Please cite the Published Version

Day, David (2019) Bricoleurs extraordinaire: sports coaches in Inter War Britain. Sports Coaching Review, 8 (3). pp. 243-261. ISSN 2164-0629

DOI: https://doi.org/10.1080/21640629.2018.1521624

Publisher: Taylor & Francis (Routledge)

Version: Accepted Version

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Bricoleurs Extraordinaire: Sports Coaches in Inter War Britain

Introduction

The teachings of the coach must always be suspect when he attempts to develop techniques based upon theories worked out intellectually. Unless he gets the idea from personal experience, and feeling first, he is most likely to be wrong in principle (Cerutty, 1960, 16).

Twentieth-century educational theorist John Dewey argued that learning through doing is essential in enabling people to abandon their habits and think creatively. People learn from their experiences and by reflecting on those experiences since reflective thinking, an active, careful and constant reconsideration of beliefs and knowledge, leads to inquiry through a scientific method, a process of experimentation that results in the formulating and testing of theory (Day, 2016). Reflection is a rational and purposeful act and the reflective process, which mediates experience and knowledge, is triggered by professional issues or problems. Central to defining reflection is the concept of a reflective conversation, a repeating spiral of appreciation (problem setting), action (experimenting), and re-appreciation (problem setting) that involves issue setting, strategy generation, experimentation, and evaluation (Gilbert and Jackson, 2004; Gilbert and Trudel, 2001). From Dewey's perspective, then, activities such as sports coaching involve a 'continuing reconstruction of experience', the rethinking and re-examining of concepts and experiences in order to deal with the demands of the present (Vazir, 2006: 445-446), and, in that respect, coaches are active participants in their learning, continuously operating in a fluid, cyclical, and transactional manner within an ever changing environment to redevelop their competencies (Burden, 2000: 467).

This ongoing process is not exclusively domain specific. Winchester et al. (2013: 415) argued that knowledge, skills, attitudes, and insights are developed from a coach's daily experiences, in sport, work and at home, as well as through exposure to the coaching environment, while, for Jarvis (2007), learning is a lifelong activity with coaches extracting information from their social situations and transforming it into knowledge and/or skills. Hassanin and Light (2015) observed that coaches learn to coach as a long-term, social and situated process within which experience forms the most powerful influence and highlighted the powerful influence of the specific socio-cultural contexts within which they learned to play and coach on beliefs and dispositions. Every transformation results in a changed person who has become more experienced. While 'maintenance learning' allows the coach to deal with known, reoccurring situations, 'innovative learning', which includes reflection and requires more time, contributes to progress by bringing change, renewal, and problem reformulation (Jarvis, 2007).

Contemporary research recognises the importance of practical coaching experiences, combined with personal reflections on, and interpretations of, those experiences, as significant factors in coach effectiveness (Cushion, Armour, and Jones, 2003; Gilbert and Trudel 2001; Gould, Giannini, Krane, and Hodge, 1990; Nelson and Cushion, 2006: 174; Cushion, 2001; Salmela, 1995). In a review of related literature, Cushion et al (2010: ii, iii, vi) noted that informal learning through coaching experience and engaging with other coaches remained the dominant mode of learning with 'expert' practitioners favouring self-directed learning and reflection to support their experiential learning. When players become coaches, their methods remain heavily influenced by their playing experiences, irrespective of their levels of formal qualification, and they consistently identify other coaches, experimentation, and their own past experiences, as key reference points (Potrac, Jones and Cushion, 2007). Irwin, Hanton and Kerwin (2004, 430-432) established that gymnastics coaches displayed individuality in how they learnt coaching skills, but that knowledge acquisition was facilitated mostly through interactive coaching clinics and mentorships. These stimulated critical inquiry and active experimentation

allowing coaches to develop learning through reflective practice within the training environment. Stoszkowski and Collins (2016) revealed that coaches preferred, and mostly acquired, coaching knowledge from informal learning activities, especially when these facilitated social interactions, while Bertram, Culver and Gilbert (2016) found that coaches engaged and learnt most effectively through relevant and meaningful opportunities.

In summary then, it seems that skilled coaches continue to prioritise experience and networks over theory and formal education. Expert coaches learn through sharing with other coaches, making their own mistakes, and drawing on early coaching experiences (Vallée and Bloom, 2005, 185), with coaches preferring to consult those who had performed or coached the skill themselves (Irwin, Hanton and Kerwin, 2004, 436). Jones and Allison (2014) explored the knowledge development and experiences of elite coaches and found they wanted greater peer learning opportunities while, in a study by Currie and Oates-Wilding (2012), Olympic coaches attributed to their success and fulfilment of goals to their past experiences as an athlete and their learning from other coaches/mentors. These developmental preferences mean that coaches possess a largely implicit form of knowledge. While subscribing to Dewey's argument that experience and immediate reflection are central to learning, Evans and Light (2007: 1) observed that this learning is often unarticulated as abstract knowledge operating at a non-conscious level. This implicit, or tacit, knowledge denotes all forms of knowledge that cannot be represented, fully articulated, expressed in formulas or described in documents (Styhre, 2004) making it almost impossible to codify. As a result, it cannot be made explicit or taught directly. As Polanyi (1969: 142) pointed out, tacit knowledge involves the training of perception in such a way that the individual 'discovers by an effort of his own something that we could not tell him. And he knows it then in his turn but cannot tell it'. Tacit knowledge is a form of 'know how' or a 'knack' of doing something like sports coaching (Polanyi, 1958, 1998) and successful coaches in all historical periods have argued that they possessed an innate intuition about how to improve athletes. Mussabini (1913, 78-79, 86, 103-108, 143-148, 257-258) thought the 'discerning eye of the trainer' could assess the effectiveness of his regime through observing the athlete's 'general bearing, appearance and spirits, and the way he does his work.' Athletics coach Geoff Dyson (1950) commented that it was his 'coaching eye' that made him such an accomplished coach while footballer Jimmy McIlroy attributed his success to the coaching he received from veteran coaches experienced enough to know intuitively that certain skills came naturally to some individuals (Ross, 1963, 147-148).

Inter-War Coaching Skills and Knowledge

The absence of any scientific work on exercise and training for the guidance of athletes is to us no matter of surprise. Experience has built up a system of training which, although in some respects ... open to improvement by the application of scientific knowledge, is on the whole probably much more correct than would be the programme recommended by the whole body of our savants in the Council. *Anonymous. British Medical Journal*, 1873.

Research into the history of coaching suggests that nineteenth- and twentieth-century coaches fundamentally operated in ways that would be familiar to contemporary elite coaches. Their reliance on experience and intuition, an immediate insight made in the absence of conscious reasoning, stimulated training innovations, while socialization, trial-and-error or practice, provided a body of craft knowledge, a 'feel' for coaching founded on tacit knowledge (Day, 2012; Day and Carpenter, 2015). In the years before 1914, sports coaches continued to link personal experience to oral traditions by utilising conventional craft processes of specialised knowledge transfer, the tacit nature of which involved 'stealing with the eyes' with the master modelling and the apprentice continually observing (Gamble, 2001). Coaches shared information

with trusted confidantes who drew on that knowledge, and the social networks developed while in training, when they subsequently became coaches. Despite the increasing institutionalization of science, coaches preferred to rely on the support of those who shared their methodology and the repertoire of resources that constituted the key elements of their coaching 'toolbox' (Wenger, 2004).

Throughout the Inter-War period professional coaches continued to regard themselves as practical men whose experiential knowledge gave them the ability to control diet and develop wind, apply psychological and massaging techniques, prepare stimulants and medical treatments, identify talent, and individualise training programmes (Nelson, 1924: pp. 25-26). Mussabini described himself as part practitioner, part doctor, and part student of nature (Moon, 1992: 14-22) and believed the ideal coach would have "gone through the mill himself" and that his aptitude would be backed by a common-sense that came with years of practice in his craft (Mussabini, 1913, 103-148). Rather than consulting academics or scientists they relied on 'organisational socialisation', having acquired knowledge and skills, as well as absorbing the nuances of coaching practice, through years of involvement and they entered coaching already provided with comprehensive 'maps of meaning' from their own experiences (Sage, 1989; Sparkes, 1993, 111; Bloom et al., 1998). When Oxford University appointed Alfred Shrubb as their first professional coach in 1918, he drew on his past experiences with his coach Harry Andrews, who, in turn, had utilised his family expertise and years of coaching Olympians (Hadgraft, 2004, 255-283). Cambridge University coach Alec Nelson and Bill Thomas, Shrubb's successor at Oxford, also drew on their experiences as amateur and professional athletes, as well as a range of supplementary sources such as medical science, physical educators, animal trainers, newspapers, sporting journals and magazines, as well as international travel. Many practitioners produced their own training manuals in which they distilled their experiential knowledge concerning skill development and training methods, although few of them dealt with the practice of coaching itself, because it was assumed that such craft 'know-how' could only be achieved through experience (Wolek, 1999, 410).

The content of these texts illustrates a sophisticated understanding of many of the critical components of competitive preparation and suggests that many contemporary concerns over issues such as athlete selection, age group involvement and individualisation of training are nothing new. Following the Great War there were public discussions about the advantages of sports psychology and inter-war British coaching texts in athletics (Mussabini, 1924, 93; Webster, 1936, 293), rowing (Meldrum, 1932, 109-112, 118-119), tennis (Tilden, 1920, 47-90), and squash (Bey, 1934, 89-102) demonstrate just how much coaches and athletes were aware of methods of psychological preparation. D.G.A. Lowe (1929) argued that athletes should train mentally as well as physically and athletics coaches were sure that improved mental training was producing sounder judgment, greater receptive powers, and quicker intuitions and decisions, as well as cultivating selfdiscipline and will power or pluck (Lowe and Porritt, 1929). Elementary psychology was also included in the first course for football coaches to be held by the Football Association (FA) in 1935. Stanley Rous, secretary of the FA, observed 'There is as much need for psychology as applied to games as there is in any other branch of activity'. For example, there were issues surrounding 'questions of discipline, encouraging interest in training, qualities which produce leadership, team co-operation, and unselfishness'. A coach who could 'handle players of different temperament and understand them can get the best out of them and can permeate the whole team with his own enthusiasm' (Daily Mail, July 9, 1935, 9).

Physical preparation and skill development had long been a staple of the trainer's craft and in the 1920s, swimming coaches were advising that training should be a process of 'building up', rather than one of 'continuous exhaustion', and that effective training could not be accelerated. Work should never be pushed to fatigue since training too hard might cause 'burn out', the symptoms of which were weight loss, fatigue, extreme irritability, and drawn features, at which point a swimmer should 'let up' (Handley, 1925, 55-57;

Billington, 1926, 56). Rugby player W. W. Wakefield (1927, 118) warned that it was a common mistake for players to 'plunge into an orgy of strenuous exercise' in preseason training thereby 'hastening the approach of staleness, that real enemy of footballers'. While the origin of interval training is disputed, it was developed further by track and field coaches in the thirties, when it was also being used by rowing coaches like Gerda Stock in Hamburg (Dodd, 1992, 165). Tactical training was important too and in 1936, 800 metre runner Woodruffe became the first athlete to negative split (running faster in the second half of the race) in an Olympic final. In terms of technique, British coaches recognised the importance of good style, rhythm, and grace of movement (Lowe, 1929). D.G. White (1933) wrote that after "years of observations" experts generally agreed on the fundamental principles of running styles, although there were agreed variations according to the distance being attempted. However, a 'mechanistic view' that viewed the human body as a species of machine had limitations since nearly all great runners exhibited some significant differences. He also noted that a tiring body adjusts to meet the increasing strain imposed upon it and that so-called stylistic defects grew most marked as fatigue increased. He later noted there was still room for training improvements in areas such as diet, technique and psychological preparation (White, 1933b).

Modern sports are often classified as either early specialisation or late specialisation sports, which require a more generalised approach to early training, an approach which was obvious to many Inter-War coaches. Writing in 1937, the mother of Cecilia Colledge, Britain's youngest ever Olympic figure skater, recalled that Cecilia had begun serious rink training aged eight, following eighteen months of Swedish exercises and dancing. During the peak years of training she spent more than 1,000 hours per year on the ice, most of it under the eye of Swiss coach Gerschwiler, the 'Svengali of the rink', and she concluded that it took from eight to ten years to make a world's skating champion and the cost could be anything up to £10,000 (Colledge, 1937). In tennis there was a trend in this period towards commencing systematic tennis training at an increasingly early age (Lake, 2010, 92) but swimming coaches were prepared to wait a little longer, arguing that a female should delay until she was about 14 or 15 years old before attempting serious swimming. At that time, the body has begun to stop its growing at the former rapid rate. Provided the swimmer had not burned herself out in early stiff competition she should be able to 'maintain top-notch form for ten years' (Anderson, 1931). Webster (1936, 11) argued that many potential athletic champions were ruined during adolescence through the 'enthusiasm of parents, the ignorance of games masters or the eagerness of the young athlete himself'. Once an athlete had reached an appropriate age coaches generally identified talent through a form of natural selection with an athlete chosen for further training because of competition performance or through subjective assessment by the coach. Although anthropometric techniques were available (Park, 2007), coaches argued that athletic prowess was measured not by shape but by what a man could do.

Bricoleurs extraordinaire

While it is clear that coaches of the Inter-War period had a substantial body of traditional and emerging knowledge at their command, there were significant differences in the emphasis that amateur and professional coaches placed on how training the athlete should be approached. For example, amateur authors such as Abrahams and Abrahams (1936, 116) questioned the moral worth of athletic specialisation while Butler (1938, 9-22) proposed training programmes that were always going to be difficult to follow for working class athletes. The way coaches operated, then, was a function of their class, including attitudes, values, and educational backgrounds, as well as their personal athletic experiences. Lemyre, Trudel and Bush (2007, 194) have suggested that researchers studying coaching experiences ask coaches to tell their stories since these expose the sociocultural context and the expectations and norms of the community. Jarvis (2007) uses the term 'biography' to capture the concept of who coaches are at a specific moment in time, based on their accumulation of experiences, knowledge, and skills, while Jones, Armour and Potrac (2003) employed

a life-story approach to demonstrate how one elite coach was influenced by his playing experiences and how he constructed his professional knowledge. In doing so, they illustrated some dimensions of the dynamic social construction of coaching knowledge. In arguing that many contemporary coaches are active learners who engage in constant reflection, Gilbert and Jackson (2004) cited the example of basketball coach John Wooden who embarked annually on a course of intensive self-study, initiated by continued reflection on his coaching strengths and weaknesses, while Watts and Cushion (2016) considered the coaching journeys of eight experienced coaches who highlighted how their biographies had shaped their identities, learning and practice. Each coach emphasised the importance of experiential learning, learning from other coaches, practicing in diverse coaching domains and the ongoing nature of learning. The authors concluded that coaching journeys are an under-utilised resource and have implications for future coaching practice, coach learning and coach education development. Oral histories and life stories such as these examples are extremely useful in uncovering the elements and context that contribute to elite coaching practice but they are only one method of combining coaching history with contemporary coaching practice. Historical reflections on coaching journeys and practice, gleaned from the archives, could be equally valuable as those gathered orally from contemporary practitioners, although, as can be seen from the short coaching biographies that follow, the earlier the time period, the more interpretation is required of the researcher and reader. Nevertheless, these kinds of studies of coaching figures and practices from the past can significantly inform our understanding of what attributes and strategies have traditionally been employed when engaging in elite coaching.

The Soccer Coach

Association football was slow in adopting coaching and the Daily Mail argued in 1920 that football was suffering from a failure to recognise the need for expert coaching, especially important after the loss of so many experienced players in the War (Aitken, 1920). Coaching continued to meet considerable resistance throughout the professional game from both management and players, although the Football Association began coaching courses in schools in 1934-35 (Carter, 2001) and ran a course for nearly 100 coaches at the Carnegie Physical Training College, Leeds, in 1938, which included psychology, diet and sleep, training and tactics (Walton, 1938). Most of those responsible for developing the professional game had no such formal training, relying instead on their experience and their footballing communities. When football's governing body changed the offside law in 1925 the intention was to counter negative tactics, but the outcome was 'New Football', a game that had new tactics and playing formations, often considered to be the invention of Arsenal club manager Herbert Chapman (Nannestad, 2002). Chapman was the first football manager to become as well-known as leading players, not least because he reputedly earned £1,500 per year (Huggins and Williams, 2006, 45). He introduced changes in the way his teams approached games and brought his own playing experience to bear on the game, changing the function of every outfield position and encouraging his teams to act as a single, efficient organic unit. The style was a culmination of Chapman's theory and practice during twenty years in football management and one that demanded a carefully planned, scientific method of winning matches. Chapman's methods were based on thinking about the game. The club's trainer, Tom Whittaker described him as a '25 hour a day manager' and Eddie Hapgood explained that Chapman 'loved to sit up to the early hours with Whittaker...arguing tactics, angles, theories'. Charles Buchan believed that the secret of Chapman's greatness was that he 'would always listen to other people and take advantage of their ideas if he thought they would improve the team in any way'. A key part of his tactical nuance was the organic and pragmatic marriage of his theories to the individual abilities of the players. Chapman's would utilise any method, regardless of its origin, to improve his teams. He experimented, but he did not do so blindly, for he possessed the vision and adaptability to incorporate innovations into his grand designs. Chapman always borrowed ideas if he considered them worthy and he backed his belief in the importance of learning from the continentals by taking his teams abroad (Say, 1996).

The Track and Field Coach

By the time you'd listened to Franz, you would be in no doubt that breaking the world record would be as good as painting the *Mono Lisa*. He just invested the whole thing with glamour and magic (Chris Chataway cited in Bryant, 2005, 19)

Franz Stampfl claimed to have put science into British sport in 1938 by initiating biological and physiological approaches to running and mechanics to throwing, which were later 'generally accepted throughout the world.' Although a highly debatable claim, Stampfl, who had no formal coaching qualifications, was an elegant, charismatic, and inspirational freelance athletics coach who coached at Oxford University two days a week and ran evening training sessions at the Duke of York's Barracks in Chelsea, charging a shilling for anyone who turned up. Among his athletes were Chris Chataway and Chris Brasher, who believed that Stampfl's power as a coach derived from his tough experiences of life. In 1936, Stampfl had gone to the Olympic Games in Berlin and returned 'terribly worried about what the future held' so he left Austria for England where he started coaching. Stampfl's later wartime experiences, particularly being torpedoed when on his way to an internment camp, gave him a great deal of inner strength, 'I'd been through these experiences,' he said, 'I don't need somebody to tell me what I should be doing, either in coaching or in life'.

Chataway said of Stampfl that he 'didn't know a hell of a lot about running' but that he had a 'fantastic ability to inspire'. He 'could touch what we were doing with magic' making athletes certain that they could achieve and that 'it would be a disgrace if you didn't'. If 'you missed the chance to break a record, how could you ever forgive yourself?' He also observed that Stampfl had the knack of making training seem 'not in the least bit tedious. He saw all sports, and particularly athletics, as an exciting challenge.' Stampfl believed that to coach properly he had to get under the skin and into the personality of each athlete. He also argued that anything that passed between athlete and coach was covered by the same confidentiality as that between doctor and patient. For him, the important thing was that the coach should be 'willing to give of his experience whenever it's required' but to be as unobtrusive as possible and never force his opinion upon the athlete. Persuasion was the best weapon and confidence was the most important quality in the coach-athlete relationship. Without it little could be achieved but with it, 'the two men pull together in double harness to become a team.' Coaching was more than a job, it was a vocation, 'which one follows from the same sort of compulsion as drives some to write, some to paint, some to build bridges'.

Stampfl defined the coach's role as 'guide, philosopher and friend, counsellor and confessor, a prop at times of mental tension, a coach's job is big enough for any man.' He wrote, tellingly, 'when all the shouting is over, when the senior partner in the firm has broken the record, made the headlines and joined the immortals, the junior partner's reward comes from the satisfaction of a job: well done. Who could ask for more?' (Bryant, 2005, 229-239). Roger Bannister (1955, 184, 186-187, 202-203) considered that Stampfl's greatness as a coach rested on his adaptability and patience. He watched and waited for the moment when the athlete really needed him an approach that suited Bannister, who considered that the duty of the coach was to encourage resourcefulness and initiative in the athlete. For Bannister, the aim of the athletic coach should not merely be to help his athlete to achieve a set performance but to show him how, through experiencing the stress imposed by his event, the athlete could understand and master his own personality. He seems to have found what he was looking for in the coaching philosophy and practice of Stampfl.

The Rowing Coach

In Some Secrets of Successful Rowing in 1930 Steve Fairbairn outlined the differences between his approach and the orthodoxy of rowing and emphasised 'concentrating on working the oar, and natural body action'. This approach was often confused with sloppiness by traditionalists. Orthodox crews had the appearance of

being drilled, aspiring to uniformity in the boat at all stages, whereas Fairbairn crews were taught that perfect togetherness of bladework was the only uniformity that mattered. They were taught to think about rowing all the time they were doing it, to concentrate on keeping the balance and making the blade effective, and to allow their bodies to behave in a natural and comfortable way. By concentrating solely on working the oar, the body movements were left to the subconscious which, with training, would take care of them, just as in learning to walk or run. The word 'natural' crops up frequently in Fairbairn's world of rowing. His method was learned from pulling boats on the Yarra in Australia and the Cam in England, from listening and talking to oarsmen on both sides of the world, and from watching people moving boats. As a young man he was an active sportsman in other fields, a good cricketer, footballer, tennis player, billiards player and dancer, all of which and more contributed to the Fairbairn method of natural rowing. His understanding of the psychological side of coaching and his reliance on allowing the subconscious mind to solve problems was many years ahead of his contemporaries. The records show this methodology to be successful, but the results were not always pretty, leading advocates of orthodoxy, to accuse Fairbairn of bad practices. His critics might interpret his crew as being lazy, but his creed says that although you cannot do anything at all if you cannot do it easily, it is mileage that makes champions. Rowing for Fairbairn was a strict discipline and a serious business. He demanded plenty of hard work and fitness of body and mind. For Steve, rowing was thought and discussion. Steve made allowances for an individual's physical limitations and he never considered the possible effect on his reputation of coaching a crew however good or bad, however promising or unpromising. He required one thing only – that they should believe in him, and then he was ready and happy to coach any crew that asked him (Dodd, 1992, 159-163). Following a long tradition of innovation by expert coaches, Fairbairn also introduced swivel rowlocks instead of the fixed pin and, while he was attacked by the traditionalists among the amateur elite amateur for this challenge to their orthodoxy, the swivel rowlock was quickly adopted by rowers everywhere (Halladay, 1990, 130-31).

The Swimming Coach

William ('Bill') Howcroft was born in 1875 in Tamworth, Staffordshire. By 1901 he was a self-employed 'hardware dealer', working from home, and ten years later he was a 'gas works weighman' in Garston, which is where he made his reputation as a swimming coach and swimming journalist. Although originally an athletics coach, Howcroft was one of the first twentieth century coaches to systematically train schoolchildren (Gordon, 2003) and he visited the US to study their techniques and acquire a 'thorough knowledge of the American crawl', adoption of which had been particularly slow in Britain, subsequently passing on this knowledge to other British coaches. By the 1920s, he was effectively the leading swimming coach in the country. As coach of Garston Swimming Club, based at the Speke Road Baths in Liverpool, Howcroft had produced four of the six female members of the 1920 British Olympic team and when, in early 1922, the ASA appointed a special sub-committee to consider the cause of British failures at Antwerp in 1920 and to 'suggest a remedy', Howcroft was included as a member. The sub-committee reported that the chief cause of failure was that Britain had 'not appreciated the value of, and therefore not adopted, the modern developments in swimming strokes', despite the pressures from expert coaches like Howcroft.

In March 1923, the ASA reinforced its definition of an amateur as 'one who has never taught swimming for pecuniary gain' and this seems to have prompted Howcroft to review his status as an amateur. In July 1924, Howcroft, who had been appointed as Olympic coach, resigned from all of his amateur administrative offices 'on account of the fact that he was joining the professional ranks at the conclusion of the Olympic Games'. As Olympic Coach, Howcroft toured ten swimming centres throughout England that year and commented that his visits had stimulated the 200 swimmers he had tested. He had tried to coordinate and systematise the work and methods of the best English coaches and believed that the crawl stroke was finally being adopted for freestyle swimming. The results of the Paris Olympics, however, were 'only a little better' than

in Antwerp and, although District Coaching and Training Committees had been established by the late 1920s, Howcroft, writing in 1930, commented that while standards had improved this progress had not been as rapid as in other countries. Britain had failed to keep up with the latest developments in instruction methods, stroke analysis, and progressive training, leaving it as the 'only country where the governing associations have attempted to control instructional methods by textbooks and certificate exams. The ASA have dallied on the path to progress. Their recent record is one of apathy and procrastination'. Howcroft then criticised the existing ASA publications, arguing for their immediate revision, and pointed out that Training Colleges were using texts 'which should have been scrapped years ago'.

Howcroft, described on the 1939 register as a 'swimming instructor' and 'journalist', continued to be an active influence in swimming throughout the 1930s. During his coaching career, he contributed his own texts, *Swimming for Speed: The Crawl Stroke (1935)*, *Swimming for Schoolboys (1936)*, and *Crawl-Stroke Swimming (1929)*, a joint text produced with American coach L. de B. Handley. Uniquely, Howcroft coached both major universities simultaneously. After Cambridge University Swimming Club had secured his services as swimming coach, the Light Blues had had an unbroken run of success against Oxford in the annual swimming and water polo fixture at the Bath Club. In 1930, following a discussion between the two universities, Cambridge agreed that his services would also be available at Oxford, who were expected to improve significantly as a result. In 1935, he expressed concern for the administration of Olympic training and advocated 'the appointment of a national organiser, that new blood was needed in the administration and that the place to raise standards was in the training pool and not in the racing arena'. British Olympian Joyce Cooper later described 'Old Howcroft' as the best coach in the world at that time. Unfortunately, 'he went a bit bats towards his end but all during my career he was wonderful. I was supple but not strong. I had no strength in my legs and my back, my arms were weak. I couldn't climb a rope and fell off a bar if I got on it.

Howcroft died in the National Temperance Hospital, Euston, on August 14, 1951, at the age of 76, leaving his effects of £1,937 19s 9d. to his wife Agnes. His passing seems to have gone almost unnoticed and, like many other swimming coaches of the period, male and female, he has disappeared from the collective swimming memory. The technical developments he advocated had met resistance from amateur traditionalism, something of a paradox given the widespread perception of craft conservatism as holding back innovation. Like his coaching colleagues, Howcroft made little headway with the ASA who insisted on retaining the outdated trudgen in both the teacher certification structure and in educational material, partly because officials were proud of the English position as initiators of organised swimming and resentful of developments initiated by professional coaches (Day, 2017).

Conclusion

According to Dewey, people learn from their experiences and, in reflecting on those experiences, they adopt a 'scientific method', a process of experimentation that is clearly differentiated from the notion of 'science' as being a laboratory-based activity and one that coaches have often interpreted as being central to the notion of coaching as an 'art'. In eighteenth-century boxing, 'scientific' was used to describe the employment of skill and finesse and 'science' later came to be associated in the Victorian and Edwardian periods with a systematic process of training, as well as the development of technique. While coaches and athletes often referred to their training regimes as 'scientific', the impact of experimental science on coaching programmes was minimal and professional coaches continued to rely on traditional practices and their own experience, seeing their expertise as being an amalgam of both art and science. In trying to describe this dichotomy in 1908, John J. Mack, the Yale football trainer, concluded, 'if there was a word that meant about half of each, I think that would be the proper one to use' (Mack, 1908, 15-16). During the 1920s, however, advances in

experimental science, combined with the growth of the Olympic Games, stimulated the development of the sports sciences and Pierre de Coubertin noted in 1925 that scientific control, especially in physiology, was increasingly becoming part of sport, although he also observed that science provided only 'imperfect data' (de Coubertin, 1966, 96-97).

While the approach to the training of athletes became more scientific during the Inter-war period, and coaches had more theoretical knowledge than their predecessors, one commentator noted that the 'best trainers of fifty years ago were probably as successful by rule of thumb as the semi-scientific coaches of today'. Major advances had been made but most of these had been empirical (E.A.M., 1935). Drawing primarily on their own experiences and the mores of oral tradition, Inter-War coaches accumulated a range of techniques and sport-specific practices related to both skill development and physical preparation while also experimenting in applying emerging knowledge, in the process of which they intuitively accepted or rejected appropriate material, thereby adding to a traditional body of knowledge. In contrast to 'professional knowledge', this craft knowledge was 'knowing in action'; a feel for coaching developed with, and from, experience, embedded within informal structures created by coaches engaging in a process of collective learning. Using Inter-War examples, this paper highlights stability in traditional coaching methods based on experiential knowledge and suggests that, despite societal and economic developments, together with scientific and technological advances, of the last two hundred years, coaching practices remain distinguished by continuity rather than novelty. While elite coaches still fundamentally operate by continuing to rely on their experience and their 'coach's eye', however, the environment within which they operate would be unrecognizable to Inter War coaches. Given their reputations for adopting a 'scientific' approach and drawing on as many sources as possible, they would probably appreciate advances in sport science, although they may have some concerns about losing control of the coaching process and question whether they really needed to engage sports scientists and other specialists, given their own level of expertise.

Whether they would be equally impressed by the drive for standardisation through professionalisation and formal certification, a process that could well have blunted the innovative nature of their own work, can only be speculated. This notion of a formal coaching education is nothing new. The ASA introduced a Professional Certificate in 1899 and Sidney Abrahams was arguing in 1912 that 'a successful coach must be developed like a successful athlete...for the born coach in the strictest sense can hardly be said to exist' (*Singapore Free Press and Mercantile Advertiser*, May 27, 1912, 10). In 1947, there was a proposal for a 'College for Coaches', which would offer three-year courses covering first aid, psychology, massage and the 'modern methods of coaching' (Trembath, 1947, 17-18), while a year after the 1948 Olympics teachers were calling for the introduction of a Teaching Certificate in Athletics (Sparling, 1949). Despite these and subsequent initiatives the current research evidence suggests that successful coaches continue to rely on an inquiring mind, intuition, tacit knowledge, and experience and reflection rather than on sport science or coach certification. Stodter and Cushion (2014), for example, tracked two coaches over a year, encompassing their time before, during and after attending a coach education programme, and found that coaches displayed minimal changes in behaviour, relying on their existing biography to filter new ideas and integrating 'what works' into their practice context.

It is a little puzzling that the lessons of the past, together with contemporary research that consistently reinforces the legitimacy of Dewey's ideas about experience and reflection, have not been more influential within a coaching community that continues to prioritise formal education and explicit knowledge. Cushion, Armour and Jones (2003, 225) recognised that experience plays a central role in impacting upon coaches' practice but argued that the preparation of the practitioner cannot be left to experience alone while Evans and Light (2007, 1) take it as a given that contemporary coaches can no longer rely solely on 'learning the

trade' through experience. Gamble (2001) believed that the traditional 'master-apprentice relationship' represents a mode of pedagogy that is no longer deemed viable in modern workplaces where continuous change is the norm but this assumes that this relationship has no capacity to accommodate change and the innovations driven by the coaches examined briefly in this paper suggest that is not actually the case. Part of the problem may well be the widespread assumption that everyone can be taught to be a coach. If we interrogate that perspective, we might conclude that just as not everyone can become an effective plumber, doctor, joiner or teacher, even if they have been instructed in the fundamentals, then not everyone can become a coach. People with relevant personal skills and experiences, individuals who have a creative and fertile mind and who are prepared to reflect systematically on their generic and domain specific experiences, might actually be the only viable candidates as coaches. The answer might be that actually not everyone has the capacity to become a successful coach, even if the definition of 'success' is not limited to the production of competition outcomes but encompasses a broader, holistic and developmental perspective. So perhaps we should rethink both the ways in which potential coaches are selected and the way that they are helped to mature. If experiential learning is critical, and it seems that it is, perhaps it is time for a proper apprenticeship programme based on the notion of coaching as a craft not as a science. The problem for such initiatives, however, is that traditional coaching communities and coaching leaders emerged organically from within the activity, from below rather than being structured from above. Attempts to introduce mentorship and internship programmes have been unable to come to terms with this dichotomy. Zakrajsek, Thompson and Dieffenbach (2015) explored the use of internship in American academic coach education programmes and expressed concern about a lack of organisational consistency, an over-estimation of the coaching opportunities students were expected to experience, and deficiencies in the screening and evaluation of mentor coaches. Zehntner and McMahon (2015) recognised the power differential inherent within mentormentee relationships embedded in coach development pathways and argued for a narrative and critical reflection approach to establish a sustainable coaching identity that demonstrated evidence-based judgement and reflective consideration of actions rather than the mere reproduction of mentor coach practice. Unfortunately, there are no easy solutions available for coach educators but the centrality of experience, reflecting on those experiences and sharing ideas within communities, key factors highlighted by both the historical record and the contemporary research need to be placed centre stage in any future developments. As Dewey implied, coaches who learn their trade actively, rather than as a passive recipient of an instructional process, build a deeper understanding of the world in which they use their skills and through the continual development and use of those skills they experience learning as a lifelong process.

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