

A close-up photograph of a woman's face, focusing on her eyes, nose, and mouth. Her eyes are closed, and she has a serene expression. Her lips are coated in a vibrant, glossy red lipstick. The lighting is soft, highlighting the texture of her skin and the sheen of the lipstick.

*The  
story  
of*

*h!*

*The vagina is  
making a comeback.  
Social commentator  
Bettina Arndt  
reports on how  
science is redefining  
the female orgasm.*





BY BETTINA ARNDT

**A**LL THE TELLTALE SIGNS OF orgasm were there. Her heart was racing, blood pressure up, she had rapid breathing, dilated pupils. Yet the woman shouldn't have been able to feel a thing. She was a paraplegic, with a complete spinal cord injury, unable to feel anything below her waist. Here was a woman who'd been told by doctors her sex life was over. And now she was telling the researchers at New Jersey's Rutgers University that she had experienced an orgasm.

They had the proof. While she stimulated herself, using a device to apply rhythmic pressure to the vaginal wall and cervix, her head was firmly clamped inside the opening of a positron-emission tomography (PET) scanner measuring her brain activity. And there it was: a bright red spot glowing in the area representing the medulla oblongata of the brainstem, a sure sign, according to psychobiology professor Barry Komisaruk, that she was right.

For the past few years, Komisaruk has been working with his Rutgers colleague Profes-

sor Emerita Beverly Whipple, tracking brain activity during sexual stimulation. Whipple is well known as one of the researchers who hit the news in the early 1970s with research on the G spot, a sensitive area felt through the front wall of the vagina.

## “IT'S ALL ADDING UP TO A VERY RICH PICTURE OF FEMALE SEXUAL PLEASURE”

Just as the G spot discoveries developed from conversations with women who reported vaginal sensitivity, Whipple was inspired by talking with spinal-injured women to test out their reported orgasms. The resulting research, published two years ago in the *Journal of Sex and Marital Therapy*, has led to some major discoveries including a new nerve pathway providing the sensory stimulus for orgasm. While most genital nerves connect to the brain via the spinal cord, stimulation of areas deep in the vagina, including the cervix, connect

with the brain by a different pathway – namely the vagus nerve which winds from the brain through to the genitals, bypassing the spinal cord. It's this different connection that seems to allow many spinally injured women to enjoy sexual pleasure.

This is just one of the discoveries bringing into question the view of female sexual pleasure that has dominated for the past 50 years – that the clitoris is king (or should we say queen). That all orgasm results from the clitoris being stimulated, either directly or indirectly. That the clitoral connection is the route of all female pleasure and the vagina a sexual dead end.

Of course, there have always been women whose vaginas proved this wrong. Women who responded to a good old-fashioned bonk. But in recent decades they have been silenced by the clitoral clamour, told they represent a minority who manage miraculously, in a new twist on the princess and the pea, to get off on the tiny crumbs of indirect stimulation of the clitoral glans that result when the vagina is enjoying a workout.

Now the ground is shifting. The cracks started when Whipple's G spot discoveries led women to explore not only the front wall of the vagina but other areas of sensitivity. The result has been a veritable alphabet soup of erotic zones, with sex advice columns now discussing the U spot (the urethral opening) and X spot (the cervix) among the new anatomical delights.

Then came Melbourne urologist Helen O'Connell's influential work dissecting clitoral anatomy which showed the clitoris was not just a tiny button near the vaginal opening but a large, expanding, highly sensitive structure with legs which extend up to 13cm and curve around the vagina. Spongy erectile tissue, similar to that in the glans, is found right through the clitoral system, including the “female prostate” suggested by Whipple and others to be the G spot, containing the glands believed responsible for female ejaculation.

British scientist Catherine Blackledge, in her new book *The Story of V* (Weidenfeld and Nicholson, 2003), describes new research showing all these structures to be



**G WHIZ** Sexual researcher Beverly Whipple's G spot discovery led to a plethora of erogenous zones

richly innervated and capable of detecting vibration, touch and pressure changes, particularly deep pressure. So that touching the delicate skin of the clitoral glans produces one type of sensation but deep pressure receptors in the walls of the vagina produce quite another.

Amazingly, we have learnt more about what's actually happening here from couples brave enough to have sex inside MRI machines. Five years ago, when this work started, Dutch scientists had to use very slim couples because the MRI tunnels were a tight squeeze. But more recently, they switched to machines with open magnets allowing far more space and more vigorous action. Dutch and French researchers have produced magnetic imaging showing the fit of the genitals during all this activity and have come up with a few surprises. In the classic missionary position, the penis turns out to be bent like a boomerang bringing it nicely into contact with the front wall of the vagina – real G spot territory. And there's evidence the clitoris is being stimulated both inside and out, through the vaginal wall plus pressure on the clitoris from the man's pubic bone.

It's all adding up to a very rich picture of female sexual pleasure. Sure, direct clitoral glans stimulation remains critical, providing the surest route to orgasm for most women. But as we learn more about the complexities of female anatomy and arousal, the vagina is set for a comeback.

**T**hat's news that some won't welcome. The politics of female orgasm run hot, very hot indeed. The controversy dates back some 70 years to Freud, who was convinced that women achieve sexual maturity by switching focus from the clitoris to the vagina. He argued “frigid” women fail to make the “transfer of sensitivity” from the clitoral stimulation they experience in masturbation to responding to the vagina – mainly because they are paying too much attention to their clitorises. The role of the

WEB CHAT

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# Boys, boys, boys

Men, too, can enjoy the delights of the multiple orgasm – but it is all about learning how to control the physical imperative.

At a recent international conference, appreciative chuckles greeted a urologist's presentation of a large box he'd labelled "Male and Female Control Panel". On the men's half was a simple up-down switch. But the women's side was a maze of mysterious knobs, wires and dials, in all sorts of colours and sizes.

A good joke, but far from the truth. In case men reading this feel left out of all the excitement, male orgasms are proving more complex than many once believed. As Catherine Blackledge explains in her book *The Story of V*, research has revealed that a variety of different nerves provide the stimulus for male orgasm. The pudendal nerve innervates

Orgasm is a perception, a peaking of pleasure – something that occurs between the ears. Orgasm is accompanied by five to 15 involuntary contractions of the muscles of the urethra and the pelvic floor which can result in ejaculation of semen. Ejaculation is just a reflex, a motor pattern which can occur independently of the brain.

(Drug side-effects provide another clear illustration of this separation. Many men taking anti-depressants such as Prozac find that the drug inhibits orgasm, but not ejaculation, in up to one in five users. Some men with Parkinson's disease and multiple sclerosis find the opposite is true: they experience orgasm without ejaculation.)

There is also a small group of men who experience multiple ejaculatory orgasms – that is they are multiorgasmic and ejaculate with every orgasm. Dr Rosie King, *Woman's Day* advice columnist and sex therapist says: "The reason most men aren't multiorgasmic is due to the refractory or recovery period after orgasm when the penis cannot respond to sexual stimulation. In young men the refractory period is short but it lengthens as men age. Yet some men are blessed with the ability

to skip the refractory period altogether."

King says the refractory period appears to be determined by the release at the time of orgasm of the hormone prolactin and other sexually inhibiting chemicals in the brain. A German study compared the blood levels of prolactin after orgasm in men with normal refractory periods with one fortunate subject who was multiorgasmic. In the last lucky lad, no rise in prolactin was detected after three orgasms in a row.

Blackledge reports research suggesting these multiorgasmic men fall into three groups: some have always enjoyed multiple ejaculatory orgasms, others have taught themselves how to and for others it happened by chance. In one laboratory study, a 35-year-old man enjoyed six orgasms with six ejaculations, with a period of 36 minutes between his first and last orgasm.

But man has a long way to go before he can match the performance of the male macaque monkey which can ejaculate 45 times in three hours without even getting short of breath.

## SEX THEORY A HISTORY



**Sigmund Freud**  
(1856-1939)

The so-called "father of psychoanalysis" published *Three Essays on the Theory of Sexuality*

in 1905, introducing oral fixation, penis envy, castration anxiety and the Oedipus complex into the public vocabulary. His sessions with overwrought bourgeois Viennese women led to his theory that secret sexual desires lay at the bottom of all hysterical neuroses.

clitoris should be to set alight the vagina, he said, like "pine shavings can be kindled to set a log of harder wood on fire".

His views were taken seriously, particularly by his disciples. Freud's writings mention that Maria Bonaparte, leader of the psychoanalytic movement in France, twice had surgery to reposition her clitoral glans in an unsuccessful attempt to get the log burning.

But Freud's views were anathema to Alfred Kinsey, the famous American sexologist who bristled at the moralistic ideas about masturbation that underpinned Freud's rejection of clitoral stimulation. Kinsey's 1953 study of female sexual behaviour concluded the clitoris was the sole "locus" of female sexual sensation and that most women received only "psychological satisfaction" from intercourse.

And how did Kinsey reach these conclusions? Well, that was the problem. He conducted his experiments comparing the sensitivity of the clitoris and vagina using a Q-tip! It's hardly surprising fireworks can result from cotton buds tickling the sensitive clitoral glans but the vagina is a very different beast. All the latest research is suggesting that here the turn-on is vibration and pressure, often quite deep pressure, which can be triggered by the rhythmic rock and roll of coupling.

But Kinsey's view was promoted by Masters and Johnson – "All orgasm involves direct or indirect stimulation of the clitoris," pronounced William Masters in 1966 – and the clitoral agenda was taken up with a vengeance by feminists in the late 1960s who declared women had been defined sexually in terms of what pleases men. *I Accuse!* was the name of a bestselling 1968 Danish book that claimed most women were faking orgasm in intercourse to keep men onside and in their beds.

And so it was that Shere Hite, following her 1976 survey of more than 3000 American women, declared clitoral orgasm as the "real orgasm" and suggested many of the 30% of women who claimed to regularly climax during intercourse had to be deluding themselves. "The pattern of sexual relations predominant in our culture exploits and oppresses women," she wrote, claiming

**RED-BLOODED** The male sexual organ is a vastly complex system of blood vessels and nerves

penile and scrotal skin, the hypogastric nerve transmits sensory stimuli from the testicles and anus, and the pelvic nerve is thought to connect the brain to the prostate.

"So quick masturbation can give a particular level of orgasm but lengthy erotic sex can give them a completely different kind of climax, a more whole body orgasm," says Blackledge. "If you go slowly and stimulate different parts of the body – testicles, anus, penis – all of the different nerves start firing off together and you get this more intense sensation."

And it can happen more than once. Although women are far more commonly multiorgasmic, research shows men can also experience multiple orgasms by learning how to exercise and strengthen the muscles of the pelvic floor. A strong contraction of the muscles at the point of climax enables men to enjoy orgasm and prevent ejaculation. Although the two are usually seen as part of a package, ejaculation and orgasm are two separate physiological mechanisms.





it was a myth that penile thrusting in the vagina could cause orgasm.

By the end of the century, for some feminists intercourse had come to symbolise male brutality. Anti-porn crusader Andrea Dworkin – “I am a feminist, not the fun kind” – really put her boot in. Her book *Intercourse* (1997) describes the sex act as “a means of physiologically making a woman inferior; communicating to her cell by cell her own inferior status, impressing it on her, burning it into her by shoving it into her, over and over, pushing and thrusting until she gives up and gives in.” Whew! Certainly not the fun kind.

With intercourse taking a public pounding, vaginas declared dead in the water, the clitoris was firmly established as the gold standard of female sexual pleasure. Now, 30 years after Hite’s survey was published, many remain in the grip of this clitoromania. “There are certain political subgroups that seem to have an anti-intercourse agenda – they are desperate to portray female sexuality as wholly clitorocentric,” says Stuart Brody, an American psychology professor working in Germany. By choosing to conduct research on orgasm in intercourse, Brody rushes in where angels fear to tread: “I’m seen as a bit of a troublemaker.”

Brody, with colleagues Ellen Laan and Rik Van Lunsen of the University of Amsterdam, last year published research that sheds new light on one of the hot puzzles in current sex research. Remember earlier this year when Pfizer announced it was giving up on the search for pink Viagra? The reason was that while its research showed Viagra did increase pelvic blood flow – one of the physiological signs of arousal – many women didn’t even notice. “There’s a disconnect in many women between genital changes and mental changes,” said Dr Mitra Boolel, the leader of the company’s sex research team.

Well, Brody and colleagues wondered whether women who climax regularly in intercourse are more likely to make this connection since pelvic blood flow is usually measured in the vagina. Interestingly, using post-menopausal women as volunteers, these European researchers had no trouble finding a large group who said they climaxed during intercourse (38% claimed this happened every time, and another third most

**THERE’S THE RUB**  
An MRI scan of a couple during intercourse shows the penis bent like a boomerang in close contact with the vaginal wall



“THERE ARE STILL PLENTY OF WOMEN KEEN TO AWAKEN THEIR VAGINAS”

or half the time). Accurate information on orgasm patterns in the normal population is sorely lacking: there has not been any well-researched large-scale surveys since the Hite Report, although Kinsey’s data showed more than half of his subjects reached orgasm in intercourse over 90% of the time.

In the experiment, the women had their vaginal blood flow measured while being shown erotic videotapes. The scientists found women who reported they didn’t climax in intercourse were less likely than the coitally orgasmic women to show a correlation between vaginal blood flow and their subjective perception of arousal.

“For a woman to have an orgasm from intercourse, she has to be aware of and sensitive to erotic stimulation of her vagina ... unfortunately many women are not,” says Brody. He speculates there may be a range of reasons why some women have this awareness and others not, including: physical sensitivity; different nerve pathways to the brain from the vagina and clitoris; having a skilled lover; issues of anatomical fit including size and shape of the penis; attention to sensations and appreciation of having a vagina and “not being indoctrinated by anti-intercourse propaganda”.

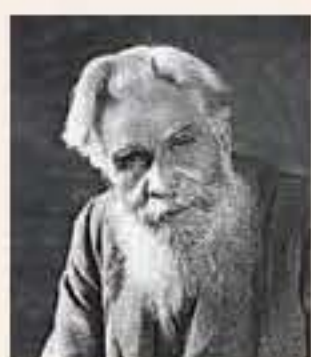
But the truth is no one knows. At this stage in sexology research, it is unclear how many women readily climax during intercourse through thrusting alone, how many can do this if they are first highly aroused through direct clitoral stimulation, or by adding that direct stimulation as part of the act? And

how many learn to enjoy these pleasures when they find the right lover or, dare we say it, mature sexually, as Freud suggested? The mysteries remain unanswered.

One thing is sure, there are plenty of women keen to awaken their vaginas. After decades of the big clitoral push, the message hasn’t sunk in. Women still want to climax in what they see as the “natural” way. “I hear that from women all the time,” says Dr Rosie King, *Woman’s Day* advice columnist and one of Australia’s best-known sex therapists. “They, and their partners, cling to the idea that the only real orgasm happens during intercourse.” A recent edition of American *Cosmopolitan* magazine reported its most frequently asked advice question was “How do I come during intercourse?”

“I get a couple of calls each night,” says Gabrielle Morrissey, a Perth sex therapist with a nightly weekday radio sex advice program on 96FM. “Young women ring up and tell me they want an ‘internal’ orgasm. They are talking about coming during intercourse, no hands.” No-hands intercourse is sex therapist talk for no-frills bonking, to distinguish it from sex where a finger on the clitoris adds something extra. Morrissey works hard to convince her listeners that there’s nothing wrong with that little something extra and women shouldn’t beat themselves up wanting it to happen through the old in-and-out.

Of course she’s right. Vaginal orgasm



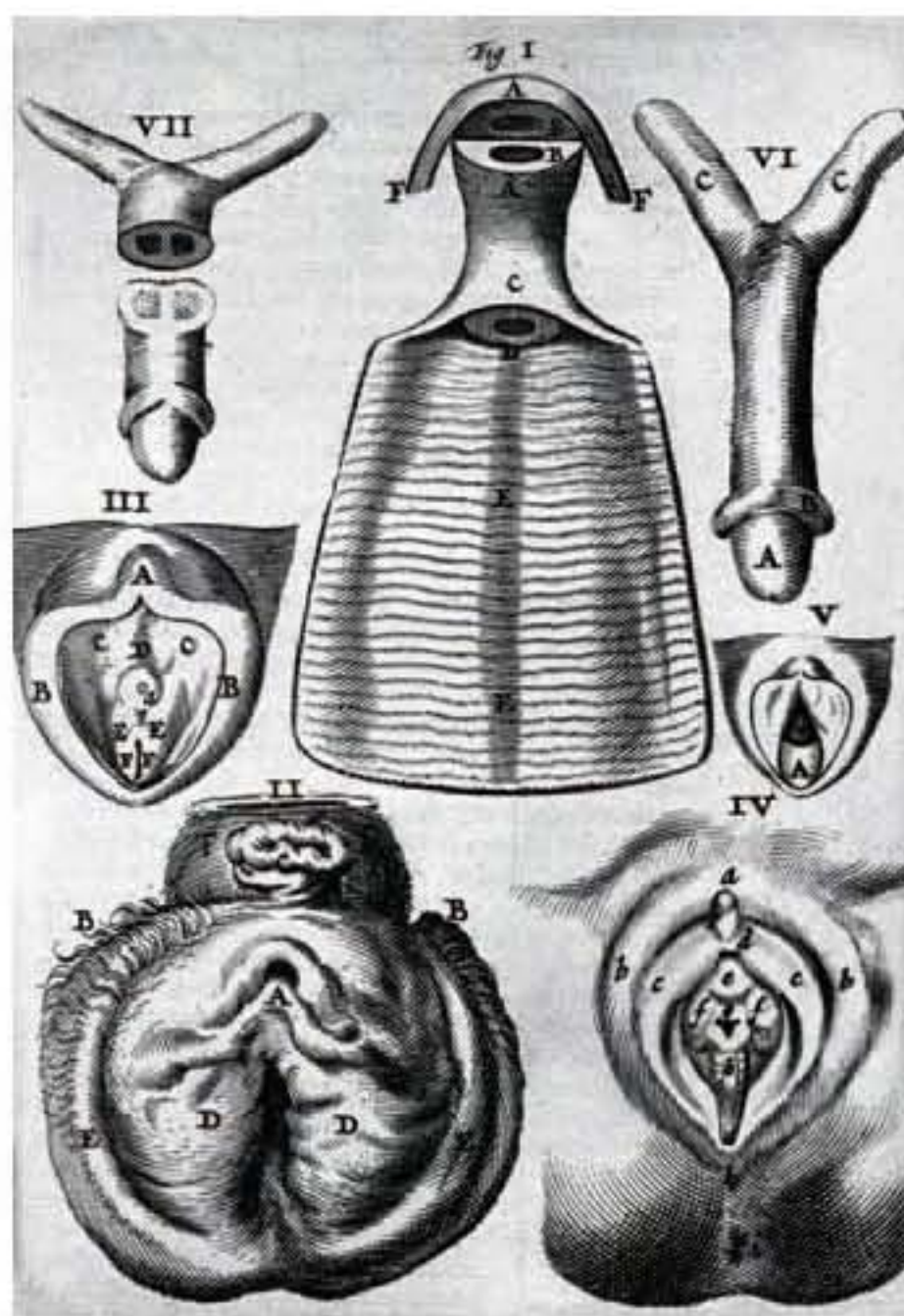
**Havelock Ellis**  
(1859-1939)

Scandalised late-Victorian England for suggesting that sexual expression was a normal, healthy human function. His *Studies in the Psychology of Sex*, published in seven volumes from 1897 to 1928 and branded “filthy” by the courts, was not available for public purchase until 1935.



isn't the holy grail. That's where Freud went wrong. It certainly isn't helpful to label "frigid" women who get their kicks through direct clitoral attention. Whipple, who's done more to promote the hidden delights of the vagina than anyone in recent history, makes this very clear. "It's not about setting up new goals," she says, speaking from her New Jersey home before rushing off to her next international sex conference. "It's not about saying this is the way you should or should not respond but just listening to women, finding out what is pleasurable and what brings them satisfaction."

But could it be that women are missing out on some sources of satisfaction because of all the attention being paid to direct clitoral stimulation? Perhaps, says Sandra Pertot, a Newcastle sex therapist who's been helping women with these problems for more than 30 years. "There are definitely some women who experience orgasm with intercourse from the time they start having sex with a



**SEXUAL RENAISSANCE** A 17th-century anatomical engraving by Thomas Bartholin

receive during intercourse. "It's about learning to make that particular brain-genital connection."

But helping women explore these possibilities also runs the risk of setting them up for failure if it doesn't happen. Often the pressure comes from their lovers, says Dr Vivienne Cass, a Perth sex therapist and author of a new book, *The Elusive Orgasm: a woman's guide to why she can't and how she can orgasm* (Brightfire, 2004). Cass mentions a couple who recently came to her complaining the wife was unable to climax during intercourse. "I feel I have failed as a man," said the husband.

Cass' book, which contains splendidly graphic illustrations showing the female genitals and clitoral structures in all their newly revealed glory, gives detailed advice on all the techniques that can help. These generally depend on getting the woman to fever pitch before the penis gets in the act, adding clitoral finger action and carefully exploring positions and motion that keep up the heat. What's critical is to avoid making the exercise too goal-oriented because that pressure then becomes a turn-off. It usually works, says Cass, but only if the woman seeks to explore these options as "just part of the pleasure, rather than the only true way to orgasm".

## “YOU NEED SLOW GRINDING, SQUEEZING AND THE WOMAN TO USE HER MUSCLES”

CATHERINE BLACKLEDGE ON HOW TO ACHIEVE VAGINAL ORGASM

partner. However, a lot of women report that they started off needing clitoral stimulation but as time goes on, sometimes after many years, they find vaginal orgasm kicks in." (She explains she's talking about orgasm through thrusting, no hands, which of course isn't really a "vaginal" orgasm since the erectile tissue of the clitoris is stimulated by pressure on the wall of the vagina and presumably provides essential triggers for the orgasmic response. Plus the clitoris may need a lot of attention in foreplay for this to happen.)

Pertot's feeling is women have a 50-50

chance of this happening: "I think Hite's figures are on the low side but I have no clear idea why some women can do it and some can't." Pertot suspects that the shift doesn't take place if the woman seeks the same intense sensations she receives from direct clitoral stimulation. "Women who are orgasmic through direct clitoral stimulation are often looking for exactly that sensation vaginally. You have to say, forget about that and think about what you are actually feeling."

Pertot says she has to teach women to tune into the more subtle stimulation they

**W**hat's needed now is a change in the culture, suggests Blackledge, who has a PhD in chemistry, and worked for years as a science writer before writing her book on the vagina, *The Story of V*. Blackledge, 35, spent four years researching the cross-cultural history of the vagina and all the new research

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on its physiology and sexual function. Her book makes a strong case that there's much we still don't know about this marvellous organ and women need to be encouraged to explore all it has to offer.

"Our culture has kept the vagina from us," says Blackledge. "I get so angry when I keep reading in articles that the vagina is insensitive, because the research clearly shows it is anything but that." She believes the problem is also exacerbated by the way intercourse is portrayed in movies, particularly porn movies - "all that quick thrusting. Quick thrusting can be great but you need a balance. To experience vaginal orgasm, you need to slow down so you can think and feel deep into these vaginal sensations. You need slow grinding, squeezing, and for the woman to use her vaginal muscles".

For a scientist, Blackledge is refreshingly willing to get personal. On the telephone from her office in London where she is at work on her next book, she cheerfully discusses the first time she reached vaginal orgasm - with her fourth lover, a man with whom she felt safe and extremely comfortable - and



### Alfred Kinsey

(1894-1956)

In 1940, opened at Indiana University the Institute for Sex Research (later the

Kinsey Institute) where he recruited and trained a team to conduct thousands of interviews on every manifestation of sexual behaviour, publishing the data in two massive volumes: *Sexual Behaviour in the Human Male* (1948) and *Sexual Behaviour in the Human Female* (1953). The landmark statistics are still quoted.

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the differences in her response to vaginal and direct clitoral stimulation. She's convinced from discussions with women she's had during and since writing the book, that many more than a third of women climax in intercourse. "My gut tells me that figure's completely wrong."

Here's a woman convinced that the vagina has been greatly undersold - a situation she's doing her best to change. Its miracles are still emerging, as her book makes clear. How about the notion that the vagina has ESP? Yes, it sounds mighty strange but this intriguing idea has a sound scientific basis which emerged from the Whipple-Komisaruk research with spinal-injured women. The researchers discovered that among the women with severed spinal cords showing all the physiological signs of orgasm were some who reported they could feel the vagina and cervix being stimulated, while others felt nothing at all. Orgasm in this latter group raises the possibility, according to Whipple-Komisaruk, that the vagina may be capable of experiencing the phenomenon known as "blindsight" - named after people with lesions in the visual cortex who respond appropriately to visual stimulation even though they cannot see. "Somehow the vagus nerve is receiving sensations even though the women can't feel anything," says Blackledge suggesting this response points to the critical evolutionary role of pleasure and orgasm experienced through the vagus nerve.

And then there's the fact that vaginal stimulation and orgasm causes the vagina to feel less pain. Whipple and Komisaruk found that pleasurable stimulation of the vagina and cervix can increase women's pain threshold by 75%, with orgasm pushing that up to over 100%. The researchers suggest this analgesic effect has a role in relieving pain during childbirth. Interestingly, eat-



### William Masters and Virginia Johnson

(1915-2001) and (1925-)

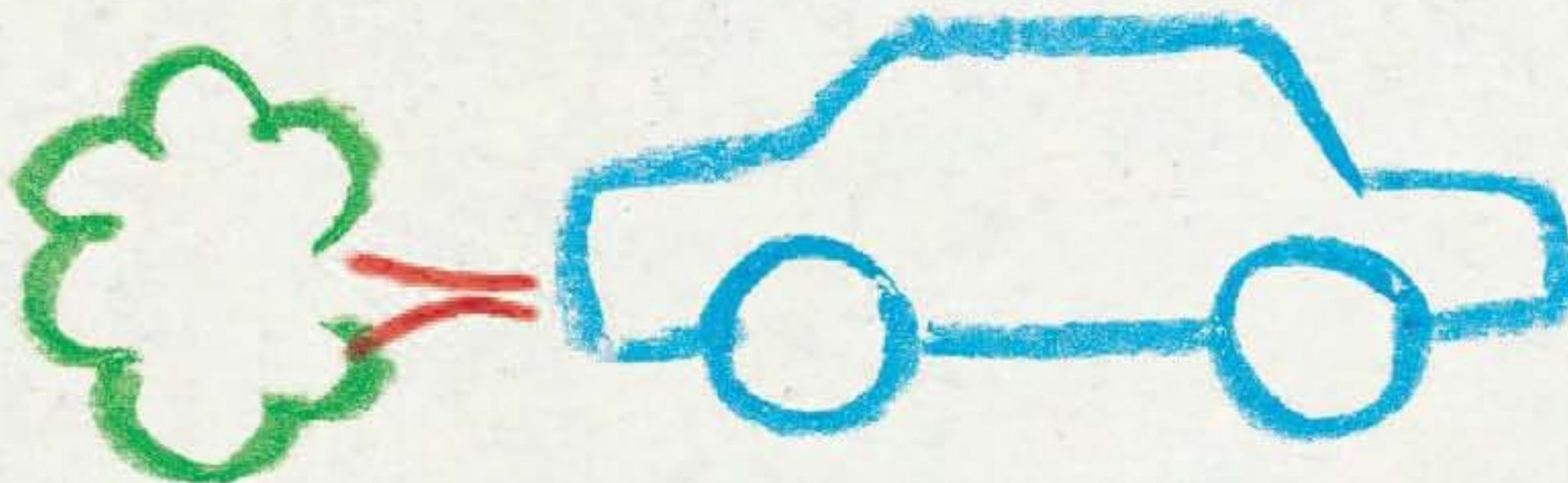
Masters, a physician, and Johnson, who had studied psychology, published the seminal

*Human Sexual Response* in 1966, summarising their innovative research into the physiology of sex. From observations of tests done with electrocardiographs and other high-tech equipment, they postulated the famous sequence of "phases" of sexual response: excitement, plateau, orgasm and resolution.

ing hot food seems to interfere with this process. Whipple has conducted research with women in Mexico which found those whose diet was high in chilli peppers don't show the pain-blocking response to vaginal stimulation present in the non-chilli eaters. Whipple mentions women in India are warned not to eat spicy food for three months before they deliver.

The analgesic effect might also be designed to allow the vagina to enjoy prolonged love-making, suggests Blackledge. "You don't want the vagina to be incredibly irritated by sexual stimulation," she says, proposing that we are provided with this natural painkiller to allow for such vigorous workouts.

No less than a vaginal revolution is brewing, says Blackledge who waxes lyrical at exciting research revealing the complexities of the vagina's role in sexual pleasure and its powerful influence on the process of reproduction. While the scientific mysteries of the vagina are slowly being revealed, the challenge is now to encourage women to sample its delights. ●



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