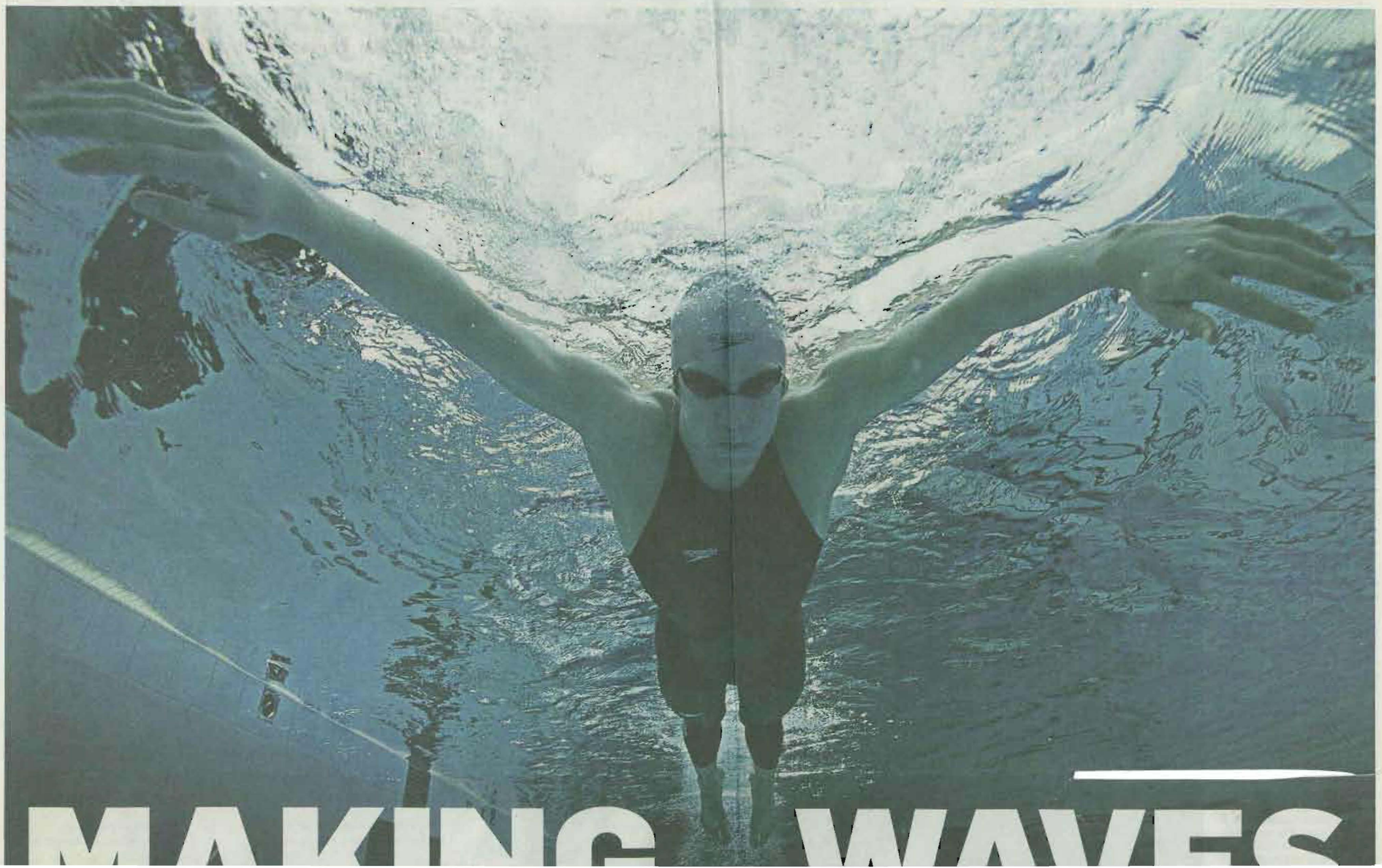
Sunday Times 23.11.08



MAKING WAVES

MAKING WAVES

Pooled efforts: Michael Phelps, above and right, is pre-eminent, although his record-breaking Olympic performances were clearly enhanced by wearing a Speedo LZR bodysuit

Bodysuits dominated swimming in Beijing but they should be banned before they ruin the sport, says the United States. By **Craig Lord**

The end of the bodysuit is nigh: the world's swimming superpower, the United States, is pressing for an international ban on the shoulder-to-ankle skintight costume that blasted swimming into a new era of speed this year and was worn by almost 90% of medal winners in Beijing.

On the surface, the American volte-face on the type of suit that helped to sweep Michael Phelps to eight Olympic gold medals and in which 70 world records have fallen since February is a response to the tidal wave of progress in the sport since the Nasa-designed LZR Racer was launched by the British firm Speedo in February.

But there is something much darker lurking in the pool: a supersuit that works with the body, that interacts directly with the central nervous system and brain. In time, it may be able to remove pain. The full doping suit is a stroke of science away and no rules are currently in place to stop it.

At the end of a year in which Fina, the international governing body, has ignored overwhelming evidence that suits boost performance, the sport is waking up to a nightmare: the future of speed may have less to do with what an athlete does than what he wears — and nobody could test for impact on the nervous system. Impossible, then, to write a rule.

"The potential to enhance performance well beyond current achievements is vast," one expert told The Sunday Times. "Suits can edit the signals going to the brain, suggest signals or amplify signals. This technology is not being used in sport at this time, but is in the military, medically, and in space. It's not science fiction. It exists."

Fina rules are unfit for the present, let alone the future. The Speedo suit includes strategically placed polyurethane panels and compression properties that help to improve performance by serving as a corset. It fights fatigue by propping up stomach muscles and tired legs for longer and gives some swimmers a much-improved body position in the water. The lift gained from the suit serves to make the swimmer an aquatic bullet. Some gain more than others.

As a leading German coach said last week as he watched the World Cup in Berlin: "I saw a . . . girl in the medley today who you would never imagine could be a world-class swimmer. But the suit is pressing her into shape. Swimmers are now saying, 'I can cut out the whole core training phase because I can just put the suit on and it will hold me in the right place'."

That, says the whisper filtering out from the scientific community, is just the start. Fabric engineering already used in the military field will soon make headlines for all the right reasons: it can cure the sick, relieve pain for the terminally ill, provide speedy rehabilitation for crash victims, improve the lives of millions. But how long before the technology reaches the world of sport?

One expert said: "Lots of money is out there, it is only a matter of time before the sport has completely and permanently changed. Swimming is rare . . . it relies on the direct interaction of the human nervous system and the environment. It would be impossible to describe limitations in engineering in a rule document that would prevent the suit from activating the nervous system."

Fina has allowed a suit that was not "available to all", as the rule states, to dominate the sport. Debate has so far focused mainly on cost — £350 for a suit that might last one or two races. US colleges have banned the suit (prompting Speedo to offer 65% discounts), while the US has outlawed its use by children under 13 and Australia is considering proposals to ban the costumes for all juniors.

But alarm bells are now ringing as the focus shifts to ethical issues. Current legislation says that no "device" shall be used to enhance performance. To get round that, Fina said the suit was not a device, even though the clock suggests otherwise. The first man swam inside 50sec for 100m freestyle in 1976. Until 2000, nobody broke 48sec. Until this year, only Pieter van den Hoogenband could do it. Now there are 11 men inside 48sec and the world record stands at 47.05. Talk is of the first sub-47sec swim next year.

Those working on the technology of the future simply smile at that. "Very powerful effects would be achievable with what could soon unfold. I have no doubt that we will see a man swim 45sec very soon if Fina does not contain the technology," one says.

The current rule on suits states that "no swimmer shall be permitted to use or wear any device that may aid his speed, buoyancy or endurance". USA Swimming wants the words "or swimsuit" inserted and has called for suits to be tested by "an independent agency [that] will utilise established globally recognised procedures to determine compliance".

In its submission to Fina, the board of USA Swimming calls for a rule to specify "the competitor must wear only one swimsuit in one or two pieces which shall not cover the neck, extend past the shoulder, nor past the knee". It wants all approved suits to be "available for all competitors for 12 months prior to the Olympic Games".

Unless rules are changed radically, the smart money is on a suit that relies on breakthroughs in neuroscience that "can amplify or reduce [brain] signals as they break up, activating certain parts of the brain selectively", an expert says.

Fina will meet coaches and suit makers at a series of talks in January and February. The sport hangs in the balance. The conclusion that many are coming to, including some of the world's leading coaches, is a simple one: return to skin.

The more of it you show, the less likely you are to invite the doping suit into the pool.

As one leading light in the sport put it: "If we don't stop the suits now, our sport will be destroyed by this and future developments. The last thing we need is to become the 'testing ground' for companies that want to do medical experiments on humans to promote their new products. The Roman Circus is here."

Gaining the edge

The impact of technology on the all-time world rankings is shown by the best 20 and best 100 times recorded.

The number of new entries into the rankings of the all-time fastest swims in the past six Olympic years in the women's 100m backstroke are listed for comparison.

2008 16/20 and 56/100 (16 of the all-time top 20 fastest times were clocked this year and 56 of the all-time top 100 times)

2004 3/10 and 20/100
2000 4/20 and 22/100
1996 4/20 and 17/100
1992 6/20 and 28/100
1988 6/20 and 37/100

Suit that created a splash

Technology making time fly by

Never before has a bodysuit re-written the record books in a year. Swimming will never be the same again *Daily Mail 5/6*

Uproar over torpedoes in Speedos

Since February this year, when the Speedo Racer costume was launched, 51 world records have fallen, 47 to swimmers wearing what some have described as 'technological doping' *Sunday Times 10/8*

Meet the real star of the Olympics

Of all humiliations, this was the worst. Nike has been forced to allow its swimmers to compete in Speedo swimsuits, effectively conceding that the suit gives swimmers an advantage *The Times 20/8*

"THE POTENTIAL TO ENHANCE PERFORMANCE IS VAST"