

# A fantasia of biological feminism

## Woman: An Intimate Geography

by Natalie Angier  
Houghton Mifflin/Little, Brown: 1999.  
480 pp. \$25/ £17.99

## Just Like a Woman: How Gender Science is Redefining What Makes Us Female

by Dianne Hales  
Virago: 416 pp. £16.99

Olivia Judson

Once upon a time, poets and musicians had a monopoly on illuminating the mystery that is woman. Then science started to creep in on the act. As the fervour for eugenics soured into revulsion, however, so too did enthusiasm for biological explanations of differences between peoples. For decades, feminists fought the notion that observed differences between men and women could be explained by biology rather than by inequality of opportunity, education and environment. They were right to do so. Stereotype after stereotype — from marathon running to performing surgery — has been dismantled.

But now biology is back. And this time feminists are interested. Unfortunately, on reading the mess they make of it, it is tempting just to hand everything back to the poets.

You see, vaginal discharge “is the lubricant beneath the illusion of carapace, reminding us that physiologically we are all aquatic organisms”, or at least so says Natalie Angier, a science journalist for *The New York Times*, in *Woman: An Intimate Geography*. She tells us that “the body is a creature of habit, and the longer it has been exposed to the chemistry of bondage, the more prone it becomes to emotional flashbacks”. She reveals that “love can feel aggressive to the point of violence. We commit our most heinous acts of aggression in the name of love. The love of God drives crusades and jihads; the love of tribe drives genocide.” But that’s OK. This terrible love, she explains, is in our nature: “we love, at bottom, because we must, for we are a sexually reproducing species.” Never mind that many sexually reproducing animals never actually meet their partners, or that plants and fungi are not known for passion, sexual liaisons notwithstanding.

Dianne Hales, also a science journalist, espouses equally silly views in *Just Like a Woman: How Gender Science is Redefining What Makes Us Female*. She reveals that “if a man, echoing Descartes, could declare, ‘I think; therefore I am’, women throughout time could have said, ‘we feel; therefore we are’.” She suggests that “so deep is the urge to reach out to others, so great is its importance to the survival of mother and child, that it

may have given rise to our seemingly instinctive need to connect”. Perhaps this is why she has come to the sinister conclusion that “women have always been more open to visitations by otherworldly beings”.

In their separate quests to fathom what makes a woman, each writer enlists grandmothers and mitochondria, eggs and oestrogen, clitorises and climaxes, breasts and blood, wombs and waists, conception and abortion, motherhood and menopause. Both would like to see a girl’s first menstrual period be a public celebration; Angier even advocates “a woman-centred myth of menstruation, a construct of our shared feminine low-giene — something on a par with the male pissing ritual, perhaps.” And naturally, both are fascinated by sex. But while Hales argues that women mostly like to be hugged and that orgasm is secondary, Angier recommends marijuana to cure anorgasmia and revels in the thought that, unlike members of the weaker sex, a sexually athletic woman can have 50 orgasms in an hour.

Hales’s book is stolid and earnest, stuffed with countless interviews and scientific results. She takes on worthy subjects, decry-

ing the inattention women have historically received in medical research, and speculating on why women are so much more likely to be depressed than men. But the book has three grave flaws. In ascending order of gravity: it is full of platitudes; the results are jumbled, with good science thrown after bad; and, finally, it is mired in evolutionary psychobabble of the most incoherent kind. For example, Hales proposes that elephant seals can show how men and women will compete differently in tough office environments. And she tells us — apparently without irony — that “females of other species have confronted many of the hassles today’s women face, including sexual harassment and unwanted pregnancy. It’s not surprising. They’ve been around a lot longer.”

Angier, meanwhile, claims her book is a fantasia, an exuberant, ecstatic hymn to womanhood. Perhaps it is this that explains her more preposterous statements and a prose style that lurches from the purple to the polemical. But a fantasia is still no excuse for lapses of scientific good sense. To wit: “If breasts had something important to say, they would be much less variable and whimsical



## Seat of life

Cleopatra, a woman who left her mark on history, but whose world was submerged by the Mediterranean, is revealed in *Cleopatra's Palace: In Search of a Legend* by Laura Foreman

(Random House, \$35). The book explores Cleopatra's era and how it came about with the aid of art and artefacts, such as this relief showing a woman in a birthing chair.



than they are," a statement that neglects the fact that secondary sexual characteristics are thought to vary a lot precisely because they convey important information to potential mates. Or, on why most people like other mammals better than insects, "we tend to like that which seems most like us, because resemblance implies genetic relatedness, and we like our genes; they have given us us". Forget that morphological similarity can evolve independently, or that few biologists would consider that kin selection — the theory that explains why organisms are more likely to cooperate with relatives than with strangers — can stretch to explain a preference for mammals over insects.

All this is a pity. It detracts from the places where her scientific explanations are good, and worse, it completely undermines the most interesting and important part of her book: her attack on the evolutionary psychology that Hales swallows whole.

Angier complains that evolutionary psychology — the current name for sociobiology as it is applied to people — is increasingly mooted as an explanation for everything from alleged differences in sex drive to why women tend to be paid less than men, despite a lack of convincing evidence for any of the claims. Indeed, even the most robust evidence — that there is a "universal" ideal for female beauty — has recently been dented. Thus, Angier wonders why, if human females develop breasts in adolescence to attract mates and if they have hidden ovulation, supposedly to encourage men to stick around, they have pregnancies that are so much more visible than those of other primates. Fair enough. Or consider the argument that is often made to explain patterns of marriage and divorce: that men prefer young women (because they are fertile) and polygyny (because that supposedly maximizes reproductive success) while women prefer men with more resources (because they make good fathers) and monogamy. Angier proposes an alternative: women are not usually economically independent enough to support a husband and family. If they were, some might well prefer handsome young toy-boys to old and ugly rich guys — nice personalities notwithstanding.

Of course, the real prediction that evolutionary psychology makes about female mating patterns is more subtle in any case. It is that women should prefer to maintain the appearance of monogamy, while practising polyandry. But poets like John Donne knew that four centuries ago:

*Though she were true, when you met her,  
And last, till you write your letter,  
Yet she  
Will be  
False, ere I come, to two, or three.* □

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Chemical synthesis: Nernst's heat theorem was a logical extension of his multifaceted work.

## A chemistry textbook hero

### Walther Nernst and the Transition to Modern Physical Science

by Diana Kormos Barkan  
Cambridge University Press: 1999. 288 pp.  
£45, \$64.95

Charles Tanford and Jacqueline Reynolds

In his 1997 presidential address to the British Society for the History of Science, John Hedley Brooke deplored the inability of historians of science to appeal to a wider audience outside their own disciplinary confines. One explanation he offered is as follows: "In our scholarship we cannot help but become kill-joys. We dismiss legends, dissolve foundation myths, dilute the Eureka moments

and destroy the crucial experiments."

Well, those of us who are mere practising scientists can take heart from Diana Barkan's biography of Walther Nernst. Here is one book on the history of science that does none of these things. Admittedly, there is the obligatory (but in this case muted) criticism of scientists-cum-historians who have presented Nernst's heat theorem as the outcome of an explicit preoccupation with problems in chemical equilibria, rather than as a logical progression from his multifaceted, but related work. But his accomplishments are left intact, and even his legendary reputation as a difficult man is preserved, albeit with little supporting evidence. There is no mention of the famous quip, "you can't bury Nernst too often", ascribed to a colleague who was forced to attend all three successive interments of Nernst's remains.

Barkan characterizes her book as