# A Partial History of Performance Analysis

Keith Lyons 12 February 2018

## Background

- A partial story of 150 years of endeavour.
- A move from hand notation to computerised coding.
- Real-time activities.
- Technologies that permit lapsed-time analysis.
- A move from personal practice to artificial intelligence.

## Performance Analysis as a disciplined insight

Systematic observation

Permanent record of performance

Enables an analysis of performance

Provides quantitative and qualitative augmented information to an audience



## #ACUGCPA: Introductions to #performanceanalysis



On Monday 8 February, I have an opportunity to meet students enrolled on the Australian Catholic University's Graduate Certificate in Performance Analysis course.

It is the first day of an intensive study week at the University's  $\underline{\text{Strathfield}}$  campus.

## A history of sports notational analysis: a journey into the nineteenth century



#### Abstract

This paper presents a history of sports notational analysis, which seeks to develop further our current understanding of the subject. The paper provides evidence that indicates sports notations developed in the mid-nineteenth century, contrary to the current view of it as a twentieth century invention. The paper further illustrates that statistics from these notations appeared regularly in newspapers, periodicals and specialist books of that period, and that the early development of notation, in many sports, was strongly associated with the work of the sports journalist. This paper reviews the work presented in earlier publications, and provides further insight into the history of sport notation in introducing many previously unknown notation systems. This work includes Hugh Fullerton's earliest known baseball notation; several analytical systems for lawn tennis; examples of nineteenth century boxing notations, and association football notations, which pre-date Charles Reep's work, hitherto consider the first soccer analysis, by half a century.





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## The History of Sports Analysis





BALSPORT

**BEELD EN GELUID** 

BOEKEN

**OLYMPISCH** 

**OVERIGE SPORT** 

POLITIEK

NIEUW

**NET BINNEN** 

Volkskrant-check: de openingsceremonie van Amsterdam 1928 was kleurloos



Q







NIEUW OLYMPISCHE SPELEN

Volkskrant-check: de

ZIE ALLES

Vraag

ZIE ALLES

Winterspelen ZIE ALLES













## **#Sport History**

#### A game of rugby union in 1907

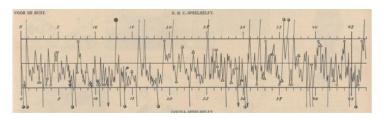


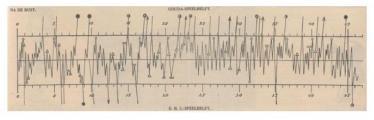
Thanks to Darrell Cobner, I have another discovery to share.

Darrell suggested I look at <u>Frederic</u> <u>Humbert's blog</u>, Rugby Pioneers. (Simon Eaves and Paul Worsfold also link to Frederic's post in their <u>2014 review</u> of notational analysis for rugby football.)



<u>The 1932 game notation</u> has a record of where possession was won and lost as well as a time (within 1 minute) stamp by each half of the game.





Link

### **Hugh Fullerton's Inside Game**

Back in the Summer of 1993 I spent some time in the Ursinus College Library.

I was looking for information about Lloyd Messersmith.

Eventually I found a copy of Lloyd's 1942 Doctor of Education thesis *The Development of a Measurement Technique for Determining the Distances Traversed by Players in Basketball*. The Bibliography contains twenty-one references, one of them is to a 1910 paper in the American Magazine by Hugh Fullerton.

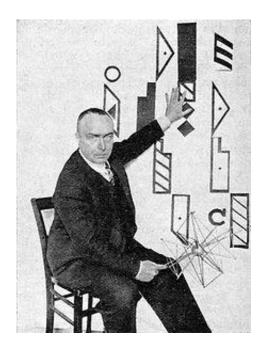
Fortunately a librarian at Ursinus College tracked down the journal for me and I was able to make a copy from a microfiche reader.







National Library of Wales



Wikipedia



**Hugh Fullerton** 



Lloyd Messersmith



Anna Espenschade



Charles Reep



THE DEVELOPMENT OF A DETERMINING THE DISTANCES TRAVERSED BY PLAYERS IN LLOYD LOWELL MESSERSMITH

Lloyd Lowell Messersmith

Hugh Fullerton's Inside Game



Godmothers of Performance Analysis 2



Charles Reep



Bruce Scott Old

I am the author of many highly rated books on badminton and an international coach with many years of experience in successfully coaching world class badminton players and devising coach education programmes for the BAofE.

1985-97. In 1985 I became employed as England Team and Coaching Manager for the BA of England prior to assuming the position of Director of Coaching in 1986 with the task of planning and implementing programmes for player development and coach education and training.

1990. Received the 'Coach of the Year Award'awarded by the British Institute of Sports Coaches in the category for "Services to Coaching Nationally"

#### **Professional Qualifications**

Diploma in PE from Loughborough College (1959)

One year Art of Movement Course at the Laban Art of Movement Centre (1967)

Diploma in Education, University of London (1972)

Master's Degree in Education (Philosophy) , University of Manchester (1974)

Jake Downey



Tom Reilly



Frank Sanderson



Ian Franks



Mike Hughes



Celia Brackenridge



Peter Treadwell

## Looking Back: A 1992 Take on **Notational Analysis**



Keith Lyons Nov 26, 2012 12

In the Autumn of 1992, I was invited to write an article for the Sports Council of Wales' In Touch magazine for coaches. I had been at Cardiff College for just under a year and had established a Centre for Notational Analysis there with the help of Peter Treadwell, Dave Cobner, Sean Power and Jeff Young. I had started my work with the Welsh Rugby Union as a notational analyst.



# What Is In A Name? Are We All Performance Analysts?

Keith Lyons Centre for Notational Analysis, Cardiff

Porto 1998

## A Vision for Twenty-First Century Performance Analysis

**Keith Lyons** 

June 1999

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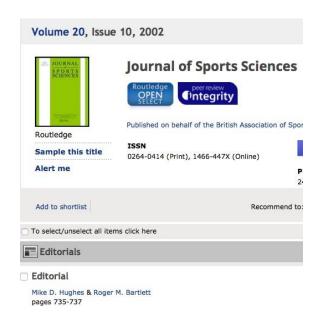
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## Permanent Recordings of Performance

**Hand Notation** 

Film

Analogue Video

Computerised Notation and Coding

Digital Video

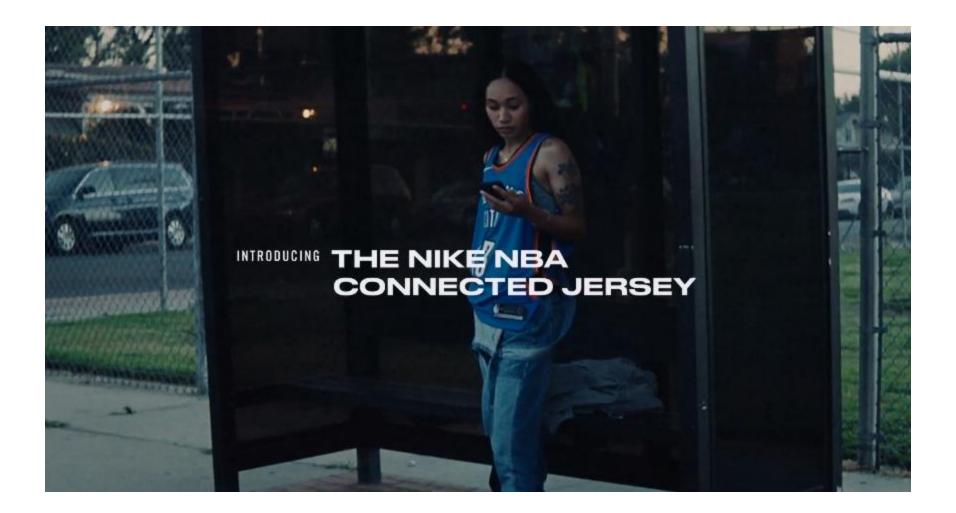
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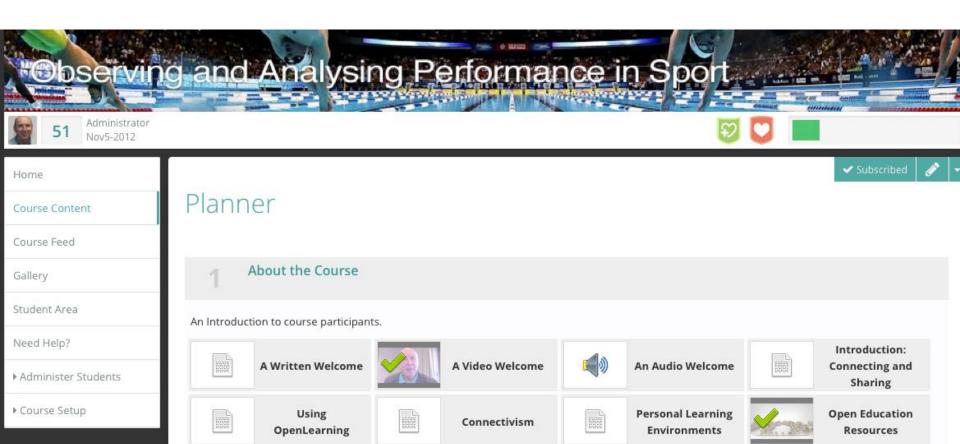


Occupational Culture









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