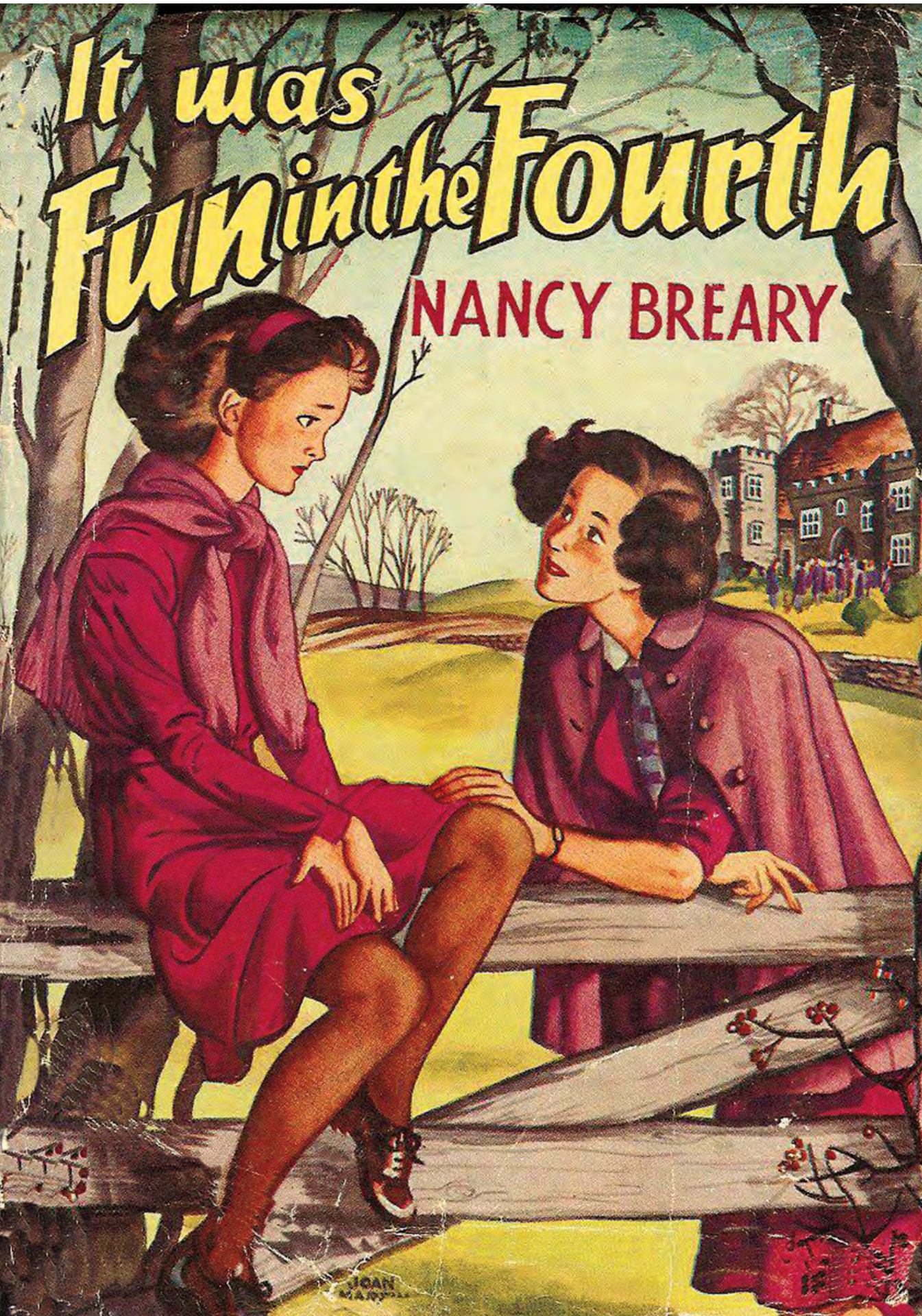
As this chaotic revolution unfolds, we need to exercise caution. Even with all its exciting innovations and democratic promise, American media may be heading in the wrong direction. What began by adding new sounds to the chorus of American media may soon leave us with little more than unmodulated noise. Given the power and impact of television in our lives, it may be time to step back and carefully consider, with an eye on the future, the pros and cons of current developments.

At this critical moment in the history of American television, we should revisit the regulatory framework that governs providers of television programming in all its forms. Clearly, the various regulatory regimes that pertain to broadcast, cable, and telephone services no longer make sense in this era of integrated digital communications. The legal structure needs to be reconsidered and revised to reflect the realities of technology and the marketplace. At the same time, we need to explore the national vision of our media and promote its potential as a positive force in our culture and society. Right now, as we spin in the whirlwind of change, a full review and revamping of the duties of media providers would be a healthy exercise, and would do much to ensure that the digital revolution does not relegate public-service media to the dustbin of media history.

Inside back cover: Cover illustration for the dust jacket of Nancy Breary's book, *It Was Fun in the Fourth,* published by Thomas Nelson & Sons in London in 1948, cover design by Joan Martin May. A prolific author, Breary wrote in a genre notorious since the late nineteenth century for its barely sublimated Sapphic inflections, churning out popular fiction about life in imaginary all-girls boarding schools similar to the Kingsdown School in Dorking, where Breary had boarded as a young girl. See Terry Castle on *The lesbianism of Philip Larkin,* pages 88–102: "In the brutal and bittersweet narratives of lesbian desire Larkin found a doom-laden prediction of what was to become the central and most painful theme of his imaginative and emotional life: no girls for you." Image courtesy of Terry Castle.

It was Fun in the Fourth

NANCY BREARY



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