Feng Shui and the "Odious Iron-way"

Railways and Beijing's Spatial Order: 1890-1916

Anson Stewart

History 78
Professor Li
May 16, 2008

Today's Beijing is a vibrant city with millions of daily commuters, yet the Beijing of the Imperial Era employed manifold restrictions on spatial mobility as a means of rigid social control. This paper considers the beginnings of a transformative process, from 1890 to 1916, when railways began to break through the centuries-old city walls, both encouraged by and encouraging the redefinition of urban space. The spatial layout of any city is one of its fundamental characteristics, offering insight into an array of societal and hierarchical dynamics. As Dray-Novey argues, "the organization of space helps to explain patterns and institutions characteristic of urban areas."[1] Definition and demarcation of urban space are especially central to Beijing, as Chinese emperors used the city's layout for centuries to increase imperial power. As Western powers gained increased influence in China, railroads[i] began to physically penetrate and divide Beijing, as well as facilitate the symbolic import of Western ideas. Western powers, through railways, introduced into Beijing both physical forms and cultural symbols. Focusing on the interaction between new railroads and ancient walls and gates, this research will investigate how Beijing responded to, shaped, and eventually appropriated these spatial impositions.

Historians have generally assumed that railways were Western intrusions into China's physical order and loci of foreign domination. While a majority of research has focused on railroads at the national level, this perception is especially acute with regard to Beijing's infrastructure. Dong writes:

> The railroad permanently shook the city walls, rendering them superfluities left by an obsolete past, their practical functions and symbolic meaning lost…Once the walls and gates were surrounded by the smoke and roar of the steel machines, they could never again be as grand and intimidating as before. [2]

[i] I will use railways and railroads interchangeably.

Contemporary observers of Republican Beijing also recognized the impact of railroads. Sirén asserts:

> On the whole it must be admitted that the railways with their various accessory buildings have done more to destroy the character and beauty of the Peking walls and gates than any amount of neglect, or carelessness in the upkeep, of these precious monuments.[3]

While railways undoubtedly destroyed a great deal of traditional Chinese infrastructure, they also conformed over time to Chinese goals and notions of spatial order. Research on the role of railroads in Beijing has problematically considered their entry into the city solely as an intrusive effect of overpowering foreign dominance. Instead, I will treat railways in Beijing as interfaces for bilateral symbolic exchange between China and the West rather than sites of pure Western domination. Historical spatial constraints and the inertia of Beijing's built environment allowed the city to absorb railways and adapt them to Chinese aims.

Brief Overview of Chinese Early Railroads

The development of railways throughout China evinces a process of Chinese appropriation. Officials who had initially feared and resisted railroads eventually realized their benefits and requisitioned railways of their own. According to Kent (1907), this process occurred in the three stages: foreign imposition, Western merchants' demonstration and persuasion projects to "allay the hostility and smooth the susceptibilities of a conservative and superstitious people"[4] (1863-1878); Chinese embrace of benefits and attempts at enterprise (1879-1894); and granting of concessions (1895-1905). In 1865, the British merchant R.J. Durante built the first demonstration railroad in China, a five hundred meter track in Beijing. It was "simply too shocking an innovation, and it seemed out of place in the imperial capital," so court officials demolished it immediately.[5] Officials like Li Hongzhang initially protested

demonstration projects, ardently denying the application of British merchants to install a railway near Shanghai in 1863. [6] [ii] Yet by 1880, Li had shifted his position. He assembled Chinese management and employed Western engineers to build a profitable coal transport railway at Kaiping without explicit Imperial approval. As Chinese merchants and officials grew increasingly aware of railways' benefits, construction grew more acceptable and widespread. In 1888, Li attempted to curry Imperial favor for further railroads (or perhaps to appease Imperial protests about his unauthorized Kaiping coal line) by purchasing a small train from Germany and installing it as a novelty in the Forbidden City.[7] The Empress Dowager made known her fear of the locomotive, ordering her eunuchs to pull her around instead.[8]

Imperial protests against railways quickly lost traction as more Qing officials like Li, Chang Chih-tung, and Shen Ping-ch'eng began to comprehend the economic potential of both freight and passenger service and change their stances. At the turn of the century, "the belief that railway development could be the most efficacious means of generating economic growth was widespread among intellectual and bureaucratic circles in China."[9] The formation of the Imperial Chinese Railway Administration indicates the resulting shift in policy.[iii] By 1902, even the Empress Dowager began to embrace trains and their uses. Her reentry to the city after the Boxer Uprising was orchestrated with a colorfully decorated train.[10] By the Republican period, railroads had been completely embraced in Chinese policy. Sun Yat-sen declared, "Of all development projects transportation is the most important. For the country's current needs the railroad is the most important form of transportation."[11] Chinese officials, after initially fearing

[ii] An informative discussion and detailed compilation of officials' reactions to Shanghai's Woosung Railroad is available in David Pong, "Confucian Patriotism and the Destruction of the Woosung Railway, 1877" *Modern Asian Studies*, 7:4 (1973), pp. 647-676.

[iii] The Imperial Chinese Railway Administration was formed in 1891, due in part, no doubt, to the efforts and reports of Chang and Sheng.

and resisting the development of rail infrastructure, began to embrace it for their own economic ends and direct foreign capital towards construction.

Railroads from the Western Perspective: Motivations and Justifications

Although officials recognized the need for Western capital, the Chinese felt conflicted about foreign powers because the interests of these powers completely disregarded Chinese priorities. Western governments were interested in developing railways in China primarily for their own economic profit.[iv] Foreign powers also used Chinese railways as bargaining chips in international diplomatic relations. Railways changed national ownership between foreign conglomerates for reasons completely removed from the Chinese government or interest.[v] Since foreign railway projects were explicitly not in the Chinese interest, foreign powers needed significant justifications to overcome the strong, traditional spatial order of Beijing.

The Boxer Uprising provided a suitable pretext for Western powers to breach the city walls. Railways first transgressed into the city during the foreign occupation in 1900 after the Uprising. During and immediately subsequent to this occupation, the Outer City wall was opened in three locations for railway tracks. New railway stations were sited directly adjacent to Qian men, providing a reliable and easily accessible escape route from the foreign legations in the event of another uprising. The Boxers led to "a Beijing that was fresh in many ways, with new and reconstructed buildings, roads, transportation, and a difference in spirit. It was as if the breaches in the walls and gates of the city…had opened the capital not only to violence and

---

[iv]. The construction of railways not only facilitated improved transportation of goods for Western enterprises in China, it also required Western materials and expertise. A 1921 report by an analyst from JP Morgan advises, "A great system of railways must be built over there, and its inception should not be long delayed. Those railways will require a fair share of American steel, of American bridges, American equipment." (Thomas Lamont. "The Economic Situation in the Orient," *Proceedings of the Academy of Political Science in the City of New York*, 9:2, American Foreign Trade Relations. (Feb., 1921), pp. 216.)

[v] For example, the Manchurian Railway was completed before 1902 by Russians, turned over to Japanese after Russo-Japanese war. The Chinese were also pressured by foreign powers to grant concessions concomitantly with other powers. An article from *Times* of London describes a Sino-Russian agreement as "an offset to the series of Japanese agreements of October, 1913."

destruction, but also to positive foreign influence and reform."[12] After initially relying on the power of occupation and concessions to enable railway construction, foreign powers needed less justification for construction as the Chinese began to appreciate the benefits and undertake construction on their own.

Through railways, Chinese commandeered Western skills and resources for their own economic ends. These ends have been well documented, but scholars' concentration on economic considerations of railroads has left the social forces largely underappreciated.[vi] Further research into the spatial motivations for Chinese-led railway development is necessary.

Railroads and Spatial Order in Beijing

Beijing reflects a conscious design, the purpose of which was to augment imperial authority. Modern scholars generally agree that the "political and social hierarchies of imperial China influenced both the concept and organization of space in imperial Beijing."[13] The intentionality of this design was apparent even to those who did not grow up in Chinese culture. An American who lived in Republican Beijing, George Kates, wrote, "Of all the great cities of the world none can rival Peking for the regularity and harmony of its plan. As a design, it reflects clearly the social scheme that called it into being."[14] Sirén echoes Kates' admiration of Beijing's consistency in his description of the Inner City walls, describing their "quiet forceful rhythm" and "continuity of horizontal lines."[15] The only breaks in the walls' regularity were monumental gates. These were the sole passages through the imposing walls and exhibited glorious architecture to fortify the image of imperial power. Dong explains,

---

[vi] Railways only marginally benefited Chinese industry, and did not lead to daily commuting patterns. A study published in Yishi Bao in 1928 concluded that, even with railways and streetcar lines completed in Beijing, nearly half of Beijing families spent "little or nothing on personal transportation" (Strand 26). Rosenbaum in particular provides a strong argument that railways' economic impacts were overstated. He documents a "weak linkage between the railway and other types of economic activity" (229). He observes, "Neither the steel nor the metallurgical industry, the most likely beneficiaries of railway-induced demand, was able to capitalize on the construction of Chinese railways" (264). This view, however, is not universally held.

> As in other imperial capital cities around the world, the edifices in Beijing conveyed the power of the emperor and the imperial state, as well as more complex ideological, cosmic, and aesthetic messages. The city gates were thus invested with both a practical function in transportation and a spiritual meaning. [16]

Clearly, tremendous ideological, social, and spatial forces would be involved in the destruction of the ancient walls and gates. Railways were the first forces powerful enough to do exactly that.

Walls had symbolic power in their longstanding association with imperial power. The Yongle Emperor dedicated the city as his new capital in essentially its current form in 1421.[17] The layout of the city relied on traditional cultural geomancy, *feng shui*; its orientation flawlessly reflected a cosmological order and the emperor's power as the Sun of Heaven. Planners built Beijing's street network and monuments to reinforce the city's geomancy.[18] Even in the last days of the Qing dynasty, "Beijing's walls still symbolized, concealed, and protected imperial authority and the person of the emperor."[19] By 1911, "dethronement of the emperor jarred political authority loose from the symbolic design of the city's walls and palaces."[20] Despite the loss of contemporary political authority, the gates maintained historical authority; in the 1930s, "even Chinese of only moderate learning [knew] by heart the names of many of the chief gates of their ancient capitals."[21] In short, the walls and gates demanded reverence because of their symbolic connection with the emperor and the natural cosmological order. Even though this "cosmological order of the imperial capital was most decisively broken by trains,"[22] the walls and gates remained significant because they unmistakably and forcefully defined urban space. Their structural inertia allowed them to remain potent forces in the development of Beijing's spatial pattern even when the original political entity behind their symbolic power ceased to exist.

The walls within walls and gates within gates were a "basic element of spatial order in Qing-era Beijing."[23] For Beijing's massive population, movement was highly restricted. The Inner City wall had only nine gates.[24] Motion was literally restricted for purposes of social control. The Manchu rulers of the Qing Dynasty wanted to spatially segregate the different ethnic populations of fifteenth century Beijing. Social control was also achieved through more localized spatial restrictions. The Inner City had 1,219 *zhafan*, street gates, to partition the city.[25] Each of these needed to be manned, and nonresidents were not allowed to pass at night. The vast resources required to maintain and guard these *zhafan* indicate the high value residents and officials placed on spatial control. Beijing as a whole was highly conscious of the norms of restricted spatial mobility. Kates observed, "Since the Chinese make use of walls, I have once heard it expressed, to 'govern by prestige,' progress from one zone to another is to any Chinese a matter of importance. At each opening he is quick to sense whether he is to be advanced or stopped."[26] Railroads, in enabling widespread spatial mobility, would upset this traditional sense of space and movement in the city.

Even ignoring the intentional effects of its design – symbolic power, spatial ordering, and social control – travel was impractical due to a lack of infrastructure within Beijing. Vehicular transportation in 1885 was limited to mules, horses, sedan chairs, and wheelbarrows.[27] Roads were unpaved; deep mud restricted travel during rainy months, and dust made travel highly unpleasant at other times. The Chinese were also disinclined to travel far from their homes because neighborhoods were highly specialized.[28] Residents took advantage of agglomeration economies, clustering in areas where the resources they needed were readily available; travel outside their limited neighborhoods was unnecessary. So railways not only upset the symbolic

power and social restriction of Beijing's traditional infrastructure, they also enabled increased mobility by providing a vastly more efficient transportation mode.[vii]

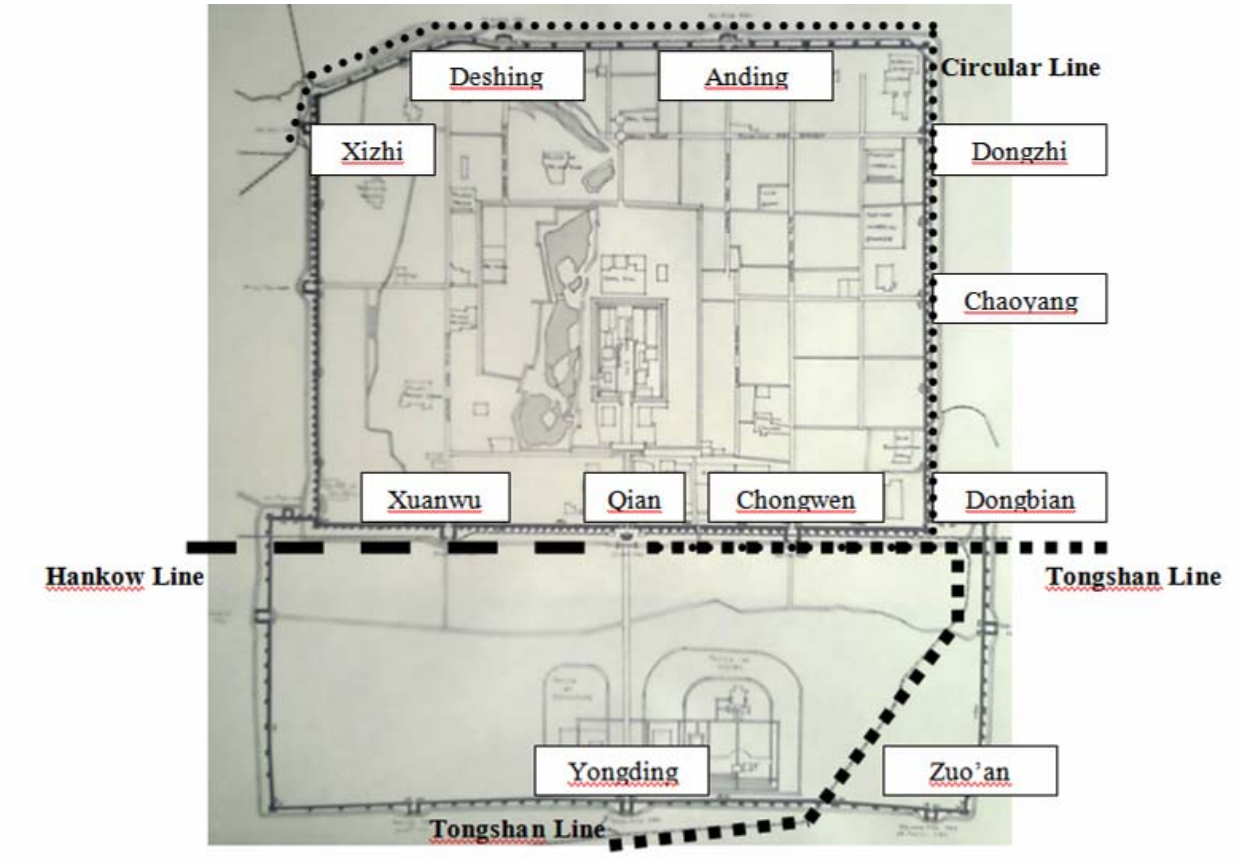


Figure 1 - Map of Republican Beijing, noting railways and relevant gates[29]

In their first forty years in China, railroads were prevented from entering Beijing, primarily "because many saw them as a foreign intrusion that disrupted the rules of geomancy."[30] Railways would severely disrupt the physical symmetry and regularity of the city as well as traditional approaches to mobility. Accordingly, before 1900, "the Peking railway station was far beyond the walls of even the Chinese city."[31] Travelers needed to exit the city through the Yongding gate to reach the closest railway terminals at Majiapu or Lugouqiao.[32] In 1900, foreign troops occupying Beijing after the Boxer Uprising extended the Tongshan line

[vii] Though Beijing's residents would not fully take advantage of transit for daily commuting until decades later, trains allowed for relatively rapid travel and a new paradigm of free movement.

from its former terminus at Majiapu. The extension ran through the south wall of the outer city between the and Zuo'an gates, then along the south wall of the Inner City to the eastern of the two stations at Qian Gate (See Figure 1).[33] This was a blatant violation of Chinese geomancy, as the railway cut diagonally across the traditional north-south grid of streets from the southeast corner of the Temple of Heaven to the northeast corner of the Outer City. Such a flagrant imposition of Western steel and machinery was possible only because of foreign occupation after the violent uprising.

The second breach of the wall was at Dongbian men, for a branch of the Tongshan line to the Grand Canal.[34] This branch traveled only along an east-west axis within the city, demonstrating slightly more respect for geomancy. The rails leading to the west Qian Gate station, a 1901 extension of the Hankow line that breached the western wall of the Outer City, conformed to geomancy even further by leaving surrounding gates. The completion of the 1915 circular railway did not even enter Beijing. Thus, railway development within the context of Beijing's spatial order shifted from forced imposition to conformation with traditional *feng shui*.

Beijing's progression, from imposition to embrace and finally direction of railroad construction, mirrors railway development on a national level. This process of spatial appropriation is closely correlated with the official political acceptance of railways. Li et al. note that "these rapid changes in the management of the city and in its physical appearance show the impact of the New Policies on Beijing."[35] Chinese officials responsible for the New Policies understood the importance of reordering space using tangible, visible partitions and architecture. They appreciated that "in terms of space, visual persuasion is perhaps the most powerful of all relevant devices."[36] Railways were particularly effective in perceptibly dividing space, and many commoners felt "that their country was about to be 'carved like a melon'."[37] Western

observers noted that in Beijing, walls and gates were so important "in Chinese eyes that their demolition would rob Peking of something fundamental."[38] Clearly, railroads represented far more than a modern form of transit for Beijing residents. Railway infrastructure interacted intimately with Beijing's traditional built environment, thus acquiring for itself tremendous symbolic significance.

Railroads as an Interface of Symbolic Exchange

As symbolic interfaces, railways encouraged the bilateral exchange of culturally different conceptualizations of time and mobility. Railroads and train stations compelled Beijing's residents to grapple with Western formulations of time and space. Conversely, railway construction forced foreigners to consider the cultural and social significance of traditional Chinese restrictions on spatial mobility. Western observers learned about *feng shui* and considered completely new cultural outlooks on social control through spatial control.

The development of railways, which was shaped by and reshaped the city's spatial order, illustrates a dialectic of Western and Chinese symbolism. Through railroads, Chinese were able to adapt Western technology to their own cultural values. As time passed, railways increasingly conformed to the city's grid layout. Occupying forces immediately after the Boxer Uprising had the dominant power to construct railroads that disregarded the location of walls and gates. Yet they lacked the sustained power necessary to continue to continue to overcome "the sheer inertia of these ordered ranges of earth and brick"[39] in following years. Thus the enormous physical mass of Beijing's walls, which had been maintained for centuries to protect the city from outsiders, continued to fulfill its purpose in restricting and ordering railroad construction. After the Uprising's initial shock, Beijing's well-defined layout allowed the Chinese to adopt mobility and modernity on their own terms. Dong explains,

> Whereas in imperial times everyone was forced by the city walls to slow down and stop in reverence to the emperors, in the Republican era mobility…became the catchword for the city as a whole.[40]

Beijing's residents were able to gradually form their own notions of modernity and mobility as the city evolved and was exposed to more Westerners.

Railways literally facilitated increased cultural exchange between Chinese and Westerners by making travel more accessible for foreigners. This increased contact, in turn, led to an increasing exchange of cultural values. An 1889 article expresses the Western sentiment that railways "cannot fail to produce a sensible modification of the Chinese character," and accordingly, the article continues, "the odium and contempt in which foreigners are held…will melt away as opportunities for intercourse increase."[41] Railways literally encouraged more Chinese-foreign interaction by facilitating travel, but they did so in a way that increasingly conformed to traditional Chinese values.

Beijing's potent symbolic association between spatial patterns and cultural meant that changes in the physical landscape would necessarily require symbolic and cultural reevaluation. This is especially true of gates, the primary focus of mobility improvements. Gates were especially important to the Republican government, which had a political agenda in facilitating mobility for commoners.[viii] Gates "not only embodied the principles visible in the spatial order of the whole city but also were testaments to the inseparability of the social and cultural dimensions of spaces."[42] By the 1910s, "top-down projects embodied the new Republican government's vision of a 'modern' city."[43] Within two decades, the process of reordering the city to prioritize mobility and modernity became directed and led by the Chinese, not foreigners.

[viii] Among others, Dong stresses the connection between the new Republic's political agenda and spatial patterns in *Republican Beijing*. Her analysis will not be repeated here.

Alterations to the spatial landscape are significant because "architecture and landscape speak silently yet explicitly of the social change they manifest and help shape."[44] Ancillary structures built for railroads, such as stations, engine houses, and coal sheds, were especially important in helping to shape such social change. Sirén notes, "There are the stations, magazines, and workshops of the main railways, and also, to the west of Chi'en men, the greatest coal market of Peking. It need hardly be added that the establishments of this kind by no means harmonize with the old wall."[45] Railway stations were the foremost harbingers of Western architecture in Beijing.[46] A particularly noteworthy component of station architecture was the prominent clock tower.

Conceptualizations of time provide a salient example of cultural exchange mediated by railroads. In the Late Imperial Period, Chinese valued standardized time because it represented social control. The counting of the hours of the night watch by street patrols reminded residents of police protection and that movement in the city was restricted.[47] This contrasts with the Western motivations for standardizing time, namely enabling factory production and efficient mobility through railroads. By 1889, Western conception of standardized time had not yet taken hold. A broad assessment of early railroads confirms this, explaining, "In Peking there is a considerable number of watchmakers…But the system in vogue throughout China remains unchanged from the days of antiquity."[48] Rail service required timetables, which symbolized a standardization of time that facilitated mobility rather than mobility's restriction.[49] Rail stations' clock towers furthered the emphasis on a modern embrace of time. At the Qian Gate stations, and at stations throughout China, clock towers were the most conspicuous architectural features (See Figure 2). Describing the clock tower in Nantong, a city built to exhibit and extol modern development, Shao writes:

> [Clocks] represented the emergence of a new set of cultural values that were supposed to be superior to the traditional ones. It would be wrong to think that the exchange of the watchtower for the clock tower was simply a matter of one instrument giving way to another…The new clock towers declared the arrival of a powerful yet invisible control mechanism in human affairs…[and] expressed a rejection of the old order.[50]

The new structures associated with railroads forced Beijing's residents to consider new ways of understanding time and space.

Figure 2 – Clock tower atop the Qian Gate Rail Station [51]

Just as the Chinese gained an understanding of Western symbolism through rail construction, Westerners also gained awareness of Chinese symbolism. Since the majority of tourists visiting Republican Beijing arrived by train, the beginnings of travel memoirs usually contain observations about the Qian Gate stations and the railways. [52] Accounts of railroad tourism circulated widely through popular media in the United States and Europe.[ix] Through these memoirs and media accounts, foreigners thousands of miles away gained familiarity with

[ix] See, for example, "Tourists Try New Railroad," *New York Times*. August 4, 1907. and "Railways in China." *Science*, 13:328. (May 17, 1889), pp. 375-377

the symbolic power of Beijing's built environment. Contemporary Western writing about railways demonstrated an understanding of how gross a violation of spatial order and symbolic power the early railroads were. Their accounts show both a reverence for the power of ancient structures and dismay at the West's corruption of them. Describing his arrival in Beijing, Kates writes, "Having pierced the outer walls, the train pulled slowly beside the Water Gate platform of the main station."[53] Arther Moule similarly describes how the wall of Hankow "has been ruthlessly pierced by the engineers of the railway."[54] Weale goes even further in his arrival account:

> You pass through the outer wall of the Chinese city, and (horror of horrors!) are running along this great sandy stretch under the Tartar wall, which of old was the private and inviolate property of camel-trains, mule-litters, traveling carts and galloping ponies, and is now given over to the odious iron-way.[55]

Travel writers and their readers focused not on the power of Western dominance, but on the violation of ancient and profoundly powerful spatial pattern.

Despite this sense of violation, many foreigners felt that walls remained superior to the corrupting railways of the West.[x] Foreign tourists consistently described railway infrastructure as spatially deferential to the ancient walls. They describe, for example, "the broad roofed platform under the high city wall"[56] and an approach "below the great wall of Peking into the noisy station alive."[57] Westerners realized that railways were not an abrupt, foreign form of complete domination that obliterated the symbolic power of the long-established built environment. Instead, "the cosmological-philosophical, political, and social principles of the imperial spatial plan were *gradually* obscured by a reorganization of the city's built

[x] A discussion of Westerners' views of Beijing as an idealized and romanticized eternal city would be appropriate here, but it would diverge substantially from the central focus of my paper.

environment"[58] [emphasis added]. This realization demonstrates that the Westerners were able to understand and deeply appreciate the "principles of the imperial spatial plan." Thus the physical layout of Beijing, through the process of railway development, taught the Western world about Chinese values and symbolism related to space and mobility.

The construction of railroads and stations made manifest a self-reinforcing feedback mechanism between the symbolic and infrastructural realms. Early Western spatial construction led Chinese leaders to value modernity and mobility; leaders then adapted these concepts, appropriating them to further change how the city was viewed. As Shao explains, "All these changes…constituted 'an objectified symbolic world,' where the model of modernity became something tangible. They greatly influenced the way in which people understood the city."[59] Consideration of specific examples of these concrete changes is warranted.

Gates of the South Wall of the Inner City

Railroads led to especially noticeable changes in the space around the Qian, Chongwen, Xuanwu, and Dongbian gates. The first three of these were historically the only routes between the Inner and Outer Cities through the Inner City's colossal south wall. Sirén notes, "All three have been more dilapidated and rebuilt in modern times than any of the other Peking gates. The transformation has been most complete at the great middle gate, Ch'ien men, but quite considerable also at the side gates."[60] Railways were directly responsible for this transformation. The Hankow line traveled adjacent to the south wall to the west of Qian men, and the Tongshan line did so to the east of Qian Gate (See Figure 3). At Qian men, the two lines ended in large stations. The terminal of the Tongshan line occupied "practically the whole space between the great middle gate and the Water gate."[61] All three gates were drastically transformed between

1915 and 1921 in purported restorations that were actually demolition projects to improve railways. Sirén explains,

> Both [the Chongwen and Xuanwu gates] have been quite recently (1920-1921) rebuilt, or should we say ruined, as the restorations only concerned the inner towers, while the outer ones were simply demolished. The reason for this is said to have been that the outer towers were rotten and unsafe, especially in consideration of the railway at their foot.[62]

The reconstruction of the Qian area is especially noteworthy as an "exemplar of the city's spatial transformation in the early years of the Republic."[63]

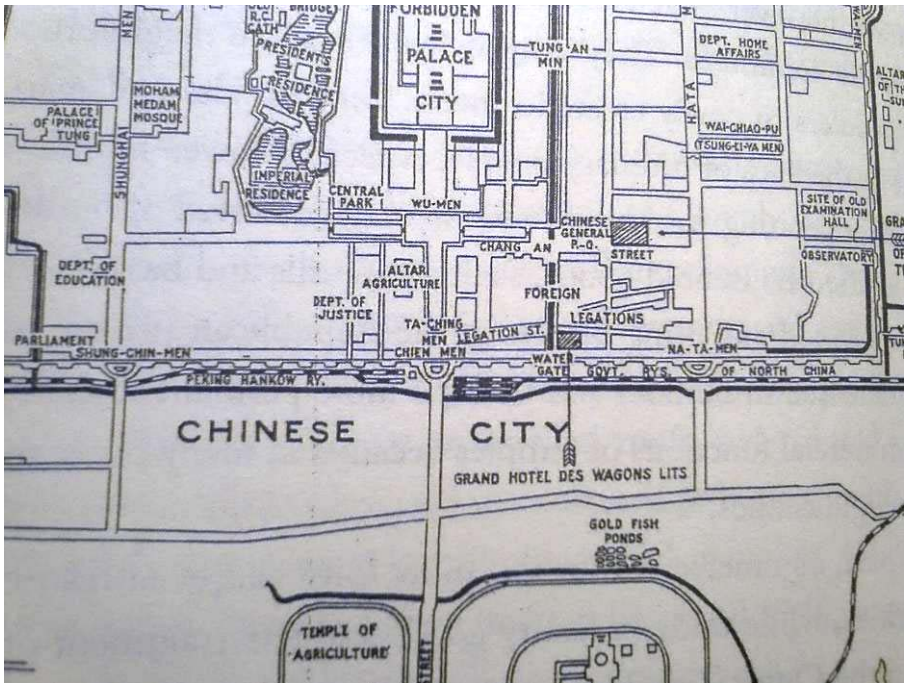


Figure 3 – Railways along Inner City's South Wall[64]

Qian Gate (Ch'ien men)

The Qian gate stands "right in the centre of the capital where the Outer and the Inner city are most intimately knotted together."[65] Originally, only the emperor was permitted to pass through the central section of the gate; the entire structure functioned to halt the flow of traffic.[66] The towers of the gate complex burned in the Boxer Uprising. Until the tower itself underwent

reconstruction in 1915, the Chinese government presumably contemplated ways to repair the monumental gate towers and reconfigure the massive walls.[xi] The construction of two of Beijing's busiest rail terminals directly adjacent to the gate's mouth during this period of contemplation must have drastically impacted their design goals. Exponentially increasing traffic turned the gate into a gateway, and Qian Gate "soon proved quite insufficient and often became the cause of a most annoying congestion."[67] The massive, rigid barbican walls funneled traffic into a small passage in the gate or forced it to use perpendicular side entrances (See Figure 4). The redesign of Qian Gate strove to facilitate the increased mobility the rail terminals encouraged. The new design was wider and more streamlined; it removed the perpendicular passageways in the barbican wall and added two new passages through the south wall of the Inner City[68] (See Figure 5).

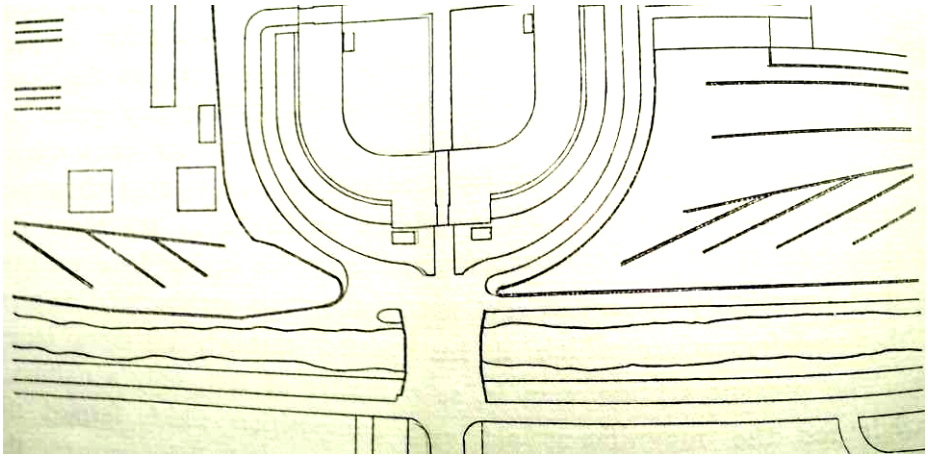


Figure 4 – Qian Gate before its reconstruction[69]

[xi] A discussion of this redesign, including the German architect who conducted it, can be found in Sirén 170 and following.

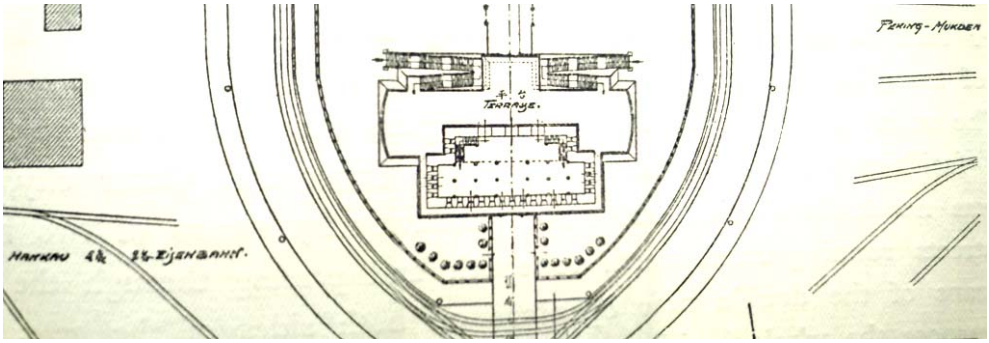


Figure 5 – Qian Gate after its reconstruction[70]

With the gate complex's redesign, traffic could flow much more freely, encouraging even further use by carts, rickshaws, pack mules, camel caravans, automobiles, and bicycles[71] (See Figure 6). The rail lines had not replaced traditional forms of transportation. They were instead a complement, encouraging increased mobility and a corresponding increase in the use of traditional transit modes. Thus, through the reordering of physical space in the Qian Gate redesign, Chinese embraced increased mobility by means of both new and old vehicles.

Figure 6 – Traffic surrounding Qian Gate after reconstruction. The small diameter of the original passage is visible in the right of the photograph.[72]

A particularly illustrative feature of the Qian area was the set of lane dividers installed along the bridge in front of the gate (See Figure 7). The city constructed these traffic dividers with concrete and iron to facilitate smooth traffic flow along the recently widened avenue, which had become one of the city's most vital traffic centers.[73] Sirén describes the bridge, "divided by means of chains and posts into four broad thoroughfares which radiate in southerly, easterly, and

westerly directions leading to the most important business quarters of the Chinese city."[74] While these dividers were miniscule compared to the city's massive walls and gates, they illustrate an important symbolic shift. In the Imperial Era, street structures had been restrictively perpendicular to the flow of traffic. The many gates and smaller *zhafan* functioned to prevent mobility; these new dividers functioned to facilitate it. They created a symbolic association between a modern appreciation of mobility and the traditional importance of the cardinal directions. Concretely representing the abstract modern notion of free movement, these dividers first appeared in the area directly between the two Qian Gate stations. Rail stations, then, were loci of a mediated process of gradual cultural exchange, rather than merely violent intrusions into the city's space.

Figure 7 – Lane markers placed south of Qian Gate to facilitate traffic flow[75]

Lane dividers tangibly demonstrate the emanation of abstract Western conceptualizations of mobility away from railway stations. These lane markers demonstrate a larger process that interrelates Beijing's spatial order and culture. First, foreign powers constructed railways that disregarded Chinese tradition and values. Embedded within these physical forms were cultural values, namely the modern importance of unrestricted mobility. The Chinese appreciated the benefits of this new physical form, as evinced by the large increases in traffic. They then,

however, adapted the physical form (e.g. forcing new railways to conform more closely with *feng shui's* mandates) and the symbolic associations (e.g. using facilitative lane dividers radiating to the cardinal directions) to traditional culture. Thus railway development was a mutual process, with the Chinese eventually taking an active role in design and construction.

This sense of mutuality, of mediation between East and West, is evident in the railway customs houses at Qian Gate. They were built in the Chinese style, between the Western-looking stations and the city wall, "architecturally form[ing] connecting links between the gate-tower and the railway stations which, however, are of an offensively foreign appearance."[76] While military occupation in 1900 had allowed "offensively foreign" stations to be built, by the 1910s Chinese gained control of the Qian area's visual appearance, directing monumental reconstruction, streetscape features, and further construction towards their own ends.

Chongwen Gate (Hata men) and Xuanwu Gate (Shun-Chi men)

The same course of increasing Chinese control is seen in the distinctions between the development of the Chongwen and Xuanwu gates. Railways were constructed in front of both during foreign occupation in 1900. Foreign expeditionary forces completed the Tongshan line first, routing it in front of Chongwen Gate. This line, which cut diagonally across the southeast of the Outer City, blatantly disregarded spatial order. Accordingly, residents considered it a foreign incursion over which they could exert little control.

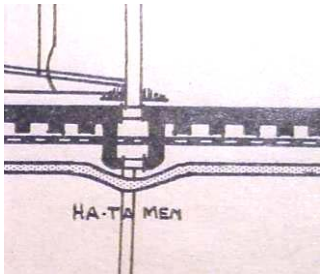
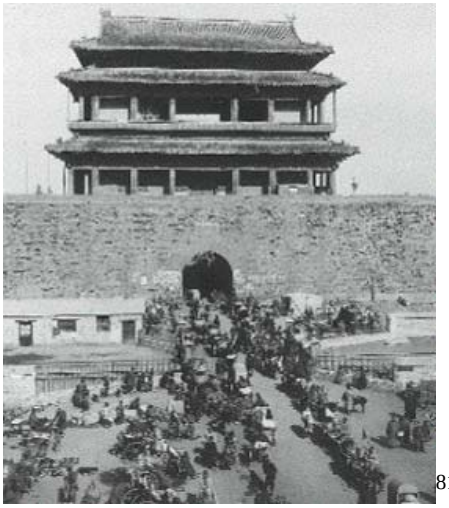


Figure 8 – Plan of the train tracks passing through the Chongwen Gate complex[77]

Train service to Fengtian, in Manchuria, was initiated along the original Tongshan line in 1907. To expand capacity for the additional rail traffic, the government rail authority tore down the *wengchang* at Chongwen Gate.[78] Trains ran frequently on the double tracks passing through the gate complex. Blocking passage through Chongwen Gate for the trains would often cause "a considerable congestion of carts and rickshaws"[79] (See Figure 9). Rickshaw pullers, coolies, and common pedestrians waiting for trains to pass would likely marvel at the juxtaposition of Western machinery and the remnants of the gate complex. Around what had once been an intimidating monument, "the most conspicuous buildings in the vicinity [were in 1908] the coal sheds of the railway."[80] Beijing's first true railway physically broke the monumental gate in its path. This demonstrates the West's initial disdain for Beijing's symbolic order and led locals to feel unable to control railway development.


81


82

Figure 9 – Chongwen Gate grew into a traffic bottleneck (left), especially when the gates were closed for a train to pass (right). The railway's coal sheds are also visible.

In contrast, the Chinese exerted strong control over Xuanwu men, Chongwen men's symmetrical analogue. The Hankow line, completed immediately after the Tongshan line, conformed to *feng shui*, remaining strictly along an east-west axis within the city. Plans to

reconfigure Xuanwu Gate surfaced as early as 1911.[83] A republican official outlined plans for restoring Xuanwu Gate in 1918:

> The Xuanwu Gate area is a key point in Inner-Outer City transportation. The narrow gate is joined by a barrier formed by the protective walls outside the gate, making transportation extremely inconvenient. In order to promote commerce and improve transportation, the Municipal Council plans to tear down the protective walls and to construct streets there.[84]

Despite these plans, the Xuanwu area avoided "reconstruction" for twelve more years. Local residents felt more control over the second of Beijing's railways because it was symbolically less foreign. Accordingly, they were powerful enough to halt Xuanwu's destruction until the 1930s.[85]

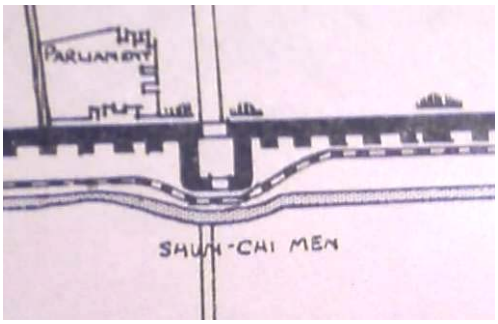


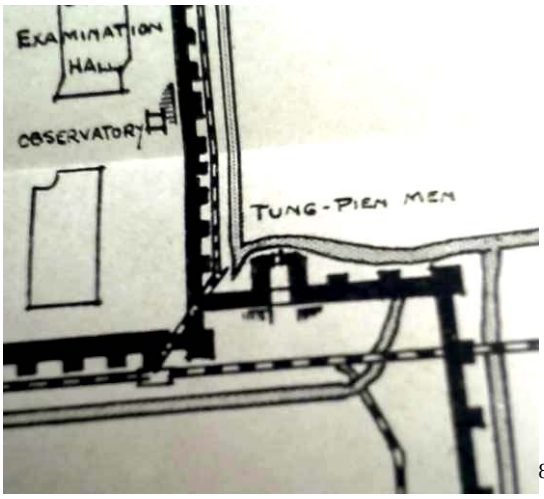
Figure 10 – Plan of the Xuanwu Gate complex. Unlike at Chongwen men, the tracks here passed around the ancient gate complex.[86]

Dongbian Gate (Tung Pien men) and the Circular Line

This trend of increasing Chinese control over railways' placement and effects continued with the construction of the circular line.[xii] Yet this trend has been largely overlooked in part because of dramatic changes at the southeastern corner of the Inner City wall near Dongbian.

[xii] The circular line connected three preexisting trunk lines, thereby resolving longstanding connectivity problems between Beijing's terminals. The line ran around the city between the Qian and Xizhi gates, with station stops at Dongbian, Chaoyang, Dongzhi, Anding, and Desheng gates (Shi, 360).

The long curve required for the railway tracks meant that both the northeastern and southeastern corners of the wall required modification. Near Dongbian men, the railway pierced the corner tower with a twenty seven foot high archway. This was a significant breach of the massive wall. Sirén felt that "as the old [northeastern] tower is also completely demolished, the corner has been stripped of all its original character and beauty."[87] Railways helped demolish the literal cornerstones of the Inner City's wall. On the surface, it might seem that this railway line was a gross violation of Beijing's space.



88

89

Figure 11 – Railways around Dongbian men

On the contrary, Chinese planners and builders attempted to integrate the circular line with the existing walls. They constructed "screen walls" where the original corners had been replaced to cover the changes.[90] While these screens were not entirely effective, they visually and symbolically integrated the rail line with the Inner City wall. The railroad seemed to be a part of the wall, even at the corners (See Figure 12). As will be discussed below, Republican politicians purposefully fostered such an association between the walls and rails.

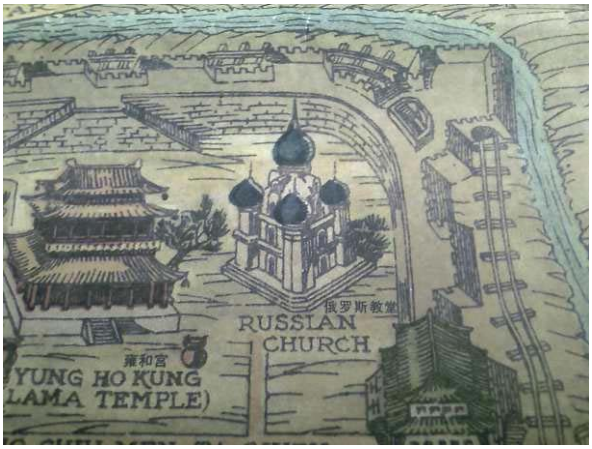


Figure 12 – The circular line's routing through the northeast corner of the Inner City Wall.[91]

The 1915 construction of the circular line represents the culmination of a process of Chinese appropriation. Completely Chinese entities designed and implemented the railway project. The Beijing-Zhangjiakou Railroad Authority, the Republican Ministry of the Interior, and Beijing's military guard took land by eminent domain and demolished parts of city gates.[92] The destruction of four *wengchang*,[93] rather than being destruction driven by foreign powers, demonstrates the speed and efficiency with which the Republican government wished the project to be completed. Zhu Qiqian, Minister of Communcations and chair of the City Council, first proposed the line to President Yuan Shikai in 1915; the President fully supported and embraced the project, and it was completed within the year.[94]

Service began on the circular line on January 1st, 1916, the date on which Yuan Shikai reestablished imperial authority, enthroning himself as emperor.[95] That the two events occurred on the same date is not a coincidence. Leaders in the Republican government, especially Yuan, had been fervent supporters of railways as symbols of power. Choreographing the enthronement and the circular line's opening to occur on the same day was an attempt to equate the Republican construction project with the traditional authority embodied by the walls the rail line followed. While facilitating mobility between different sectors of the city, the walls and rails, "The dual

circumferential structures, one traditional and the other modern, prevented Beijing from spreading out into the suburbs commercially or residentially."[96] By 1916, the Chinese had appropriated what was originally a Western imposition so well that they were able to equate a railway construction project with the edification and reestablishment of imperial authority. Railways had come full circle, from demolishing symbols of traditional authority to reinforcing them in support of new Chinese agendas.

The circular line buttressed the Inner City's walls while maintaining an appropriate, reverent distance from the walls. Along the north wall, Sirén observed, "are planted some young trees, and a railway track runs inside the moat, but the trains are not very frequent and the traffic, as a whole, is very slight"[97] (See Figure 9). Railways were no longer violent and scary intrusions that destroyed walls. Ultimately, it is hard to accept Dong's assertion that, by 1930, walls and gates had "surrendered to the steel tracks and locomotives a pride accumulated over hundreds of years."[98] Instead, it seems that the Chinese had been able to appropriate the "steel tracks and locomotives" to reinforce a reframed yet traditional imperial pride and authority.

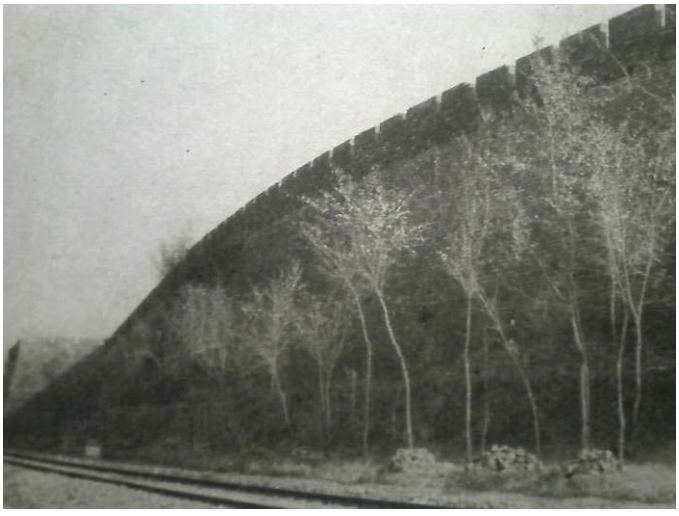


Figure 13 - Trees in the median between the rails and the north wall of the Inner City, west of Deshing Gate.[99]

Conclusions

Between 1890 and 1916, a process of appropriating railways mediated the Chinese approach to spatial order's shift from restriction to facilitation of mobility. Because Beijing historically linked spatial patterns and symbolic power, the new spatial order brought around by railroads also encouraged an exchange between Chinese and foreign symbols, especially temporal and spatial ones. This transition to a Western and modern conception of spatial patterns was an ongoing process which railways only initiated. The spatial changes pioneered by railways allowed for further development of roads and streetcars, which further altered the city's spatial order.[xiii] In response to the additional mobility encouraged by railways, roadway construction was so extensive that "by 1927 all the walls of the Imperial City had been torn down to accommodate new streets and traffic patterns."[100] The construction of streets reduced old mechanisms of social control and required new ones. Strand elaborates, "The streets themselves, with their complement of new devices and social roles, including telephone communications, rickshaw and (eventually) automobile travel, and formal policing of public behavior, systematically projected modern ideas and invention throughout the city."[101] Since the Chinese appropriated and actively directed infrastructural building by 1916, they also had an influence over the resulting physical and mechanical structures that "dictated radically new social roles and methods of operation."[102] Because they were shaped by *feng shui* embodied in the city's ancient walls, these new mechanical structures were in some ways not all new, and in many ways, not all foreign.

Historians' and contemporaries' portrayals of railways purely as mechanisms of Western domination are largely inaccurate. It is highly significant that no railways entered the Inner City.

[xiii] Dong, "Juggling Bits," p. 314 discusses how railway placement influenced streetcar development, which subsequently affected the layout of Beijing's commercial areas.

Ancient *feng shui*, embodied by the massive walls and invoked symbolically by politicians, prevented them from doing so. If Western powers had been able to fully dictate the spatial placement of railways, they surely would have extended lines to the Forbidden City. Western practice was to situate rail terminals in a city's geographic center, directly adjacent to seats of power, as can be seen with New York's Penn Station, Philadelphia's Broad Street Station and Reading Terminal, Los Angeles' Union Station, and London's Charing Cross Station.[xiv] Rather than imposing their own spatial preferences, Westerners began to understand and defer to the symbolic power of walls and gates contextualized in Chinese culture. Some even lamented the violation of Chinese space and saw as train tracks as an "odious iron way." In contrast, Chinese leaders and commoners alike valued the increased mobility enabled by train service. They assumed a modern notion of unrestricted mobility. As Shao explains, "To be modern is to appropriate, exhibit, and consume what is perceived as modern; it is a mentality."[103] Beijing's historical spatial order allowed the city to "appropriate, exhibit, and consume" railroads in accordance with Chinese culture. Railways in Beijing, then, reflected a thoroughly Chinese formulation of modernity.

[xiv] For analysis of the social and political significance of railway station sites throughout the world, see Jeffrey Richards and John MacKenzie, *The railway station: a social history*. (Oxford: Oxford University Press, 1986).

References

[1] Alison Dray-Novey. “Spatial Order and Police in Imperial Beijing,” *The Journal of Asian Studies*, 52:4 (Nov., 1993), p. 886.
[2] Madeleine Yue Dong. *Republican Beijing : the City and its Histories* (Berkeley: University of California Press, 2003), p. 37.
[3] Osvald Sirén. *The walls and gates of Peking: researches and impressions.* (London: J. Lane, 1924), 105
[4] “Railways in China.” *Science*, 13:328. (May 17, 1889), p. 375.
[5] Dong, *Republican Beijing*, 35
[6] Percy Horace Kent. *Railway Enterprise in China*. London: Edward Arnold, 1907, p. 2
[7] Ibid., 35.
[8] Li, Lillian M., Alison Dray-Novey, and Haili Kong. *Beijing: From Imperial Capital to Olympic City*. (New York: Palgrave Macmillan, 2007), p. 144.
[9] Arthur Rosenbaum. “Railway Enterprise and Economic Development: The Case of the Imperial Railways of North China, 1900-1911” *Modern China*, 2:2 (Apr., 1976), p. 227.
[10] *New York Times*, January 8th, 1902
[11] In Richard Edmonds. “The Legacy of Sun Yat-sen's Railway Plans.” *The China Quarterly*, 111. (Sep., 1987), p. 423.
[12] Li, Dray-Novey, and Kong, 125.
[13] Mingzheng Shi. “From Imperial Gardens to Public Parks: The Transformation of Urban Space in Early Twentieth-Century Beijing,” *Modern China*, 24:3 (Jul., 1998), p. 220.
[14] George Kates. *The Years that were Fat: The Last of Old China.* **(**Cambridge, Mass. : M.I.T. Press, 1976), p. 69.
[15] Sirén, 34.
[16] Dong, *Republican Beijing*, 30.
[17] Li, Dray-Novey, and Kong, 23.
[18] Piper Gaubatz. “Changing Beijing,” *Geographical Review*, 85:1. (Jan., 1995), p. 79.
[19] David Strand. *Rickshaw Beijing*. (Berkeley: University of California Press, 1989.), p. 3.
[20] Ibid., 8.
[21] Kates, 71.
[22] Dong, *Republican Beijing*, 34.
[23] Dray-Novey, 890.
[24] Ibid., 890.
[25] Ibid., 892.
[26] Kates, 71.
[27] Strand, 24.
[28] Gaubatz, 80.
[29] Sirén, xviii.
[30] Li, Dray-Novey, and Kong, 114.
[31] B.L. Putnam Weale. *The Re-Shaping of the Far East*. (London: Macmillan and Co., 1905), p. 193.

[32] Madeleine Yue Dong. "Juggling Bits: Tianqiao as Republican Beijing's Recycling Center." *Modern China*. 25:3 (Jul., 1999), p. 314
[33] Dong, *Republican Beijing*, 35.
[34] Ibid., 35.
[35] Li, Dray-Novey, and Kong, 128.
[36] Shao, 55
[37] E.R. Hughes. *The Invasion of China by the Western World.* (New York: Macmillan Company, 1938), p. 39.
[38] Kates, 71.
[39] Strand, 3.
[40] Dong, *Republican Beijing*, 34.
[41] "Railways in China," 377
[42] Ibid., 30.
[43] Ibid., 24.
[44] Shao, 76
[45] Sirén, 105
[46] Li, Dray-Novey, and Kong, 145.
[47] Ibid., 85.
[48] "Railways in China," 377
[49] Nicholas Clifford. *A Truthful Impression of the Country*. (Ann Arbor: The University of Michigan Press, 2004), p. 86.
[50] Shao, 93
[51] Aldrich, 62.
[52] Dong, *Republican Beijing*, 21.
[53] Kates, 1.
[54] Arthur Moule. *Half a Century in China*. (London: Hodder and Stoughton), 1911, p. 9.
[55] Weale, 196.
[56] Kates, 263.
[57] Elizabeth Kendall. *A Wayfarer in China*. (Boston: Houghton Mifflin, 1913), p. 228.
[58] Dong, *Republican Beijing*, 22.
[59] Shao, 83.
[60] Sirén, 161.
[61] Ibid., 104.
[62] Ibid., 161.
[63] Dong, 22
[64] "Peking, North China, South Manchuria, and Korea." 5th ed. Peking: Thos. Cook &Son, 1924 in Li, Dray-Novey, and Kong,148.
[65] Sirén, 169.
[66] Dong, *Republican Beijing*, 36.
[67] Sirén, 169.
[68] Ibid., 172.
[69] Ibid., 168.
[70] Ibid., 171.
[71] Ibid., 181.
[72] Dong, *Republican Beijing*, 23.

[73] Ibid., 22.
[74] Sirén, 181.
[75] Ibid., plate 80.
[76] Ibid., 181.
[77] Li, Dray-Novey, and Kong, 148.
[78] Dong, *Republican Beijing*, 36.
[79] Sirén, 164.
[80] Ibid., 165.
[81] Dong, *Republican Beijing*, 28.
[82] Sirén, plate 71.
[83] Dong, *Republican Beijing*, 60.
[84] Quoted in Dong, *Republican Beijing*, 60.
[85] Dong, *Republican Beijing*, 36.
[86] Li, Dray-Novey, and Kong, 148.
[87] Sirén, 74.
[88] Li, Dray-Novey, and Kong, 148.
[89] Frank Dorn. *Peking Map*. Tientsin: Peiyang Press, 1936.
[90] Sirén, 73.
[91] Ibid.
[92] Shi, 357.
[93] Ibid., 361.
[94] Ibid., 356
[95] Ibid., 359
[96] Ibid., 362.
[97] Sirén, 100.
[98] Dong, *Republican Beijing*, 36
[99] Sirén, plate 22.
[100] Li, Dray-Novey, and Kong, 143.
[101] Strand, 4-5.
[102] Ibid., 121.
[103] Shao, 7.

Bibliography

Aldrich, Michael. *The Search for a Vanishing Beijing: a guide to China's capital through the ages.* Hong Kong: Hong Kong University Press, 2006.

Beers, Burton. *China in Old Photographs*. New York: Scribners, 1978.

Braisted, William R. "The United States and the American China Development Company." *The Far Eastern Quarterly*, 11:2. (Feb., 1952), pp. 147-165.

"Canton-Hankau Railway," *New York Tim*es. June 11th, 1902.

"China's First Railroad," *New York Times*. August 31st, 1891.

Clifford, Nicholas. *A Truthful Impression of the Country*. Ann Arbor: The University of Michigan Press. 2004.

Connolly, Bruce. "The Secret Railway." *Beijing This Month*. Beijing Municipal Bureau of Tourism. Sept. 2004. <http://www.btmbeijing.com/contents/en/btm/2004-10/your/dongbianmen>

Dong, Madeleine Yue. "Juggling Bits: Tianqiao as Republican Beijing's Recycling Center." *Modern China*. 25:3 (Jul., 1999), pp. 303-342.

Dong, Madeleine Yue. *Republican Beijing: the City and its Histories.* Berkeley: University of California Press, 2003.

Dorn, Frank. *Peking Map*. Tientsin: Peiyang Press, 1936.

Dray-Novey, Alison. "Spatial Order and Police in Imperial Beijing." *The Journal of Asian Studies*, 52:4 (Nov., 1993), pp. 885-922.

Edmonds, Richard. "The Legacy of Sun Yat-sen's Railway Plans." *The China Quarterly*, 111. (Sep., 1987), pp. 421-443.

Gaubatz, Piper. "Changing Beijing." *Geographical Review*, 85:1 (Jan., 1995), pp. 79-96.

George Kates. *The Years that were Fat: The Last of Old China.* Cambridge, Mass.: M.I.T. Press, 1976.

Hughes, E. R. *The Invasion of China by the Western World.* New York: Macmillan Company, 1938.

Kent, Percy Horace. *Railway Enterprise in China*. London: Edward Arnold, 1907.

Knapp, Ronald G. *China's Walled Cities*. New York: Oxford University Press, 2000.

Lamont, Thomas. "The Economic Situation in the Orient." *Proceedings of the Academy of Political Science in the City of New York*, 9:2, American Foreign Trade Relations. (Feb., 1921), pp. 68-75.

"Lawless Soldiers in Peking," North China Herald. Shanghai: North-China Daily News & Herald. February 7th, 1926.

Leung Chi-Keung. "China.: Railway Patterns and National Goals." Chicago: University of Chicago Department of Geography, 1980, pp. 141-45.

Li, Lillian M., Alison Dray-Novey, and Haili Kong. *Beijing: From Imperial Capital to Olympic City*. New York: Palgrave Macmillan, 2007.

Meyer, B.H. "Foreign Railway Events in 1902-03." *Annals of the American Academy of Political and Social Science*, 23, Tariff Problems. American and British. (Jan., 1904), pp. 121-140.

Moule, Arthur. *Half a Century in China*. London: Hodder and Stoughton, 1911.

"New Eara in Chinese Railway Construction." *Pacific Affairs*, 10:3. (Sep., 1937), pp. 276-288.

Pong, David. "Confucian Patriotism and the Destruction of the Woosung Railway, 1877" *Modern Asian Studies*, **7:**4 (1973), pp. 647-676**.**

"Railways in China." *Science*, 13:328. (May 17, 1889), pp. 375-377.

Richards, Jeffrey and John MacKenzie. *The Railway Station: A Social History*. Oxford: Oxford University Press, 1986.

Rosenbaum, Arthur. Railway Enterprise and Economic Development: The Case of the Imperial Railways of North China, 1900-1911 *Modern China*, 2:2 (Apr., 1976), pp. 227-272.

Shao, Qin. *Culturing modernity: the Nantong model, 1890-1930*. Stanford: Stanford University Press, 2004.

Shi Mingzheng. "From Imperial Gardens to Public Parks: The Transformation of Urban Space in Early Twentieth-Century Beijing." *Modern China*, 24:3. (Jul., 1998), pp. 219-254.

Shi, Mingzheng. *Beijing Transforms: Urban Infrastructure, Public Works, and Social Change in the Chinese Capital, 1900-1928*. Ann Arbor, MI: University Microfilms International, 1993.

Sirén, Osvald. *The walls and gates of Peking: researches and impressions*. London: J. Lane, 1924.

Smith, Arthur Henderson. *China in Convulsion Vol. 2*. Shannon: Irish University Press, 1972.

Strand, David. *Rickshaw Beijing*. Berkeley: University of California Press, 1989.

"The Court Back in Peking," *New York Times*. January 8th, 1902.

"Tourists Try New Railroad," *New York Times*. August 4, 1907

Weale, B.L. Putnam. *The Re-Shaping of the Far East*. London: Macmillan and Co., 1905.