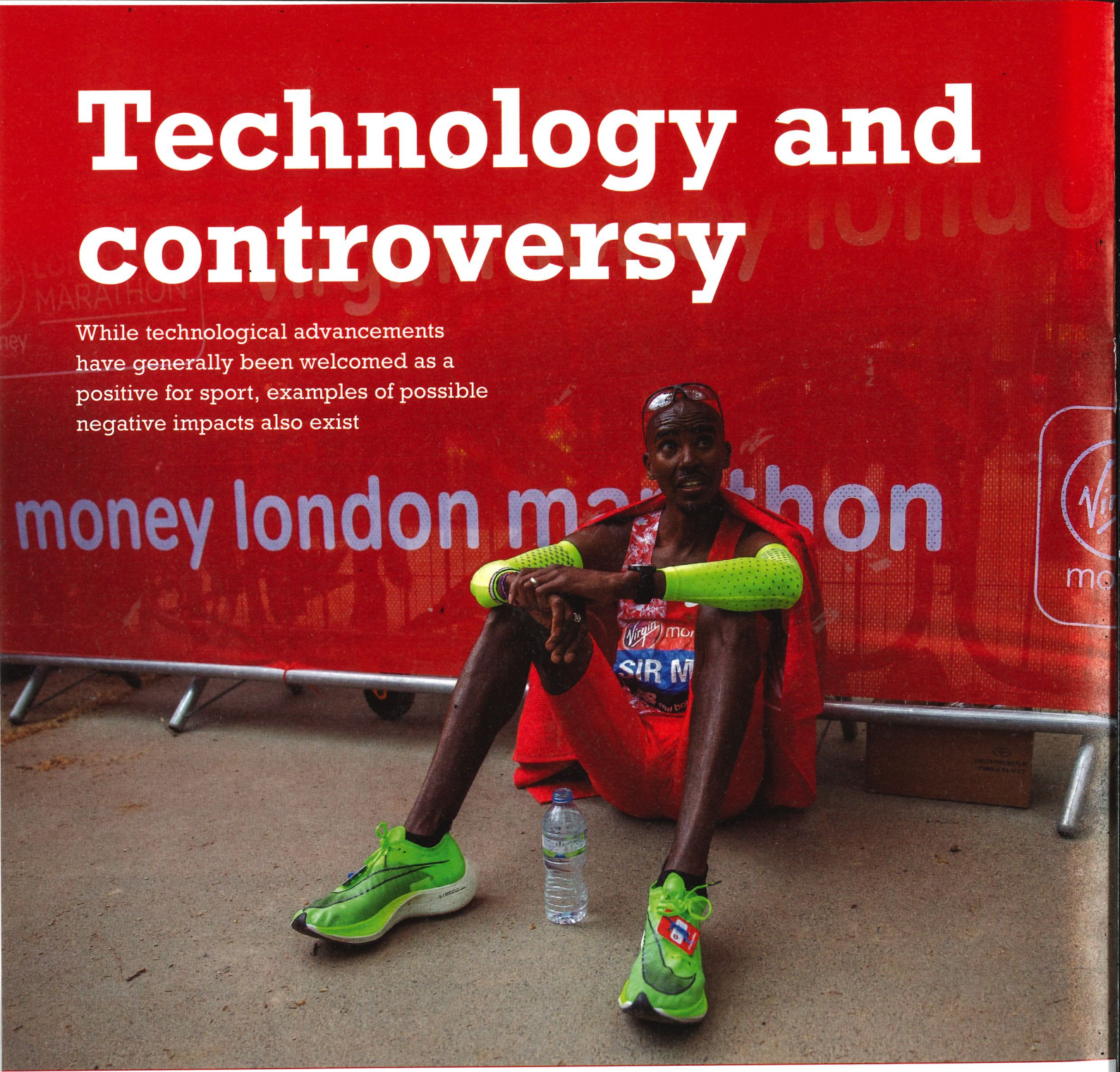
Technology and controversy

While technological advancements have generally been welcomed as a positive for sport, examples of possible negative impacts also exist



Why are the following developments in sports technology controversial? Are they an acceptable way of improving performance through technology, or just plain cheating?

Improvements or cheating?

Polara golf balls

Banned in competition play, Polara golf balls are advertised as impossible to slice, which critics claim 'deskills' the sport of golf and makes it too easy for lower-skilled players who have a greater tendency to make mistakes.

In 2020 the United States Golf Association and the Royal and Ancient Golf Club took a firm stance on technology being used in golf, vowing to try and rein in the ever-increasing distances being achieved by the world's best golfers, before they 'destroyed the game'. Statistics showed that by the end of 2019 the average drive of the 20 longest hitters on the European and PGA Tours was 310 yards.

In many ways this has been a good development, as it wows the live fans and the television viewers, and leads to increased sales of equipment and coaching sessions on swing instruction. However, ever-increasing distances are potentially dangerous. Longer shots have led to many courses being lengthened and the strategic challenge of courses becoming less of an issue, and therefore less enjoyable for everyday play. Longer courses slow down play, and cost more to build,

renovate and maintain. Such increased costs increase the financial challenges for many golf courses at a time when the game is facing many problems.

Full-body swimsuits

Full-body swimsuits led to dramatic improvements in swimmers' performances as designs evolved, and a large number of world records were broken. However, only athletes with the right sponsors could access the suits. Many could not, so they were deemed to be unfair. This led to the world governing body for swimming banning them, but the records set during the time of full-body swimsuits remained in place. This places a distinct disadvantage on swimmers looking to set new world records, who do not have the benefit of wearing such swimsuits.

Head protection

Improved head protection gear in amateur boxing has been developed to increase health and safety and provide extra protection in bouts by decreasing the severity of head injuries. However, it has also led to an increased sense of invulnerability, as illustrated by the fact that there has not actually been a decrease in the number of recorded head injuries since the head gear was introduced.

Video assistant referees

A number of high-profile decisions made by the video assistant referee (VAR) in football have been criticised due to inconsistencies and the time it takes to reach decisions. VAR has also been deemed to be controversial due to the lack of communication with fans and the fact that referees tend not to view the pitchside monitors in order to review events and help with the decision-making process.

Full-body swimsuits of this kind are now banned in Olympic competition, but the records set using them still stand

Vaporfly

Nike's Vaporfly running shoes have become the high-performance shoe of choice for elite long-distance runners. In the six world marathon majors in 2019, 31 of the 36 podium positions were filled by runners wearing Vaporflys.

Kenyan Eliud Kipchoge wore Vaporflys when he set an official men's marathon record in Berlin in 2018. A year or so later in October 2019 he became the first athlete to run a marathon in under 2 hours, wearing the Nike Alphafly, which has three carbon plates and improved cushioning to aid performance.

Is this just an example of technological evolution in the sport of athletics, or is it unfair to other athletes not sponsored by Nike, who are therefore at a disadvantage in races due to their footwear? Studies of Vaporflys suggest that they can improve an individual's running economy by 4–5% (which would be worth 60–90 seconds in a marathon).

Nike's running spikes also seem to be working the magic in middle-distance running, with British athlete Jemma Reekie making vast improvements at the start of the 2020 indoor season. She broke the British indoor 800 m record on 1 February before breaking Laura Muir's 1500 m and 1-mile records a week later. This improved level of performance coincided with her wearing new, more technologically advanced running spikes.

So how much of this improvement in athletic performance is down to the legs and lungs getting more efficient, and how much to the shoes worn on the feet? World Athletics has proposed that more research is required into the new wave of running shoes, in order to establish how the foam stack, the make of foam used and the angle of the carbon plates can affect speed and performance. For the time being, World Athletics has ruled that high-tech shoes such as Nike VaporFlys are allowed to be worn through to the period 'post-Tokyo Olympics' before further evidence is reviewed.

RESOURCES

YouTube videos

Changes to driving distances in golf: **www.tinyurl.com/y7n3ch3s**

High-tech swimwear: **www.tinyurl.com/y53b5kx4**

Former footballer Danny Murphy argues why VAR should be scrapped: **www.tinyurl.com/ycj7z3jf**

The controversy around Nike's Vaporfly running shoes: **www.tinyurl.com/vu2xp9d**

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