

The Bicycle Boom of the Gay Nineties: A Reassessment

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Résumé/Abstract

Les historiens voient généralement dans la bicyclette un facteur de transformation de la société de la Belle Époque, détruisant les barrières sociales, favorisant la transformation du vêtement féminin et suscitant une action en faveur des bonnes routes. Une analyse plus serrée montre toutefois que ces importants changements sociaux se sont produits indépendamment de la bicyclette ou encore que celle-ci compta seulement comme un élément important parmi d'autres. Les articles de revue et les ouvrages de l'époque consacrés à la bicyclette donnent à penser que l'importance de la popularité de la bicyclette réside plutôt dans ce qu'elle nous fait comprendre de la mentalité victorienne — notamment une certaine fascination pour le décorum, le sport, l'amélioration de l'hygiène, la nature, les clubs et la technologie nouvelle. Dans ce contexte, la bicyclette n'apparaît pas comme un catalyseur qui déclencha le changement, mais comme le miroir des attitudes de l'époque.

Historians have traditionally seen the bicycle as a transformative agent in turn-of-the-century society, destroying class barriers, stimulating changes in women's clothing, and producing the good roads movement. Closer analysis indicates, however, that these important social changes either occurred independently of the bicycle or that the bicycle was only one of several influential factors. Period bicycling books and magazine articles on the vehicle suggest that the bicycle boom's significance instead lies in the insights it offers into the Victorian mentality — in particular, fascination with decorum, sports, health reform, nature, clubs, and state-of-the-art technology. Within this context, the bicycle emerges as a mirror of existing attitudes, not a catalyst for change.

Certain periods in history are surrounded by mystique and exert tremendous allure. The 1890s undoubtedly was an era that has been romanticized and idealized. It is seen as an ebullient, dynamic, elegant decade, perched between the rigid, tradition-bound nineteenth and the energetic, forward-looking twentieth centuries. Dubbed the "gay nineties," this period characteristically is thought of as the time of the electric streetcar, the gramophone, and the Gibson girl. And invariably a prime symbol evoking that special ethos has been the bicycle. Both popular and academic social histories and works specifically on the bicycle have attributed incredible achievements to it, from liberating women from restrictive clothing and social roles, to bringing about the widespread use of asphalt pavement in cities. These extravagant claims permeate our historical literature; unfortunately, despite their widespread acceptance, their accuracy should be questioned. When the broad cultural context of the 1890s is considered, the bicycle in fact stands as a reflection of commonly held attitudes and values of the period. It was less a transforming agent than a mirror. The role of the bicycle in Canada is of particular interest because Canadians were passive consumers of the technology. Since there was little sense of being at the vanguard of a movement and having to prove themselves, Canadians were free to adopt the bicycle as they saw fit.

Within this framework the real impact of the bicycle at the turn of the century can best be assessed.

The bicycle that appeared in the 1890s was not a sudden, radical invention. Under various names and in various forms it had existed throughout the nineteenth century, periodically experiencing waves of popularity and then disappearing again into obscurity. The direct ancestors of the turn-of-the-century bicycle were hobbyhorses, which first emerged in France at the end of the eighteenth century. They consisted essentially of a solid wooden frame with wheels, shaped like a bicycle but without steering or braking mechanisms. The more elaborate versions took the form of animals or serpents. Hobbyhorses became fashionable diversions for court dandies in England and on the continent, but by 1820 much of the early excitement they created had dissipated. They were ungainly, and propelling them required too much effort. In spite of the fanciful nature of the dandyhorse era, an important technological change was introduced towards its end. Karl von Drais, baron of Sauerbronn, invented the "Draisine," which added a tiller to the basic vehicle, making steering possible. However, the Draisine was never mass-produced and remained something of a curiosity. During the next forty years, further innovations to the hobbyhorse were developed, but

again they were never commercially exploited. For example, in 1839 Kirkpatrick Macmillan, a Scottish black-smith, invented pedals and put them into a machine of his own design. Macmillan's vehicle remained his private plaything and was not extensively copied.

In the 1860s the efforts of three Frenchmen, Pierre and Ernest Michaux and Pierre Lallement, led to the development of the velocipede or boneshaker. This solid iron machine with pedals (but no brakes or gearing system) ushered in a new wave of fascination. The fad was short lived, and by the beginning of the 1870s the machine was discarded, but not without containing the seed for the next phase of innovation. In 1869 the English firm of Reynold and May displayed the "Phantom" at the Crystal Palace in London. It was a highwheeler or "ordinary," characterized by a large front wheel and a much smaller rear one. The huge wheel represented an attempt to maximize the distance that each revolution of the pedals could carry the machine. By the 1880s this variation of the bicycle became the *de rigueur* racing and touring delight for affluent young men and the focus of special cycling clubs, with their familiar uniforms and quasi-military organizational structure. Most of the local clubs and the larger national associations of the 1890s, such as the League of American Wheelmen and the Canadian Wheelmen's Association, date from this decade. Toward the end of the 1880s refinements were made to the bicycle. The pneumatic tire and the diamond frame made the so-called "safety" (basically the modern bicycle) a technological reality. A chain drive permitted more efficient pedalling, and the bicycle's wheels became equal in diameter; the use of steel tubing brought a dramatic reduction in the weight of the machine and made cycling much less strenuous. By the beginning of the 1890s, the safety supplanted the unwieldy ordinary as the standard form for the bicycle.¹

The famed bicycle boom raged between 1895 and 1899. It was a striking phenomenon because of the amount of publicity it generated and because it arose in the middle of the depression that plagued the decade. The beginning was marked with high society taking up the wheel. American and British literary and public figures, such as Lillian Russell, Frances Willard, and several politicians, were reported to have adopted the new recreation. An air of glamour attached itself to cycling and popular literature began to devote much attention to the new craze. Starting in 1895 manufacturing increased dramatically; during the next year the number of American bicycle companies reached a peak of over 300. Large profits were realized. It was claimed in some circles that markups of 200 per cent were by no means unusual.

Until the mid 1890s all bicycles in Canada were imported. They either came fully assembled or else arrived in parts that were put together in a Canadian factory, usually in the Toronto area. However, antidumping legislation

enacted in 1895 interrupted this practice, and with the new tariffs the only economically viable alternative for American companies was to open branch plants.² In 1899, important changes profoundly affected the industry both in Canada and the United States. The American Bicycle Company formed a large trust, absorbing numerous smaller producers and creating a new competitor in the American market. That September, when plans to open a Canadian subsidiary in Hamilton were announced, Canadian companies reacted swiftly. Five of the larger manufacturers (H.A. Lozier & Co., Goold Bicycle Co., Welland Vale Manufacturing Co. and the bicycle divisions of Massey-Harris and Gendron Manufacturing Co.) merged to create Canada Cycle and Motor Company, which remains a fixture in sporting goods manufacturing in Canada.³ The mergers proved to be less successful than anticipated. By the end of the decade the novelty of cycling had yet again worn off and it was clear that an exciting new technology, the automobile, would soon eclipse the safety. Sales plummeted and by the early 1900s the boom was over.

The very structure of the bicycle raises questions about how useful it ever was. Riding it demanded at least a minimal level of physical fitness and will power. Cycling along flat stretches was not so difficult, but hills required too much effort for a heavily clothed, overfed Victorian. It was much easier to rely on the street railway or cabs, and with unpaved streets it was also cleaner. Mud was always a problem after streets had been watered and generally throughout much of the spring and fall; in dry spells dust could be equally trying. When riding a bicycle it was also impossible to carry objects. Activities like shopping were impractical. Finding secure parking along busy city streets was also difficult. In Canada, probably the greatest limitation was the weather. As June Callwood remarks: "Climate shapes character. Climate extremes shape character profoundly."⁴ The length and severity of the Canadian winter allowed only a few months a year for cycling. In light of all of these factors, the bicycle was not an ideal transportation medium. It could never take the place of the other options available to Canadians in the 1890s—the horse and buggy, streetcars, walking, trains, and boats.

In spite of the limitations inherent in the bicycle, historians have persisted in building elaborate myths about its impact on turn-of-the-century life. One claim that should be dismissed is that everyone—all classes, all ages and both sexes—rode it. Some commentators have stated that the bicycle erased social barriers because cyclists all rode along the same country lanes each Sunday and that astride a "wheel" all men and women magically became equals. However, throughout the boom years bicycles were anything but cheap. Access to them was not universal. Gary Tobin notes that in 1893, before bicycle sales began their dramatic climb, a prospective buyer could expect to pay \$100 to \$150 for a new machine. By 1897, the price had fallen to approximately \$80, still beyond the budget of most

workers.⁵ In addition to lacking the money to buy bicycles, working class men at the turn of the century did not have leisure time to indulge in the new recreation. The work week was long and paid holidays were nonexistent. After a day at a factory doing manual labour, a man, especially if he was married and had children, was unlikely to climb onto his bicycle and speed away.⁶ Furthermore, it seems likely that most cyclists were urban dwellers. The farmers of the 1890s, like factory workers, could not afford the time or money to devote to bicycles. They also had no place to ride them, given the notoriously poor condition of rural roads.⁷ Admittedly, there were certain groups that did put the vehicle to good use. Doctors, mailmen, policemen and even ministers found them useful for doing their rounds. Some businessmen and workers likely rode them to work and then used them to return home for lunch. Henry Klassen states that in Calgary the CPR telegraph boys and call boys (whose job it was to summon engineers and firemen on call) depended heavily on the bicycle in the days before the telephone became common in homes. Some effort was made to devise military applications for the vehicle, but projects met with limited success and they certainly never made a mark on Canada.⁸ On the whole, the main users of the bicycle seem to have been middle- and upper-class urbanites with the requisite leisure time and disposable income.

A second area for dispute concerns women and the bicycle. No article or book discussing changes in women's status or female clothing at the turn of the century omits mentioning the bicycle. It and the typewriter are credited with rendering traditional heavy Victorian clothing obsolete and freeing women from the home.⁹ Attention is always focused on bloomers and divided skirts, both of which were adaptations to accommodate bicycle and other sporting activities. However, bloomers did not entrench themselves as important elements of female dress, and the extent to which they were actually worn can be debated. Katharine Brett states that Canadian women did not abandon skirts en masse and simply wore looser and lighter ordinary clothing when exercising.¹⁰ It should also be noted that historically bicycle manufacturers tended to design machines to fit female clothing. Ladies' models featured drop frames because of the skirt and some bicycles even included mud guards over the rear wheel to prevent garments from becoming soiled.¹¹ The striking shift in clothing styles toward less ornamentation and a sleeker silhouette by the 1890s was linked to the rise in women's work outside the home, female involvement in clubs and associations, and the growing phenomenon of the servantless housewife. Functional daily dress became a necessity. As well, the dress-reform movement worked for change.¹² The bicycle was only a small part of a much larger concentration of forces that reshaped feminine garb. Incidentally, it has been noted that men's wardrobes were also affected by cycling. Sportswear, such as knickerbockers and sweaters, came to be incorporated with nonsporting outfits and a new air of

"greater informality in everyday affairs" supposedly resulted.¹³ There again the bicycle was not the sole operating factor. Golf, lacrosse, tennis, and other sports played equally important roles.

Historians have suggested that the bicycle produced a new breed of tourist, who demanded road maps, reports on road conditions, and better rural inns.¹⁴ Cycling clubs in Great Britain and the United States are usually mentioned as the chief proponents of these services. However, the Canadian situation was somewhat different. The Canadian Wheelmen's Association was never large or influential enough to finance the preparation of maps or to organize tours.¹⁵ When cyclists travelled (and these were generally highly motivated young men only), they tended to take the train to their destination, tour locally by bicycle, and return by rail.¹⁶ A persistent obstacle to this type of travelling was the structure of railway fares. Some companies charged extra for handling bicycles, which the cyclists angrily denounced since the vehicles were part of their luggage. In 1897 a bill to rectify the problem was debated in Parliament after petitions bearing a total of 25,000 signatures were received. The issue at stake was not simply the personal finances of Canadian cyclists. There was fear of offending American cycling tourists, a concern that was brought into sharp relief owing to the Canadian Wheelmen's Association program of distributing promotional literature on touring in Canada. The regressive policy of the railways would discourage potential visitors.¹⁷ The association was not the only body promoting tourism in the 1890s. For example, in 1898 the Ottawa Valley Tourists' Association was formed with the express goal of publicizing the valley.¹⁸ The influence of railway companies was the most pervasive of all in the tourist trade. In the 1880s the CPR began constructing a chain of hotels across the country. The aim was to meet passengers' need for accommodation and at the same time stimulate income to increase profits. The mountain resorts, such as Banff, were designed specifically to attract tourists.¹⁹ The bicycle touring phenomenon was only one manifestation of a trend toward increased leisure travel.

A third area in which the influence of the bicycle can be disputed is the good roads movement and urban reform. The League of American Wheelmen in particular is usually cited as the main agitator for the development of better quality rural roads and the asphalt paving of city streets. Certainly the league had some impact in Canada through coverage of its activities in magazines and newspapers. Also, the Canadian Wheelmen's Association tended to pattern itself on the league and thus espoused good roads as one of its causes. Although the issue was raised again and again in *The Canadian Wheelman*, the association's official mouthpiece, it appears that little was accomplished. In 1883 four members of the Ottawa Bicycle Club set off on a jaunt to Toronto and found the roads from Ottawa to Kingston abominable.²⁰ By 1897 the association was still

trying to induce its members to lobby for better roads. It organized a photograph contest with a \$10 prize for the picture of "the worst piece of public road to be found in Ontario." Only two entries were received; the magazine responded by admonishing cyclists: "Come now, gentlemen, wake up."²¹ Later in the same year, a Toronto correspondent recalled "the old saw" — that the roads leading out of the city were in lamentable condition. The cause of this annoyance was "principally... the apathy of the vast body of cyclists who could control any and every Municipal, Provincial and Dominion legislative body if they would unite and work harmoniously... there is an all prevailing desire on the part of wheelmen apparently to leave these matters to anybody and of course that means nobody."²²

In general, representations made to various levels of government throughout Canada tended to be poorly coordinated and sporadic. The magazine contains references to a low response to a circular from the Saint John Good Roads Association demanding more citizen involvement in the issue, a test case in Montreal in which a cyclist was attempting to sue the city for damages caused to his wheel by bad roads, and attempts in Victoria to obtain passage of a bylaw authorizing \$100,000 worth of street improvements. There was no pan-Canadian movement, nor were there strong provincial movements that united cyclists into a cohesive pressure group.

The timing of this agitation for good roads is in itself highly significant. The trend towards paving heavily

travelled city streets with asphalt began in the early 1890s. It was already well under way when the bicycle boom took place. By the end of the decade, when the Canadian Wheelmen's Association was still trying to recruit support for good roads, paving programs were commonplace. Better-organized lobby groups that carried more political clout were responsible for street paving. The situation in turn-of-the-century Ottawa serves as illustration. As early as 1890 city council was affirming the need to pave streets in order to achieve a sanitary and durable surface. Another key motive was enhancing the city's status — "the keeping up of appearances as seemed to be desirable on the part of a metropolitan city." Proof that a city was modern and progressive was found in its streets. Although the city usually provided the first formal impetus in the process of initiating paving, a petition from a certain percentage of those ratepayers owning property abutting onto the street was required. All abutting landowners then paid a portion of the paving costs through a special assessment levied over a number of years, and the remainder was paid by the municipal government. If a street railway line ran along the street the company was involved in negotiations as well. It is significant that the first street in Ottawa to be paved with asphalt was Sparks Street, an important traffic arterial and the location of the city's more exclusive retailers and professionals. No evidence appears in city council minutes of petitions from Ottawa cycling clubs or the Canadian Wheelmen's Association. Instead, the affluent landowners were the only interest group involved.²³ Cyclists simply accepted existing conditions in Ottawa and, although they



Fig. 1. Sparks Street, Ottawa, at the turn of the century. This is one of the few photographs that shows bicycles on the street, but even those seen here were outnumbered by streetcars, buggies, and pedestrians. William H. Carré & Co., *Art Work on Ottawa* (Ottawa: 1889). (Photo: Public Archives Canada, C3776.)

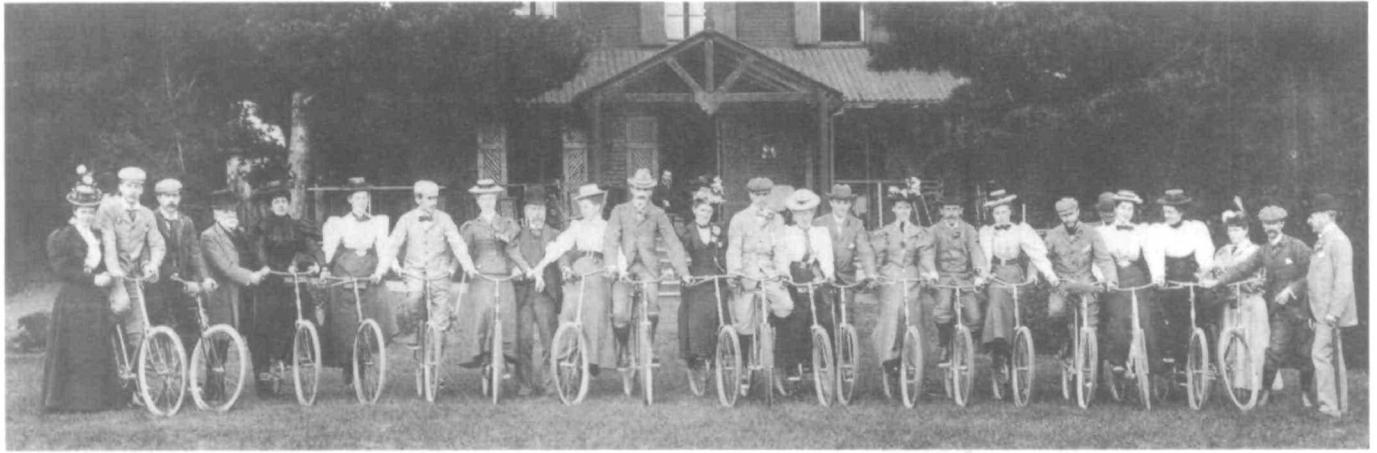


Fig. 2. An impressive balancing act. The bicycles appear as colourful novelties, enabling an unusual photographic image to be captured. (Photo: Public Archives Canada, C24322.)

may have been critical of muddy, uneven streets, they were unable and seemingly unwilling to make the effort to contribute to the political process.

In fact, the inaction of cyclists in Ottawa (and Canada for that matter) stemmed to some degree from a sheer lack of numbers. Historians quote statistics indicating that large quantities of bicycles were being sold in the 1890s and that many of these graced turn-of-the-century city streets. Armstrong and Nelles note in *The Revenge of the Methodist Bicycle Company* that an 1895 traffic census recorded 395 cyclists passing the corner of King and Yonge streets between 6:00 and 6:30 p.m. one evening.²⁴ Period photographs, however, convey a quite different impression. The collections held in the Ottawa City Archives and the Picture Division of the Public Archives of Canada contain numerous views of turn-of-the-century Ottawa, but cyclists are rarely seen in them. The streets are invariably dominated by streetcars and buggies; pedestrians are always found on the sidewalks. Figure 1 shows the greatest number of cyclists of any photograph in these collections and even in it other forms of transportation dominate. If anything, the bicycles attract attention because they were so unusual.²⁵ Photographs of the city's parks and of Britannia-on-the-Bay, a fashionable summer resort for Ottawans, show almost no bicycles. The most popular access to Britannia was the streetcar, and once there people usually walked. Photographs of cyclists on country roads are rare. However, two of an 1898 cycling party at Aylmer, Quebec (which seems to have been a popular destination for committed Ottawa cycling aficionados), offer interesting insights (see fig. 2).²⁶ All of the cyclists are approximately between the ages of 20 and 35, indicating that only a very specific segment of society was involved in recreational cycling. All are handsomely dressed and are clearly not of the working class. Most importantly, these photographs and similar ones of a Vancouver quintet in Stanley Park and a large

group of young men, also in Vancouver, were carefully constructed images.²⁷ They were posed photographs, a deliberate attempt to create a dramatic and colourful record of a cycling spree. To some degree this artificiality may be the product of the state of photographic technology at the end of the nineteenth century. Long exposure times were still necessary to produce a clear image. However, the fact that so few of this genre of photograph survive from a period entranced with the camera suggests that country cycling was not as widespread as researchers have assumed. In terms of city photographs, a photographer wishing to capture the peace and beauty of a park would naturally avoid including people and bicycles, but in a street setting it was difficult to be so selective. The images recorded would include all passers-by, no matter what method of locomotion used. Ottawa was in no way unique in its level of bicycle use. Henry Klassen's work on Calgary indicates that of a population of 4,000 in 1897 only 120 were cyclists. Poor street and road surfaces and the cost of the bicycle limited its usefulness, and as a result the horse remained the standard source of motive power.²⁸

Another preoccupation of historians has been the traffic-control bylaws inspired by the bicycle. These are thought to have formed the basis for regulation of automobile use. Once again, after closer analysis this assumption can be questioned. Municipal governments controlled the activities of all vehicles on city streets before the bicycle boom began and they continued to do so after its decline. For example, an 1890 Ottawa bylaw granted pedestrians right of way, defined speed limits for vehicles, and prohibited loitering on streets and obstructing traffic.²⁹ None of these was aimed solely at bicycles and where the latter were mentioned they were treated like all other vehicles. In 1896 the bylaw was amended to include explicit reference to bicycles. An eight-mile-per-hour speed limit was demanded, "coasting" (riding down hills without braking) was forbid-

den, and cyclists were advised to sound their bells within fifty feet of a street crossing and before passing another vehicle.³⁰ These ideas were not new; most had been applied earlier to horse-drawn vehicles.

The amendments were based on decisions reached at a public meeting of a civic committee held in order to frame a list of cycling regulations. Six Ottawa cycling clubs were present, and newspaper reports indicate that the meeting was a cooperative affair.³¹ Information contained in the annual reports submitted by the chief of police through the 1890s suggest that the most common bicycle-related convictions made under the street bylaws concerned using the vehicles on sidewalks. Specific mention of speeding was rarely found. In 1896 the city invested in several bicycles for its police force, but officers did not use them to pursue cycling criminals. Instead, they enabled the police "to cover a great deal of territory they would otherwise have been unable to reach, and to make frequent visits to all vacant and unoccupied houses reported during the year."³² It should be remembered that although bicycles could be a menace to pedestrians, in many instances cyclists (sometimes owing to their own carelessness) were themselves vulnerable.³³ Several terrible accidents and near-accidents involving streetcars occurred in the city in the late 1890s, and injuries were usually serious if not fatal.³⁴ Bylaws controlling bicycle use were as much protection for cyclists as they were limitations on their freedom.

Although historians have misinterpreted the significance of the bicycle, one of the machine's most crucial contributions to the late nineteenth century has been consistently and correctly identified. The industrial and economic repercussions of bicycle manufacturing left a lasting mark on society. Even though Canadians were not innovators themselves they benefitted from the new techniques and materials. Often inventions that improved the bicycle were later applied in more sophisticated vehicles like aircraft and automobiles. These included the pneumatic tire, ball bearings, wire wheels, and chain and shaft drives. Bicycle factories were among the first to use large assembly lines. Product testing was introduced in bicycling manufacturing. Two of the largest American companies, Overman Works and Pope Manufacturing, are noteworthy in that area. As demand expanded beyond the capacity of individual factories, manufacturers turned to subcontracting, drawing on the expertise of watch, knitting-needle, and rubber-hose producers in making bicycle parts.³⁵ All these elements indicate that a complex, mature industry had developed.

The sales techniques used by major manufacturers also generated new ideas. Turn-of-the-century bicycle companies are said to have been much enamoured with planned obsolescence. Cycle enthusiasts were encouraged to buy the newest spring models, and each fall the most devoted followers of the latest trends would sell their bicycles and

buy a new machine the following spring.³⁶ This practice helped inflate sales figures, but only well-to-do individuals could afford to do this. Bicycle promotional information was disseminated to a mass audience through popular literature, mainly special bicycling magazines. Canada had two: *The Canadian Wheelman* (the official gazette of the Canadian Wheelmen's Association) and *Cycling* (a Toronto-based periodical). These publications were heavily subsidized by manufacturers. For example, the well-known American magazine *Wheeling* (later *Outing*) was substantially underwritten by Pope and other companies.³⁷ One historian has estimated that during the later 1890s, 10 per cent of all newspaper advertising in the U.S. was devoted to the bicycle.³⁸ A scan of the June issues of the *Citizen* (Ottawa) from 1895 to 1898 indicates that this figure does not apply in Canada but that there was a definite presence in the papers. Bicycle advertisements were eye-catching because they were richly and imaginatively illustrated. They and the colourful, attractive posters of the period did much to create the characteristic ambience of the Gay Nineties.³⁹ Almost a century later they remain as compelling as when they were created. The bicycle manufacturers spent additional sums of money establishing cycling clubs, supporting racing tournaments, and subsidizing the training of top racers.⁴⁰ All of these public relations activities were aimed at drawing as much attention to cycling as possible.

The bicycle had an impact on retailing as well, providing an important source of income for shop owners at the same time that manufacturing companies made their fortunes. Stores selling bicycles and bicycle accessories, bicycle liveries, and repair shops all generated employment and profits during the difficult economic times of the 1890s.⁴¹ Turn-of-the-century sales estimates vary; however, a sampling of statistics gives a general idea of the magnitude of transactions. Armstrong and Nelles state that in 1895 Toronto boasted over 90 bicycle shops, with sales exceeding \$1,500,000 (18,000 vehicles).⁴² Another source indicates that by 1899 North American bicycle sales amounted to 1,883,000 units; five years later the figure shrank to 250,000.⁴³ The situation in Ottawa offers some clarification of the retailing boom and its eventual decline. City directory data (which by no means included all businesses) reveals that by 1895 the number of shops selling bicycles was starting to climb and that levels remained high until well after 1900. However, few of these retailers remained in the directories' bicycle listing for long. There was a continual in- and outflow of businesses each year. At the beginning of the boom, in 1895, few of the shops selling bicycles relied on them for income. An "importer of men's fine furnishings" (which featured a Parisian steam laundry as well), a camping and flag supply shop, an insurance agent, a machine and foundry shop, and a combined jeweller/watchmaker/optician all sold bicycles as a sideline. Interestingly, most of these establishments were on Sparks Street, a heavily travelled section of the streetcar network and the city's prestige shopping and office area. Within two years the range of

available services expanded greatly. Bicycle liveries, repair shops, and a "riding academy" (all of which also sold the vehicles) opened for business. The heavy concentration on Sparks Street continued, with some activity spreading south along a streetcar line onto Bank Street (also a key traffic arterial and retail area). Most of the newer retailers tended to focus exclusively on bicycles and sporting goods or machine tools, indicating a maturation of the market. As the boom neared its end, although the number of shops still remained high, a movement away from the high status and expensive locations along Sparks Street occurred. Bank Street, to the southwest, and the market area further east of Sparks became the growth areas. After the boom finished, bicycle shops continued to exist, but they were fewer and were based in the less prestigious parts of the city.⁴⁴ Retailing in the boom period was clearly aimed at the well-to-do of the city.

At this point it may be seen that the bicycle boom was an interesting but relatively unimportant phenomenon in history, little more than a brief manufacturing and marketing triumph. Such was certainly not the case. The late Victorians' fascination with the bicycle offers crucial insights into

how they saw themselves and their world. Rather than fundamentally changing those views, the bicycle allowed them to be expressed in a very visible and forceful manner. The imagery of the bicycle transcended national boundaries to speak on behalf of European and North American popular culture in the 1890s. Actual daily use of the bicycle was unimportant—the ideas represented by cycling were far more significant.

On the most superficial level the bicycle craze provided journalists and popular writers with a fashionable, topical subject with almost inexhaustible possibilities. Kit Coleman, a Toronto newspaperwoman, proclaimed "Blessed be fads, they are the crumbs the gods send to the poor journalists who grope under the Olympian dinner tables."⁴⁵ The golf fad was one of those convenient crumbs; the bicycle boom was definitely another, and a versatile one at that. It could be a source of humour. The bicycle appeared in cartoons and was the inspiration for jokes and witty monologues. Even Jerome K. Jerome used it in one of his books, *Three Men on the Bummel*.⁴⁶ Fiction of a more dramatic nature reflected an interest in the bicycle. Novelists like Frank Stockton mentioned the vehicles.⁴⁷ From time to



Fig. 3. A typical romantic, pastoral view from the 1890s. Note that the bicycles included in the picture remain to the side, with little emphasis. They are merely props, adding a nuance of youth and vigour to a reflective mood. P.E. Doolittle, "Cycling of To-day," *Massey's Magazine* 1, no. 6 (June 1896), p. 410. (National Library of Canada.)

time popular magazines would feature short stories with bicycles in them. Songs and poems were written about the bicycle. Tunes like "Daisy Bell," "My Love's a Cyclist," and "A Merry Cyclist" were products of the 1890s.⁴⁸ Cycling even appeared in religious literature. The pastor of the First Baptist Church in Manchester, New Hampshire, wrote the forgettable *A Bicyclist's Dream of the Road to Heaven* (Manchester, N.H.: John B. Clarke, 1899) under the pseudonym J. Bunyan Lemon.⁴⁹ Life was likened to a spin on a spiritual bicycle, with the road obstacles assuming religious significance and certain parts of the bicycle being designated as Faith, Hope, Charity and other important virtues. George F. Hall's *A Study in Bloomers* had a similar orientation.⁵⁰ Bicycling was used as a candy coating for the spiritual messages contained inside the book. Subjects discussed included dress reform, dietetics, suffrage, prohibition, coeducation, the race question, marriage, society, divorce, and bimetallism. Most of these works, from comedy to serious religious writings, were short lived. They formed part of the vast outpouring of ephemeral turn-of-the-century popular music and literature. The bicycle provided a source of grist for the popular culture mill.

The bicycle also figured in the Victorians' overall enthrallment with their material world. Popular literature delighted in describing new technological developments. For example, magazines and newspapers featured many articles on new buildings. In addition to commenting on stylistic details much attention was frequently paid to construction techniques and innovative elements such as elevators. To some degree this preoccupation stemmed from a sense of witnessing the dawn of a new era. The effect of the simple realization that a new century was approaching should not be underestimated. The year 1900 seemed a milepost. David Rubinstein suggests that "novelty was sought for its own sake."⁵¹ Change was largely seen as a favourable sign of progress. The bicycle was a piece of machinery firmly situated within the context of this preoccupation with technology. It symbolized success in invention, manufacturing, and merchandising. Particular pleasure was derived from the fact that "that vehicle... added new and altogether unequalled powers of locomotion to those already possessed by man... and... enabled him to travel farther and faster than he has ever been able to progress by... muscles alone."⁵² The bicycle represented a synthesis of man with the marvellous machine, an intimate interaction with a technological wonder.

Curiously, at the same time attitudes towards the use of the bicycle reflected a counter-reaction—the desire to escape and return to a more natural lifestyle. In an article in *The Canadian Magazine*, J.W. Longley criticized "the tendency of the great masses of mankind to be absorbed in matters which pertain simply and solely to this world—the comfort of the body, the acquiring and interest in things which can be seen and felt and handled... an absorbing



Fig. 4. A humorous illustration for a magazine article on cycling. Again the bicycle contributes a dynamic ambience to the overall image but is not integral to the main message conveyed in the drawing. P.E. Doolittle, "Cycling of To-day," p. 409. (National Library of Canada.)

regard for matters of a purely finite character."⁵³ For some, a jaunt in the country (even if road conditions actually made it impractical) seemed the panacea for the tensions accumulated in a rushed, impersonal world. Savouring the bicycle promised an improvement in the quality of life.

A fool... always wants to shorten space and time; a wise man wants to lengthen both. It should be thus with us. We should not measure our pleasure by the miles. We should cultivate the spirit that recognizes "tongues in trees, books in the running brooks, sermons in stones, and good in everything," and should learn to derive a heartfelt pleasure from a flower-entrained ditch as we rest by the wayside, or from the movements of the animal kingdom.⁵⁴

Communing with nature was described as a way to "raise, educate, and ennoble the mind, and to inculcate in one a deeper reverence for the Lord of Nature... Human life has many shadows in it; aught that can lessen or dissipate these shadows is of untold value, and should be cultivated."⁵⁵ This pastoral ideal was often used in illustrations for periodical articles on cycling. Figures 3 and 4 are examples of the romanticized (and sometimes comical) perceptions of the virtues of the country. The crucial point, however, is that the bicycle was only a means of gaining access to that paradise. The act of riding was a temporarily exhilarating

experience, but the ultimate aim was to escape to the perfection of nature. The state of mind was the focus, not the hardware of the transportation medium.

This escape imagery captured the imagination of a number of eccentrics. Although they were a small minority, their activities were highly publicized and served as entertainment and inspiration for late Victorian society. All types of personal endurance tests using the bicycle were devised. They ranged from century runs (100-mile bicycle stints) to cross-country and around-the-world tours.⁵⁶ A significant number of books and periodical articles were published that described unusual and daring trips abroad. It seemed that no destination was left untried. Trips all over England and Europe were undertaken, and forays into Asia and even Africa emerged in spell-binding accounts. Some of these were clearly promotional gimmicks financed by bicycle manufacturers. Thomas Stevens in his eight-volume *Around the World on a Bicycle* acknowledged that the support of bicycle magnate Albert A. Pope had made his trip possible.⁵⁷ Money was a powerful persuasive force, but the true adventurer had more noble aspirations. Robert Jefferson explained that "the real reason why I rode a bicycle to Khiva was because so many people said it was impossible."⁵⁸ Some of the excursions were incredibly ambitious. Mr. and Mrs. H. Darwin McIlraith reportedly cycled around the world, travelling for more than three years.⁵⁹ These personal statements of achievement stood as testimony to the heights of human potential. As one contemporary commentator asked: "Can any one find fault with [such] desires?"⁶⁰

The spectator element of bicycling was important as well. The Victorian interest in sports did not always entail participation. Magazines and newspapers devoted much space to articles on successful athletes and teams, developments in sporting regulations, and the latest game scores. Bicycle racing was consistently a popular attraction at both amateur and professional levels. Certainly one of the main aims of the Canadian Wheelmen's Association was the regulation of the sport.⁶¹ Victorians were also enthusiastic paraders. For every major holiday or public event a parade would invariably be organized, and bicycles were usually incorporated into the processions.⁶² Great pleasure was taken in pomp, ceremony, and spectacular entertainments. The bicycle was one means of satisfying that public taste.

The Victorians' use of the bicycle also expressed their love for club life. Sporting clubs were common during the late nineteenth century, springing up around such recreations as skating, curling, snowshoeing, and tennis.⁶³ The late nineteenth century also saw increasing female interest in clubs and associations. Religious groups received most initial attention but by the 1890s involvement in broader, less sectarian groups such as the Aberdeen Association and the Womens's Art Association was rising.

Bicycling clubs (which remained male preserves) were the products of the same urge towards group activity. The cycling clubs curiously did not limit themselves to bicycle riding. Many clubs rented their own premises and maintained dining facilities, gymnasiums, reading rooms, and storage areas for their vehicles.⁶⁵ They offered their members the opportunity to socialize and relax with others of similar interests and presumably the same social class. Clubs also organized special entertainments that had little to do with the bicycle. In the late summer of 1897 the Westminster and Vancouver bicycle clubs held a joint picnic. The Vancouver cyclists arrived by wheel and "a number of ladies and gentlemen... also... went out by tramcar." Vancouver cyclists held a musical evening in Stanley Park the same year. "A piano was taken out and placed underneath the trees and several well-known vocalists contributed selections during the evening."⁶⁶ The bicycle served as a rallying point drawing people together, but once assembled the group turned its attention to a broader range of amusements.

Attitudes toward the physical manipulation of the bicycle offer other insights into the Victorian mentality. Bicycling literature constantly emphasized the need to maintain correct decorum. It was unequivocally stated that "to look well is as much the ambition of every lady cyclist as to ride well. And so it ought to be, for every woman who looks well a wheel... benefits the world at large by adding an item of beauty to it."⁶⁷ Cycling should therefore be "graceful, pretty and charming, as well as enjoyable."⁶⁸ In order to present this tasteful image to the world men and women were urged to maintain a stiff upright posture (see fig. 5). "The proper position in bicycling is the common-sense one, and that is the upright and well-balanced one."⁶⁹ The same posture was favoured for walking and sitting; bicycle riding adopted existing ways of moving and carrying the body. As one bicycling manual noted, "Custom and habit are responsible for a good many of our ideas of grace, style, and propriety."⁷⁰ The concern for appearances resulted from the visibility of the cyclist. Kit Coleman received a letter from a selfconscious wheelman who believed that "the public was watching and laughing at him." Rather than encouraging him to continue riding she advised: "Dismount, little god, and roll away your wheel... and be a sensible little human worm, wriggling along with the rest of us."⁷¹ Bicycling was as much a means of being seen as it was for sightseeing.

Finally, the bicycle was linked to the late Victorian interest in health reform and exercise.⁷² Throughout the 1880s and 1890s Canadian men and women participated in an increasingly wide range of sporting activities. Medical authorities stressed the benefits of regular exercise for a sedentary population.⁷³ The physical improvements were obvious, yet the goal lay deeper than firm muscles and a general feeling of well-being. Health reform reflected a



Correct Position.



A "Scorcher" — Wrong Position.

Fig. 5. The very erect posture adopted by the first cyclist represented the Victorian ideal: an upright, sedate, decorous position. The second image, that of the "scorcher," was described by one commentator as a "hideous caricature of the real athlete, — a man who does not know how to use his muscles engaged in a futile effort to look as if he did." Elegance was clearly favoured at the expense of speed. J. West Roosevelt, "A Doctor's View of Bicycling," in *Athletic Sports*, The Out of Door Library (New York: Charles Scribner's Sons, 1897), pp. 133, 216-17. (National Museum of Science and Technology.)

concern for self-improvement and social betterment. The skills practised in learning to ride a bicycle would serve the cyclist in good stead through his or her life. A turn-of-the-century handbook affirmed that.

Haste and nervousness... are fatal to all finish in riding. There must be smooth progress always, not pedalling by flurried fits and starts; there must be leisurely mounting and dismounting, and the cyclist must keep cool in every emergency. More accidents arise from over-haste or loss of self-possession than in any other way, and cycling is a valuable educator in nerve, calmness and quickness in resource.⁷⁴

Another commentator sagely noted that "skill to do comes by doing, knowledge comes by eyes always open and working hands; and there is no knowledge that is not power."⁷⁵ Bicycling was not alone in promoting these ideas. Period literature reveals that the same emphasis on per-

sistence and patience and deliberate, calm movements were recommended in other contexts. Swimming was a prime example of this.⁷⁶

In retrospect, the turn-of-the-century bicycle boom's real importance did not lie so much in the precise number of units sold or miles travelled astride a "wheel." It was unnecessary for an entire population to use the bicycle to be profoundly affected by it. Indeed, as research indicates, the bicycle market was narrow and elitist. Instead, it was the attitudes and ideas conveyed by the bicycle that appealed enormously to Victorians, not its transportation applications. The feelings that the bicycle evoked were most important. The bicycle rhetoric that emerged in popular culture in the 1890s recorded dreams and ideals, which probably tell us more about society during that decade than the facts contained in period bicycling photographs and city directory material.

NOTES

1. The best basic bicycle histories are: Frederick Alderson, *Bicycling: A History* (New York: Praeger, 1972); Arthur Judson Palmer, *Riding High: The Story of the Bicycle* (New York: E.P. Dutton & Co., 1956); Andrew Ritchie, *King of the Road: An Illustrated History of Cycling* (London: Wildwood House, 1975); Ken Smith ed., *The Canadian Bicycle Book* (Toronto: D.C. Heath, 1972); Robert A. Smith, *A Social History of the Bicycle: Its Early Life and Times in America* (New York: McGraw-Hill, 1972); John Woodforde, *The Story of the Bicycle* (London: Routledge & Kegan Paul, 1970). Much of this information is summarized in William Henderson's "Pedal Power," *The Ontario Technologist* 18, no. 3 (May/June 1976), pp. 4-8, and "Pedal Power—Part II," 18, no. 4 (July/Aug. 1976), pp. 16-19.
2. Christopher Armstrong and H.V. Nelles, *The Revenge of the Methodist Bicycle Company: Sunday Streetcars and Municipal Reform in Toronto* (Toronto: Peter Martin, 1977), p. 169; June Callwood, *The Naughty Nineties 1890/1900* (Toronto: Natural Science of Canada, 1977), p. 75; Merrill Denison, *CCM: The Story of the First Fifty Years* (Weston, Ont.: Canada Cycle and Motor Co., 1946), pp. 20-23.
3. Armstrong and Nelles, *Revenge*, p. 171; Smith, *Social History*, p. 39.
4. June Callwood, *Portrait of Canada* (Garden City, N.Y.: Doubleday,

- 1981), p. xxvi.
5. G. Tobin, "The Bicycle Boom of the 1890's: The Development of Private Transportation and the Birth of the Modern Tourist," *Journal of Popular Culture* 7, no. 4 (Spring 1974), p. 840. Although these figures are American, they mirror Canadian conditions.
 6. David Rubinstein, "Cycling in the 1890's," *Victorian Studies* 21, no. 1 (Autumn 1977), pp. 58-59.
 7. Tobin, "Bicycle Boom," p. 840.
 8. Henry C. Klassen, "Bicycles and Automobiles in Early Calgary," *Alberta History* 24, no. 2 (Spring 1976), p. 2; Smith, *Social History*, pp.48-50, 71-75, 227-34.
 9. Eileen Collard, *Clothing in English Canada Circa 1867 to 1907* (Burlington, Ont.: C. Eileen Collard, 1975), p. 9.
 10. George de P.T. Glazebrook, Katharine B. Brett, and Judith McEvel, eds., *A Shopper's View of Canada's Past*, (Toronto: University of Toronto Press, 1969), p. x.
 11. Palmer, *Riding High*, p. 93.
 12. Anita Rush, "Changing Women's Fashion and its Social Context, 1870-1905," *Material History Bulletin* 14 (Spring 1982), p.44.
 13. Fred C. Kelly, "The Great Bicycle Craze," *American Heritage* 8, no. 1 (Dec. 1956), p. 72. By the mid-1890s cycling clubs were abandoning their distinctive uniforms and members began to wear clothing of their personal choice (Smith, *Social History*, p. 95).
 14. Tobin, "Bicycle Boom," pp. 838-49.
 15. "Maritime Province Notes," *The Canadian Wheelman*, 15 March 1897.
 16. In 1896 the Ottawa Bicycle Club organized such a trip to Quebec via the Canadian Atlantic Railway (*Citizen*, 24 June 1896).
 17. *Citizen*, 10 June 1897.
 18. *Citizen*, 15 June 1898.
 19. Harold D. Kalman, *The Railway Hotels and the Development of the Chateau Style in Canada*, Studies in Architectural History no. 1 (Victoria: University of Victoria, Maltwood Museum, 1968), pp. 5-6.
 20. "News from the Clubs," *The Canadian Wheelman* 1, no.3 (Nov. 1883), p. 21. Of the four travellers, three wisely opted to take the train to Brockville and cycle from there to Toronto. Only the fourth elected to ride his bicycle the full distance.
 21. "Bad Roads Photographs," *The Canadian Wheelman*, 15 March 1897.
 22. Red Bird, "Spokes from Toronto's Wheel," *The Canadian Wheelman*, 6 Sept. 1897. An article in the same issue noted that as of 1 Sept. 1897 membership totalled 9,387 cyclists — not a very high figure for a national association.
 23. Anita Rush, "A Historical Analysis of Sparks Street, Ottawa, 1890-1920" (B.A. Honours research essay, Carleton University, Ottawa, Spring 1982).
 24. Armstrong and Nelles, *Revenge*, p. 169. One popular history of Canada enthusiastically (and unconvincingly) asserts that, at least in the 1900-10 period, thousands of cyclists travelled country roads on Sundays and that thousands more could be seen on the paved streets of towns and cities (Alan Phillips, *Into the Twentieth Century 1900/1910* [Toronto: Natural Science of Canada Ltd., 1977], p. 17).
 25. A photograph of Hyde Park, London, in a turn-of-the-century cycling manual conveys the same impression. The photographer was attempting to record the large number of bicyclists on the street, but at the same time he captured far more people walking along the sidewalks. B. Fletcher Robinson, ed., *The Complete Cyclist in Isthmian Library* no. 2 (London: A.D. Innes, 1897), p.208.
 26. "A group of Ottawa people taken opposite the summer cottage of Mr. E. Mial at Aylmer, P.Q., c. 1898," Public Archives of Canada, C24322; "A group of Ottawa people taken at the summer cottage of Mr. E. Mial, Aylmer, P.Q., c. 1898," Public Archives of Canada, C39096.
 27. Callwood, *Naughty Nineties*, pp. 72-73.
 28. Klassen, "Bicycles," pp.1-2.
 29. City of Ottawa Bylaw 1076 (13 Oct. 1890), Sections 30, 37, 38, 43, 46, 47.
 30. City of Ottawa Bylaw 1655 (6 July 1896), Section 2.
 31. *Citizen*, 3 June 1896.
 32. "Annual Report of the Chief of Police," Ottawa, *Annual Departmental Reports*, 1897, p. 87.
 33. Reckless cyclists were well advised to be careful whom they hit. In 1895 Senator Read of Quinte narrowly missed being struck by a night-time cyclist on Parliament Hill. The next day complaints were raised on the Senate floor and recommendations were made to ban bicycles from the Hill's attractive gravelled walks (*Citizen*, 5 June 1895). People were not the only ones threatened by "scorchers." In the same year a Hull cyclist collided with a cow (*Citizen*, 19 June 1895).
 34. An example of this occurred in June, 1898. Albert Monette was riding along the devil strip (the area on the street between the streetcar rails) one evening and his bicycle unexpectedly twisted while he was attempting to make a turn. A streetcar following him was unable to stop; Monette's legs were crushed and he died of his injuries (*Citizen*, 2 June 1898).
 35. Palmer, *Riding High*, p. 190; Smith, *Social History*, pp. 19, 244.
 36. Smith, *Social History*, p. 19.
 37. *Ibid*, p. 9.
 38. Tommy W. Rogers, "The Bicycle in American Culture," *Contemporary Review* 221, no. 1281 (Oct. 1972), p. 203.
 39. Richard F. Snow, ed., "The Great Bicycle Delirium," *American Heritage* 26, no. 4 (June 1975), p. 62; Jack Rennett, *100 Years of Bicycle Posters* (New York: Harper & Row, 1973), pp. 3-4.
 40. Richard Harmond, "Progress and Flight: An Interpretation of the American Cycle Craze of the 1890s," *Journal of Social History* 5, no. 2 (Winter 1971-72), p. 238; Smith, *Social History*, p. 9.
 41. A piece of period journalistic humour from the *Chicago Tribune* noted:
 Hey-diddle-diddle
 The bicycle riddle
 The strangest part of the deal;
 Just keep your accounts,
 And add the amounts
 The sundries cost more than the wheel.
 (Edmond Redmond, ed., *Lyra Cyclus, Or The Bards and the Bicycle, Being a Collection of Merry and Melodious Metrical Conceits About the Wheel* [Rochester, N.Y.: n.p., 1897], p. 90).
 42. Armstrong and Nelles, *Revenge*, p. 169.
 43. Smith, *Canadian Bicycle Book*, p. 10. Merrill Denison estimates that between 1896 and 1900, 100,000 of the bicycles purchased in Canada were domestic manufactures (p. 23-24).
 44. This information was compiled from Ottawa city directories, 1890-1910.
 45. Ted Ferguson, *Kit Coleman: Queen of Hearts* (Toronto: Doubleday Canada, 1978), p. 33. She also recommended it as a safe topic of conversation for a young lady in a gentleman's company (p. 23).
 46. Jerome K. Jerome, *Three Men on the Bummel* (Bristol: J.W. Arrowsmith, [1900]).
 47. Frank Stockton, *A Bicycle of Cathay* (New York: Harper, 1900); *Pomona's Travels* (New York: Charles Scribner's Sons, 1894).
 48. Rogers, "Bicycle," p. 200.
 49. He was also the author of the equally obscure *A Dream of the Christ* (New York: Fleming R. Revell Co., 1899).
 50. George F. Hall, *A Study in Bloomers* (Chicago: American Bible House, 1895).
 51. Rubenstein, "Cycling," p. 47.
 52. Luther H. Porter, *How to Tour by Wheel: An Indispensable Guide to the Successful Use of the Wheel* (New York: Dodd, Mead & Co., 1896), p. 7.
 53. J.W. Longley, "A Material Age," *The Canadian Magazine* 12, no. 2 (Dec. 1898), pp. 93-94.
 54. R.J. Mecredy and Gerald Stoney, *The Art and Pastime of Cycling*, rev. ed., (Dublin: Mecredy & Kyle, 1897), p. 107.
 55. *Ibid*, p. 156.
 56. Smith, *Social History*, pp. 127-41.
 57. The first two volumes of this series were *From San Francisco to Teheran* (New York: Charles Scribner's Sons, 1887) and *From*

- Teheran to Yokobama* (New York: Charles Scribner's Sons, 1888).
58. Robert L. Jefferson, *A New Road to Khiva* (London: Methuen, 1899), p. viii. Jefferson also produced accounts of cycling trips to Moscow and Constantinople.
 59. *Around the World on Wheels for the Inter Ocean; The Travels and Adventures in Foreign Lunds* (Chicago: Inter Ocean Publishing, 1898). This was a compilation of letters written by Mr. McIlraith and published in the *Inter Ocean* from April 1895 to November 1898.
 60. A.R. Savile, "Preface," to Robert L. Jefferson, *Awheel to Moscow and Back* (London: Sampson, Low, Marston, 1895), p. v.
 61. C. Stan Allen, "Cycle Chats," *The Canadian Wheelman*, 4 Oct. 1897.
 62. Rush, "A Historical Analysis of Sparks Street," p. 154-59.
 63. Katharine B. Brett, *Clothing Worn in Canada: Changing Fashions in the Nineteenth Century*, Canada's Visual History Series, no. 41, (Ottawa: National Museum of Man, National Film Board, 1980), p. 6.
 64. Rush, "Changing Women's Fashion," p. 38.
 65. Smith, *Canadian Bicycle Book*, p. 115.
 66. H.J. Franklin, "British Columbia," *The Canadian Wheelman*, 6 Sept. 1897.
 67. Lillias Campbell Davidson, *Handbook for Lady Cyclists* (London: Hay, Nisbet, 1896), p. 21.
 68. *Ibid*, p. 22.
 69. "Caution to Wheelwomen," *The Ladies' Journal* 15, no. 5 (Aug. 1895), p. 11.
 70. Victor Nessen, *Dr. Nessen's Book on Wheeling: Hints and Advice to Men and Women from the Physician's Standpoint* (New York: New Amsterdam Book Co., 1899), p. 19.
 71. Ferguson, *Kit Coleman*, p. 130.
 72. A thorough and perceptive analysis of the intellectual and social significance of the medical debate in the 1890s over the merits and failings of the bicycle can be found in James Whorton's "The Hygiene of the Wheel: An Episode in Victorian Sanitary Science," *Bulletin of the History of Medicine* 52, no. 1 (Spring 1978), pp. 61-88.
 73. Harmond, "Progress and Flight," p. 243.
 74. Davidson, *Handbook*, p. 66.
 75. W.N. Robertson, *Cycling* (Stratford, Ont.: F. Pratt, 1894), p. 19.
 76. "Learning to Swim," *The Ladies' Journal* 15, no. 5 (Aug. 1895), p. 27.