Technology in Sport: competitive edge or unfair advantage?

Technology Doping is a relatively new term, but it's of paramount importance in the world of sport. It refers to the unfair advantages an athlete or team may gain from technology. With London2012 finally upon us we ask the question - where does competitive edge stop and unfair advantage begin?

Technology in sport is continuously developing and you can argue that gaining a competitive advantage is what sport is all about. If Team GB can build better bikes than other countries shouldn’t they be allowed to? After all, every sport is essentially a team effort - you have the athletes, the coaches, the doctors and then you have the designers and engineers. Yet, there are so many regulations and rules in sport which inhibit the technology an athlete is allowed to use - so much so that innovation can often be stifled.

British cyclist Graeme Obree designed his own bike made out of washing machine parts amongst other things, and created a bike with a unique position which allowed him to hold his body together more closely and therefore be more aerodynamic, as well as allowing him to generate more power into his thighs and so cycle faster. Genius. Yet, the Union Cycliste Internationale (UCI) decided to ban it.
Obree took this on the chin and set about creating a new design and went the complete opposite direction of his previous design. He came up with something even more innovative, giving him what became known as the ‘Superman stance’. Again, this bike design was also banned.

Image credit: obree.com

During the 90s, cyclists developed many different designs for their bikes in order to find the most aerodynamic and efficient format. However, UCI eventually stepped in and decided to ban all Olympic track bikes that didn’t fit in with their new specifications.

This has resulted in the bikes of today returning to their original shape from the mid 70s due to the strict regulations in place that dictate things such as the shape of the bike, distance between saddle and handle bars and even the angle at which the seat is allowed to be placed. As a result, UCI have left no room for Olympic bike design to progress and develop. If Obree was allowed to be innovative and design the best bike he could, what would the cyclists of today be riding?

Of course, there must be some rules in place to ensure that athletes aren’t gaining ‘too much’ of an advantage which detracts from the skill involved and this is where the term ‘technology doping’ really comes in. For the 2008 Beijing Olympics, Speedo designed a swimsuit that was so advanced; they worked with NASA to create the perfect material. The suit allows for better oxygen flow to the muscles, holds the body in a more hydrodynamic position, and traps air which adds buoyancy. The results were staggering with almost every world swimming record being shattered by athletes wearing the Speedo LZR Racer swimsuit.
There is no doubt then that this is an amazing bit of design but with records broken so easily it begs the question, when does it become about the technology and not the athlete’s skill? You could argue that if every swimmer was wearing the suit then it’s still fair competition, but what about past athletes? If I’d set a world record a few years ago that’s suddenly broken by someone who isn’t a better swimmer than me but has a high-tech suit, I’d be pretty disgruntled to say the least.

After the Beijing Olympics and subsequent swimming events, at which many world records were broken by swimmers wearing the LZR suit, the international governing body of swimming decided to step in and subsequently ban the suit.

Maybe an alternative method of looking at technology’s place in sports is how it is used as opposed to what is used. Allie Walker writes about how athletes continue to break Olympic records through using advanced technology to train rather than in competition. And this seems far more reasonable. US Olympic hurdler, Lolo Jones, uses the PDD designed Vicon motion capture camera to analyse her movements down to millimetres and therefore better herself as an athlete. Surely there’s nothing wrong with that?

Sport is continuously changing as a result of technology, from carbon fibre and aluminium javelins to football boots with built-in electronic chips; all designed to enhance performance in one way or another. The difficult part is allowing technology and sport to develop and grow, while maintaining fair play, for current and past athletes. Innovation in sport must be encouraged, but not in a way which overshadows the core skills of an athlete. It certainly is a fine balance. The real beauty of the Olympics is witnessing the phenomenal skill on display from the world’s greatest athletes, and that is something that must remain.