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## Riding the Wheel: Selling American Women Mobility and Geographic Knowledge

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# **Riding the Wheel: Selling American Women Mobility and Geographic Knowledge**

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## **Abstract**

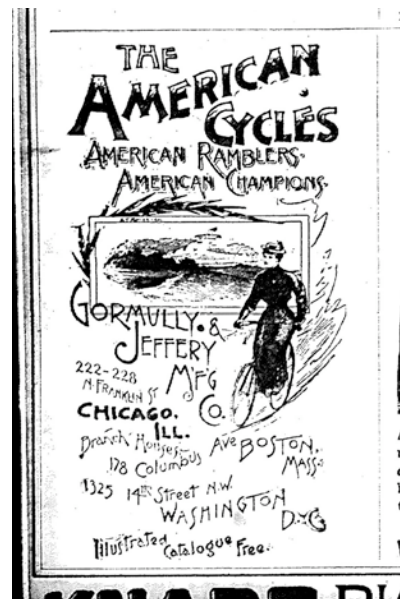
The bicycle's "prime" was a mere decade, 1890-1900, but in this brief window, it had a profound impact on American women's lives. This paper will examine the role of the media in transforming women's relationship to their world, altering how, where and why they moved through the landscape, drawing from work on cartographic culture, actor-network theory and consumption and mass culture. Through popular magazine articles, stories, advertisements, and maps, American women (as well as men) were "informed" of the possibilities the bicycle had to offer, modeling geographic mobility, greater spatial awareness, and the practice of both cartography and landscape. Women had to tackle a network of new technologies – bicycles, maps, spatial information – to successfully transcend their sphere on their cycle. While women's roles in society did not substantially change, it did lead to greater personal freedoms in mobility and the need for more detailed geographic information.

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**Figure 1** “The New American Woman” leaving the “old” behind in her dust; an illustration from “The Athletic Girl” *Munsey’s Magazine* 25, 5 (August 1901): 737.



**Figure 2** “The American Cycles” advertisement featuring a woman awheel from *Godey’s Lady’s Book and Magazine* 122 (June 1891). Note the “landscape” in the “frame” behind her. This was one of the first advertisements in *Godey’s* to feature a woman on a cycle.

Now and again a complaint arises as to the narrowness of women’s sphere. For such disorder of the soul the sufferer can do no better than to flatten her sphere to a circle, mount it, and take to the road. (Marguerite Merington 1895)

The New American Woman speeds through the landscape (Fig. 1), leading the way, head up, confident, stylishly dressed, appearing to know where she is heading. In her dust a rural woman stands, seeming lost, stranded, stuck in the past and in place.<sup>2</sup> Right at her heels is a gentlemen cyclist – following her lead or allowing her to lead? The bicycle was part and parcel of the transformation in American women’s lives in the late 19<sup>th</sup> century. Through print ads (Fig. 2), advertising art, and articles, not just the bicycle and its accoutrements were promoted, but also a new world for women. A woman’s public space was being created in which they could move, spaces that women controlled and that allowed

<sup>2</sup> A similar image appeared in an 1893 *Outing* magazine article on bicycling in Ireland, captioned with the reported greeting “More power to you, Ma’am,” suggesting that the older rural woman was speaking to the woman on the bicycle (Denison 1893).

women to network and nurture their own culture (Kerber 1998, 32). While these geographies were still male dominated and controlled, the marketing and promotion of the bicycle expanded women's presence in American society and geography's presence in women's lives.

I will demonstrate how the marketing and promotion of bicycling encouraged women to expand their "sphere" and, in the process, learn new geographies and obtain maps. The topic of women as map users/consumers lies at the nexus of a complex web of capitalism, consumption, culture, gender, technology and knowledge. In pursuing the bicycle's impact on American women's geography, I have examined a range of American printed materials from 1885-1900, the era of the bicycle, including magazine articles, especially those directed at women; fictional stories and novels; bicycling manuals and maps; and advertisements. It was during this time that early mass magazines, such as *Ladies' Home Journal*, *McClure's*, and *Cosmopolitan*, were shaping modern American consumer culture of the developing white middle-class (Bogardus 1998). Through the media and the forces of capitalism, the bicycle and its accoutrements were transformed from mere products to a national mass culture phenomena – not just a means of moving through the world but transforming humans experience of it. Women in particular were being shown a new world and a new way to negotiate that world. Drawing on actor-network theory, I argue that the bicycle led to women engaging in the practices of both landscape and cartographic culture.

### **"Science of Princes" or Child's Play? Approaching Gender and Cartographic Culture**

This essay attempts to fill a "gap" in work on gender, cartography, and geography. If cartography is the "science of princes" (Harley 1988, 281), when did women as map readers/users/consumers enter the picture? Specifically, when did mainstream American women "need" maps? Use maps? What are the social, political and economic ramifications of their map use? The work of Alice Hudson, Mary Ritzlin and Judith Tyner document the presence of women in map production throughout Western history (Hudson and Ritzlin 2000; Dymon and Kaye 1999; Tyner 1999; Tyner 1997; Ritzlin 1989). Through their work, it is possible to see glimpses of how women encountered maps, especially through family occupations and women's education. Penny Richards' work on Southern women has demonstrated not only were maps part of their education, maps were part of their culture, with cartographic conventions utilized to express both spatial and emotional connections (Richards 2004). However, Richards' Southern women represent a largely elite audience: well-educated women, in the 1820s and 1870s. Richards' work approaches an aspect of the history of cartography that Matthew Edney has termed "cartographic culture" – "the understanding of and attitudes towards maps as representations of spatial knowledge" (Edney 1994, 385). For

Richards, a focus on cartographic culture draws “lay map use, domestic map use, and necessarily, *women’s* map use into clear view” (Richards 2004, 2).<sup>3</sup> She suggests that such work is not only “politically correct” but necessary if we are to fully understand the domestic use of maps, “the availability of maps to users, the training of map users, and their attitudes toward maps” (Richards 2004, 11).



**Figure 3** “A Chart of the Dangerous Dozen,” a map of marriage, from *Good Housekeeping* 26-27 January 1935.

Research on maps in American women’s magazines suggests that, by the 1920s, American women were already intimately familiar with maps and cartographic conventions, as exemplified by an article on marriage found in *Good Housekeeping*, drawing on classic old map motifs to delineate a modern map of marriage (Dando 2003) (Fig. 3). The map identifies the dangerous currents and “rocks” that threaten marriage including money problems, pregnancy, jealousy, and lack of common interests, posing the question: how to “keep the marriage off the rocks”? The text continues the theme:

In order to put our heads together I’ve sketched a little chart showing the rocks to avoid and especially the perilous current which in most (though not all) cases is the force that hurls marriage on the rocks –

<sup>3</sup> Emphasis is Richards (Richards 2004, 2).



the current of Selfishness. I wish you'd do this: spread the chart before you, trace the rocks as we talk, and make certain jottings. Those which you have cleared completely, jot down in column under "safe." Those that you now and then graze might be headed "Danger." If you've already struck some, write above those "SOS." (Howe 1935)

This figurative map allows women a way of visualizing their marriage journey, utilizing traditional cartographic imagery, suggesting "Study the chart." But the text goes a step further, directing the women to spread the chart out and "make certain jottings," encouraging them to engage with the map and make it their own.

Early automobile road maps of the 1920s and 1930s featured numerous images of women gazing with pleasure at maps, offering a stylish example of what it meant to be "going places" (Fig. 4). Between the cartographic references in women's magazines, the presence of women in road map art, and advertising appealing to female consumers on road maps, mainstream middle-class American women by the 1920s and 1930s were part of the map audience, consumers of this geographic commodity (Dando 2002). So what was the crucial turning point between maps among elite women in the mid-1800s, as documented by Richards, and maps among middle-class women of the 1930s? I will argue it was the bicycle that placed maps into a wider spectrum of American women's hands and transformed the geography they utilized in their everyday lives.



**Figure 4.** 1931 Standard Oil Company road map "See California and the entire Pacific West" featuring a woman driver with a road map. Courtesy The Newberry Library, Chicago IL (RMcN AE 007.14).

In approaching women, the bicycle and maps, I found a much more complicated story than I ever imagined. In order to get to map consumption by American women, I began with early cycling maps and then explored a variety of mediums. Cycling accounts by men as well as women supplied directions on bicycling and touring, such as Fanny Bullock Workman's *Algerian Memories* (1895) and *Sketches Awheel in Modern Iberia* (1897). Bicycling fiction, such as H.G. Wells' *The Wheels of Chance: A Holiday Adventure* (1896), provided another avenue to investigate popular conceptions of cycling. Bicycling and travel guides offered advice on bicycle travel, including those for women cyclists such as M. Ward's *Bicycling for Ladies* (1896). Magazines, such as *Munsey's*, *Godey's*, *The*

*Century* and *The Wheelman/Outing*, published articles and advertisements on bicycling, bicycling for women, and maps. Eventually there were also poems, songs, and plays, all centered on bicycling. I investigated bicycle companies, such as the Pope Manufacturing Company and its owner Albert Pope (Pope began the Good Roads movement) as well as mapping companies, such as Rand McNally and Mendenhall.

Ultimately, all these materials resonate with one another, reinforcing not only the popularity of the bicycle but also the freedom that came with this form of mobility and the landscapes/places that were opened to exploration through this medium. Much of the “forward movement” was made in the dueling interests of scientific advances and greater sales (profits). It was not possible to separate one from another: they were like the cogs of a gigantic machine “... one can do nothing without others; when one acts the others act too” (Murdoch 1997, 743). As I struggled to make sense of this “thing,” I turned to work in both science/technology and in culture/media studies.

Much has been written on the development of the bicycle, particularly drawing from history of technology and science perspectives, using actor-network theory (ANT) and social construction of technology (SCOT) (such as Clayton 2002; Bijker 1995; and Pinch and Bijker 1987).<sup>4</sup> Of the two, ANT is more compelling, allowing not only users and producers into the network, but the bicycle and map themselves. Actor-network theory approaches the coalescence of an artifact as a result of the dynamic interaction of a variety of elements that form a network (Harvey 2001, 30; Law 1987, 113). These elements, both things and persons, termed actants, come together but are not static; there are shifts and flows as products are modified, new uses created, etc. What is most significant is the linkages among the actants and how durable the network is as a result (Waltz 2004, 167). As Waltz phrases it: “*Practices*, not subjects and objects, populate this landscape, which, in turn, allows things to speak as loudly as persons” (Waltz 2004, 168).<sup>5</sup> Latour states it slightly differently: “It all depends on the sort of action that is flowing from one to the other, hence the words ‘net’ and ‘work.’ Really, we should say ‘work-net’ instead on ‘network.’ It’s the work and the movement and the changes that should be stressed” (Latour 2005, 143).<sup>6</sup>

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<sup>4</sup> For a basic overview of ANT that also delineates the differences between ANT, SCOT and SSK (sociology of scientific knowledge), see Monteiro 2000.

<sup>5</sup> Emphasis is from Waltz.

<sup>6</sup> Ironically, Latour repeatedly uses imagery, examples and metaphors from geography and cartography in *Reassembling the Social* (2005).

While engineers and designers may start out with a particular use in mind, the way the object is actually utilized depends on the other actants in the network:

How some particular work is designed to function in a given setting [classroom technology], for example, is *in-scribed* by the engineers, memos, scientists, administrators, computers, and curriculum designers, among others, and appropriate measures are put in place to ensure an anticipated “trajectory.” Both human and non-human actants, then, may *subscribe* to that program, *reinscribe* that end in the face of resistance, or *deinscribe* by working at cross-purposes. (Waltz 2004, 170.)<sup>7</sup>

Inscription is key, for without it, networks “could not be *organized, maintained, or extended*,” but inscriptions are also a means to following the actors through their networks (Barnes 1998, 207; Perkins 2006, 209).<sup>8</sup>

Critical human geographers have found ANT to be an interesting means to explore knowledge production, with its spatial metaphor of “networks,” its perspective of performance by all actants, and its view that scientific knowledge is site-specific (Hannah 2005, 154). I found a way through ANT with the work of Trevor Barnes, particularly “Performing Economic Geography: Two Men, Two Books, and a Cast of Thousands” (2002), where Barnes applies ANT to the performance of two prominent economic geography textbooks.<sup>9</sup> Barnes focuses on two critical texts and the ways in which they performed, contributing to the history and practices of economic geography. Barnes identifies four crucial attributes of texts which compose their performance: serving as an “inscription device,” permitting ideas to diffuse without corruption; offering “optical consistency and semiotic homogeneity,” that is, allowing diverse phenomenon to be controlled and manipulated once it is reduced to the size of a page; becoming touchstones that connect networks; and representing powerful rhetoric, binding complex evidence and ideas into a cohesive whole, constructing compelling arguments (Barnes 2000, 493-5). The network holds into place a variety of actants, human and non-human: once the network is stabilized, a “black box” is formed and only the final product is visible. Barnes’ work, in exploring economic geography, highlights the importance of objects in performance and the role of practice in shaping knowledge. In an earlier work, Barnes writes “Once they start circulating, however, those black boxes quickly become components of new networks that then define existing social

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<sup>7</sup> Emphasis is from Waltz. See also Akrich and Latour 1992.

<sup>8</sup> Emphasis is from Barnes.

<sup>9</sup> See also Barnes 1998.



relationships and new kinds of knowledge” (Barnes 1998, 207). Barnes’ work offered a glimpse into how articles, advertisements, stories, illustrations, and maps might play a role in the practice of bicycling and participate in the production of geographic knowledge from bicycling.

Barnes’ work resonates, in turn, with Vincent Del Casino and Stephen Hanna’s recent work on maps as representational practices (Del Casino and Hanna 2006), where they are “... thinking of maps as spaces. As such, maps and mapping are both representations and practices (read: performances) simultaneously” (Del Casino and Hanna 2006, 36). Whereas Barnes work examines texts’ contributions to the practice of economic geography, Del Casino and Hanna, also drawing in part from ANT, explore how maps and mapping work on an individual and societal level, what might be termed the *practice* of cartographic culture. Using a tourism map of Fredericksburg, Virginia, they demonstrate the ways in which consumption is production. Appearing as static representations, tourism maps involve performance as real bodies, moving through map space, find their own ways through the landscape. Picking up where Barnes left off, Del Casino and Hanna reorient texts from strictly addressing production to exploring how “production and consumption of map spaces [is] a process of both authoring and reading simultaneously” (Del Casino and Hanna 2006, 51).

Work in mass media studies, particularly by Richard Ohmann, offers compelling evidence of the ways in which texts participated in the creation of a national mass culture by promoting certain products, in this case the bicycle.<sup>10</sup> Through both content and advertising, early magazines targeted the growing white middle-class, and shaped modern consumer culture. Ohmann draws from Gramsci’s theory of cultural hegemony to “convey the complexities of mass culture and the negotiations among its producers and consumers” (Bogardus 1998, 515). Through the pages of magazines such as *McClure’s*, *Munsey’s*, *Ladies’ Home Journal*, the emerging middle-class was both being presented with commodities, such as the bicycle, by the capitalist ruling class and with a new view of itself and its space (Bogardus 1998, 515; Ohman 1996b, 45). Magazine editors and advertising agents claimed to “know the habits and tastes of old and young, urban and rural, male and female people” as well as the class of people who purchased their magazines and goods (Ohman 1996a, 231). As Richard Ohman writes “consumption is class specific and advertising had to be so, too” (Ohman 1996a, 233). Equipped with the knowledge of their target audience, the editors and agents

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<sup>10</sup> Ruth Schwartz Cowan’s work takes ANT and tweaks it “to place the consumer in the center of the network (at the consumption junction) but also to view the network from the consumer’s point of view” (Cowan 1987, 262). However Cowan’s focus is on the “place and time at which the consumer makes choices between competing technologies” (Cowan 1987, 263). I am interested in the impact of the consumption, in this case, the bicycle.

claimed the ability to “create desire” – “... if the desired act is purchase of a product, you must create a want for it” (Ohman 1996a, 233). These desires were for brand-name products and the lifestyle associated with them, transformed by the forces of capitalism from a mere product into a national mass culture (235). The bicycle industry was the first to utilize advertising in a massive, successful way (Petty 1995). As American mass culture became focused on mobility, their relationship with their landscape changed, triggering the need for not only new products but also new knowledges.

Rather than focus on a single theoretical perspective and methodology, I would like to use an array of methods, a virtual “cat’s cradle” as Donna Haraway has termed it. Haraway writes:

Drawn into patterns taught me by a myriad of other practitioners in technoscience worlds, I would like to make an elementary string figure in the form of a cartoon outline of the interknitted discourses named (1) cultural studies; (2) feminist, multicultural, antiracist science projects; and (3) science studies. ... the three are place markers, emphases, or tool kits – knots, if you will – in a constitutively interactive, collaborative process of trying to make sense of the natural worlds we inhabit and that inhabit us; i.e., the worlds of technoscience. ... The tangles are necessary to effective critical practice. Let me name this knot tendentiously and without commas: antiracist multicultural feminist studies of technoscience – i.e., a practice of critical theory as cat’s cradle games. (Haraway 1994, 66-69)

Haraway extends the metaphor, explaining that like the game cat’s cradle, it can be played alone but it can also be passed back and forth, inviting collective work, resulting in the creation of complex patterns. Haraway’s approach, which she identifies “as an actor-network theory” has much in common with more recent work done by Bruno Latour, focusing on the intimate connections linking objects, people, and places into intricate networks (Latour 1999; Haraway 1994, 71).<sup>11</sup> The advantage of the “cat’s cradle” approach is that it acknowledges that the resulting pattern is just one way of thinking about the issue at hand, avoiding the criticism of ANT that, by focusing on networks, it leaves no spaces to exist outside the network, resulting in a flat, centered view (Hetherington and Law 2000).

Cat’s cradle is a very appealing metaphor to me in approaching this work on women, bicycling, mapping, and geography. Not one approach can take everything into account. There needs to be a complex web: of feminist theory in thinking

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<sup>11</sup> Emphasis added.

about women's lives and experiences; of consumer and marketing theories in addressing the bicycle manufacturers and advocates; of science and technology to address the bicycle as well as the maps; of science/technology and society to address the relationship between these; and so on. To focus on one aspect would neglect another important thread. I will begin by introducing the "strings" that form our game and then attempt to weave one possible figure of women, bicycles, maps, and geography.<sup>12</sup>

### **Conquering a New World: Bicycle and the Need for Local Geographical Knowledge and Maps**

Riding the wheel, our own powers are revealed to us, a new sense is seemingly created. The unobserved are gradually awakened, and the keen observer is thrilled with quick and rare delight. The system is invigorated, the spirit is refreshed, the mind, freed from care, swept of dusty cobwebs, is filled with new and beautiful impressions. You have conquered a new world, and exultingly you take possession of it. (Ward 1896, 12)

American women did not immediately embrace the bicycle when it first arrived on the American scene in the 1870s. The "ordinary" bicycles of the time featured a large front wheel and a smaller back wheel, high seats, rigid tires, and were notoriously difficult to mount and ride, especially given women's clothing of the day – tight, heavy and restrictive. Bicycling was thus predominantly a man's sport and the bicycle associated with masculinity (Lerman et al 2004, 5; Bogardus 1998, 519). While writing about the automobile in 1904, the sentiment expressed in *Outing* magazine equally applies to the bicycle:

Motoring and, indeed, all outdoor pleasures are masters of iron, especially to a woman, who always, in a fashion, has to adopt them, while a man takes to them naturally. ("Why Women are ..." 1904, 155)

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<sup>12</sup> While working on this manuscript, I was startled to learn of Phillip Mackintosh and Glen Norcliffe's "Flâurie on Bicycles: Acquiescence to Women in Public in the 1890s," *The Canadian Geographer* 50, 1 (2006): 17-37. Panic-stricken I located and read the article, troubled that my work may have been preempted. It had not. As Haraway, would suggest, it was an entirely different figure of "cat's cradle." Mackintosh and Norcliffe focus on bourgeois urban women and how the bicycle resulted in a female flâneur of sorts, respectable as she moved freely through the streets on her bicycle.

The stereotype of men being mechanically inclined while women are not lingers to this day. Women's "adoption" of the bicycle began with mechanical solutions, with technological advances making bicycling easier and safer for all. With the development of the safety bicycle in 1885, featuring two equal size wheels, the development of the drop frame for ladies (to allow for full skirts), and the introduction of pneumatic tires in 1890, the stage was set for a women's revolution (Fig. 5) (Rosen 2004, 380; Aronson 1952).<sup>13</sup> It is difficult to gauge the exact number of women cyclists but the United States may have had as many as 2 million in the 1890s (Petty 1986, 124).



**Figure 5** "Carding & spinning wool, Icelandic spinning wheel. The new & the old" – hand-colored photographic print believed to have been taken in North Dakota around 1900. Fred Hulstand History in Pictures Collection, NDIRS-NDSU, Fargo ND.

The bicycle called American women to master new skills, both technical and social. The riding was the easy part – bicyclists also needed to know how to solve bicycle problems, fix flats, and map trips (Fig. 6). Through magazines and books, how-to hints were given on how to ride, how to maintain your bicycle, and the essentials needed to undertake short and long trips.<sup>14</sup> They were indoctrinating women in the practice of cycling – how to do it, what to do, what not to do, proper conduct, etc. These magazines and books, while presenting "knowledge" were also material goods connected with bicycling, part of the bicycling paraphernalia to be purchased (in addition to clothing, seats, corsets, etc). The purchase of the bicycle was just the first step in a network of society, consumption, and technology that the act of bicycling pulled the rider into.

<sup>13</sup> The likening of a spinning wheel to a bicycle was a popular analogy. With little effort I have located three poems that utilize this imagery (Bryan 1897; Lyon 1897; Bridges 1893)

<sup>14</sup> Authors such as Maria Ward advocated women learning the basic mechanics to fix and maintain their bicycles (Ward 1896).



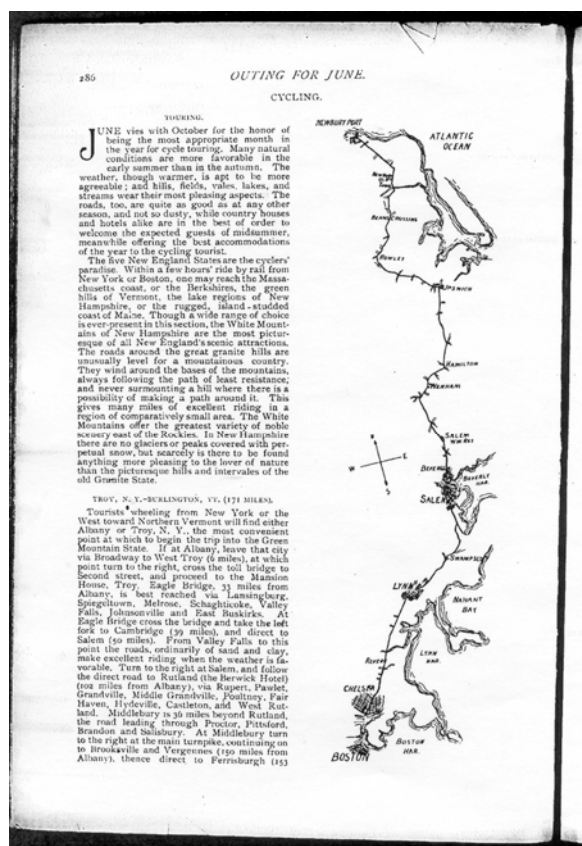
**Figure 6** Frontpiece from H.G. Wells' *Wheels of Chance* (1896).

Early bicyclists rode on indoor tracks or in urban parks, so maps were not necessary initially. As the technology improved, making riding more comfortable and safer, riders began to venture further, relying on their own knowledge of the local landscape. An 1891 article in *Outing* on women and bicycling, entitled "How We Ride Our Wheels," suggests that once bicycling has been mastered, the next question is where to go:

But when my lady has forgotten all these trouble-some tricks, when she can mount quickly and expertly and do her ten miles unweariedly, where shall she ride? Ah, where? The smiling countryside holds out arms of welcome to her, the shaded grassy road, the smooth steep incline, the bumping corduroy by-ways, the canal towpaths, the lakeside drives and the stubborn stiff hill to be climbed. (Denison 1891, 54)

The practice of bicycling requires the consumption of place – for women this meant venturing out into the landscape in a new way. Marguerite Merington in "Women and the Bicycle" (1895) not only provides suggestions on what women should wear but also where to cycle in New York City. It was only when they

ventured beyond the “known,” into unfamiliar landscapes that bicyclists needed maps or some form of spatial information, originally in the form of verbal information, eventually transmitted to a greater audience through road books and maps. This spatial information included not only the roads, and their conditions, but also the grade, and, at times, included information on hotels and restaurants. Early information on bicycle touring can be found in bicycling articles and were also used by other cyclists for clues on roads and conditions.



**Figure 7** “Boston to Newburyport” itinerary strip map from *Outing* magazine, 1898. *Outing* regularly published articles on cycling on the East Coast, complete with itinerary strip maps, supplemented by a narrative account of the trip, detailing not only the roads but also the stops. “Cycling. Touring.” *Outing* 32, 3 (June 1898): 286.

*Outing* magazine regularly published articles on cycling on the East Coast complete with itinerary strip maps (Fig. 7) and narrative descriptions as well as accounts of touring outside the United States (for example “The Prowler” 1896).<sup>15</sup> *Outing* catered to the middle to upper classes with leisure time, focusing on a wide range of physical activities, beginning with bicycling. It aggressively promoted bicycling for women from its inception, in the form of tricycling at first, safety bicycles later. Albert Pope of Columbia bicycle fame and A.H. Overman of the Victor Bicycle Company underwrote the publication of *Outing* as well as the *The Wheelman* (Smith 1972, 9).<sup>16</sup> American Grace Denison published an *Outing* account of cycling with her husband in Ireland in 1893 (Denison 1893). She was inspired to take the trip from a newspaper account of an Irish cycling club called the “*Ohne Hast*” or “Take it easy.” Denison writes: “. . . the more I thought the more I fretted to

<sup>15</sup> Occasionally bicycle articles were published with pseudonyms such as “The Prowler” and “Martha” articles cited here. “The Prowler” is likely one of the editors.

<sup>16</sup> *Outing* magazine merged with *The Wheelman* in 1884. The first issue of *The Wheelman* in 1882 featured on its cover not only men on a variety of bicycles, but also a woman on a tricycle.



set out. As to the roads, I cheerfully re-read the newspaper article, and in fancy followed the ‘*Ohne Hasts*’ on their runs” (Denison 1893a, 28). She goes on to write about her planning for the trip, commenting

After the costume and the wheel, came the itinerary. (Isn’t that sequence a confession of sex?) I had maps and advice galore, and a good share of undiluted Hiberian pessimism, with large portions of much watered veracity, and highly colored adjectives. (Denison 1893, 30)

Her sequence may reflect her sex, but it also reflects the concerns of early women bicyclists – once you obtain a wheel and a suitable costume, then you can worry about the route.<sup>17</sup>

*Outing* modeled bicycling for women, not only publishing articles that advocated it, but also articles on American women touring in bicycles, such as 1892’s “We Girls Awheel Through Germany” (“Martha” 1892). “We Girls” is an account of a trip through Germany by five women on bicycles, describing the landscape and the people but also explaining how they found inns and food, dealt with bicycle repairs themselves, and what they packed in their bags: “changes of linen, handkerchiefs, necessary brushes, combs, etc., a pocket-dictionary, a road-map for cyclists, and a few other things” (“Martha” 1892, 302). Through accounts such as “Martha’s,” women cyclists were shown not only that women could tour alone on bicycles but *how* to tour – what to pack, what to see, what to do. The bicycle literature constructs an association of bicycle maps with “touring” an activity at least initially associated with the upper-class and “touring” in Europe (as in the articles in *Outing*). By modeling the behavior, it was demonstrated that “touring” was within reach of the middle-class in the local landscape if they had a bicycle and a map. Four months later in *Outing*, an article by the American explorer Fanny Bullock Workman details the sport of bicycling in Germany and advocates women cycling, providing information on the landscapes to travel through, how to obtain the maps, and how to read and utilize the maps (Workman

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<sup>17</sup> Costume suitability cannot be treated too lightly. An account entitled “A Honeymoon on Wheels” describes a trip through the South, with the bride being told in New Orleans: “I reckon a girl in bloomers would ride but once here. She’d get lynched!” (Follett 1896, 5-6). As if bloomers and bicycles were not bad enough, what of bloomers off bicycles? In Long Island, school teachers were forbidden from bicycling out of fear that they would wear bloomers in the classroom (Smith 1972, 100). In Chicago, creative entrepreneurs found a market for public dances where “cycling costume was required for both ladies and gentlemen” (Smith 1972, 103). While the public was interested, the Chicago police were not and passed a ruling that “any woman who would wear bloomers while dancing in public was to be treated as a common prostitute” (Smith 1972, 104).

1892, 111). Workman recognized that her works provided an exemplar of how to travel by bicycle, as she writes “... an intelligent bicyclist will find considerable information that might prove useful were he to make a similar journey” (Workman 1897, vi). Maps were incorporated into the network associated with the bicycle, as something to be consumed and as a tool of cycling consumption.

## Gatekeepers and Road Maps

While the automobile is often credited for the explosion in road maps, it was the bicycle that led the way. The state of American roads was rough in the 1880s and 1890s. Accounts of early touring by both bicycle and automobile are filled with horror stories of road conditions (for example, see Ramsey 1961/2005 and LeLong 1898a and 1898b).<sup>18</sup> Early in the 19<sup>th</sup> century, there had been a movement to construct national highways, but the advent of the railroad and the subsequent boom in rail lines across the nation placed a greater focus on rail transportation, downplaying the need for national roads (Preston 1991, 19). Railroad maps were maps just of railroads, showing only where the rail lines could get you: they did not generally include roads on them. Maps of roads prior to the bicycle were also questionable – reportedly during the Civil War Confederate troops had few maps, and at times did not know where they were going, using newspaper accounts of battles to find their way (Harvey 2000, 152). The existing roads were often primitive: used primarily by individuals on horseback or traveling by wagon or coach, they often did not have bridges over streams or creeks, expecting the horses to ford the stream instead (Preston 1991, 96). Few had artificial surfaces; many were merely dirt that rutted horribly in spring rains. Road condition information was therefore key to a successful bicycle ride/tour and road information was necessary if the cyclist was to travel beyond the familiar.

Bicycling clubs and organizations became the “gatekeepers” of spatial knowledge:

Almost equal in value to the good road surface, and of great importance to the touring wheelmen, is a knowledge of routes and distances. To supply this knowledge, as well as to indicate the quality and direction of each of the several different roads within the State, the wheelmen had prepared road books and maps for the use of the members of their several State organizations. (Potter 1896, 362)

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<sup>18</sup> Alice Ramsey’s *Alice’s Ride* (2005) is a republished account of her 1909 automobile tour, driving from coast to coast. Ramsey encountered poor roads all across the U.S. but found Iowa particularly appalling, compounded with unseasonably heavy rains.

The logbooks wheelmen were encouraged to keep of their runs became the basis for maps produced for the League, the maps representing the collaboration of League members to create a new artifact – the map (Aronson 1952, 311). Travelers abroad were directed to plan in advance and join touring clubs of each country that they planned to travel through. Cycling clubs each set their own rules for membership. Some admitted women as full members while others admitted them as “honorary members.”<sup>19</sup> Membership brought fraternity as well as insurance against bicycle theft, subscription to a journal, discounts for repairs and hotels, tour books and maps, and access to experienced riders with knowledge of the local geography (*Road Book of Massachusetts* 1898; *Wisconsin Tour and Hand Book* 1897, 115). The reportedly low admission fees would be well-worth it, readers were advised:

Indeed, the touring idea has gained such ground in late years, both in Europe and in America, that there are new national organizations with small membership fees, which have for their object the advancement of this interest. Road-books with best routes and conditions of the highways are issued to all members. These contain, also, a list of the best hotels to patronize (often at special rates to cyclists); lists of repair shops, and the names of “consuls,” who are appointed in every chief town and who willingly impart to strangers all necessary information. (Dodge 1888, 110)

With the bicycle, attention was focused on roads again and road knowledge, both in the need for good roads and the need for road maps. Early bicycle clubs worked toward both: conceiving the Good Roads movement and providing the bicycle road books and maps, with the bicycle maps also functioning as “propaganda in support of road improvements” (Parry 2002, 18; Hugill 1982, 327-8).<sup>20</sup> An example of this is Fig. 8, a detail of the Good Roads map of Manhattan

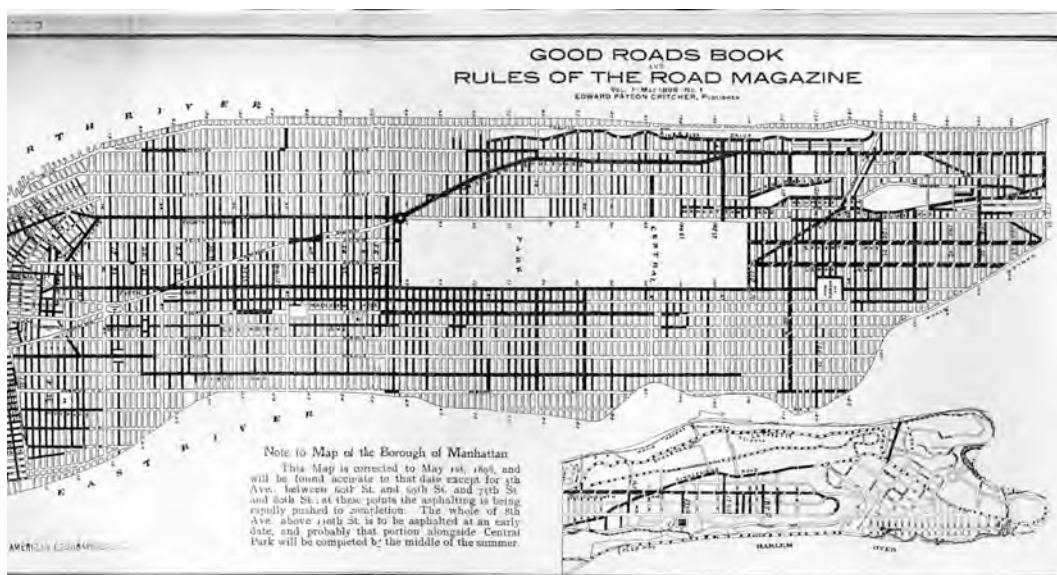
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<sup>19</sup> It is difficult to explicitly state the League of American Wheelmen’s position on women bicyclists. Its membership was open to “white wheelmen,” thereby banning most minorities. Its bylaws only state that they do not sanction women’s cycling races. From my brief research, it seems that state and local branches of L.A.W. would bend the rules as they saw fit. In 1896, the Winnebago Wheelmen (Fond du Lac WI), a local branch of the League of American Wheelmen, voted and passed a resolution admitting women as honorary members: twenty-eight women joined (Julka 1941). A list of forty-one bicycle clubs of Wisconsin (both those affiliated with L.A.W. and independent) from 1897 includes three clubs with women in leadership positions (*Wisconsin Tour and Hand Book* 1897, 125-9). Number of bicycles is believed to have peaked in 1899 with an estimated 1.1 million bicycles on American roads (Petty 1995, 32). However, the League is believed to have peak membership of only approximately 100,000 in 1898 (*Road Book of Massachusetts* 1898).

<sup>20</sup> The earliest American bicycle map located thus far is an 1885 “Driving and Cycling Map of South-Eastern Massachusetts” at the Newberry Library, Chicago IL. It does not have any visible connection to a bicycle club.

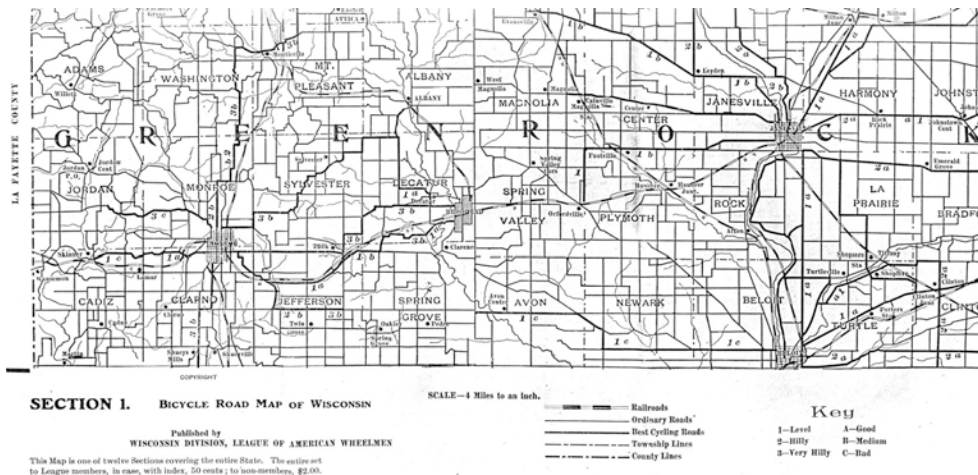
from 1898, describing road conditions in Manhattan, which at the time were not all paved. Particularly prominent was the League who began their Good Roads movement in 1888, influencing Congress to create a national highway commission in 1892 and then the Office of Road Inquiry in 1893 (Preston 1991, 12).

On these early bicycle maps (see Fig. 8 as well as 9 and 10), roads were keyed to their conditions and grades, providing a mental map of sorts for the bicyclists, not just what roads to take but also how steep they were and how smooth or rough they were.<sup>21</sup> Bicyclists could then lay out their route according to the conditions that they were willing to endure. But we must acknowledge that it is not

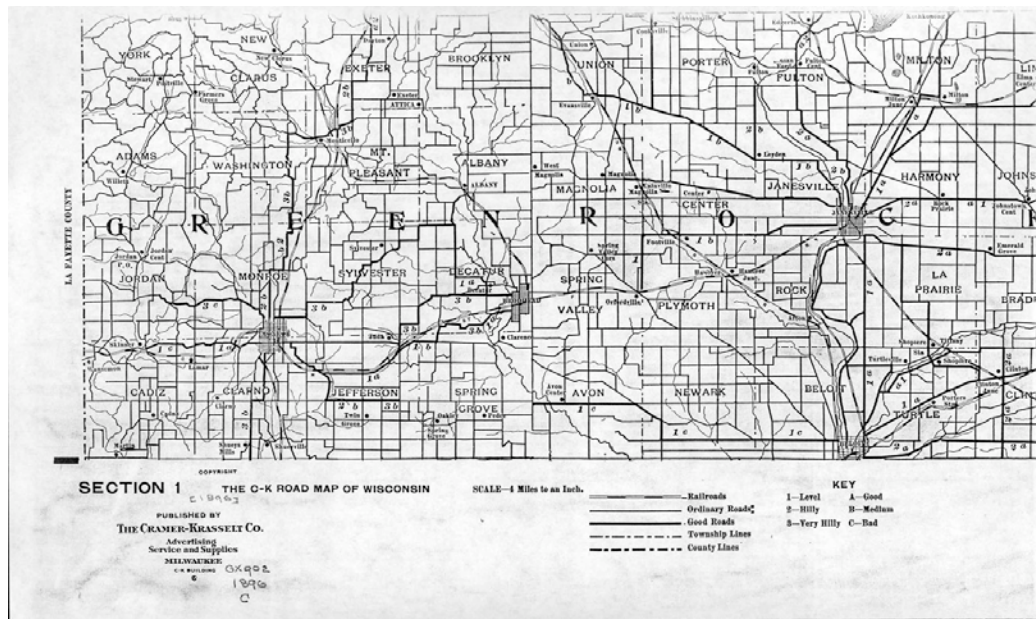


**Figure 8** Good Roads map of Manhattan, 1898. From the American Geographical Society Library, University of Wisconsin-Milwaukee Libraries (862.1 New York City D-1898).

<sup>21</sup> Several brief articles have been published on bicycle maps: R. Parry, 2002, "Cartography for the 'New' Cyclist," *Mercator's World* July/August, 18-24; C. Piggott, 1980, "When the Cycle was King of the Road," *The Map Collector* 13: 14-18; and J. Troja and E. Drake, 1978, "Mapping for Bicycles" *Bicycle Forum* 1:22-29. Only Piggott is historical; however it focuses on Great Britain. The other two cover primarily contemporary bicycle maps. In my archival research in American collections, I have found only a handful of bicycle maps. Most maps were published on a very thin paper (onionskin), so it could be practically folded small, tucked into a pocket, and taken along on a bike ride. As a result, if the map were used at all, it was less likely to survive long enough to be donated to a collection. Europeans bicycled longer (and are still cycling) and published more bicycle maps than Americans, judging from the bicycle maps I have located and from an informal monitoring of antique bicycle maps for sale on Ebay during 2006.



**Figure 9** Detail of Southwestern Wisconsin from the 1896 “Bicycle Road Map of Wisconsin” published by the Wisconsin Chapter, League of American Wheelmen. Note the multilevel coding of the landscape. The legend differentiates between “Ordinary roads” and “Best cycling roads” and also codes the conditions of the roads (good, medium, bad) as well as the grade (level, hilly, very hilly). Wisconsin Historical Society, Madison WI (WHI--50449).



**Figure 10** Detail of “The C-K Road Map of Wisconsin” produced by the Cramer-Krassett Company of Milwaukee WI. Note that it is virtually identical to Fig. 10, except for the publishing information. Wisconsin Historical Society, Madison (WHI--50443).

just “facts” on these bicycle maps – there is an authoritative voice dictating what roads are “good” and what makes a “good road” – leaving us to wonder what is the criteria for a “good road” and who decides if it meets the criteria? Hotels, restaurants, and bicycle repair shops are similarly treated, with road books providing lists of these along the routes, beginning the commercialization of our transportation routes (Akerman 1993). Commercially produced bicycle maps often incorporated advertisements on their covers, the margins, and all available spaces, encouraging consumption as they themselves were being consumed (Pridmore and Hurd 1995, 50-51).<sup>22</sup> The coding on these map acts as inscription, directing use and action (Monteiro 2000). Although riders have the free-will to select their own routes and use the maps as they wish, most casual riders would probably opt for the “best” roads, resulting in greater traffic along select routes. The format, particularly of the League maps, suggests use was also inscribed, in that they were made small enough and on fine onionskin paper to be slipped into a pocket so that they may be handily taken on the bicycle rides. A British poem entitled “The Old Road Map” captures this:

See its scrawled about, in and out, with lines and  
circles strange,  
What time we planned the lie of the land, and marked  
the Mendip range.  
‘Twas, overnight, with our tour in sight, we broached  
the foaming tap,  
And drank to the chance of the mazy dance we had  
traced on the old Road Map.

That summer is dead, and its friends are fled: but I  
follow their passage still,  
Where the pencil-black still wanders back from Wells  
to Cranmore Hill:  
It was here that we lay after lunch that day for a pipe  
and a noontide nap,  
Till the market-cart woke us all with a start, as we  
dozed o’er the old Road Map. (Waugh 1900)

As sketched out in the poem, maps were used both to plan bicycle trips but also taken along to refer to on the road. Yet it also captures how the riders inscribed their own path, their own map use, onto the map itself. Maps were not just where

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<sup>22</sup> A readily available example is on David Rumsey’s website: <http://www.davidrumsey.com/>. See: George Blum, *Map of California Roads for Cyclists* (1896). (Accessed 25 April 2007).



you could go but also represent the freedom of mobility that accompanied bicycling, the “dreaming” if you like, over the map.

Bicycle maps had social and spatial limitations: maps being limited initially to certain “mapped” areas and restricted to members, unless willing to pay a higher price for the knowledge. In the 1890s, most of the League members were in Northern states and the majority of their tours were in locations near major cities, such as New England, so maps were done of these states (Preston 1991, 12).<sup>23</sup> In states where local clubs existed, local clubs mapped their local areas and at times their states. State L.A.W. members received the road book and its five maps free but non-members paid \$2.00. By comparison, League membership was \$2.00 for the first year and \$1 each year after (*Road Book of Massachusetts* 1898; *Wisconsin Tour and Hand Book* 1897).

Seeing a potentially lucrative opportunity, map publishers got into the bicycle map trade. In Wisconsin, a map produced for the local League chapter appears without the League title in the Wisconsin State Historical Society, identical in everything except the producer.<sup>24</sup> It appears the publisher was selling the maps under its own name after producing the League map, despite the League map being copyrighted (compare Figs. 9 and 10). Mendenhall Lithographic Company out of Ohio produced bicycling maps of numerous states. A 1901 article comments

Go where you would you could hear nothing but talk about different models and ‘century runs’ and the condition of the highways; while map-makers reaped a small fortune by publishing little guides and roadbooks for the use of the bicycle fiend. (Cited in Tobin 1974, 839)<sup>25</sup>

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<sup>23</sup> The bicycle craze reached nearly all corners of the country. For example see: “a marvel of ingenuity” special bicycle issue of *The Indiana Historian* December 1996 by Pamela Bennett; R. Spreng, “The 1890s Bicycling Craze in the Red River Valley” *Minnesota History* 54, 6 (Summer 1995): 268-282; and “Hall County’s Pioneering Women: All Work and No Play Makes Jane a Very Dull Girl” on the Stuhr Museum, Grand Island NE, website: <http://www.stuhrmuseum.org/research/play.htm> Accessed on April 25, 2007. However, bicycle maps from these areas have proven more difficult to find.

<sup>24</sup> Unfortunately, its price is not listed.

<sup>25</sup> A high estimate from the 1890s puts an estimated \$300,000,000 in bicycles and another \$200,000,000 in sundries, including repairs (Smith 1972, 24). Another estimate puts the bicycle and related industries economy at an estimated \$75,000,000 in 1890s (Tobin 1974, 839). It is estimated that 10% of all newspaper advertising at this time was devoted to cycling (Rogers 1972, 203). These estimates cover a substantial range, suggesting the great economic impact of the bicycle and related industries in the 1890s.

Considering a Rand McNally map of Illinois, a Rand McNally map of New York, a Mendenhall map of Wisconsin and a Mendenhall map of Chicago, all four maps indicate “good” cycling roads but none provide a means of indicating the topography. By comparison, League maps of Wisconsin and New York used a variety of means of conveying the terrain as well as road quality.<sup>26</sup> The difference in the maps may reflect the cyclists’ concerns and the influence of cyclist’s logbooks in compiling the maps. While one cycling map may seem as good as another, the differences in the maps would be apparent in the practice. More research will need to be conducted to reach a stronger conclusion.

Cycling maps were not above reproach, despite being based on riders’ information. Margaret Valentine Le Long, in her account of bicycling from Chicago to San Francisco, vents her frustration with her League map:

After fifteen miles of alternate sand and mud, hills and bogs, and a cold wind blowing, of course, straight in my face, I decided to stop in the next town and spend the rest of the day expressing my opinion about the League map of Iowa, which is a snare and a delusion. (Le Long 1898a, 492)

Nor were verbal directions always the easiest to follow. Le Long found Wyoming quite trying:

By this time I had developed a positive mania for getting on the wrong road, so I made inquiries of all the cyclers and old pioneers in Laramie, wrote down their directions, drew maps of the country, and then took the wrong road. It landed me on the banks of an alkali lake, and ended there. (Le Long 1898b, 593)

But all was not lost: A local man eventually came along and when Le Long asked where the road was, he replied she was standing in the middle of it, acknowledging “it wasn’t ‘any great shakes of a road, nohow’” and pointed her in the right direction (Le Long 1898b, 593). Between the maps and guidebooks, it often came down to local male experience, privileging masculine knowledge of local geography.<sup>27</sup>

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<sup>26</sup> Mendenhall maps of Illinois, Wisconsin, and New York examined in collections at the Wisconsin State Historical Society, Madison. I have examined a small sample of bicycling maps produced by the League and by independent map companies. The small sample due to the difficulty in locating 1890s bicycle maps, not due to lack of effort.

<sup>27</sup> “Some broken spokes mended by 10:30, we start, not taking any of the routes indicated by the guidebooks, for the host of the Lion d’Or, an enthusiastic wheelman, insists on laying out a

By the early twentieth century, bicycle maps began to be published as “bicycle and motoring” maps, reflecting the shift from bicycles to the growing American obsession with the automobile (Piggott 1980). Bicycles soon gave way to automobiles, never disappearing completely from the American landscape, but enjoying periodic revivals in popularity. The network had shifted to embrace a new technology and develop new networks, but these new networks originated with bicycling and its nascent mobility, now carrying Americans much farther and faster than they had gone before.<sup>28</sup>

### **“A New Language”: Landscape, Maps and Geographic Knowledge**

. . . the average bicycler has learned more of the topography of the country and its local history than anybody, except the map makers, has known before. The feminine mind is fond of detail, and when she starts out, the woman who rides afield knows where she is going, and what she is going to see. It is as though a new language had been given to her, and the books of literature opened before her. (“The World Awheel” 1896, 159)

For this figure of women, bicycles, maps, and geography, in this game of critical theory “cat’s cradle,” I would now like to return to the impact of bicycling and women’s use of maps and geographic knowledge. The bicycle and its accoutrements entered American women’s lives and began to transform their understanding of the world around them. As women rode their bicycles, they experienced landscape in new ways, they went farther (spatially and socially) as a result, and they became more aware of their local geography and of maps in general.

The American concept of landscape evolved because of bicycling, but especially for women. The late 19<sup>th</sup> century experience of landscape varied dramatically by social status, race, and geography. People who depended on the landscape for livelihood, such as farmers, would have a markedly different view of

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new course for us, which he knows all about, and which will be more comfortable “pour ces dames” (Cross 1899, 6).

<sup>28</sup> Some major transportation industry giants had their start as bicycle manufacturers. Aviation pioneers Orville and Wilbur Wright and Glenn H. Curtiss were all bicycle manufacturers. Harley-Davidson motorcycles began with motor to be attached to regular pedal bicycles. And many contributors to the development of the automobile were bicycle manufacturers first, such as Charles Duryea and Albert Pope.



**Figure 11** Getting the lay of the land, Crescent bicycles advertisement from *Scientific American* 74, 5 (February 1896).

landscapes, valuing agricultural land for one reason and wilderness for another. Industrialization and urbanization led to a distancing from landscape, changing the experience of landscape. Landscape became something that you would travel to, to experience, thus associating landscape with the rustic rural scene or with untamed wilderness (Figs. 1, 2 and 11) (Aronson 1952, 311). As a result, landscape was not encountered by most urban dwellers on a daily basis, but on weekends or perhaps on a summer holiday if you could afford it. The rural or wilderness offered “a highly attractive alternative to the ugly artificiality of modern civilization” and “the illusion that we can escape the cares and troubles of the world in which our past has ensnared us” (Cronon 1995, 78-9).

With cycling, Americans were being encouraged to experience landscape and the environment in a new ways, in terms of physical experiences and in terms of knowledge. Not dependent on landscape

for livelihood, not viewing it from a discreet distance, but experiencing it physically in a “practice of landscape” as Tim Cresswell has phrased it (Cresswell 2003). Cycling through a landscape meant to experience it with the full body – not just the eyes. There were hills to be climbed, legs burning, and then flying down the other side, wind in the hair; smells, good and bad, to be taken in; changes in temperature, from bright sun to shady forest to be experienced. The practice of landscape involves the participant with the place: “participation in the landscape brings with it a very different sense of place from one which is disembodied and contemplative” (Spinney 2006, 710). Through the bicyclist’s practice of landscape came a variety of outcomes: not just a new way of experiencing landscape but also “new” landscapes, new roads, data to be compiled into maps, and eventually the maps themselves. Dualities came crashing down: landscape was an object to be consumed, a product of the Good Roads movement, and a practice; bicyclists could read guides and maps and contribute their own knowledge via word of mouth and by contributing to league maps; bicycling was presented as a freedom to be bought and consumed and, in practice *was* freedom itself, as many Americans rode off, unfettered by trains or mass transportation restrictions (Del Casino and Hanna 2006, 35-6). As Glen Norcliffe writes, the bicycle was “... in short, a geographically liberating machine” (Norcliffe 2001, 222).

Not all welcomed the transformations the bicycle was achieving in women's lives. Some outraged Americans were quite concerned about women's mobility:

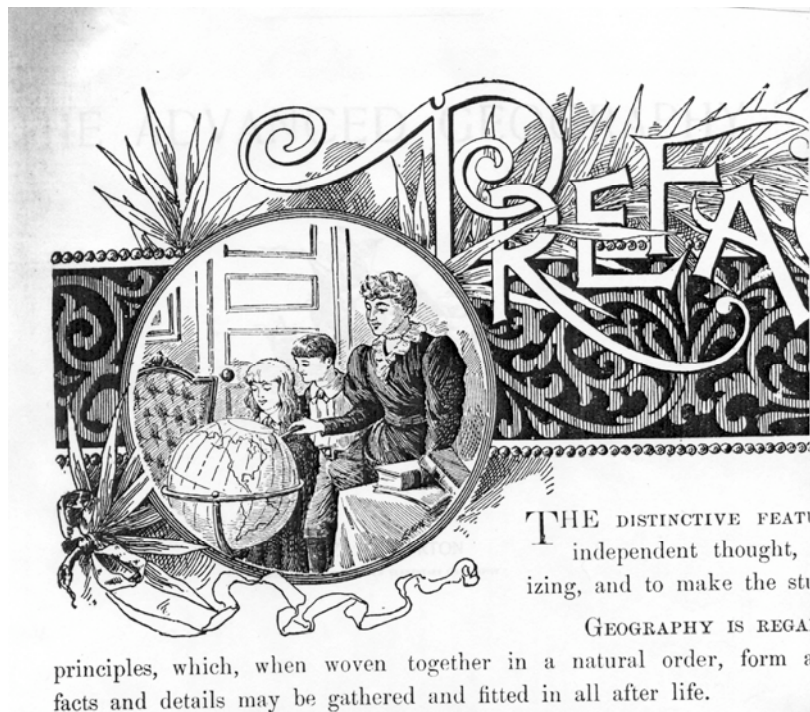
Bicycling by young women has helped more than any other medium to swell the ranks of reckless girls, who finally drift into the army of outcast women of the United States." ("Crusade against the wheel for women" *Literary Digest* July 18, 1896)

Women were expected to stay in their place. Women out of place – prostitutes, tramps, hobos – were viewed as a social aberration and a threat to the moral order at the time (Cresswell 1999). However most Americans welcomed the new landscapes and new worlds bicycling opened for women, accepting wheeled mobility of women where they hadn't accepted other forms of mobility (Mackintosh and Norcliffe 2006).

Though women had been portrayed in the media as being limited in their geographical range, they did undoubtedly have knowledge of geography beyond their sphere on the global scale, before the bicycle. A nineteenth century education included a healthy dose of geography and history for boys and girls (Fig. 12). Emma Willard argued that this was essential in order to understand each but that it also leads to "improvement in individual and national virtue" and aid in the "growth of wholesome national feelings" (Willard 1860, iv-v). But I would argue that there is a difference between the global geography taught in the schools (continents, capitals, major products) and the local knowledge of the regional landscape (good roads, hills, safe places to rest) learned through cycling.<sup>29</sup> In the 1890s, the Conference on Geography to the Committee of Ten of the National Education Association called for geography teaching to shift from the abstract global level to that of the local, accompanied by experience with maps, both creating as well as reading (Russell 1895, 34-5). Through observation and representation, geography would in essence shift from a representation to a practice of geography.

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<sup>29</sup> An informal survey of 1890s geography textbooks suggests that much of the focus was on world countries, their cities, major physical features, products, etc and being able to draw "maps" of the continents. If the United States was dealt with, it was on a regional scale in a similar manner (cities, features, etc.). Informal survey conducted at the American Geographical Society Library, University of Wisconsin-Milwaukee, June and July 2005.



**Figure 12** Detail from the preface page of E. Morton's *Advanced Geography* (1903). From the American Geographical Society Library, University of Wisconsin-Milwaukee Libraries.

The bicycle required a working knowledge of local geography in planning the rides. The farther the rider ventured, the greater the topographic knowledge required. Initially this was probably word of mouth, from rider to rider, and then through the medium of the bicycle club. Eventually, bicycle maps provided this local knowledge. But bicycle maps were not just about planning a particular route; they facilitated learning about new places (Brown and Laurier 2006, 30). As early as 1885, bicycle supporters realized the potential of bicycling as more than just physical activity, they promoted “Cycling as an Intellectual Pursuit” –

... the use of the bicycle or tricycle is inseparably connected with acquisition of knowledge, beginning with mechanics, and extending through physiology, climatology, topography, geography, natural history, and every other region of popular science ... its full enjoyment is seen more and more to call for more of available knowledge in these directions than the individual rider has ... (“Scientific Use of the Wheel” 1885)

This “intellectual pursuit” was not just limited to men, but opened to women as they adopted the bicycle, as per the quote at the beginning of this section.



While bicycling led to a great appreciation of the topography, it also led to a need to read and interpret maps. Ward in *Bicycling for Ladies* (1896) directs her readers:

Study the country you are to travel and the road surface, understand your map, know your route, its general directions, etc. Always observe the road you cover; keep a small note-book, and jot down everything of interest. Use the pocket-compass, even in your home locality, to fix general direction; for when detained at night, such knowledge may prove useful. (Ward 1896, 54)

A 1899 *Good Housekeeping* article provided women with some directions on reading and using maps. Entitled “Governmental Maps: Their Use in the Vacation Season,” and written by a William Orr, Jr., it begins “While the summer tourist does well to follow the advice given to Othello and put money in his purse, there is another suggestion he should heed, that is, put a map in his pocket” (Orr 1899, 283). It goes on to suggest how it is not just the physical landscape that can be observed through the map, but also the cultural landscape, how this can be useful when on vacation as well as when bicycling. It even details how to paste them onto linen so they can easily be folded small and be tucked into a pocket, kept handy while traveling. An 1896 “Cyclists’ Road Map of Portland Oregon” has a sidebar narrative on a pleasant ride from Portland to the town of St. Helens:

For ladies and those not wishing to make the round trip by wheel, a delightful day may be had by taking the O.R. & N. steamers from Ash Street at 7 A.M., arriving at St. Helens about 9. You then have nearly the whole day in which to enjoy the beautiful scenery along the road, and the lunch you have taken may be daintily served at one of the numerous sparkling streams to be found about eleven or twelve o’clock. This run should be made when the wind is from the north. Fare to St. Helens, 50 cents, wheels free. (*Cyclists’ Road Map of Portland Oregon*, 1896)

The tone of the sidebar suggests that it was anticipated a potential female audience of the map and that the map would be consulted prior to the trip.<sup>30</sup> An ad for women’s cycles in the map margins supports the argument for an audience that included women. While there is no way of knowing the number of women who contributed to cycling maps, it is conceivable that through their participation in cycling clubs, women contributed to the development of cycling maps.<sup>31</sup> Thus

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<sup>30</sup> For a fascinating new study on wayfinding, see Brown and Laurier 2006.

<sup>31</sup> A souvenir program from “bicycle runs,” organized by a Milwaukee bicycle club, has six of the ten “guides” for the runs being women (*Souvenir program ...* 1897).

American women were indoctrinated across the spectrum in cartographic culture, both in terms of the population reached and in the variety of texts.

Just because a woman had a map and knew how to read a map, did not liberate her from patriarchy: male knowledge of the landscape was still privileged (Fig 6). Despite all my searching, I never found an illustration that depicted a woman bicyclist with a map in her hand, only men with maps. Men dominated geographic knowledge, through their positioning as the sources of *local* geographic knowledge as well as having active roles in the production of geographic knowledge. Men have long been associated with “knowing the lay of the land,” with both geographic and sexual undertones (Huffman 1997; Rose 1993). American men had been bicycling longer than American women and had greater geographical mobility through their socially-constructed roles. Male-dominated bicycle clubs were positioned as sources of knowledge about routes and roads, at times more informative and dependable than a map. Men were in control of the network, inscribing “proper” use of the bicycle and of geographic knowledge. Despite the continued male domination of geographic knowledge, women were being encouraged to explore their landscape, utilize maps, and make geography their own.<sup>32</sup>

Even as women were mastering another new technology in the form of maps, they were learning that the authoritative knowledge they contained could be questioned:

To look at the map of Wyoming, one would think it a thickly-settled country. Had I known how many of those names that loomed so large on the map stand only for side-tracks and section-houses, I fear I should never have had the courage to make the trip. (Le Long 1898b, 595)

Maps, while offering convincing rhetoric as to the lay of the land and the state of the roads, could be proved right or wrong, as the case may be, on the road. Lelong’s published frustrations with maps of Iowa and Wyoming is a counterpoint to the authority of the League maps (deinscribing) and represents her own authoring of spatial information through cycling and writing/publishing.

Maps appear to be “black boxes,” representing the League and its knowledge as well as its rules and regulations, but as we are well aware, everything

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<sup>32</sup> Note, at this time, women were engaged in cartography in certain circumstances. Richards (2004) work on Southern women captures their exposure to cartography through education and its subsequent role in their lives. Women pursuing social justice work were engaged in mapping projects, such as the Hull House maps, published in 1895 (Sklar 1998). However, I argue that at this time men dominated geographic knowledge and knowledge production.

is essentially malleable. It is up to the user to decide how to put them into play – by following the “best” routes, inscribing their own new routes and information, or dreaming over them in a comfy armchair. It is up to the individual to find their way through the landscape, be it real or imaginary, without or without their bicycles, maps, and knowledge. For women, the encouragement towards maps and geography suggests tacit permission granting women greater mobility. Why direct women to use maps if not to travel farther, more freely than they had before, experiencing landscape in new ways? By examining articles, books, and advertisements it is possible to explore how approaches to geography for women were inscribed. Through repeated inscription, maps and geography were linked through cycling to mobility, into a compelling, cohesive, logical assemblage. The geographic knowledge that women gained through cycling was a result of the interaction of bicycles, bicycle clubs, bicycling literature and advertisements, and bicycle maps. It is the combined technological and sociological elements that impacted women’s lives, allowing for greater spatial and temporal mobility, allowing them greater freedom and agency. Through the practice of cycling and cartographic culture, women were being encouraged to experience and practice landscape, gaining in the process new knowledge and experiences of geography, both local and distant.



**Figure 13** Peugeot bicycle advertisement poster from 1922. While not an American example, it embodies the world that the bicycle gave women. From J. Rennert, *100 Years of Bicycle Posters* (New York: Harper & Row, 1973), plate 100.

The technological development of the bicycle changed *how* Americans moved through the landscape *and* what they knew about the land. The advertisement and promotion of bicycling encouraged women to embrace these changes and modeled new behaviors for them, from dress to the practice of cartographic culture. As American women adopted the bicycle, they were not simply purchasing the latest technology or the latest trend, they were pulled into a complicated network that included new knowledge of maps and geography (Fig. 13). In 1895, Jean Porter Rudd captures the entire network of women, bicycles, maps, and geographic knowledge:

. . . a wheel is not merely a conveyance, a vehicle. It is a whole code of philosophy, it is the world, the universe, the much in little. (Rudd 1895, 127)

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