## Graeme McDowall



# S Y S T E M

What We Can Learn When Science and Reason Collide with Scottish Football

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## SYSTEM

## What We Can Learn When Science and Reason Collide with Scottish Football

## Graeme McDowall



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## Chapter 1

## The modern history of Scottish football – phase 1

THE INTRODUCTION set out the landscape of youth football in modern Scotland. It was in no way an exhaustive characterisation. Nor was it meant to be. More a rough sketch, an outline and a point of reference for much of the discussion in the later parts of the book. The task in hand now is to connect the conversation across the 'systems' of the past, present and hopefully the future to help inform us how we might start to think of a new future for youth football in Scotland. As such, this section of the book looks at Scottish football from a historical perspective to understand its earliest phases and subsequent evolution. When this stage is overlooked, misleading conclusions are often drawn. The goal of this section isn't to give a history lesson on what once was, rather it's to use the historical perspective to sharpen our vision of the present.<sup>1</sup>

The Scottish game has arrived at where it is today as a process of more than 150 years of adaptation and change. Not only has the world of football changed, but the world around us and our role in it has also changed. Scotland,

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despite being Europe's poorest independent country in 1700, would go on to create the ideals of modern life and take these ideals around the world; by the beginning of the 18th century Scotland had become Europe's first literate society with a cultural bias towards reading, learning and education, and in the process would become a global powerhouse in industries such as shipping and the tobacco trade.<sup>2</sup>

Scotland is illustrious in its endeavours of an intellectual nature, responsible for inventions such as the telephone, television, radar, the steam engine – a Scot even invented the Bank of England and the dugout. More significantly, on the pitch itself, and as we'll go on to discuss, Scots pioneered dribbling the ball and passing it, which created a more expansive style of football that would be labelled as 'combination play'. This style of play pioneered by the Scots is one that's widely adopted today.

The Scottish fast-paced passing play also employed for the first time position-specific players, changing the formation of the game in England. Clubs would recruit Scots and organised matches against Scottish teams in a conscious attempt to emulate and learn from them. This deliberate move to adopt the Scottish model changed the game south of the border to such an extent that by the late 1880s the majority of clubs in England were working class, like those in Scotland.

We have a propensity for driving change and for progress. Globally, Scots have punched above their weight, especially when you consider there's only around five and a half million of us. We've adapted and refused to accept our circumstances. According to the sports journalist Hugh McIlvanney, Scots have a collective self-assurance about them, they refuse to be belittled or taken for granted.<sup>3</sup> Not surprisingly then, this current and ongoing decline in our ability to excel at our national game hurts. We might not readily admit it, but it's a source of shame to us – it's a national embarrassment! We've arrived here as part of a slow process that crept up on us when we weren't looking and seemingly took root before we could do anything about it.

From a historical perspective, the World Cup finals in 1998 are an important landmark. The roots of our decline had already started to bed in, we just didn't know it yet. When Craig Brown and his Scotland team exited the Stade Geoffroy-Guichard on 23 June 1998 they brought the curtain down on what I'll go on to discuss as 'phase 2' in our footballing evolution. After an opening defeat to Brazil and a 1-1 draw with Norway, a 3-0 defeat to Morocco knocked Scotland out of the tournament. The century had ended, once again, with Scotland failing to qualify out of the group stages of a major tournament. It was little consolation at the time that this was our sixth appearance out of the previous seven tournaments. We know only too well that six more World Cup finals have come and gone since, and Scotland have failed to qualify for all of them. Scotland hold the dubious distinction, alongside Hungary, of being the only current international team to have played in eight World Cup finals but none in the 21st century.<sup>4</sup>

There's a sense of now or never when it comes to Scottish football. When it comes to the powerhouse footballing leagues, we know we're cut adrift as a matter of our geography and appeal. We can do little about that (although Celtic and Rangers have talked about jumping the geographical ship over the years). We don't, however, need to be cut off when it comes to producing world-class players and teams. Scotland did it before, and as we'll come to see they did it at scale; during one semi-final stage of the European Cup in the 80s, across the four teams participating, 30 per cent of the players were Scottish. For now, I'll leave you guessing on that one, but the point is we did it before and we can do it again. Before we get back to how, let's look at the 19th century to discuss some important factors in phase 1 of our evolutionary history.

## The modern history of Scottish football – phase 1

To look at something from a historical perspective you need to establish an entry point. The first documentation of football in Scotland goes back to 1424, to an act of parliament of James I forbidding the playing of the game.<sup>5</sup> To what extent this deterred Scots from playing the game isn't clear. Records from the time are brief and lack specifics. However, by the early 1700s the 'common people of Scotland' were described as addicted to the game of football.<sup>6</sup> What's clear is that between James I's reign and early Victorian times some form of football was being played in Scotland.<sup>7</sup> While it's unclear what form(s) of the game that was, there are no records to suggest that the modern form of the game, known as the rugby football game, was played until after 1850.8 For the purposes of this book, and by way of an entry point, this is where the story of the modern history of Scottish football begins.

Perhaps unsurprisingly, nowhere could modern football be seen more clearly than in Glasgow. The arrival of the modern game in Scotland, via the private schooling system, coincided with the population of Glasgow doubling between 1851 and the early 1900s.<sup>9</sup> When Hampden Park opened in 1903, and alongside Celtic Park and Ibrox, the city had the three biggest stadiums in the world, capable of housing almost half of the city's population.<sup>10</sup> The commentator R.M. Connell, writing in 1906, argued that 'the enthusiasm of the Scot for the Association game is without parallel in any race for any particular sport or pastime'.<sup>11</sup>

Post 1850, this enthusiasm is notable for two key factors, and it's through these factors that I'll discuss this part of our history. First, the story of the enthusiasm for the game in Scotland is inseparable from the story of the development of the game around the world; and second, is the style of football pioneered and exported by the Scots. It's a style that, today, is associated with what we consider the beautiful game. There's simply no doubt that Scottish players and coaches have played a major role in, and influenced, the development of the game worldwide. According to Michael Grant and Rob Robertson, authors of *The Management: Scotland's Great Football Bosses*, Scots working abroad introduced the passing game in countries such as Germany, France, Italy, Argentina, Uruguay, Brazil and Mexico.

The son of a Scotsman is said to have been present at the birth of football in Brazil. When Charles Miller travelled to join his father in Brazil, legend has it that among his luggage was a football and a copy of the Hampshire FA rules of the game. Miller was born in Brazil to a Scottish father and Brazilian mother of British descent.<sup>12</sup> At the age of nine he was sent to England to continue his schooling at the Bannister Court School in Southampton.<sup>13</sup> On his return in 1894, Miller picked two teams of men from the local gas company, the London and Brazilian Bank and Sao Paulo Rail Company. The men contested what's widely regarded as the first game of football of the modern era in Brazil. Miller would be influential in setting up the Liga Paulista 1901 that gave birth to association football in the country. Six years later Scotland's influence in the country was further enhanced when the former Ayr United defender Jock Hamilton took over at Club Athletico Paulistano and became Brazil's first professional coach.<sup>14</sup> Not only this, but he reputedly would also lay the foundations for future success by putting in place a coaching structure that was used throughout Brazilian football from youth level upwards.<sup>15</sup>

Elsewhere in South America, Alexander Hutton, a former teacher from Glasgow, moved to Argentina to work at the St Andrews Scottish school in Buenos Aires and is said to have set up the inaugural Argentinian league in 1893.<sup>16</sup> Before then, Hutton had set up his own English School in Buenos Aires where he quickly installed a football pitch. He brought the first leather footballs to Argentina; the odd-looking deflated pieces of stitched leather had bemused customs officials and his staff at the school, who struggled to see what use they were to be put to. Hutton would go on to form a team, Alumni Athletic Club, that would win ten league titles and become Argentina's first great club; this feat has only been surpassed by the cinco grandes ('big five'): Racing Club de Avellaneda, River Plate, Independiente, Boca Juniors, and San Lorenzo de Almagro.<sup>17</sup> Such was his influence that Argentine sportswriter Félix Frascara described Hutton as the 'Father of Argentine Football'.<sup>18</sup>

These aren't isolated examples of the Scottish influence on the game worldwide. John Harley, an engineer from Springburn in Glasgow, played for and then managed Peñarol in Uruguay. Harley and José Piendibene were the two exceptional players in the great pre-war Peñarol team. Notably, Harley, who captained the team for eight years, taught those around him the passing game.<sup>19</sup> In recognition of its Scottish roots, the short methodical passing game came to be known as 'a la escosesa', and this contrasted with the other style of play that was tutored in the country at the time – the 'kick and rush' game of England.<sup>20</sup> According to Uruguayan academic Rafael Bayce, this influence was paid back in cruel style when Uruguay crushed Scotland 7-0 at the 1954 World Cup finals in Switzerland.<sup>21</sup>

Even before football had taken root in Latin America and Continental Europe, it was being played in Asia. Football arrived in British Burma in 1879 when James George Scott from Dairsie in Fife introduced football to the country during his 25 years as a colonial official there.<sup>22</sup> Earlier than this, around 1870, John Prentice, a Beattock-born, Greenock-educated engineer, introduced a modernised form of the game in China.<sup>23</sup> In North America, David Forsyth from Perthshire introduced football in Canada at Berlin High School in 1870. He helped set up the first leagues that would spread locally before he played an instrumental role in the formation and administration of the Western Football Association.<sup>23</sup>

The story of the introduction of football into any nation is, of course, open to interpretation and depends on who is telling the story. The truth is always more complex than the simplistic creation of legendary figures and stories of

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the founding fathers. It's more realistic to suggest that no nation can claim to have invented football, that the pioneers of football in South America were likely South Americans with German, Italian and Swiss as well as British influence, and that this was connected to intercultural empire and nation-building, to industrialisation, trade and shipping, and travel, and the educational reform associated with this.<sup>24,25</sup> What's clearer is that the Scots had a profound influence on the way the game would go on to be played. Some of the historical figures mentioned, alongside many more influential Scots, became known collectively as 'the Scotch Professors'.

As well as the pioneers of passing the ball and of 'combination' play, the Scots were also the originators of dribbling the ball and were among the first professionally paid players. High-profile Scottish professional players such as James Love and Fergus Suter from Glasgow were paid to play for the Lancashire club, Darwen, against Old Etonians in the 1879 FA Cup Final; and Peter Andrews and James Laing were paid to play for the Heeley Club in Sheffield – men such as these are said to have been derogatorily labelled as the 'scotch professors' by the 'high priests' of amateurism.<sup>26</sup>

Eric Dunning, the former Emeritus Professor of Sociology at the University of Leicester, speculated that this label had been given to the Scots 'on account of what they had to teach the English about the game as it was constituted in those days, as well as the fact that they were illegitimately paid'.<sup>26</sup> According to Scottish football historian Ged O'Brien, this onset of professionalism weakened the game in Scotland as English scouts started to flood into the big towns and cities to entice players south to train players and clubs in this new style of football. The 'scotch professors' moved south and then eventually to the continent of Europe and beyond to teach the passing and running game to the world.<sup>27</sup>

Author and historian Ian Campbell Whittle hypothesises that the early history of Scottish football, and the Scottish style, can be traced to shinty-playing footballers of the 1870s, the devastating effect of the potato famine that hit Europe in the 1840s causing large numbers of people to move. While Ireland was worst hit, the Highlands of Scotland weren't far behind. People had to flee to survive. Areas such as Renfrewshire, Lanarkshire and Dunbartonshire were taking in as many people annually as Glasgow.<sup>28</sup>

These areas were experiencing a population explosion. The footballing hotbed of the Vale of Leven in Dunbartonshire was one such place. While the highlanders came to work in the local factories, they also brought with them the game of shinty. Soon shinty was being played in Alexandria, Renton and Dumbarton, and before long was reputed to have the largest following of all sports in the area. Significantly, the shinty players decided to give football a try but knew little of the rules or conventions of the game. While association football had only broken away from 'rugby football' in 1871, the year before the formation of the Vale of Leven Athletic and Football Club, it wouldn't have mattered much to the young highlanders, who knew little of either codes.<sup>29</sup>

This population explosion of people ambivalent to the conventions of the game may well have been the perfect

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storm for the emergence of the Scottish style of play. According to Campbell Whittle the source of this new philosophy was the Vale of Leven, and the catalyst was the sport of shinty, a game of not only lofted long passes but also a combination of short passes, trapped and passed along the ground, and of triangles.

The genesis of this new style aside, for the Scots the combination play would prove to be the perfect antidote when they came up against the greater physicality of their English counterparts. English football was more associated with a fast-paced kick-and-rush style – partly to do with the early rules of the game – something more akin to rugby than the soccer we know today. The English style of play of the day seems to have been shaped by their greater physicality and the rules of the game. As Jonathan Wilson writes in his book *Inverting the Pyramid*, rules varied from place to place and were loosely structured around the objective of getting a roughly spherical object to a target at opposing ends of a notional pitch.<sup>30</sup>

Up until 1863, carrying the ball with the hands was still practised, hacking was part of the game, such rule's meaning that football was typically a running and kicking game with some individual dribbling. English teams relied on individualism and physical strength, a key tactic being the practice of 'backing-up' that had flourished due to the absence of an offside rule.<sup>31</sup> This involved as many as eight forwards who would line up to forge an attack using raw brawn and dribbling skills. Breakdowns in play would be supported by a muscular rearguard who would look to quickly regain possession and launch a new attack. When done well, a large physical team was a daunting proposition to play against. All this conjures up images of the game we now more associate with rugby.

According to the sports historian Andy Mitchell, the marked physical discrepancies between English and Scottish players was evident in the first international between the two teams in 1872, played at the West of Scotland cricket ground in Partick. The visitors lined up in something resembling a 1-2-7 formation; Mitchell surmises that the Scottish style of dribbling and passing the ball to create a more expansive style of football was clearly alien to the English, who had been brought up playing as individuals who relied on a strong physical presence - in contrast to the combination play of the Scots. The Glasgow Herald report from the game noted: 'The Englishmen had all the advantage of weight, their average being about two stones heavier than the Scotchmen and they had also the advantage in pace. The strong point of the home club [sic] was that they played excellently well together.'32

In the match, Scotland were represented by Queen's Park, and given the weight advantage, most commentators expected an England victory, but it finished goalless, a scoreline that wouldn't be repeated for over a century. The theory behind this 'scientific approach' was that the best way to combat physicality was to tire the opposition out to neutralise their physical advantage. At some point in the match opposition players would become fatigued (perhaps physically and mentally), make a mistake, or could be picked off and exploited accordingly.

As with many great inventions and endeavours the genesis for creativity is the need to solve a problem. Combination play, if patiently adhered to, would eventually pay dividends but only if the application of the approach was adopted by all. To complement this style of play, the Scots, as well as pioneering systematic passing, were the first to give each player an allocated position; so effective was this approach that it would change the way opposition teams lined up against Scottish teams – forward players were reduced from seven to five and the number of defenders increased to five or six.<sup>33</sup>

The Scots had a distinct advantage when it came to gaining a head start in relation to this new, preferred and revered style of football. The rules of the game were so disparate from region to region that it promoted a particular style of play in one place, and something different elsewhere. Queen's Park, as the arbitrators of the rules at the time in Scotland, would play many of their early fixtures in matches among themselves. Up until 1873 and the formation of the SFA, Queen's Park were the game's governing body. Unlike the English, according to Wilson, on Queens Park's establishment in 1867 they adopted a version of the offside law that was more conducive to passing than either the FA's first offside law or its revision in 1866. Queen's Park would eventually accept the FA's version around 1870, but by this time their passing style was very much embedded in their playing. This advantage had been embedded due to a lack of matches in Scotland around the time, so Queen's Park essentially 'hot-housed' their talent and played many matches against themselves.

Whatever its origins, the combination style of play would supersede the kick-and-rush style and, as can be seen with Harley's 'a la escosesa', it would be exported around the world by the Scotch Professors. These early styles of play are associated with the inequalities of the 18th and 19th centuries, where social class accounted for a 2cm difference in height, serving as an indication of the health status between the well-off and less well-off.<sup>34</sup> From the 1870s in the west of Scotland, the epicentre of the game, working-class football clubs had sprung into life, while in England all the leading clubs, and a such the national team, were made up entirely of men from middle-class and uppermiddle-class backgrounds.<sup>35</sup>

## Reflections - the lost art of passing

The objective of this chapter wasn't to reminisce about the past, it was to sharpen our vision of the present. First, the matter of physicality. Today, in the 21st century, Scottish men are the smallest in the United Kingdom, averaging 5ft 8in, while across the world the Dutch are the tallest at 6ft.<sup>36, 37</sup> Gordon Strachan once cited 'genetics' as a factor in Scotland's failure to qualify for the 2018 World Cup finals. According to Strachan, the issue of height was a recurring factor, leading to the off-the-cuff remark that 'genetically we have to work at things, maybe we get big women and men together and see what we can do'.<sup>38</sup>

To date the scientific literature hasn't found a link between the recruitment of taller players and greater success on the football pitch. The average height of the Scotland team for the final qualifying match for the 2018 World Cup finals was 181cm, very similar to the average height of 181.7cm of players who would go on to contest the 2018 World Cup finals; notably, the average height of players from France was 180.5cm, Brazil 180.4cm, Spain 179.5cm and Argentina 179.4 cm. The Netherlands, who

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also failed to qualify for the 2018 finals, were the tallest team in the world around this time with an average height of 183cm.<sup>39</sup>

However, unlike Strachan's team, the Scottish players of the 19th century (and the 20th) used these inequalities to their advantage – as did Strachan himself as a player. The expansive combination play of the Scotch Professors was designed to destabilise more physical opponents, which has parallels with the modern idea of 'positional play'. According to Pep Guardiola, perhaps its most successful exponent, the aim is to 'move the opponent, not the ball', emphasising the importance of interconnectedness and teamwork, and the philosophy is executed via the creation of triangles, diamonds and short passes, such as is associated with the combination play of the Scotch Professors.<sup>40</sup>

When we consider the so-called physical inequalities of the early Scots, it may come as no surprise that when Guardiola's Barcelona dominated football in 2008/9, he did so with a group of players who were physically diminutive. That year Barcelona won the Champions League, La Liga and the Copa del Rey, scoring 194 goals in 73 matches. Of his regular attacking players that year, only Thierry Henry was over 1.8 metres tall, wile Pedro, Xavi, Andres Iniesta, Lionel Messi, and Samuel Eto'o were all smaller, averaging 1.75 metres.<sup>41</sup> Currently the average height of an English premiership player is over 1.82 metres.<sup>42</sup>

Much like Guardiola's Barcelona team, what the Scotch Professors lacked in weight and height they made up for in speed of play and technique. In introducing the 'pass' and combination play the Scots had transformed the game into an art form. The players who were the best exponents were those who could not only dribble the ball but could also 'give and take' a pass.<sup>43</sup> More than anything, today we seem to have lost the *art of passing* and all that's involved in that. This might come as a surprise; you would only need to observe an elite youth session to see that it's not something that's neglected on the training pitch, and yet we've become such ineffective exponents of it.

While Strachan's 'genetics' comments were tongue in cheek, there's a more developed line of thought behind them. According to Strachan, to play passing football, players not only need to be comfortable on the ball and be able to pass it, but they also need to be willing and able to take the ball in any situation, to be able to shield the ball and, if need be, beat a player, and for that you need core strength. According to Strachan:

Barcelona and Man City, all the top teams ... they call them passing teams ... but when you watch them ... everyone in Barcelona and everyone in Man City can beat you: that doesn't happen in Scottish football, if it gets to a position where someone is coming to close you down, you play it long, or you play it first time and hope it gets there, the top players [rather than gamble with it] can shield it or they can beat you.<sup>44</sup>

Strachan highlights that this needs a change in mentality in relation to coaching and messaging to players. Players need to be encouraged to be responsible for the ball, encouraged to beat a player rather than get rid of it. This requires a deemphasis on the notion that you must not get 'caught on the ball' – all these attributes are commonly found in the great passing teams. However, while I agree that we need to develop the attributes and mentality to play this way, I feel we're missing an ingredient, and that's what the historical perspective enlightens us about.

The Scotch Professors, and those who came after, developed the passing game as a 'solution to a problem', not because it looked pretty. What became the 'beautiful game' was born out of necessity – the classic 'problem' first, 'solution' second conditions that can be found at the birth of any great innovation. For the Scots it was to combat a more physical opponent and to play to their own strengths; for Guardiola the problem was to move the opponent, to create an overload and then to exploit the space this created. The solution would come to be known as the 'tiki-taka' style and, much like 'combination play', these were labels given to describe what others were observing.

For now, the historical perspective leaves us with food for thought for the future, particularly how we go about introducing this competency back into our talent system. One thing for sure is that you need to know 'why' you're passing the ball, and not just be drilled to do so!

## Numbers game - a shrinking talent population

The second factor that should sharpen our vision of the present, and a factor that I'll return to later in the book, is the issue of numbers. The size of your talent pool matters. It really matters! In 1851, the population of Scotland was 18 per cent that of England and Wales.<sup>45</sup> Today it has fallen to around half of that, but not only that – by comparison to England we have an older population.<sup>46</sup> More revealing

is the sharp decline in the birth of males per year over the last 170 years.

The players who contested the first Scotland versus England game in 1872 were born between 1844 and 1852.<sup>47</sup> On average across those nine years there were just under 50,000 male births in Scotland per year (the peak year being in 1847 with 58,000); by way of comparison, from 2000 to 2021 the average males born per year was just under 28,000 (the highest being 30,570 in 2008).<sup>48</sup> Scotland's decline on the football pitch correlates with the declining number of males born per year. The Lisbon Lions were born between 1930 and 1944, when on average there were over 46,000 males born per year; the decorated players of the 1982 World Cup finals, who we'll discuss in the next chapter, were born across an era of an average of more than 48,000 males born per year.

In addition to this is another factor that wasn't an issue in the 19th century, or the best part of the 20th century – in today's society, more than 16 per cent of 2–15-year-olds are obese.<sup>49</sup> This is a barrier to participation that shrinks the talent pool even further. This issue needs to be taken seriously when it comes to thinking about the structure and make-up of Systems 1 and 2. A smaller talent pool has implications on many levels. Fewer people playing, less competition for places, a smaller margin for error when selecting. The issue of small numbers is a key issue, and as we'll come to see, it's a recurring theme, one that's hurting us, but in some ways it's self-inflicted. We need to design a 'system' that minimises this issue but instead we have a system that exacerbates it – more than anything it's the pool that's too small, not the players!

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What's clear and what does matter is that style of play emerged out of the 'mix' of cultural constraints of the time. The question of most relevance then becomes: when, how and where did we lose this philosophy? If Scotland exported the passing game to the world then why did so many nations retain this style? The passing game continues to be synonymous with the beautiful game. Its best exponents are the best players in the world, and they tend to play for the best teams. These questions need to be addressed. Before we get to that, though, we draw the curtain on phase 1 of our modern footballing history and head to the 20th century, a century that for the best part would see the Scottish player and manager flourish at the highest levels of European football ... and a Scotland team capable of winning the World Cup!