

“Men who can last”: Mountaineering endurance, the Lake District Fell Records and the campaign for Everest, 1919-1924

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Abstract

This paper examines the Post-First World War reconstruction of masculinity around notions of endurance in the British outdoor movement. From the 1860s onwards, long-distance walking trials in the Lake District became part of the regional mountaineering and rambling culture, offering middle-class mountaineers strenuous physical challenges which were expressions of regional pride and in which the Lake District became a synecdoche of the Alps, a place for excursive rehearsal of Alpine scale ambitions. Part of a wider cultural turn towards gigantism in sport and exploration prior to the First World War, these challenges increasingly deployed insights from the life-reform and body-management movements of the late nineteenth century, drawing on developments from other endurance sports such as cycling. They culminated in the standardised but largely informal Lake District Twenty-four Hour Fell Record, the pre-war record being established by Dr. Arthur Wakefield of Keswick in 1905. Post-war efforts to beat Wakefield's record by Eustace Thomas of the Manchester-based Rucksack Club demonstrated increasingly sophisticated applications of nutritional, body management and training programmes. Thomas's adoption of theoretical models of human vital capacity, based on the work of the Manchester anthropometrist and public health researcher, Dr. Alfred Mumford, suggest that, far from amateur athletes rejecting medical and scientific advice, the adaptive physiological model that emphasised the human ability to endure and to transform itself via habituation was deeply appealing in a post-war context. Innovative experimental physical regimes and recursive strategies pioneered in the regional outdoor movement were understood by participants to have wider implications for imperial mountaineering ambitions, notably the post-war campaign to climb Mount Everest.

In 1905 the cyclist, mountaineer and fellsman Dr. Arthur William Wakefield of Keswick, set a record for the most peaks covered in the Lake District in twenty-four hours. His tally of twenty three summits completed in 22 hours 7 minutes set a new benchmark for stamina and fitness, representing the culmination of nearly forty years of informal attempts by walkers and climbers to establish the parameters of a mountain endurance trial in the Lake District.¹ In 1920 the climber Eustace Thomas, a member of the Manchester-based Rucksack Club, set out to beat that record. Coached by Wakefield and on a strict vegetarian diet, the fifty-four year old Thomas trained for seven weeks in Borrowdale, beating the record over the Wakefield course with a time of 21 hours 25 minutes, a full 42 minutes under Wakefield's time. Thomas went on in 1922 to extend the number of summits in the challenge by including the Dodds and Clough Head north of Helvellyn, bringing the total ascent to 25,500ft and completing the round back to Keswick in 21 hours and 54 minutes. After a brief rest and a meal, Thomas set off with a party of seven friends to extend the route, taking in Grisedale Pike and Grassmoor and reaching the summit of Sail to achieve 30,000ft of ascent in 28 hours and 35 minutes.² In the years that followed, Thomas established other prodigious mountain endurance challenges. In 1924 he engaged in a friendly rivalry with R.T.S. Chorley of the Fell and Rock Climbing Club to climb all the Scottish 4,000ft summits in twenty-four hours.³ In the Alps in 1924, Thomas employed the services of the Alpine guide Joseph Knubel, setting out to climb all eighty nine Alpine 4000 metre peaks from a list compiled by the former Alpine Club President Captain J. P. Farrar, becoming the first Englishman to do so in 1928.⁴ Thomas's Lake District Twenty-four Hour Record was only beaten in 1932 by the Keswick guest- house owner Bob Graham, who completed forty two summits in just under twenty-four hours, covering approximately 66 miles and 27,000ft of ascent. It is a measure of his achievement that Bob Graham's record stood until 1960.⁵

This article will examine the origins of mountain endurance events and their antecedents in competitive pedestrianism, endurance cycling and athletics events and mountaineering challenges in the nineteenth century that led up to Wakefield's 1905 record. It will also seek to address the changing meanings of endurance in the pre-War and post-War periods. Divided by the Great War, Wakefield's 1905 Lake District Twenty-four Hour Fell Record and Eustace Thomas's 1920 and 1922 records enable us to evaluate changing cultural conceptions of values such as endurance, stamina, perseverance and stoicism and their relationship to the construction of masculinity. For roughly a decade after the Great War these endurance events took on a heightened symbolic importance, part of the wider post-War reconstruction of masculinity. In the immediate Post-War period, defining the limits of human physical and psychological performance offered some kind of hope that what could not be overcome by main force could be endured, that new forms of human physical cultivation were perhaps the only possible response to mechanised wars of attrition.⁶ These mountain trials formed part of a wider phenomenon within the British outdoor movement, where enactive repertoires of strenuous rambling attempted to create a communion of shared endurance between the Home Front and the Western Front, the post-War world and what had gone before.⁷ In the period 1919 to 1932, the Lake District Twenty-four Hour Fell Records became, in both senses of the word, monumental feats of endurance and laid the foundations for the ultimate endurance prize: Everest.

Modernity and the ideation of ‘endurance’

Increasingly in the period up to the First World War the human capacity for endurance was explored in multiple domains of endeavour. In the late nineteenth-century the ‘normative codes of masculinity valued a “neo-Spartan virility as exemplified by stoicism, hardiness and endurance”, which was personified by figures such as the soldier-hero or the imperial explorer.’⁸ Andrew Ritchie and Rüdiger Rabenstein have observed that in the 1880s and 1890s technology, commercial opportunities and cultural optimism led to a huge growth in the promotion of endurance events, with extraordinary performances being recorded in different sports.⁹ The athletics movement began to develop distance events, with the marathon appearing as a ‘re-invented’ tradition for the 1896 Olympics. ‘Gigantism’ in cycling emerged in the 1890s, typified by four different disciplines. In 1891 the Paris-Bordeaux race initiated the first international long distance place-to place race. Stage racing on the road led to the formation of the Tour de France in 1903. Paced “stayer” races on cycle tracks were introduced at the 100km distance in the first world championship in 1893. They were soon followed by twelve, twenty-four and seventy-two hour endurance races, where human and mechanical pacing led to an increase in speeds and distance. Six-day cycle races drew huge crowds to venues such as Madison Square Garden in New York. Very soon the ‘uninterrupted 1,000kms became a record-breaking objective.’¹⁰ ‘Gigantism’ also emerged in exploration and in mountaineering circles at the time. The Norwegian explorer Fridtjof Nansen’s account of *The First Crossing of Greenland* (1888) led to a craze for skiing throughout Europe and also to the inception of long ski tours in Scandinavia emerging as foundational components of masculine self-fashioning.¹¹ Driven by commercial pressures and a popular appetite for sensationalised newspaper and magazine coverage, the distinction between sport and exploration was often obscured. The last remaining geographical objectives increasingly became characterised as ‘races’ and tests of human endurance, with sporting champions taking part. Roland Huntford has argued that the race for the South Pole in 1911 was represented as the ultimate test of endurance and was understood by Amundsen’s Norwegian team members in sporting terms. Olaf Bjaaland, a Nordic ski racing champion, conceived of the race to the South Pole as ‘just another race; longer than anything he had known, but still a race. The psychology of this group was exactly that of a Nordic contest’.¹² ‘Nansen mania’ reinforced notions of imperial and exploratory masculinity, contributing to many British mountaineers’ notions of the Alps as the ‘Third Pole’, a mountain landscape containing endless potentialities for the construction of new endurance challenges. Sir Martin Conway’s *The Alps from End to End* (1895) records his 1894 enchainment of the Alps with two Ghurkha companions. Conway’s *First Crossing of Spitsbergen* (1897) also indicates the pervasive influence of Nansen in defining the masculine exploratory ideal and its appropriate representation. The eve of the First World War represented the high water mark of this expansive exploratory optimism.

The Lake District Fell Records emerged in the context of this growth of extreme endurance objectives and sporting events and drew on the physiological, psychological and nutritional insights developed by endurance athletes, particularly cyclists. In the

period up to 1914, accepted notions of the human capacity for speed and endurance had to be constantly recalibrated:

At a time of supreme confidence, improvements in athletic achievement appeared to be limitless. The suggestion, by extension, was that human capacity was without limits. Technology, exemplified by the bicycle and the newly emerging internal combustion engine, served to enhance human physical capacity.¹³

This 'expansive technological moment in society'¹⁴ created a fluid affective realm where concrete technology informed abstract possibilities and where the as yet unrealised desire to break records and do the impossible forced the pace of technological change. Peter Galison has made the point, in his discussion of the influence of technological metaphors on Einstein and Poincaré's theories, that 'for those turn-of-the century decades it made perfect sense to mingle machines and metaphysics.'¹⁵ Contemporary modes of thinking emerged that accommodated the superimposition of the concrete and the abstract and the metaphorical transference between the two. So, just as contemporaries understood that the machine enabled the body to push the limits of the possible, so the body could be envisaged as a machine, a machine that depended for its optimisation on understanding its workings systematically.¹⁶ In the machine age, mechanical objectivity became 'a way of being, as well as a way of knowing'.¹⁷ Mechanical metaphors proliferated:

Thermodynamics had major social implications and the metaphor of the body as a 'human motor' made it possible for discoveries in physics to be applied to a 'new vision' of social modernity.¹⁸

Modernity also featured an affective shift in the status of time from an absolute to a relative concept, in response to Einstein's Special Theory of Relativity. The metaphorical power of the concept of time's dimensionality and plasticity opened up new ways of thinking about human agency, space and time in the period up to the First World War. The multiple meanings of duration, with its etymological roots in notions of hardening, of lasting and of continuance in time, enabled contemporaries to explore the possibility that notions of human agency should be grounded not in measures of strength but in measures of endurance.

It should be no surprise then that the rise of endurance sporting events was contemporaneous with the rapid production and hybridisation of new body-management systems, as new ways of knowing informed new ways of being. By the 1880s physical culturalists and life reformers had embraced the outdoors as a significant new domain for individual and societal reform. Health and fitness were explored via experimental regimes combining 'dietary reform, gymnastics, sports and athletic exercise, exposure of the skin to sun and air, personal cleanliness, and dress reform'.¹⁹ Dominant national discourses of racial fitness and national efficiency created commercial opportunities for body-management systems. Physical culturalists like Eugen Sandow, drawing on the German gymnastics tradition, tended to emphasise the development of strength. Life reformers, like Eustace Miles, along with other food reformers and vegetarian

campaigners, tended to emphasise health, fitness and the efficient workings of the human body. These systems and techniques were studied and adapted by outdoor enthusiasts. The second part of this paper examines Eustace Thomas's 1920 and 1922 Lake District Fell Records and his system of body management. Eustace Thomas' choice of a vegetarian diet for an endurance event drew on the experience of a long tradition of vegetarian campaigners using endurance events in cycling, pedestrianism and gymnastics to demonstrate the superiority of their system of body management. The food reformer, health-food entrepreneur, fitness pundit and sporting champion Eustace Miles, perhaps the foremost populariser of body management and training regimes in the early Twentieth Century, frequently cited these 'muscular vegetarians' in his own food-reform works. Eustace Thomas adopted many of the dietary principles of Henry Light²⁰, founder of the Vegetarian Cycling and Athletics Club²¹, as well as consulting with Eustace Miles and submitting to a 'medical examination' by Miles.²² But Thomas was not a principled and committed vegetarian. He embraced vegetarianism as part of a wider scientific approach to endurance sporting events, of which a vegetarian diet formed only a part. His meticulous preparation was distinctive for its professional approach, analysing every aspect of the challenge. In his paper 'Mountain Endurance: Notes on a System of Training' presented to the Rucksack Club on Friday 11 March 1921, Thomas outlined his approach.²³ It encompassed a thorough reconnoitring of the route, gymnastics and mountain-based training, the use of lightweight clothing and footwear, massage, spinal exercises and foot preparation. Sleep, rest and psychological disposition were all covered. Above all Thomas' approach sought to understand the problem of endurance from a systematic physiological perspective, incorporating analysis of the nervous system, the respiratory system and breathing technique, the biomechanics of movement, gait and pace. The critical factor in Thomas' system was his analysis of the 'source of energy, and nature of fatigue'. An engineer by trade, Thomas employed mechanical metaphors: 'Each muscle cell acts as an internal combustion engine. Every effort and every contraction doing work means that a tiny, but exactly definite, quantity of fuel (food) is burnt'.²⁴ In formulating this highly medicalised and mechanistic approach and in imagining the body as a machine, Eustace Thomas drew heavily on the work of the Manchester physician and biometrician, Dr. Alfred A. Mumford.

Mumford held a number of important medical appointments in Manchester but it was his work with the Greengates Hospital and Open-Air School and his role from 1909 as Medical Adviser, and subsequently Medical Officer in 1910, to the Manchester Grammar School that informed his most important research as part of the Manchester Child Study Society. A proponent of Swedish exercises, Mumford took annual biometric measurements of boys in the gymnasium at the Manchester Grammar School. His main research theme was 'the pattern of physical development of young people and the relationship of that with personal academic and athletic performance.'²⁵ During the War years Mumford became increasingly critical of standard measures of physical fitness and sought to establish new measures of what he termed vital capacity, focussing on the cardio-pulmonary system. Mumford's concern was that modern urban schooling placed 'increasing demand for individual strenuousness'²⁶ and his work formed part of a wider medicalised debate around racial fitness, urbanisation and physical degeneration. Mumford focussed on measuring and understanding physique and its relationship to

stamina, defining the latter as ‘the capacity for sustained vital activity, particularly when endurance has to be sustained against disintegrating influences.’²⁷ A paediatrician with an interest in public health, Mumford’s research had important implications in a regional context for the post-War physical reconstitution of the Nation’s health and fitness, arguing that it was ‘the persistence of life rather than its power’ that should be the object of scientific consideration. Mumford’s research not only represented a conceptual shift of emphasis from measuring (and therefore valuing) strength and power to the construction of medical measures of vital capacity and endurance. It also placed strikingly little emphasis on the psychological aspects of stamina and endurance, or on essentialist theories related to notions of the will. Mumford’s ‘vital activity’ lacked any trace of neo-vitalist essentialism. It exemplified the scientific and medical orthodoxy of the time that had developed from the scientific critique of vitalism begun by Emil DuBois-Reymond and Hermann Helmholtz.²⁸

Neo-vitalist arguments retained their popular appeal however and scientific advances and metaphysical speculation kept the dream of invisible agency alive. In 1906 William James, in a talk to the American Philosophical Association entitled ‘The Energies of Men’ had drawn attention to hidden states of energy within men and women, calling for further study of the ‘topography of the limits of human power’²⁹:

Mental activity shows the phenomena as well as physical, and in exceptional cases we may find, beyond the very extremity of fatigue-distress, amounts of ease and power that we never dreamed ourselves to own.³⁰

For James these ‘vital reserves’ were unlocked by certain mental states, thoughts having a formative ‘power over the body’ with the will being strongly associated with ‘the amount of effort which we can put forth’.³¹ In continental Europe, psychological notions of the will were coloured by Nietzschean philosophy ‘which valorized the “primitive” energies lying dormant in man’³² as well as the psychoanalytical theory of the subconscious. Wider *fin-de-siècle* cultural concerns around degeneration and nervousness examined notions of ‘fatigue’ and ‘energy’, sometime utilising metaphors drawn from physical laws such as the conservation of energy.³³ Richard Overly has noted that in Post-War Britain there was a growing public appetite for ‘information on psychology of all kinds’, particularly in response to shell shock but that ‘the wider reading audience did not discriminate and the boundaries between the psychic and the psychological were often blurred.’³⁴ Whether it was spiritualism, psychoanalysis or other ‘technologies of the self’ dependent on willpower, there was a widespread post-War exploration of theories dependent on invisible agency, subconscious mental states, ghosts in the machine.

Mumford’s positivist medical approach to the problem of endurance rejected essentialist arguments. Physiological adaptation rather than a “will to power” was the key to reconstructing post-War health and masculine identity, putting Mumford firmly in the mainstream of late nineteenth- and early twentieth-century medical opinion that viewed the body as an adapting organism, capable of reconfiguration.³⁵ Mumford’s research drew heavily on the work on human respiration and vital capacity undertaken by the

Professor of Pathology at Oxford, Georges Dreyer.³⁶ Dreyer had been one of the first to raise the issue of supplementary oxygen with the Mount Everest Committee and had submitted eventual Everest expedition members George Ingle Finch and Howard Somervell to pressure chamber tests in 1921 and 1922. Finch became a staunch advocate of supplementary oxygen on Everest, the Committee dividing into pro and anti-Oxygen parties and the 1922 Everest expedition becoming something of a test of the utility of supplementary oxygen.³⁷ Thomas' wholesale adoption of an adaptive physiological model propounded by Mumford and linked to Dreyer's measures of vital capacity demonstrated an awareness of the constraints that would be placed on human performance at altitude³⁸ and presents the possibility that the Lake District Fell Records were intended as demonstrations of Eustace Thomas' suitability for inclusion on any attempt on Everest.

The origins of mountain endurance events

Competitive pedestrianism and the gambling associated with it was a feature of northern English sporting culture, something that the amateur athletic movement sought to distance itself from.³⁹ In the Lancashire "cotton district", the cradle of commercial spectator sport, competitive pedestrianism was one of the spectacles on offer in the first working class consumer society, actively supported by publicans and bookies. It grew out of an extensive working class rambling culture that had existed throughout the nineteenth century, an expression of the strength and vitality of recreational, auto-didactic and popular political energies that has only recently begun to receive due attention.⁴⁰ In the Lake District counties of Cumberland, Westmorland and Lancashire, guides' foot races had long been associated with fairs and county sports. These were short distance events, the prize money on offer and the related betting indicating a resolutely working class domain.⁴¹ Lakeland county field sports, such as following fox hounds and otter packs on foot, also indicate the rootedness of vigorous pedestrianism in rural sporting cultures. It was however, the vacationing middle classes, imbued with the athletic and exploratory ideal, who pursued the recreational potential of the Lakeland fells for physical challenges that pitted man against nature. Detailed topographical knowledge of local fells and a preference for vigorous pedestrianism as a way of acquiring that knowledge became an important part of regional middle-class self-identity. Middle-class mountaineers were also conscious of the Lake District as a synecdoche of the Alps, a place for excursive rehearsal of Alpine scale ambitions.⁴²

The Lake District guide-book author W. T. Palmer drew attention to the role that men with Alpine mountaineering experience had in initiating long endurance challenges in the Lake District. Palmer, in a chapter entitled 'Fell-walking Records' in his *In Lakeland Fells and Dales* (1903) noted the Alpine mountaineer the Rev. T. M. Elliott of Cambridge was the pioneer in 'record walking', undertaking a large mountain circuit at the head of Wasdale in the early 1860s [**insert Table One**].⁴³

The first attempt at something like a round of the major Lake District 3,000 foot peaks (Scafell Pike, Helvellyn, Skiddaw) was in the spring of 1870 by Thomas Watson from

Darlington.⁴⁴ A few years later ‘a well-known member of the Alpine Club tried to climb Bowfell, Scawfell Pike, Helvellyn, and Skiddaw in one day’.⁴⁵ At a similar date the future President of the Alpine Club, Charles Pilkington, did a sixty mile circuit of the fells in just over twenty-four hours.⁴⁶ In 1876 the Lakeland guidebook writer H. I. Jenkinson undertook a fifty three mile circuit. Known locally as Jenkinson’s ‘Six Mountains’ this walk received a good deal of publicity, inducing Leonard Pilkington to attempt a circuit of the high fells.⁴⁷ Pilkington was also a prodigious pedestrian, having walked from Liverpool to Windermere, completing a sixty mile circuit of the Lakes in 21 hours and 34 minutes.⁴⁸ In June 1878 ‘the brothers Tucker’, residents of Langdale and keen local cricketers and footballers, set out from Elterwater on a clockwise circuit of the high fells completed in 19 hours 38 minutes. Their performance was generally accepted as ‘the record’ until the mid-1890s.⁴⁹

Clearly, by the late 1870s, a probationary Lake District Fell Record was in existence. It involved a circular walk, generally taking in the summits of Bowfell, Scafell Pike, Skiddaw, Helvellyn, with the requirement of returning to a point of origin in under twenty-four hours. A small and highly motivated community of mountaineers and strenuous walkers were developing innovative measures of endurance and were willing to test themselves against the Lakeland fells. There was sufficient local interest for the press to become involved and for details of routes, times, height gained and speed over the ground to be recorded, preserved and circulated. But the record itself was still informal. There was no fixed starting point or route, no definitive number of summits, or official validating body. Different versions of the Twenty-four Hour Fell Record were contemplated. The Tuckers’ record for the main Lakeland summits was eventually beaten in August 1895 by ‘Messrs. Dawson, Poole and Palmer’ in a time of 19 hours and 17 minutes.⁵⁰ But increasingly participants tried to add to the tally summits attained and distance travelled in twenty-four hours. On 27 October 1893 the Cumbrian climber John Wilson Robinson, along with G. B. Gibbs, ‘the Lorton Walkers’, set out at midnight from Keswick, completing a round in 23 hours and 25 minutes.⁵¹ Robinson was diffident about setting out to beat the Tuckers’ record, claiming he only wanted to ‘see how many mountains I can do in a day’ but A. W. Rumney was under no illusion, stating that in spite of Robinson’s protestations ‘it was an attempt at the record.’⁵² Robinson had turned to Rumney for details of previous endurance records, stating in correspondence ‘I know you hold the best cycling records round here.’⁵³ Rumney, a writer on Dales life, was also the author of *Cycle Touring* (1893) and subsequently editor of the *Cycle Touring Club Gazette* 1907-1913. It is suggestive of the close affinities between endurance sports at the regional level. In June 1898 Ned Westmorland, having trained a Carlisle YMCA team, set out from Seathwaite. The walk was abandoned at Keswick but had ‘extended over fifty-two miles of fell country... total time taken, nineteen hours thirty five minutes.’⁵⁴ In September 1898 the climber Richard Broadrick from Windermere, a school master at Fettes, began a solo attempt on the Twenty-Four Hour Record, cycling from Windermere to Dungeon Ghyll at the start of the attempt, covering 60 ½ miles in 20 hours 15 minutes.⁵⁵ On 27 April 1900 Broadrick produced a 15 hour 26 minute circuit from Ambleside of Bowfell, Scafell Pike, Skiddaw and Helvellyn.⁵⁶ Westmorland subsequently suggested to Broadrick that ‘they should together try and beat all records by including Pillar Mountain and Fairfield in the walk, and do the whole in 24 hours’. On 14

September 1901 Broadrick, Westmorland and the Manchester cotton merchant Cecil Dawson of Sale, completed a circuit from Rosthwaite in 23 hours and 32 minutes.⁵⁷

These endurance events increasingly demanded a more systematic approach to physical cultivation. Broadrick and Westmorland were both leading Lakeland climbers. Westmorland was 'Sandow's gold medalist for his county' who had made a 'lifelong study of methods of climbing and descending'.⁵⁸ A. W. Rumney noted that Westmorland pioneered lightweight clothing and 'wore rubber soled shoes and alpaca or silk clothing'.⁵⁹ Broadrick was to die in September 1903 in a notorious mountaineering accident on Scafell Pinnacle. Cecil Dawson was a pioneer of long-distance walks and strenuous rambling in the Pennines. It is a measure of the increasingly competitive nature of these events that their record lasted under a year. On 28 May 1902, S. B. Johnson of Carlisle raised the bar still further by completing a 70 miles route, (18,000 feet of ascent) in 22hrs and 7 minutes.⁶⁰ Reflecting on the previous forty years of endeavour in mountain endurance pedestrianism in the Lake District, W. T. Palmer noted the increasingly systematic approach to the Twenty-four Hour Record: 'pacing and prearrangement of all kinds is considered necessary, and the record-maker is relieved of all impedimenta.'⁶¹

This new approach was exemplified by the mountaineer Dr. Arthur Wakefield of Keswick who set out to establish a new record in 1904. He defined the objective as 'to ascend the greatest possible number of peaks over 2000 feet, and return to the starting point within twenty-four hours'.⁶² Wakefield had developed tremendous stamina, Geoffrey Winthrop Young recalling that 'at five foot eight, 160 pounds, with a thirty-one inch chest, he was ferociously strong, a champion boxer and rower at university, with brilliant blue eyes and a penchant for adventure'.⁶³ Being one of the few GPs at the time that would make house calls, he cycled on his professional calls and swam in Derwentwater most days, a habit he continued in the icy waters of Labrador and Newfoundland as a medical missionary in the Grenfell Missions between 1908-1914. Like Ned Westmorland 'he was the first to adopt really lightweight kit on the fells, wearing a rugby shirt, shorts and gym shoes.'⁶⁴ Wakefield set the record in 1904 and again in 1905, taking in 23 peaks in 22 hours 7 minutes, covering 59 miles and 23,000 feet of ascent.⁶⁵ During the First World War, Cecil Dawson made another attempt on the record. Dawson pioneered vigorous long-distance fell walking in the Pennines and North Wales. He had walked from Llandudno to Manchester, and developed the famous Marsden-Edale walk. He had attracted around him a group of hard fell walkers who would trespass over the grouse moors of Kinder and Bleaklow, playing a game of cat-and-mouse with the gamekeepers in a politically charged assertion of customary access rights that was not untypical of the Lancashire cotton towns but which was increasingly at variance with other values and norms expressed in the Manchester outdoor movement, not least middle-class liberal notions of self-governance and appropriate behaviour.⁶⁶ Known initially as 'Dawson's Crowd' they eventually became known as 'the 94th' and Dawson simply as 'Colonel'. Eventually most of this rambling group would join the Manchester climbing and outdoor club, the Rucksack Club (founded in 1902).⁶⁷ Dawson tried several times to break Wakefield's record: 'Dawson's last effort on the 16th June, 1916, was completely successful. His time of 22 hours 17 minutes was ten minutes

longer than Wakefield's, but he included Stybarrow Dodd and Great Dodd, which meant an extra six miles.'⁶⁸ Despite this, Dawson's claim on the record was not accepted by many people, perhaps because of sensitivities about the appropriateness of undertaking sporting stunts during wartime. The simple fact was that the rules were fairly loose and there was no one to adjudicate. The Lake District based Fell and Rock Climbing Club (FRCC) 'refused to have anything to do with the dispute, disclaiming any authority in the matter'⁶⁹ and this was to be the position it would maintain, Eustace Thomas also indicating that the FRCC committee 'had passed a resolution that they would not recognise anything in the nature of racing on the Fells' after his successful attempt.⁷⁰ Class-based assumptions undoubtedly played a part. Dawson was in trade and from Manchester, whilst Wakefield was a professional, on active service and from an established Kendal family. The phrase 'racing on the Fells' implies more than a whiff of condescension and an implicit rejection of any hint of working-class foot racing. Even the Rucksack Club indicated, in its minutes of 4 June 1920, that whilst it appreciated Thomas's achievement, 'it was a new and undesirable departure for the club to enter an official recognition of records such as this, as it might introduce and encourage the purely competitive element into our sport.'⁷¹ Wakefield, who might have been induced to pass judgment on the performance, was on the Western Front, first with the Newfoundland Regiment, transferring eventually to the Royal Army Medical Corps. Eustace Thomas is on record as saying he thought Dawson should have held the record. An embittered man, Dawson nursed a sense of grievance all his life that led him to dispute Eustace Thomas' 1922 record.⁷²

Engineering the body: Eustace Thomas and the 1920 and 1922 Lake District Fell Records

Eustace Thomas had been a colleague of the rock climber Owen Glynne Jones at the Finsbury Technical College, London and had moved from London to Manchester in 1900, helping found the family engineering firm Bertram Thomas Ltd. He joined the Rucksack Club in 1909 at the age of forty.⁷³ At the end of the War 'he was an ageing businessman with weak digestion and troublesome feet. Suddenly and mysteriously everything changed: a fever for hard walking got into his blood and altered his whole outlook on life'.⁷⁴ He repeated a number of the Peak District test-piece walks like the 51 mile Colne-Dove Holes walk, in 17 hours 57 minutes.⁷⁵ Thomas approached the problem of endurance walking scientifically, using light clothing, rubber soled shoes, training hard and studying the terrain. He undertook extensive reconnaissance walks in the Lake District at Easter and Whitsun 1919, and every weekend in between, using an altimeter to record heights. Accurate measurement added 3,000ft to the height gain of the route.⁷⁶ Thomas and his walking partner Norman Begg described developing 'a regular schoolboy hero-worship for Wakefield'.⁷⁷ In 1919 Thomas began a series of remarkable endurance walks, including a traverse of all the 2,500ft peaks in South Wales with J. Rooke Corbett, a traverse of the Welsh "3,000s" from Aber to Snowdon with Corbett and Dr. Wakefield in 22 ½ hours and a traverse of the English 3,000ft summits from Keswick to Wasdale Head in 19 hours 20 minutes.⁷⁸

In 1919 Thomas made his first attempt on the ‘Wakefield Fell Record’, completing the round in 28 hours 30 minutes. Reflecting on the causes of his failure in 1919 he was analytical: ‘The difficulties were – Insufficient feeding (his own fault), great reduction in climbing pace in the second half to avoid distress in breathing....How can one best train to increase food reserves, and maintain his wind?’⁷⁹ In 1920 the Wakefield course ‘was completed, and in under 22 hours’, Dr. Wakefield accompanying him for ‘three-fifths of the whole circuit’.⁸⁰ The climber Dorothy Pilley recalled seeing Thomas and Wakefield reconnoitering their route on a glorious May morning in Wasdale: ‘Suddenly, like two little, rolling hopping balls, he and Wakefield (who held the record and was pacing him) came dashing incredibly down the fell...there followed a pause for a bath and a rub-down. Then off they went for Scafell.’⁸¹ Wakefield’s role as pacer was to stop Thomas going too fast, Thomas noting that ‘the Fell Record calls for continual restraint.’⁸² His average speed on the successful attempt was two and a half miles an hour. Technically Thomas had won the record but he wanted to better it. He made two failed attempts in 1921, then in 1922 succeeded.⁸³ On Saturday 10 June 1922 Thomas ‘covered the 23 tops of the doctor’s 1905 route in 21 hours 25 minutes.’⁸⁴ The height gained was 25,500 feet.⁸⁵ Then ‘after a short rest in Keswick he continued over the top of the Grassmoor range, and in a total time of 28 hours 35 minutes he climbed 30,000 feet in a distance of 79 miles. This was at the age of fifty-three.’⁸⁶ Reflecting on this achievement in 1923, Thomas hinted at his motivation for ascending 30,000 feet in a single push. He had long advocated these endurance events as domestic counterparts of greater mountaineering challenges:

this test makes as near an approach to the conditions of the greater mountaineering as this country can afford. There are no new ascents possible, and no glaciers, but there were the difficulties of cold, fog, and rain, and of a journey through the mountains at night without moon. The course made a severe call on endurance in virtue of the great height ascended and distance travelled.

Thomas also noted that 30,000 feet was ‘a nice round figure which had long been coveted, and which represented something more than the height from sea level of the greatest mountain in the world.’⁸⁷ This imaginative rehearsal of the ascent of Everest by Thomas had multiple motivations, communal and personal, signaling Thomas’s own fitness to be chosen for the assault on Everest and his imagined communion with Britain’s imperial mountaineering ambitions. It also registers the enduring social distance that prevailed in the British mountaineering establishment at the time, as well as perhaps a note of defiant resentment that was to inform Thomas’ subsequent campaign to climb all the Alpine 4,000m peaks. Despite Thomas’s 1920 Fell Record, it was Dr. Wakefield who was invited on the 1921 Everest Reconnaissance Expedition (he had to decline as he was at the time a G.P. in Megantic, on the Quebec-Maine border in Canada). That Wakefield was chosen to go to Everest again in 1922 was largely to do with his class (Sedbergh School, Trinity College, Cambridge) and his M.D. The Mount Everest Committee, founded in January 1921, with representatives from the Alpine Club, the Royal Geographical Society and the War Office, represented the establishment: unsolicited applicants were ‘turned down in favour of upper-to middle-class young-to

middle-aged men, most of whom had a military or a medical background.’⁸⁸ Class still represented an insurmountable obstacle to being inducted into the British mountaineering establishment and gaining access to the greater ranges. Imperial mountaineering objectives remained a jealously guarded domain, where selection was often based on connections and estimations of character as much as on climbing ability, a thinly veiled and racially inflected attempt to maintain a version of imperial masculinity based on caste, ethos and nationality. The Australian George Ingle Finch also suffered initially from the conservative nature of the British mountaineering establishment. He was excluded from the 1921 Everest Reconnaissance Expedition, despite his outstanding Alpine track record and his exceptional performance in Dreyer’s hypobaric chamber, largely due to his forthright manner, European scientific education and complicated domestic life.⁸⁹ Eustace Thomas’ recursive strategies failed to effectively negotiate the deeply encoded social grammar of the British class system. Nor could the performative consciousness so evident in modernity ever truly replicate the otherness of mountaineering in the Himalaya; or account for the madness of a summit bid on Everest after the monsoon had broken and fresh snow fallen. On 7 June 1922, three days before Thomas’ 1922 record, Wakefield was in Camp III on Everest when a climbing party above him triggered an avalanche that killed seven sherpas, bringing the 1922 Everest Expedition to a terrible close.⁹⁰

The early 1930s were to see another boom in endurance fell walks in the Lake District. The *Manchester Guardian* of 4 July 1931 recorded Colin Dodgson’s Lake District 100 mile walk, completed in 33 hours.⁹¹ Further attempts were made on the Twenty-four Hour Fell Record, the mountaineer, explorer and Sedbergh School alumni F. Spencer Chapman attempting it in 1932. Spencer Chapman noted that ‘Dr. Wakefield was a Sedbergian, and had been paced over part of his route by Bobby Woodhouse, a Sedbergh master.’⁹² He also indicated that Wakefield and Woodhouse were keen for the prize to go to an Old Sedbergian. He lodged with Wakefield and was coached by him. He set off on 17 May, 1932 but was defeated by navigational problems in the mist.⁹³ He was also certainly hampered by a knee injury sustained on the 1930-1931 Greenland Expedition.⁹⁴ Soon after F. Spencer Chapman’s failed attempt, on 13 June 1932, Bob Graham, a Keswick guesthouse owner, established a new record, the ‘Bob Graham’ still being the name given to the Lake District twenty-four hour event.⁹⁵

Eustace Thomas’ preparation for the Lake District Twenty-four Hour Fell Record is outlined in his 1921 *Rucksack Club Journal* article, ‘Mountaineering Endurance: Notes on a System of Training.’⁹⁶ He drew on the full range of physical cultural and life-reform models available to him. Physical exercise was taken at the YMCA gymnasium in Manchester ‘under the special direction of Lieut. Marsh.’ Breathing exercises were provided by the ‘Rev. Allen Barrett, of Claygate, road and track walking and racing were much practiced.’ Massage was taken once a week in training and every day for two weeks before the event; ‘during the race massage was taken at Langdale and Threlkeld.’ Commercial products were used, such as ‘Barrett’s nostril expanders’, ‘loofah shoe socks’ and the ‘N. British Rubber Co.’s No. 2794 (shoes 2791)’. These were re-engineered, the toe-piece being cut away and replaced with aeroplane linen, a Duralumin plate inserted ‘under the heel and a horse-hair pad above this.’

Underpinning these hybrid and experimental techniques was Thomas' understanding of the physiological systems that linked food-oxygen-respiration to outputs, measured as reserves of energy and endurance. In a section entitled 'Sources of energy and Nature of Fatigue', Thomas stated that energy meant stores of digested food: 'The same total of heat and work is produced as if the food had been used as fuel for a steam engine.' He went on to itemise the necessary elements of the system:

(1) Substantial reserves of digested food. (2) Food, during long effort, which is digested quickly by a tired digestion. (3) Perhaps a tenfold increase in oxygen. Heavy breathing and a well-developed chest. (4) A strong heart. The blood stream must accelerate to carry increased oxygen, food, CO₂, waste etc (5) Clean fluid blood without accumulation of clogging fatigue products.

Thomas 'felt that digestion was the greatest problem, and he experimented with various types of food until he discovered the diet most suitable for himself, both before and during the walk.'⁹⁷ He stated that

Vegetarian food was used throughout these attempts, largely because I believe in restraint, rather than excess in feeding: vegetarian feeding, while very satisfying if each meal is approached with keen appetite, is not so tempting.⁹⁸

In training in 1922 and on a restricted diet Thomas recorded that he lost seven pounds in weight:

I believe that this was good and had the result of a sort of general spring-clean of the body, with the elimination probably of deposits of urates, etc.⁹⁹

His adoption of a vegetarian diet during training was pragmatic rather than a principled and drew on the work of vegetarian endurance pioneers. The Vegetarian Society had been founded in Manchester in 1847, attracting a large working class as well as middle-class membership. We know from James Wharton's research that muscular vegetarians were keen to use endurance events to promote the superiority of their body management system.¹⁰⁰ The great vegetarian long-distance athlete Emil Robert Voigt had been born in Ardwick, Lancashire, and ran for Slade Harriers and the Manchester Athletic Club. He was the winner of the five-mile race in the 1908 London Olympic Games. Voigt had reported for the *Manchester Guardian* from 1905 and was a sports reporter for the *Manchester Evening News* until he moved to Australia in 1911.¹⁰¹ Between the years 1914-1921 he was resident in Manchester, running a welding and brazing works. Whether or not Thomas knew Voigt or had met him, he could hardly avoid knowing of him. Thomas certainly made clear his debt to Henry Light, founder of the Vegetarian Cycling and Athletics Club.¹⁰² In debating the balance between protein, fats and carbohydrates in endurance sporting diets, Thomas recalled that 'physiologists are

working hard at these matters and believe nature favours carbohydrates for hard work' noting that Light could never make 'low proteid diet work in practice. He prefers to get his proteid from eggs, milk, nuts and cheese, rather than from meat, which may contain already some of the objectionable fatigue products or uric acid.' On the subject of food during the race, Thomas noted simply, 'adopted Mr. Light's system of liquid feeding.'

Thomas' mention of the elimination of 'deposits of urates' and of 'fatigue products' indicates knowledge of the 'uric-acid-free-diet' pioneered by Alexander Haig, expounded in his book *Diet and Food* and popularised by the likes of Henry Light and the food reformer Eustace Miles, whom we know Thomas consulted. Eustace Miles' 'alcohol-free, uric acid free regimen allowed him to become one of muscular vegetarianism's best advertisements.'¹⁰³ Having encountered the Haig diet in 1896 Miles found himself 'feeling and looking better. His muscular flexibility and endurance improved.'¹⁰⁴ Eustace Miles was a hugely successful sportsman, health food entrepreneur, opening restaurants in London, running a mail order business and producing numerous self-help books:

Miles advised "self-help" in order to acquire 'complete health' which could be achieved by daily practice of gymnastics, self-massage, breathing exercises, auto-suggestion and meditation.¹⁰⁵

In his 1907 book *The Eustace Miles System of Physical Culture with Hints as to Diet*, we can detect some of the principles that Thomas applied, principles that would clearly be of benefit if applied to endurance events. Miles stresses important properties: digestibility of food, compactness, cleansing of the system, individual experimentation. He also noted how his system differed from Haig's. Miles's system included pulses, oatmeal and wholemeal: 'I have not found that the pulses, when properly cooked, and eaten in moderation, hurt many people, and I have found that they are decidedly sustaining'. The issue of sustenance is a critical one for endurance athletes. Miles, in a chapter entitled 'Foods', says 'I have kept towards the end a very vital merit of such foods: namely, their power to sustain. Experiments have shown that their power to sustain is almost equal to the power of flesh-foods, while sometimes it is far superior.'¹⁰⁶ Thomas was aware that Vegetarian campaigners claimed that the vegetarian competitive edge might have had something to do with carbohydrate heavy diets, enhancing the ability to restore depleted muscle glycogen. Other contemporaries suggested that it might also be the case that personality type and willpower were indicated in vegetarian athletic success. As early as 1905 the Berlin physiologist Wilhelm Caspari, in his studies of vegetarianism and physiology, was stressing: 'Since vegetarians were more self-conscious about health...they were more likely to live regular, hygienic lives year-round, and particularly to refrain from the use of alcohol.'¹⁰⁷ But even more important in Caspari's estimation was 'the importance of willpower for the completion of feats of endurance.' It required psychological firmness to stick to fixed principles. 'One could easily see vegetarian strength of will becoming fanaticism.'¹⁰⁸

Contemporaries had commented on Eustace Thomas' relentless determination. Ashley Abraham believed 'his whole performance was a triumph of mind over matter, however, and when one remembers that on some of his previous walks his feet and socks have been

literally soaked in blood one feels that his is no ordinary personality.’¹⁰⁹ Clearly, Eustace Thomas’ mental resilience was a component in his success. In the years after these events Thomas’ certainly came to place more of an emphasis on willpower. However, in the early 1920s, there is little evidence of Thomas appropriating any rhetorical strategies or mental techniques associated with psychological theories of the will, or affording willpower any primacy. Scientific positivism underpinned his whole approach to endurance events, his discourse on the nervous system being aligned with mainstream medical opinion that viewed the origins of motor ideation in the interplay of muscular movement and nervous tissue, as distinct from any psychologised notions of ‘nervousness’,¹¹⁰:

Fatigue is as likely to be nervous as muscular. The spinal cord is most important and is not at its fittest unless each joint of the spine is fully free, strong and normal. Spinal exercises and massage are valuable; also, much rest, sleep and a happy frame of mind.

This physiological model drew heavily on the work of the Manchester biometrician Dr. Alfred Mumford. The minutes of the Rucksack Club record that Thomas first read his paper “Endurance in Mountaineering” on Friday 11 March 1921, noting that the talk was exceptional for its ‘close scientific analysis of all the elements of the subject...there was an unusually large gathering, which included Dr. Mumford, with whom Thomas had collaborated.’¹¹¹

Post-War masculinity, endurance and the campaign for Everest

Eustace Thomas’ approach to endurance in the mountains certainly seems to confirm Zweiniger-Bargielowska’s observation that ‘physical culture and life reform should not be seen as separate movements and many activists practiced a range of bodily disciplines. Physical culturalists and life reformers were inspired by a critique of the artificiality of modern urban lifestyles and they aimed to restore the body to more natural living conditions.’¹¹² Restoring the body also took on a new resonance in post-War Britain. A physically exhausted nation required rejuvenating. A disenchanted nation required inspiring. Broken bodies required mending, shattered nerves the chance to heal. Dr. Arthur Wakefield himself, according to a recent medical analysis of his symptoms, suffered from post-traumatic stress disorder after 1919 and his nerves were the source of frequent comment by colleagues on the 1922 Everest Expedition, suggesting that he suffered from a ‘nervousness that amounted to hysteria’.¹¹³ In this context, qualities such as stamina, endurance, perseverance and restraint become patriotic duties, key components of post-War national reconstruction. The Great War, in Michael Roper’s analysis, led to the British middle classes reflexively re-assessing the codes of manliness.¹¹⁴ Edwardian ideals that had valued ‘stoic endurance, that is the forbearance of pain and the suppression of emotion’ gave way to a realisation that ‘even the bravest of men might succumb to fear’. Mechanised war and the experience of fear led to an increasingly ‘differentiated perception of masculine subjectivity’ explored via the New

Psychology of the inter-War period.¹¹⁵ Mechanised war also increased the focus on the body as a ‘technologized object’:

Body cultures embraced reconstruction from a position of both fear and fantasy about machines. War machines destroyed men but they were also important in rehabilitation and prosthetics.¹¹⁶

The body-building cultures analysed by Carden-Coyne exemplify the antinomies of the Post-War technologised self and the metonymy of machine and mechanism. It at first seems antithetical in the post-War context that mechanical models of physical reconstruction should flourish. But if traditional notions of masculinity were disarticulated by the experience of the Great War, which destroyed bodies, it was also clear from the widespread experience of shell shock that war was also capable of breaking the human will. In the British context, and particularly in the inductive and empirical sciences, the unreliability of the will was taken as axiomatic. There was a deep suspicion of the idealist currents displayed in the various forms of continental *lebensphilosophie*.¹¹⁷ If the will was free to fail, to buckle under extremes of pressure, then perhaps masculine values such as stoicism and endurance needed re-conceptualising as largely physical constructs, outputs of an adaptive physiological mechanism: as Daston and Galison have noted, ‘instead of freedom of will, machines offered freedom from will.’¹¹⁸

Mumford’s medical positivism inclined him to present and popularise his theories with mechanical analogies. His 1927 book *Healthy Growth* has a chapter entitled ‘The General Plan of the Human Engine’.¹¹⁹ Leading up to and during the War, Mumford’s research had increasingly focused on the physical education of boys and appropriate measures of physique and stamina. Increasingly critical of the standard military measures of fitness that were modeled on adults, Mumford was quick to adopt the Oxford Professor of Pathology Georges Dreyer’s model of vital capacity, outlined in his 1920 *Assessment of Physical Fitness*.¹²⁰ Mumford applied this model to his Manchester Grammar School data in a 1921 article in the journal *Biometrika* entitled ‘The Interrelationships of the Physical Measurements and the Vital Capacity’.¹²¹ Dreyer had increasingly become interested in physiological work during the war, examining blood volume and its ‘relationship to body weight and body surface area, the size of the aorta and the trachea in relation to body weight, and the effect of altitude on blood volume’.¹²² Prof. Dreyer’s research provided tabular information to relate lung capacity to other body measurement, a ratio he termed vital capacity, roughly comparable to what we now call VO² max.

The amount of oxygen actually available for each individual is calculated from the largest amount of air which he can pass out of his lungs after a deep inspiration. Failure to exhibit the relation between the amount of air and his body measurements, determined in the published tables, is held to show that the individual is not physically fit.¹²³

This concept clearly informed Eustace Thomas' thinking in his 1921 *Rucksack Club Journal* article, 'Mountaineering Endurance' where he notes that 'by special exercises a 4 ½ inch chest expansion was increased by 50 per cent and breathing muscles were strengthened.'¹²⁴ Dreyer's pioneering work with the Royal Flying Corps/Royal Air Force on hypoxia at altitude led to his consultation by the Oxygen Subcommittee of the Mount Everest Committee in the spring of 1921 and to the tests on G. I. Finch in the low-pressure chamber at Oxford. The controversies surrounding the use of oxygen at altitude on Everest have been expertly summarised elsewhere.¹²⁵ Despite Dreyer's warning to the Committee that Everest could not be climbed without supplementary oxygen, the Everest Reconnaissance Expedition of 1921 was inadequately prepared for some of the practical physiological problems of operating at unprecedented altitudes. Worrying about the exclusion of Finch in 1921, George L. Mallory was of the opinion that what was needed for the assault on Everest was benign conditions on the final easy angled slopes of the North Ridge and men who still had some go in them:

If this hope is realised the question will be one purely of endurance and not at all of mountaineering judgement as to snow conditions, etc., or of technical skill in dealing with snow and ice. All that is likely to come in lower down, but for the final push we want men who can last and we ought to give ourselves the best possible chance of being such a party when the critical time arrives.¹²⁶

But opinions were divided on how to achieve the 'best possible chance'. Mallory was initially fiercely opposed to the 'damnable heresy'¹²⁷ of supplementary oxygen but eventually the logic of using oxygen became overwhelming. In 1922 Finch and Bruce attained an altitude record of 8,320m using supplementary oxygen, 500m from the summit of Everest

The 1922 expedition demonstrated the prime requirements for an ascent of Everest from the north: good judgment, good equipment and men with endurance. They had had only the latter. Of climbing skill, very little seemed to be needed.¹²⁸

Mallory's bourgeois-romantic attitudes to mountaineering and the mythopoeic nature of his disappearance have tended to cloud the fact that in 1924 he was 'a late convert to gas', believing that 'any attempt without oxygen would be little more than a gesture, and act of nostalgia'.¹²⁹ A reluctant harbinger of modernity, Mallory knew better than most the brutal logic that Himalayan mountaineering imposed on the physiological limits of human endurance. Eventual success on Everest would require recursive military-style logistics, a better understanding of high-altitude medicine and biology and an acceptance of the technologised self. It is possible to argue that the Everest Expeditions of the early 1920s represent a dramatic struggle to come to terms with the limits of human endurance, a struggle that would change the nature of mountaineering and demand new models of human agency, new definitions of masculinity. In this immediate Post-War context, the physiological models developed by Dreyer, promulgated by Mumford and operationalised by Eustace Thomas are evidence of a conceptual shift in attitudes. A deep

seated faith in positivistic science and pragmatism was applied to the problems of post-War physical reconstruction. New endurance paradigms and bodily practices challenged inherited attitudes about character and masculinity that had been derived from nineteenth-century cultural codes. The biological rhetoric of British life reformers, physical culturalists and physiologists largely rejected hereditarian policies, believing that ‘a healthier, fitter, and more beautiful body was within reach of anybody who observed a hygienic regimen,’¹³⁰ that the body was itself a site of democratic values.

Further comparative research is needed to understand how the British outdoor movement adjusted to the growth of medical knowledge and the ‘medicalisation’ and ‘biologisation’ of society, drawing from it emancipatory potential and largely avoiding the repressive hereditarian biases that emerged in continental European societies in the 1920s and 1930s.¹³¹ Kerwin Klein’s observation about regional mountaineering cultures being more receptive to new ideas and offering more scope for innovation seems to be borne out in this instance.¹³² Regional civic culture increasingly theorised about liberal spaces outside of the city in which the ills of modern urban life could be addressed.¹³³ The outdoor movement was seen by many contemporaries as a democratic space offering the potential for both the reform of the individual and society. Regional pride and self-identity were increasingly expressed via a shared appreciation of the upland hinterlands of the northern industrial cities. The regional context enabled the close collaboration between the amateur sportsman and medical professionals, calling into question the claim that both athletes and the non-elite sporting population ‘resisted, rather than embraced, medicine’¹³⁴ in the late nineteenth century and that this attitude endured into the twentieth century. Within a regional setting, public health expertise could be adapted to the needs of outdoor enthusiasts, innovative and experimental bodily regimes freely drawing on localised theoretical knowledge. The British outdoor movement conforms to the philosopher James Carse’s notion of the domain of ‘infinite play’, a highly liminal, rule free space where play is indulged in for its own sake.¹³⁵ Mountaineering added the element of deep play, of irrational experimental risk. It is these elements that distinguish the outdoor movement from the domain of ‘finite games’, of codified rules, game time, winners and losers. It is interesting to speculate that perhaps here, in the unregulated outdoor movement, where participants were free to reinvent themselves and to freely experiment, we may be able to identify some of the origins of British sports science. It should also perhaps not come as such a surprise that in Manchester, the first industrial city of the nineteenth century, the engineering of the self should have been taken so seriously, or the implications of the machine man been explored so extensively.

Notes

¹ Arthur Wakefield, ‘Fell-Walking’, *Climbers’ Club Journal*, 9, part 33 (1906), 11-24. Anon., ‘The Fell walk of A. W. Wakefield (O.S.)’, *The Sedberghian*, 26, no.5 (1905), 234-235.

² Eustace Thomas, ‘A Long Circuit of the Fells’, *The Rucksack Club Journal*, 5, no.1, Issue 17, (1923).

-
- ³ R.S. T. Chorley, 'Peak-bagging Expeditions in the Highlands', *Journal of the Fell and Rock Climbing Club* 4, no.3 (1924): 369-377.
- ⁴ A.S.P. and P.E.B., 'In Memoriam: Eustace Thomas', *The Rucksack Club Journal*, 1961.
- ⁵ Buckley, P. and Smith, R., *42 Peaks: The Story of the Bob Graham Round*, (Kirkby Stephen, Cumbria: Hayloft Publishing, 2005), 11-17.
- ⁶ Ana Carden-Coyne, *Reconstructing the Body: Classicism, Modernism, and the First World War* (Oxford: Oxford University Press, 2009), 172.
- ⁷ Melanie Tebbutt, 'Landscapes of Loss: Moorlands, Manliness and the First World War', *Landscapes*, 2 (2004): 114-127. Melanie Tebbutt, 'Rambling and Manly Identity in Derbyshire's Dark Peak, 1880s-1920s', *Historical Journal*, 49, no.4 (2006): 1125-1153.
- ⁸ Ina Zweiniger-Bargielowska, *Managing the Body: Beauty, Health, and Fitness in Britain 1880-1939* (Oxford: Oxford University Press, 2010), 18, quoting J. A. Mangan and James Walvin (eds) *Manliness and Morality: Middle-class Masculinity in Britain and America, 1800-1940* (Manchester, 1987), 1. Paul Gilchrist, 'The Politics of Totemic Sporting Heroes and the Conquest of Everest', *Anthropological Notebooks* 12, no.2 (2006): 41.
- ⁹ Andrew Ritchie and Rüdiger Rabenstein, 'Mostly Middle-class Cycling Heroes: The *Fin de Siècle* Commercial Obsession with Speed, Distance and Records', *European Sport History Review*, 4 (2002): 92-133.
- ¹⁰ Ritchie and Rabenstein, 'Mostly Middle-class Cycling Heroes', 92-93.
- ¹¹ Roland Huntford, *Two Planks and a Passion: The Dramatic History of Skiing* (London: Continuum, 2008), 154-166.
- ¹² Huntford, *Two Planks and a Passion*, 279.
- ¹³ Ritchie and Rabenstein., 'Mostly Middle-class Cycling Heroes', 92.
- ¹⁴ *Ibid.*, 106.
- ¹⁵ Peter L. Galison and D. Graham Burnett, 'Poincaré and Modernity: A Conversation', *Daedalus*, 132, no.2 On Time (Spring, 2003): 51.
- ¹⁶ Anson Rabinbach, *The Human Motor: Energy, Fatigue and the Origins of Modernity* (Berkeley: University of California Press, 1992). Rob Beamish and Ian Ritchie, 'From Fixed Capacities to Performance-Enhancement: The Paradigm Shift in the Science of "Training" and the Uses of Performance-Enhancing Substances', *Sport in History* 25, no.3 (2005): 412-433.
- ¹⁷ Lorraine Daston and Peter Galison, *Objectivity* (New York: Zone Books, 2010), 4.
- ¹⁸ Zweiniger-Bargielowska, *Managing the Body*, 22.
- ¹⁹ *Ibid.*, 1.
- ²⁰ Eustace Thomas, 'Mountaineering Endurance: Notes on a System of Training', *The Rucksack Club Journal* 4, no.3, Issue No. 15 (1921).
- ²¹ The Vegetarian Cycling and Athletic Club (Established 1888): History <http://www.vegetarian-cycling-and-athletic-club.org.uk/history.html> (accessed 31 October 2012).
- ²² 'Thomas was congratulated in his recent record and gave some details of his training and experiences', *Rucksack Club Minutes*, 16 June 1922, Informal Meeting.
- ²³ Club meeting under the chairmanship of Mr. William Walker, *Rucksack Club Minutes*, 11 March 1921.
- ²⁴ Thomas, 'Mountaineering Endurance'.

-
- ²⁵ R. I. Mackay, 'The First Medical Officer', February 1999. <http://www.oldmancunians.org/html/news/current/The%20First%20Medical%20Officer%20illustrated.pdf> (accessed 3 November 2012).
- ²⁶ Alfred A. Mumford, 'Cardiac Efficiency from the School Point of View', *The British Medical Journal* (27 September 1913): 793.
- ²⁷ Alfred A. Mumford, 'Estimation of Physique and Stamina for School Purposes', *The Lancet* (16 January 1915): 115.
- ²⁸ Roberta J. Park, 'Physiologists, Physicians, and Physical Educators: nineteenth Century Biology and Exercise, hygienic and Educative', *The International Journal of the History of Sport* 24, no.12 (December, 2007): 1637-1673. S. Finger and N. J. Wade, 'The Neuroscience of Helmholtz and the Theories of Johannes Müller: Nerve Cell Structure, Vitalism, and the Nerve Impulse', *Journal of the History of the Neurosciences: Basic and Clinical Perspectives* 11, no.2 (2002): 136-155.
- ²⁹ William James, *On Vital Reserves: The Energies of Men: The Gospel of Relaxation* (New York: Henry Holt and Company, 1911), 39.
- ³⁰ James, *On Vital Reserves*, 4.
- ³¹ Robert D. Richardson, *William James: In the Maelstrom of American Modernism* (Boston: Houghton Mifflin, 2007), 490, 306.
- ³² Carden-Coyne, *Reconstructing the Body*, 172.
- ³³ Joachim Radkau, *Max Weber: A Biography* (Cambridge: Polity Press, 2011), 268-274; Zweiniger-Bargielowska, *Managing the Body*, 24.
- ³⁴ Richard Overy, *The Morbid Age: Britain Between the Wars* (London: Allen Lane, 2009) 144.
- ³⁵ Beamish and Ritchie, 'From Fixed Capacities to Performance-Enhancement', 420; Vanessa Heggie, 'A Century of Cardiomythology: Exercise and the Heart c.1880-1980', *Social History of Medicine* 23, 2 (2009): 280-298.
- ³⁶ John B. West and Eric Sidebottom, 'Georges Dreyer (1873-1934) and a forgotten episode of respiratory physiology at Oxford', *Journal of Medical Biography* 14, issue 3, (2006): 140-149. 'George Dreyer's scientific work at Oxford', *British Medical Journal*, 24 November (1934): 946. 'Georges Dreyer 1873-1934', *Biographical Memoirs of Fellows of the Royal Society* 1, no.4, 1 December (1935): 568-576.
- ³⁷ George W. Rodway, 'George Ingle Finch and the Mount Everest Expedition of 1922: Breaching the 8,000-m Barrier', *High Altitude Medicine and Biology* 8, no.1 (2007): 68-76. John B. West, 'George I. Finch and his pioneering use of oxygen for climbing at extreme altitudes', *Journal of Applied Physiology* 94 (2003): 1702-1713.
- ³⁸ Vanessa Heggie, 'Experimental Physiology, Everest and Oxygen; from the Ghastly Kitchens to the Gasping Lung', *The British Journal for the History of Science*, 46, no.1 (2013): 123-147, at 14 notes that Dreyer's 'extreme conservatism about human acclimatization was not accepted by the majority of expedition physiologists, doctors or mountaineers themselves.'
- ³⁹ Peter Swain, 'Pedestrianism, the Public House and Gambling in Nineteenth-century South-east Lancashire', *Sport in History* 32, no.3 (2012): 382-404. Bob Phillips, *The Iron in His Soul: Bill Roberts and Manchester's Sporting Heritage*, (Manchester: The Parris Wood Press, 2002).

-
- ⁴⁰ John K. Walton, 'The Northern Rambler: Recreational Walking and the Popular Politics of Industrial England, from Peterloo to the 1930s', *Labour History Review*, forthcoming 2013.
- ⁴¹ Bill Smith, *Stud Marks on the Summit: A History of Amateur Fell Racing: 1861-1983* (Preston: SKG Publications, 1985).
- ⁴² Jonathan Westaway, 'The Origins and Development of Mountaineering and Rock Climbing Tourism in the Lake District, c.1800-1914', in *The Making of a Cultural Landscape: The English Lake District as Tourist Destination, 1750-2010*, eds. John K. Walton and Jason Woods (London: Ashgate, 2013).
- ⁴³ W. T. Palmer, *In Lakeland Dells and Fells* (London: Chatto and Windus, 1903), 65-66.
- ⁴⁴ Palmer, *Lakeland Dells and Fells*, 66. Buckley and Smith, *42 Peaks: The Story of the Bob Graham Round*, 7.
- ⁴⁵ Palmer, *Lakeland Dells and Fells*, 67.
- ⁴⁶ *Ibid.*, 71-73.
- ⁴⁷ A. W. Rumney, 'John Wilson Robinson's Walk. Two letters and a few notes thereon', *Journal of the Fell and Rock Climbing Club of the English Lake District* 3, no.3, (1915): 109. Palmer, *Lakeland Dells and Fells*, 72-73. Ashley P. Abraham, 'Lake District Fell Walking: An Account of Mr. Eustace Thomas' Record', *The Journal of the Fell and Rock Climbing Club* 5, part 2, (1920): 174.
- ⁴⁸ Palmer, *Lakeland Dells and Fells*, 73-74.
- ⁴⁹ *Ibid.* 67-68. See also, M. Louise Pirouet, 'Tucker, Alfred Robert (1849–1914)', *Oxford Dictionary of National Biography*, Oxford University Press, 2004 <http://www.oxforddnb.com/view/article/36569> (accessed 27 Jan 2013).
- ⁵⁰ Palmer, *Lakeland Dells and Fells*, 68-70.
- ⁵¹ Griffin, A. H., *Inside the Real Lakeland*, (Preston: The Guardian Press, 1961), 60. Palmer, *Lakeland Dells and Fells*, 74-75.
- ⁵² Rumney, 'John Wilson Robinson's Walk', 110, 115.
- ⁵³ *Ibid.*, 111.
- ⁵⁴ Palmer, *Lakeland Dells and Fells*, 81. Rumney, 'John Wilson Robinson's Walk', 109.
- ⁵⁵ Palmer, *Lakeland Dells and Fells*, 85.
- ⁵⁶ *Ibid.*, 70.
- ⁵⁷ *Ibid.*, 85-88.
- ⁵⁸ *Ibid.*, 88.
- ⁵⁹ Rumney, 'John Wilson Robinson's Walk', 115.
- ⁶⁰ Palmer, *Lakeland Dells and Fells*, 89-90.
- ⁶¹ *Ibid.*, 90-91.
- ⁶² Buckley and Smith, *42 Peaks: The Story of the Bob Graham Round*, 7.
- ⁶³ Wade Davis, *Into the Silence: The Great War, Mallory and the Conquest of Everest* (London: The Bodley Head, 2011), 13.
- ⁶⁴ Buckley and Smith, *42 Peaks: The Story of the Bob Graham Round*, 7.
- ⁶⁵ R. Bayne, 'Dr Arthur Wakefield on Mount Everest in 1922: "this has not been by any manner of means a picnic"', *Journal of Medical Biography* 11 (2003): 150.
- ⁶⁶ Harvey Taylor, *A Claim on the Countryside: A History of the British Outdoor Movement* (Keele: Keele University Press, 1997). Ben Anderson, 'A Liberal

Countryside? The Manchester Ramblers' Federation and the "social readjustment" of urban citizens, 1929-1936', *Urban History* 38, no.1, (2011): 84-102.

⁶⁷ Eric Byne and G. Sutton, *High Peak: The Story of Walking and Climbing in the Peak District*, (London: Secker & Warburg, 1966), 65-73.

⁶⁸ Byne and Sutton, *High Peak*, 72.

⁶⁹ *Ibid.*, 72-73.

⁷⁰ Eustace Thomas, *Memories of the Fell Record*, *From Kinder Scout to Kathmandu: A Rucksack Club Anthology, 1907-1986* (Stockport: The Club, 1987), 128-132. This is a reprint of the original article of the same title published in the *Rucksack Club Journal* 11, no.4, issue 24 (1951).

⁷¹ Rucksack Club Minutes, 4 June 1920 Committee Meeting.

⁷² Byne and Sutton, *High Peak*, 72.

⁷³ Mike Dent, 'In Memoriam: Eustace Thomas', *Rucksack Club Journal*, 1961.

⁷⁴ Byne and Sutton, *High Peak*, 73.

⁷⁵ Eustace Thomas, 'Long-distance Walks', *Rucksack Club Journal* 4, no.1, Issue 13 (1919).

⁷⁶ Thomas, 'Memories of the Fell Record', 129.

⁷⁷ *Ibid.*, 130.

⁷⁸ Rucksack Club Minutes, Friday 16 January 1920, AGM.

⁷⁹ *Rucksack Club Journal* 4, no.2, Issue 14 (1920).

⁸⁰ Thomas, 'Memories of the Fell Record', 130, 132.

⁸¹ Pilley, D., *Climbing Days*, (London: Hogarth Press, 1989), 80-81.

⁸² Thomas, 'Memories of the Fell Record', 129.

⁸³ *Ibid.*, 130.

⁸⁴ Buckley and Smith, *42 Peaks: The Story of the Bob Graham Round*, 8. Rucksack Club Minutes, Friday 12 January 1923 AGM.

⁸⁵ Thomas, 'A Long Circuit of the Fells'.

⁸⁶ Byne and Sutton, *High Peak*, 75.

⁸⁷ Thomas, 'A Long Circuit of the Fells'.

⁸⁸ Patrick French, *Younghusband: The Last Great Imperial Adventurer* (London: Flamingo, 1995), 332.

⁸⁹ Davis, *Into the Silence*, 147-152. West, 'George I. Finch', 1705-1708.

⁹⁰ Walt Unsworth, *Everest* (London: Allen Lane, 1981), 97.

⁹¹ "'Peak Bagging": Lake District Fell Walkers 11 Miles in 33 Hours', *The Manchester Guardian*, 4 July (1931), 16.

⁹² F. Spencer Chapman, *Memoirs of a Mountaineer: 'Hellvellyn to Himalaya' and 'Lhasa: the Holy City'* (London: The Reprint Society, 1945), 28.

⁹³ 'Lakeland Climbing Record: Attempt on 33 Peaks in 24 Hours', *The Manchester Guardian*, 21 May (1932), 15. The date of this attempt in Buckley and Smith is wrong. Chapman clearly states that he made the attempt between the two Greenland expeditions and that the record at the time of his attempt was held by Eustace Thomas.

⁹⁴ F. Spencer Chapman, *Watkins Last Expedition* (London, Chatto & Windus, 1934), 98.

⁹⁵ <http://www.bobgrahamclub.org.uk/index.php?page=home>

⁹⁶ Thomas, 'Mountaineering Endurance', (1921). All subsequent quotations are from this unless otherwise stated.

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- ⁹⁷ Byne and Sutton, *High Peak*, 73.
- ⁹⁸ Thomas, 'Memories of the Fell Record', 131.
- ⁹⁹ *Ibid.*, 130.
- ¹⁰⁰ J. C. Wharton, 'Muscular Vegetarianism: The Debate Over Diet and Athletic Performance in the Progressive Era', *Journal of Sport History* 8, no.2, (1981): 62.
- ¹⁰¹ Own Gibson, 'Vegetarian Guardian man who won track gold with fruit, tea and nuts', *The Guardian*, Monday 23 July (2012), 9. Chris Cunneen, 'Voigt, Emil Robert (1883-1973)', *Australian Dictionary of Biography*, <http://adb.anu.edu.au/biography/voigt-emil-robert-8930> (accessed 5 February 2013).
- ¹⁰² Vegetarian Cycling and Athletics Club: History, <http://www.vegetariancac.org/history> (accessed 5 February 2012).
- ¹⁰³ Wharton, 'Muscular Vegetarianism', 67. Zweiniger-Bargielowska, *Managing the Body*, 27-36.
- ¹⁰⁴ Wharton, 'Muscular Vegetarianism', 67.
- ¹⁰⁵ Ina Zweiniger-Bargielowska, 'Building a British Superman: Physical Culture in Interwar Britain', *Journal of Contemporary History*, 41, No.4, (2006): 600.
- ¹⁰⁶ Eustace Miles, *The Eustace Miles System of Physical Culture: With Hints as to Diet*, (London: Health & Strength Ltd., 1907), 101.
- ¹⁰⁷ Wharton, 'Muscular Vegetarianism', 63.
- ¹⁰⁸ *Ibid.*, 63.
- ¹⁰⁹ Ashley P. Abraham, 'Lake District Fell Walking: An account of Mr. Eustace Thomas' Record', *Journal of the Fell and Rock Climbing Club* 5, part 2 (1920): 178.
- ¹¹⁰ Park, 'Physiologists, Physicians, and Physical Educators' 1648, 1449, 1653. Roberta J. Park, 'Biological thought, athletics and the formation of a "man of character": 1830-1900', *The International Journal of the History of Sport* 24, no.12 (2007): 1548.
- ¹¹¹ Rucksack Club Minutes, Friday 11 March 1921, club meeting under the chairmanship of Mr. William Walker.
- ¹¹² Zweiniger-Bargielowska, *Managing the Body*, 2.
- ¹¹³ Bayne, 'Dr Arthur Wakefield on Mount Everest in 1922', 150.
- ¹¹⁴ Michael Roper, 'Between Manliness and Masculinity: The "War Generation" and the Psychology of Fear in Britain, 1914-1950', *Journal of British Studies* 44, April (2005): 345.
- ¹¹⁵ *Ibid.*, 347, 353, 356.
- ¹¹⁶ Carden-Coyne, *Reconstructing the Body*, 172.
- ¹¹⁷ Michael Saler, 'Modernity and Enchantment: A Historiographic Review', *American Historical Review* June (2006): 709.
- ¹¹⁸ Lorraine Dalston and Peter Galison, *Objectivity* (New York: Zone Books, 2010), 123.
- ¹¹⁹ Alfred A. Mumford, *Healthy Growth: A Study of the Relation Between the Mental and Physical Development of Adolescent Boys in a Public Day School* (Oxford: Oxford Medical Publications, 1927).
- ¹²⁰ Georges Dreyer and George Fulford Hanson, *The Assessment of Physical Fitness by Correlation of vital capacity and certain measurements of the body* (London: New York, Cassell, 1920).

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- ¹²¹ Alfred A. Mumford and Matthew Young, 'The Interrelationships of the Physical Measurements and the Vital Capacity', *Biometrika* 15, nos. 1 and 2, August (1921): 109-133.
- ¹²² West and Sidebottom, 'Georges Dreyer (1878-1934)', 141.
- ¹²³ Mumford, *Healthy Growth*, 16.
- ¹²⁴ Thomas, 'Mountaineering Endurance, 1921.
- ¹²⁵ See footnotes 35 and 36 as well as Ian R. Mitchell and George W. Rodway, *Prelude to Everest: Alexander Kellas, Himalayan Mountaineer* (Edinburgh: Luath press, 2011).
- ¹²⁶ Unsworth, *Everest*, 40.
- ¹²⁷ West, 'George I. Finch', 1709.
- ¹²⁸ Unsworth, *Everest*, 99.
- ¹²⁹ Davis, *Into the Silence*, 524.
- ¹³⁰ Zweiniger-Bargielowska, *Managing the Body*, 2.
- ¹³¹ Edward R. Dickinson, 'Review Essay: Not So Scary After All? Reform in Imperial and Weimar Germany', *Central European History* 43, (2010): 149-172.
- ¹³² Kerwin Klein, 'A Vertical World: The Eastern Alps and Modern Mountaineering', *Journal of Historical Sociology* 24, issue 4 (2011): 519-548.
- ¹³³ Anderson, 'A liberal countryside'.
- ¹³⁴ Mike Cronin, 'Not Taking the Medicine: Sportsmen and Doctors in Late Nineteenth-Century Britain', *Journal of Sport History* (2007): 27, 29, 32, 33.
- ¹³⁵ James P. Carse, *Finite and Infinite Games: A Vision of Life as Play and Possibility* (New York: Free Press, 2013).