

# Why lady Guns will never be quite like the men

By Professor P O Behan

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# Why lady Guns will never be quite like the men

It is all in the mind, says Professor P O Behan, a senior neurologist whose study on the nature of male and female shooters breaks new ground. How the rules of gun-fitting are not the same for both: and why a lady may shoot better with one eye closed



**T**HERE is a distinct difference between men and women in the way they use their eyes when shooting. Such differences are unlikely to be explained by socialisation or nurture, but are part of a general phenomenon whereby certain abilities are performed with greater skill by one gender than the other. This observation came about in the following manner, as told to me by Mr Fred Buller, formerly managing director of the Buckinghamshire gunmakers, Frederick Beesley.

Some 40 years ago Jack Kidwill, a man of independent means and a noted game shot (he and Percy Stanbury were the best Fred Buller ever saw perform), was a customer of Frederick Beesley Gunmakers. Although little could be taught him about shooting, the details of gun fitting were discussed with Kidwill, who at the time was more interested

in coaching his petite wife Marjory—who had taken up clay shooting in her 40s—than he was in his own performances, and indeed this paid off handsomely when she became Britain's lady clay shooting champion and later European lady champion.

Kidwill lived for shooting, and eventually took up a full-time job as a shooting coach and gun-fitter at the West London Shooting Grounds at Greenford. In due course his outstanding ability was recognised, and he became Purdey's chief gun-fitter, which he remained for the rest of his years.

Although he fitted all comers, Kidwill had a special interest in fitting lady shooters, and he had become aware of different factors to be considered for them. His discovery was that the 'rules' of gun fitting, so far as a person's ability to shoot with two eyes open is concerned, did not work for many lady shoot-

sight of his client, even though experience has taught him that most shooters are right-handed with a right 'master eye'.

This 'master eye' concept is best understood if one takes a simple test. Point at an object with both eyes open. If the image moves when you close your right eye, but stays still when you close the left eye, then you have a right 'master eye'. If, on the other hand, the image does not move when you close the right eye, but moves when you close the left eye, you have a left 'master eye'. Most right-handed male shooters have a right 'master eye' which allows them to shoot with both eyes open. This gives them a wider field of vision and a greater facility to judge range than they would have with just one eye open. Likewise, most left-handed male shooters have a left 'master eye', which gives the same facilities as above.

There are, however, complications in gun fitting: for example, a right- or a left-handed person, when tested, may have cyclopic or central vision, that is to say he has eyes with equal pulling strength, necessitating a stock shaped as if to serve a functional eye in the middle of the forehead. Readers will notice that the above description relates to male shooters, and they are not necessarily applicable to lady shooters.

As a working gun-fitter, Fred Buller has been able to corroborate Kidwill's findings over decades—but this curious anomaly merits an explanation. Little study other than anecdotal observation has been made of male and female shooters. In this regard, however, some observations on the differences between certain abilities of men and women may be pertinent. Some of the answer to this apparent riddle is as follows.

Essentially, what has been found is that some women actually shoot better with one eye closed, as opposed to men who may shoot better with both eyes open. This is yet another difference between the functional ability for certain talents in men as opposed to women. It has long been recognised that, as well as the expected gender differences, there are many biological differences between men and women as, some years ago, the late Professor Norman Geschwind of Harvard, and I myself have noted independently. In our neurological clinics there seemed to be an association between left-handedness and certain biological characteristics, with obvious gender differences. For example, autism, dyslexia, stuttering or allergic disorders such as severe hay fever or asthma were not only increased in left-handed individuals, but showed a striking preponderance of affected males.

When we consider the development of the brain, it is known that, usually by six to seven weeks after conception, the brain begins to take on a male or female form. In the main, the sex genes determine whether the brain will be male or female, but they themselves do not solely guarantee the gender of the child, which depends on the interaction of

## Debate started 40 years ago with Jack Kidwill and his wife, Marjory

ers, although no statistical records were kept. In other words, it was often the case that a right-handed woman with a right 'master eye' still had to close her left eye rather than shoot with the advantage of having both eyes open, as most men in a similar position can do.

The word 'shooting' here implies shooting with a shotgun (with all other kinds the word is qualified, eg rifle shooting). In shooting it has long been recognised that the gun must fit the owner if he is to exploit his talent fully. A properly fitted gun is one that allows the owner, caught on the wrong foot while walking through a field of roots, just as a pheasant rises, to take the next natural step as he mounts his gun. This is in contrast to having to make an accommodation for an ill-fitting gun—one that lacks the appropriate amount of cast, for instance—by placing the foot obliquely, thereby jeopardising balance in order to be on target.

It is obvious that variations in human physique must be taken into account by the gun-fitter. The most obvious adaptations are, first, differences in stock length to accommodate variations in arm length; secondly, differences in bend in the stock to accommodate variations in neck length and shoulder scope; and thirdly, differences in the amount of cast (cast-off for right-handers, cast-on for left-handers) in the stock to accommodate variations of shoulder width. Before the gun-fitter can get to grips with the above, however, he must test the



Elegance and expertise. Ladies' day at Mr William Tyrwhitt-Drake's Bereleigh Estate in Hampshire. The Gun has a good style; as she mounts the gun to her right shoulder, she leans in, weight on the left foot.



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hormones with the brain. In other words, whatever the genetic makeup of the embryo, the foetus will develop as a male only if testosterone is present. At six weeks after conception (and at adolescence) there will be enormous surges of testosterone. If testosterone is absent, the brain develops along female lines. If the brain is that of the female pattern, little change will take place, but if it is a male brain then certain anatomical changes will begin to develop. Testosterone alters the way in which the brain is finally constructed.

We now come to the concept of cerebral dominance—the superior capacity of each hemisphere of the brain to acquire particular skills. Dominance differs between men and women: for example, most men who are right-handed have dominance for speech, language and motor function in the left hemisphere, while the right hemisphere controls visual and spatial ability and deals with abstract forms, shapes and patterns. When right-sided brain damage occurs in men and women, it is striking that men are severely incapacitated for spatial IQ tests, while women with the lesion in the same part of the brain are hardly affected.

Men with a left-sided stroke, or damage to the left hemisphere, lose a great deal more of their language ability than women with damage to the same anatomical site.

This indicates that, in women, language and spatial skills are more diffusely distributed through the brain, whereas in males they are more focally located. Men's brains are said to be more specialised. In men, the left side of the brain deals almost exclusively with verbal function and the right side, in visual function. Women use both hemispheres for all functions. In neuropsychological tests using three-dimensional shapes, boys perform better when the data is exclusively presented to the left eye (which feeds directly into the right hemisphere) while for girls, either eye can assess the problem equally. It is a common observation that women have the ability to take in a great deal at a single glance.

Eye dominance, however, is by no means an all-or-nothing affair, and is less easily measured than hand dominance for skilled movements. There are now standardised tests for assessing eye dominance but these have not yet been used to discover the shooting abilities of men and women.

Shooting ability is clearly influenced by eye dominance. The fact is that individuals who are right-handed, but with left eye dominance, or left-handed with right eye dominance will not learn marksmanship skills as readily as individuals who have matched eye and hand dominance. Formal studies have indeed shown that right-handers with right

eye dominance are better marksmen than are right-handers with left eye dominance.

Examples of this are seen in other sports—for example in cricket, where batsmen with matched eye-hand dominance are more successful than others. The pattern, therefore, of eye-hand dominance seems to be related to athletic proficiency in general. Further, there is evidence in men that some may be very good at shooting static targets but poor at dealing with moving ones. This knowledge comes from fighter pilot training during the war. Many pilots (perfectly capable as fliers) turned out to be poor at shooting enemy aircraft. It became normal to identify and transfer such pilots from Spitfires and Hurricanes to Typhoons and Tempests, which were developed for attacking ground targets. Shooting at static targets against a rich background, such pilots shot well. Were they mostly weakly lateralised left-handers with mixed dominance, one wonders?

There are well-recognised differences between men and women for certain tasks and abilities. Neuropsychologists have shown that there is a definite superiority of females in carrying out simple tasks such as the speed of colour naming, and tests which call for rapid perception of details and frequent shifts of attention. Studies of students at high school show that females have a clerical

## To the men, a challenge: let my ladies take you on

True, the female of the species is different, says Rod Brammer, leading shooting coach. But if she is well trained, she can be without equal. One thing in her favour: she does not have the male ego

FEISTY, fabulous flyers. Singly: easy and biddable. In numbers: unmanageable and inclined to riot. That about describes the young ladies at our shooting school who came to be known as Brammer's Bitch Pack—the name they applied to themselves.

Sometimes we go for weeks without starting a new lady shooter in the school, then, for whatever reason, they come in coveys. The Bitch Pack arrived singly, then coveyed up. 'Your amazing collection of redheads,' my wife called them, with just a touch of ice in her voice.

There is no reason at all why lady shooters cannot shoot up to, and above, the skill of the men if the approach to coaching them is correct. To those chaps reading this and scoffing at the idea, give me a call. I will match you against one of my lady Guns, and she will destroy you. Anthony Norton took up the challenge, and he is an extraordinarily good shot. He took his drubbing with gentlemanly grace, and paid over his money to the chosen charity.

A lady who is new to shooting needs, above all else, reassurance. Reassurance that she is not going to be kicked to hell and back; that shooting is something which she can comfortably achieve, and will be immensely satisfying. I do not think it is the recoil that initially bothers ladies, it is more the sudden back-blast from the muzzle. Back-blast is something you do not notice after a short time, but just think back to your own first shots.

When we take on a new lady pupil we make certain to have at least two hours for her first lesson. This begins by cutting up one of the cartridges into its component parts, and explaining how it works. We then choose one of our own guns, which we judge will fit her best, and let her feel the weight. Initially she may be con-

cerned about this, because we always give ladies the heaviest gun we judge they can manage. This is to take away the recoil. A heavy gun with light shot load gives less recoil.

The next step is to test for ocular dominance; the master eye. Most right-handed ladies have ocular dominance in their left eye. We moved our shooting school from Hampshire to Devon 17 years ago. In that time we have found not 20 ladies, out of hundreds taught, who did not have ocular dominance in the eye opposite to the shoulder from which they shot. For my ease, let me talk about right-handed ladies; the opposite of what I say applies to left-handed ladies.

Taking a right-shouldered lady and finding almost inevitably that she is left-eyed, the one thing one never, ever should do is to try and make her shoot from her left shoulder. This is often advocated by people who should know better, and is arrant nonsense. Such advice from a shooting coach would make me wary of his ability. At best I would think him too lazy to do his job properly. Having a master eye problem is nothing much to deal with; there are many ways to obviate it. Having a left master eye does not mean the left eye is necessarily stronger in optician's terms; it means that part of the brain that controls the left eye wants the eye to do more work.

As to the actual gun on which we start a lady, it would be an over-and-under 20-bore or 28-bore with a light shot load. It is possible to graduate up some of the more statuesque of their number to 12-bore, but it must be done gently; never overface them.

When those ladies who are able to do so move up to a 12, we get them shooting initially with a sub-sonic load. This has an enormous added benefit, in that to hit targets with a sub-sonic load you have to

superiority and young girls have a greater ability than young boys in tasks using fine manual dexterity. Most people accept with a chuckle that females are superior to males from childhood onwards in verbal functions, as they are in reading.

On the other hand, males usually perform better than females due to their superiority in special spatial skills, particularly after puberty. By spatial ability is meant the capacity to see and picture objects regarding their size, shape, relative position and relationship to each other. It seems to be re-

## Fighter pilots and officer cadets are also brought into the equation

be well on forward of the target. When, gradually, you introduce them to, say, a 24-gram standard velocity load, they initially miss quite a few just ahead, which is never a bad thing. Anybody can miss behind, and Guns frequently do, but it requires perfect muzzle awareness to miss deliberately two consecutive targets a yard ahead. Try it yourself, and learn the trick.

Once the lady is shooting and hitting more than half of her targets, the problem of recoil and back-blast are not even noticed, but still we take the ladies gently. Twenty shots, then let them have a short mental rest; there is much to take in during the first lesson.

Ladies progress very quickly in most cases, principally because they listen better and are more inclined to take direction. Men—and I include myself in this assertion—arrive from the womb thinking they are natural Formula One drivers, wonderful lovers and great shots. This wholly illusory mind-set does not improve with age.

At around the fourth lesson there is divergence between the ladies who wish to become competitive clay shooters, and those whose shooting is directed at game. In this article I want to talk about the lady game shooters. By lesson four the ladies are generally shooting in fine style. At about this time we introduce them to our 'pheasanty thing' (it has to have a name). We position the lady as number four Gun in a line of an imaginary eight Guns, and throw targets to the whole line. The lady must decide which targets are hers: which she should shoot at, and which she should leave. The first two simulated drives are under direction, the next two not. It is great fun and injects a degree of composure into the shooter. In the undirected drives, a fine of £1 is imposed for each low bird, each bird poached, and any coloured targets shot—a great way to teach a Gun to mark targets properly. The resulting fines go in the charity box.

The last thing we do with the lady game shots is give the simulated drives in company. These are not flushes in the clay game sense,

related to the male hormone, ie testosterone, since adult male patients who had suffered delayed puberty because of low levels of male hormones perform less well on spatial tasks than do healthy male volunteers with normal sex hormone levels. A reasonable generalisation, therefore, is that females perform better than males in verbal tasks, verbal fluency, articulation and spelling, while males are superior at visuo-spatial tasks, where they can differentiate simultaneously between many different forms.

It can be seen therefore that there are sex differences in neurological function, which represents the outcome of interaction between several different factors, the most important being sex hormones. These help to explain the differences between women and men in shooting ability. Observations at Sandhurst Military College showed that males had a marginally greater ability at shooting than females, but there have not been formal studies. Several attempts over the years have been made to explain these differences. Some cite socio-cultural

factors—that in the course of upbringing boys receive more exposure to visuo-spatial skills than girls. Others cite evolutionary pressures—women stay at home while men go out hunting, shoot with arrows, throw spears, and so forth. In other words, the activities of men have given them an evolutionary edge on women for these specialised tasks. But the first tenets of socio-cultural skills can be dismissed, since they would not explain the differences in animals, only in humans, and it would be impossible to determine, in the Darwinian sense, whether they are evolutionary in origin.

The fact is that the foetal prototype brain is female, and in the early stages the nervous system is undifferentiated. Foetal testicular hormones in males act on the brain and as a result cause changes in function. The observed differences in shooting ability between men and women is yet another of these hormonally induced differences in brain function. □

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we make them as much like pheasant/partridge drives as possible, with all the noise, dogs and banter that happens.

When the great day arrives, the first real driven shoot, we suggest the lady has one of our coaches with her. Not because she will not be able to hit her birds, but to protect her from conflicting advice from well-meaning Guns and keep her up to par with her safety standards despite all the excitement happening around her.

There can be no greater job satisfaction, or perhaps it is conceit, when a shoot owner telephones and tells you that Mrs or Miss So-and-So shot like a hero and was safe and well-mannered.

And the Bitch Pack? Scattered, sad to relate. Marriage, divorce, babies, moved abroad and other such things. Never mind. They were worth the effort, and I am certain that another lot will always be just around the corner. □

¶ The writer is one of the world's leading shooting coaches. His shooting school is at Shillingford, Devon (see [www.shaldenshootingschool.co.uk](http://www.shaldenshootingschool.co.uk)).



A 12-bore for Mrs Nigel Hanbury, originally from Georgia, USA. Raised on quail shooting, she is fast and accurate. Usually attired in a skirt, she cuts a fine figure in the shooting field.