Epilogue

The Future of Soccer Science

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The features of *Soccer Science* provide an appropriate understanding of the scientific parameters that affect the performance of soccer players. Given the extensive nature of the topic area, the coverage is broad. This final section, therefore, is a postscript that brings some coherence to the themes throughout the book and situates this with a personal interpretation of the issues that will shape soccer science and the future of soccer coaching.

Several critical components that affect player performance management are discussed throughout *Soccer Science*. Although many of the components overlap, future success in soccer will be achieved by providing scientific models appropriate to soccer. The application of these models has a self-evident role in improving elite performance. Features of the model, such as devising training programmes, monitoring performance, establishing preparation for competition and evaluating sport-specific analyses, are informed by such knowledge.

The general message from *Soccer Science* is that high performance is being taken seriously, priorities have been recognized and a coordinated approach is essential for success at the elite end. We can assume that genuine endeavours are now being undertaken to improve coach education, knowledge of soccer science and professionalization. Organizational and cultural factors that have been conspiring against a move towards high-performance environments (i.e., reluctance to embrace change, coach education, professionalization, accountability and the development of scientific framework) are now being overcome.

Ultimately, the roles of the support staff will be examined more closely, to the benefit of the soccer profession. The increase in qualification-led employment will lead to an examination of the traditional role of the head coach. To facilitate these changes, a new era of performance directors and performance managers will arise. These practitioners will have the skills for appreciating the coaching process and its associated elements. This concept is based on the belief that preparation in the modern era is more important, more influential and more intelligent than in previous decades.

Scientific principles are used in maximizing individual performance and player well-being. Contemporary coaches should be trained and educated to think and work in a multidisciplinary environment. Above all, coaching is about problem solving. Therefore, coaches must appreciate the vital role of specialist support personnel.

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Successful soccer performance is undoubtedly multidisciplinary in nature. Contemporary coaches need to be aware of the physiological, biomechanical, psychological, nutritional, medical and the other types of issues that can affect competition. When all these factors work as an integrated system, excellence in high-performance soccer is possible. Coaching is all about problem solving. Coaches who are trained to think critically about all aspects of performance will gain an advantage over competitors.

If the role of the coach is to assimilate information and drive the coaching process, then the role of the soccer scientist is to monitor, record and deliver performance insights. Just as modern coaches need to be familiar with the significant contributions that sport science can offer, soccer scientists need to be familiar with the specific demands of soccer and the appropriate methods of communicating with athletes and coaches.

Soccer scientists provide information for the subsequent action by both coach and athlete. To achieve this, the athlete, coach and soccer scientist should be well versed in the procedures involved. Engagement of all parties is critical to improving performance. In the coming years, soccer scientists will link specific testing and monitoring procedures to the coaching process. The coach is then responsible for making appropriate interventions and modifications to the overall training plan.

The spiralling costs of purchasing players on the transfer market will reinforce the need for professional soccer clubs to put appropriate talent identification and development structures into place. Identifying soccer potential at an early age will ensure that players receive specialist coaching to accelerate their talent development. With the need to develop young, talented players, soccer scientists need to identify the key parameters and talent pathways that are required for elite performance participation.

Talent may be characterized by properties that are genetic and partly innate. Although talent may not be evident at an early age, trained practitioners can identify some early indicators, which may provide a basis for predicting those players who are more or less likely to succeed at some later stage. Soccer scientists will therefore need to understand genetic profiling as well as performance testing in the quest for more informed decision making. As a result, the future of talent identification will use genetic information alongside an adequate environment to maximize the pursuit of excellence.

The traditional bases of soccer competition are eroding fast. Innovation in products and services is more challenging by the day. Expectations continue to rise. Organizations have more data on hand but far less room for errors in execution, so their decision making has to be sharper and better informed. Overall, these factors call for superior analytics and deeper insights into what makes an organization work. Analytics will involve the extensive use of data, statistical and quantitative analysis, explanatory and predictive models and fact-based management to drive decisions and actions (Davenport and Harris 2007).

The analytics may be input for human decisions or may drive fully automated decisions. Analytics and intuitive decision making need not represent two diametrically opposed

paradigms. Nonetheless, contemporary coaches and practitioners will have first-hand experience of how the intelligent use of analytics can improve asset acquisition and management, talent management, operational performance and even injury prediction.

Finally, all those involved in athlete preparation need to consider how much is too much. Even though we will have sophisticated protocols, technology and analytics, we need to remember that professional sport participation is a human pursuit. At what point do all these advanced methods become overwhelming and transform athletes into machines who become too mechanical and lose their enthusiasm, spontaneity, creativity and natural talents because they are focused on everything except playing the game? The future will be complicated, but we should not lose sight of human engagement and interaction.

At an elite level of soccer, the next decade will see improved coach education, knowledge of sport science and player management. In addition, elite soccer teams will move towards high-performance environments in which the development of systematic performance models and increased accountability are commonplace. Innovations in player preparation are more challenging by the year, and expectations continue to rise. Therefore, player preparation has to be sharper and better informed. All these factors call for superior soccer science support models and deeper insights into issues relating to the management of soccer performance.