

## SECTION 4

My topic is handedness – whether in different sports it is better to be left- or right-sided or whether a more balanced approach is more successful. I'm left-handed myself and I actually <sup>(1)</sup> any relevance to my own life when I happened to start reading an article by a sports psychologist called Peter Matthews. He spent the first part of the article talking about handedness in music instead of sport, which I have to say almost <sup>(2)</sup> from reading further. But what I soon became <sup>(3)</sup> by was the sheer volume of both observation and investigation he had done in many different sports and I felt <sup>(4)</sup> that what he had to say would be of real interest. I think Matthews' findings will be beneficial, <sup>(5)</sup> helping sportspeople to work on their weaker side, but more than they can help them <sup>(Q32)</sup> identify the most suitable strategies to use in a given game. Although most trainers <sup>(6)</sup> how important handedness is, at present they are rather reluctant to make use of the <sup>(Q33)</sup> insights scientists like Matthews can give, which I think is rather <sup>(7)</sup> because focusing on individual flexibility is only part of the story.

Anyway, back to the article.

Matthews found a German study which looked at what he called 'mixed-handedness', that is, the capacity to use both left and right hands equally. It looked at mixed-handedness in 40 musicians on a variety of instruments. Researchers examined a number of variables, e.g. type of instrument played, regularity of practice undertaken and length of time playing instrument . . . and found the following: keyboard players had high levels of mixed-handedness, whereas string players like cellists and violinists strongly favoured one hand.

<sup>(8)</sup> those who started younger were more mixed-handed.

Matthews also reports studies of handedness in apes. Apes <sup>(9)</sup> a large proportion of their food by 'fishing' ants from ant hills. The studies show that apes, like humans, show handedness – though for them right- and left-handedness is about equal, <sup>(10)</sup> about 85% of humans are right-handed. Studies showed that apes consistently using the same hand fished out 30% more ants than those varying between the two.

Matthews started researching several different sports and found different types of <sup>[11]</sup> in each. By the way, he uses 'handedness' to refer to the dominant side for feet and eyes as well as hands. Anyway, his team measured the hand, feet and eyes of 2,611 players and found that there were really three main types of laterality: mixed – you work equally well on both sides – both hand and eye; single – you tend to <sup>[12]</sup> one side but both hand and eye favour the same side; and cross-laterality – a player's hands and eyes favour only one side but they are opposite sides. Let's start with hockey. Matthews found that it was best to be mixed-handed – this is because a hockey stick must be deployed in two directions – it would be a <sup>Q36</sup> <sup>[13]</sup> to have hand or eye favouring one side. An interesting finding is that mixed-handed hockey players were significantly more confident than their single-handed counterparts. <sup>Q37</sup> Things are slightly different in racket sports like tennis. Here the important thing is to have the <sup>[14]</sup> hand and eye on the one side. This means that there is a bigger area of vision <sup>Q38</sup> on the side where most of the action occurs. If a player is cross lateral the racket is <sup>[15]</sup> from the dominant eye for much of the swing. It means that they can only make corrections <sup>Q39</sup> much later . . . and often the damage has been done by then.

And moving to a rather different type of sport which involves large but precise movements – gymnastics. It's been found that cross hand-eye favouring is best. The predominant reason for this is because it aids balance – which is of course absolutely central to performance in this <sup>Q40</sup> sport.