

Southwest Regional Talent Development Centre

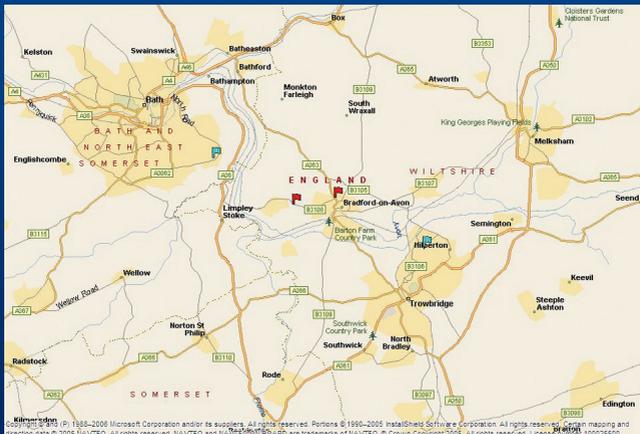
Case Study No 4: Birthplace Effect

May 2011



The Southwest Regional Talent Development Centre is a joint initiative between the University of Bath and Sport England. Its objective is to maximize the potential of people from the South West to progress to elite levels in sport by providing support to and building the capacity of National Governing Bodies to implement their talent pathways in the South West.

In the past nine months, three Southwest Talent Centre supported athletes have become World Champions: Hannah Brown won the 2010 Wild Water Kayak World Championships, Josh Hook became 2010 Jr World Champion in Quadrathlon and Philip Marsh won the 2011 U20 Fencing World Championships. Two rhythmic gymnasts, Francesca Fox and Lynn Hutchison won Commonwealth bronze medals and Fencer Jenny McGeever won an Under 23 World cup medal. Hannah and Philip share something else in common. They come from Bradford-on-Avon (population 9,326) the small Wiltshire town that is also the hometown of World and European Kayak champion Ed McKeever.



Legend: Red – World Champions, Light Blue – Commonwealth medallists

On the surface this seems like little more than a coincidence, but it is in fact a prime example of something called the birthplace effect, which was first uncovered by a team of researchers in Canada led by Jean Cote in 2006. Cote was investigating whether the size of the town an athlete was born in had any influence on their probability of becoming a professional athlete in the sports of baseball, basketball, ice hockey and golf. What he found was that large cities with populations over 500,000 produced fewer elite athletes than would be expected for their size and small towns with populations of between 50,000 and 100,000 produced proportionally more elite athletes. This birthplace effect was independent of the relative age effect (see Case Study No 1).

Researchers at the Australian Institute of Sport conducted another study to see whether they could find the same effect. They did and they dubbed it the Queanbeyan effect (or the Wagga effect) after a small town of 36,000 people on the outskirts of Canberra that produces far more elite athletes than would be predicted for its size including Mark Webber the Formula 1 star, rugby great David Campese and Olympic gold medal rower Megan Still.



LOTTERY FUNDED



**Philip Marsh,
Fencing U20 World Champion 2011**

It's thought that small towns are big enough to have good coaching and facilities that can be accessed readily but small enough for children to have greater opportunities for informal play and greater exposure to playing with adults from an early age, all of which are known to help develop good skills.

Birthplace effect has not been examined in any detail in the United Kingdom but looking at the evidence from Southwest Talent Centre athletes it appears that our small towns and villages are the greatest incubators of sporting talent and if anything the optimum size of town for developing expert athletes is smaller here than the town sizes identified in Canada and Australia, highly urbanised countries with huge travelling distances between their metropolitan centres.

The six Southwest Talent Centre supported athletes who have achieved international success in the last year have come from towns and villages with populations of 8,600 to 16,000 with a further athlete from Bath which has a population of 84,000. Further analysis of the geographic distribution of all Talent Centre athletes also highlights the importance of transportation links as easy access to major transportation arteries seems to be more important than living close to their training centre which suggests that although they may have to travel to train, it is a relatively easy

commute. Even the athletes who live in the Southwest's largest city Bristol live along the major transportation arteries and tend to live near green space.

Researchers have a lot more work to do to understand fully the factors that lie behind the birthplace effect; it appears to hold true not just for team sports with high dynamic decision making demands where the evidence points to informal play being a crucial factor in developing expert decision making skills, but it also holds true for sports with big physiological demands -- Ironman triathlon star Chrissie Wellington hails from the Norfolk village of Feltwell (population: 2,600). The assertion put forward by talent identification proponents that elite athletes must come from the top 10% of the population in terms of innate physical abilities, a distribution that should be uniform through population centres of all sizes, is weakened by the actual non-random distribution of elite athletes.

References: When 'Where' is more important than 'When':

Birthplace and birthdate effects on the achievement of sporting expertise, Jean Cote, Dany J. MacDonald, Joseph Baker, & Bruce Abernethy, Journal of Sports Sciences October 2006 24(10): 1065 – 1073

Paula Jardine
South West Regional Talent Manager
University of Bath
Sports Development
Bath, BA2 7AY

Email: P.R.Jardine@bath.ac.uk

Tel: **01225 386670**

To find out more about the Southwest Talent Centre go to:

<http://www.teambath.com/what-we-do/sports-development/south-west-regional-talent-centre>