Use of Sport Science Evidence in a National Rugby League Judiciary Case

by

Tim Gabbett

Reprinted from

International Journal of
Sports Science & Coaching

Volume 5 · Number 2 · 2010
Use of Sport Science Evidence in a National Rugby League Judiciary Case

Tim Gabbett
Brisbane Broncos Rugby League Club
Fulcher Road, Red Hill, Queensland, Australia, 4059
Email: timg@broncos.com.au

ABSTRACT
In March 2008, Brisbane Broncos rugby league fullback, Karmichael Hunt was charged by the National Rugby League (NRL) judiciary with a Grade 3 careless high tackle. The charge resulted from an 18th minute collision between Hunt and Braith Anasta (Sydney Roosters five-eighth) during their Round 2 NRL match at the Sydney Football Stadium. Hunt would be suspended for a minimum of one week if found guilty by the judiciary. At the time, the Brisbane Broncos Rugby League Club had not won a single NRL judiciary case for 14 years. This case study documents the scientific arguments presented as expert evidence in this case. The scientific defence focused on 3 key elements: (1) the height that the ball-carrier (Anasta) had fallen at the moment of impact, (2) the time for Hunt to make a decision and respond to the movements of the ball-carrier, and (3) the body position of the defending player (Hunt). Karmichael Hunt was found not guilty by the NRL judiciary panel, and was free to play in the following week’s fixture. The judiciary panel agreed that the collision between Hunt and Anasta was neither deliberate nor avoidable. This case study reports the evidence presented in a high profile NRL judiciary case and documents the practical utility of sport science in football judiciary cases.

Key words: Decision Making, Expert Testimony, Foul Play, Reaction Time, Scientific Evidence

INTRODUCTION
The National Rugby League (NRL) is the world’s premier rugby league competition. Involving 16 teams from Queensland, New South Wales, Melbourne, Australian Capital Territory, and New Zealand, the competition is played over 26 rounds, with matches played on a weekly basis. The NRL has a match review committee; the role of which is to identify incidents of suspected foul play and to ensure players responsible for those incidents are cited to appear before the NRL judiciary. The judiciary panel comprises three members (all of which are former elite rugby league players), and a judiciary foreman who advises the judiciary panel on relevant legal matters. If cited to appear before the judiciary, the player (and his defence team) must present evidence before the judiciary panel, and a representative
of the NRL match review committee (who in turn is represented by a legal prosecutor). The legal prosecutor presents evidence in an attempt to convince the judiciary panel of the defending player’s guilt. Expert testimony can be provided by the defence, and the legal prosecutor is given the opportunity to question the defence in an attempt to discredit the expert testimony.

THE INCIDENT
In March 2008, Brisbane Broncos fullback, Karmichael Hunt was charged with a Grade 3 careless high tackle, and cited to appear before the NRL judiciary. The charge resulted from an 18th minute collision between Hunt and Braith Anasta (Sydney Roosters five-eighth) during their Round 2 NRL match at the Sydney Football Stadium. While attempting a tackle on Anasta, Hunt appeared to make shoulder contact with Anasta’s face. Anasta sustained a broken nose from the incident. Hunt would be suspended for a minimum of one week if found guilty of the charge.

Due to the profile of the players involved in the incident, the case was the subject of significant media coverage. The opinion of rugby league experts (commentators and coaches) was also divided, with doubt expressed over whether the incident was intentional or avoidable. The fact that the Brisbane Broncos had failed to secure an NRL judiciary victory for 14 years (since 1994) added further interest to the case.

THE DEFENCE
The Brisbane Broncos defence team consisted of Dr. Tim Gabbett (sport scientist), Mr. Jim Hall (lawyer), and Mr. Paul Bunn (administrative support). The scientific defence of Karmichael Hunt focused on three key elements: (1) the height that the ball-carrier (Anasta) had fallen at the moment of impact, (2) the time for Hunt to make a decision and respond to the movements of the ball-carrier, and (3) the body position of the defending player (Hunt).

REDUCTION OF HEIGHT OF BALL-CARRIER
The knee height of a male adult is approximately 31% of his standing height. According to official NRL records, Braith Anasta is 189 cm tall. At the moment of impact, Braith Anasta’s knee was in contact with the ground (Figure 1). Given that knee height is approximately 31% of standing height, the knee contact with the ground reduced Anasta’s standing height.
height by an estimated 59 cm; reducing his effective height to approximately 130 cm. Had Anasta not fallen into Hunt, it was highly probable that contact would have been made around Anasta’s centre of gravity (around the abdomen).

REACTION TIME OF DEFENDING PLAYER
Analysis of video footage of the incident revealed that there was 120 milliseconds from the time Braith Anasta began to fall and the moment of impact (Figure 2). The reaction time of humans to a single stimulus is approximately 190 milliseconds. [5] This is further complicated by the fact that Anasta was moving at speed towards Hunt, effectively reducing his decision time. Given that humans cannot process information faster than ~ 190 milliseconds, [5] it was argued that it was physically impossible to avoid contact with the attacking player.

![Figure 2 (A, B, & C). Frame-by-Frame Analysis of the Tackle. Each Frame (A, B, & C) Represents 40 milliseconds in Duration. The Total time elapsed from the moment Braith Anasta began to fall to the moment of impact was 120 milliseconds.](image)

To put the short reaction time into perspective, at the Beijing Olympic Games, the average reaction time to a simple auditory stimulus (i.e., the starter’s gun) across all sprinting events (100m, 200m, 400m, and 100/110m hurdles) was 168 milliseconds. [6] Furthermore, it is well documented that reaction times increase (i.e., more processing time is required) with increasing task complexity (e.g., changes of direction, falling player). [5]
Tackling Position of the Defending Player

Karmichael Hunt’s initial body position demonstrated that he was prepared to make an orthodox, under-the-ball tackle (body position square). [7] The initial body position was identical to that observed in training (Figure 3A,B). However, while Hunt was initially prepared for an orthodox tackle, his body position prior to impact indicated a protective posture (he turned his body away, withdrew his arms and hands towards the midline of the body, closed his eyes, and ‘braced’). A comparison of an effective tackle (Figure 3c) with that of the protective posture adopted by Hunt (Figure 3D) is shown below.

The Verdict

Karmichael Hunt was found not guilty by the NRL judiciary panel and was free to play in the following week’s fixture. The judiciary panel agreed that the collision between Hunt and Anasta was neither deliberate or avoidable. [8-13] The result was the first judiciary victory for the Brisbane Broncos Rugby League Club in 14 years. [1, 9, 12]
CONCLUSION
There were three key scientific explanations for the collision between Karmichael Hunt and Braith Anasta. Karmichael Hunt prepared for an orthodox, under-the-ball tackle, but was confronted with a falling player, combined with a fraction of a second (120 milliseconds) in which to make a decision. The time in which to make the decision was much quicker than the processing ability of any human. Braith Anasta fell approximately 59cm (i.e., 31% of his standing height) within a short timeframe. Finally, immediately prior to impact, Karmichael Hunt adopted a protective posture (he turned his body away, withdrew his arms and hands towards the midline of the body, closed his eyes, and ‘braced’). This case study reports the evidence presented in a high profile NRL judiciary case and demonstrates the practical utility of expert scientific evidence in football judiciary cases.

REFERENCES