Figure 1. *Aerial photograph of Downtown Boston,* August 31, 2004 (Courtesy Alex S. MacLean/Landslides www.alexmaclean.com).

AS THOUGH IN FLIGHT:
19th Century American Urban Views

by Alex Krieger

Who has not at some point in their lives wished to observe the world from above, to disengage from gravity's pull, hover above a street or landscape and gain a broader perspective on one's environment?

During the 19th century, an appealing form of mapping that illustrated towns and cities from an imagined 'bird's eye' perspective offered citizens the next best thing. Revealing and at times exaggerating characteristics of the places they were illustrating, such bird's eyes became immensely popular. The rapid changes brought about by industrialization created a desire to better describe, understand and take pride in the urban domain beyond what one's eye could observe from the street.

With airplanes and satellite transmissions at our disposal, not to mention Google Earth, it is difficult to appreciate how hard it was prior to such technological wonders for people to observe their world from above, or understand broader geographical relationships. Yes, a roof could be climbed, or a church steeple, or a nearby hill if a nearby hill existed, but mostly one was rooted to the earth. From street level an awareness of where things were and how they were arrayed in relationship to one another was limited by where one had actually been and one's memory of that experience. Of course one could rely on maps, but maps are limited by their flatness, describing buildings and places well in two dimensions but unable to reveal much three-dimensional character. Sketches, drawings and paintings can, of course, elegantly portray an urban scene but not often a convincing panorama of an entire town. The emergence of photography, another 19th-century invention, enabled the third dimension to be described with ever greater precision, but like a drawing and unlike a map, a single photograph could only show a single view limited in horizontal range by the optics of the camera's lens.

So the beauty of a bird's eye view was in delivering two kinds of information about the physical world simultaneously. In a bird's eye view, one could locate a specific place in relationship to the rest of the town and have individual buildings shown with their architectural detail. One could, for example, understand the length of a town's main street and admire the facades of the principal commercial and civic establishments that marched along the street's entire length. The view may have been from a vantage point far above the street, but how much more intimate and revealing these bird's eye views must

have seemed to citizens whose normal views were limited to what could be seen while still on the ground.

Pictorial representation of the settled world, of course, extends considerably back in human history. Given its importance in Western culture, the city of Jerusalem is depicted in some of the earliest printed documents. A woodcut of an imagined aerial view of the holy city, drawn as if it were circular in form, appeared in the famous 1493 Nuremberg Chronicles. Drawn by two people, Michael Wohlgemut and Hanns Pleydenwurff, who had never actually seen Jerusalem, but relied on a well-documented German Pilgrimage in the 1480s, they chose to emphasize monuments important to Christianity. The image, therefore, represents the *assumed idea of Jerusalem, rather than its reality*, a condition that would motivate the design of many subsequent urban views. Nearly a millennium earlier,

one of the very oldest surviving depictions of any city, also of Jerusalem, is found in the form of a mosaic map of Palestine on the floor of a 6th-century church in Madaba, Jordan. In this mosaic, buildings are drawn in elevation and positioned unto a rudimentary plan layout of the city in a way that suggests the third dimension. A late-16th-century map of Jerusalem, Christiaan von Adrichem's *Jerusalem et suburbia eius ...* , is another intriguing antecedent of the later bird's eye (see Figure 2 for a later edition of this view). On a far more accurate plan layout, the buildings, as in the Madaba mosaic, are illustrated as façades rather than by their roof shape as plan convention would dictate. It is as if all of the city's buildings had fallen flat like a stack of cards, yet, unexpectedly, a sense of three-dimensionality is expressed.

Indeed, from the middle of the 15th century on, experimentation

with newly discovered perspective techniques led Leonardo da Vinci and the other great artists of the Italian Renaissance to render remarkable urban scenes both from ground level and from imagined aerial stations. The first great collection of city maps also dates to the Renaissance. The majestic six-volume atlas, *Civitates Orbis Terrarum*, published between 1572 and 1617 by Georg Braun and Franz Hogenberg contained in total some 550 city maps, many illustrated using a rudimentary bird's eye technique. Two of these, Lisbon and (again) Jerusalem are included in this catalog (see Figures 3 and 4). Such early aerial views were truly imaginary as they were drawn by artists still rooted to the ground. It was not until the invention of balloon flight in France during the latter 18th century that a brave artist could actually get up into the sky, look down and sketch out an urban scene prior to returning to earth to fill in more detail.

Figure 2 (Plate 2). Georg Braun and Franz Hogenberg, *Jerusalem et suburbia eius (Cologne, 1617).*

Figure 3 (Plate 4). Georg Braun and Franz Hogenberg, *Olissippo, quae nunc Lisboa* (Cologne, 1617).

Figure 4 (Plate 1). Georg Braun and Franz Hogenberg, *Hierosolyma urbs sancta Judeae* (Cologne, 1617).

Figure 5 (Plate 5). Detail of title sheet from Louis Bretez, *Plan de Paris* (Paris, 1739).

Still, the most impressive precursor to the 19th-century American bird's eye view was produced some 40 years prior to the first balloon flight. This was the remarkable 20-sheet map of Paris, commissioned by Michel Etienne Turgot (Figure 5). Turgot was appointed 'Provost of the Merchants' by Louis XV in 1729 and soon embarked on a project whose goal was to produce, not so much an accurate street plan, but

a beautiful and powerful image of the capital. Such a goal, creating an impressive view dramatizing a town, more than accuracy, motivated many an American bird's eye a century later. Turgot succeeded admirably, both in image making and in fact, in accuracy. In 1734 he requested Louis de Bretez, a member of the Academy of Painting and Sculpture, to assemble data and draft the plan. This alone took more than two years.

Then in 1736, he commissioned Claude Lucas to engrave Bretez's plan, and the monumental endeavor was finally published in 1739. In scope, draftsmanship and detail, there are few comparably exquisite representations of any city, before and since. The map remains a standard bearer for illustrating a great capital, often used by historians and cartographers to research the Paris that existed just prior to Napoleon II

and Baron von Houseman's mid-19th-century transformations. The Louvre Museum still offers individual sheets of the map for sale, printed from the original plates. No lover of city views should leave Paris without one.

So a tradition of depicting entire cities from an aerial perspective preceded their introduction into the New World. The explosion of interest in these in America, however, was caused by two factors: a new curiosity about the urban world that was so rapidly being transformed during the 19th century and the invention of lithography.

Curiosity about one's world, of course, existed for millennia and produced various techniques to satisfy such curiosity. The intense new curiosity among Americans had to do with keeping up with the astonishing growth and technological transformations that settlements of all sizes were undergoing during the initial decades of the Industrial

Revolution. Great mill buildings, immense warehouses, monumental civic and ecclesiastical edifices, train depots and roundhouses, grand residential estates, impressive apartment buildings, and parks and public gardens were appearing in one's town. A new, prospering, physical world was being constructed, and it was hard to keep up. Citizens were eager to comprehend, partake and take pride in the physical consequences of this advance in technology and prosperity.

Popularity of detailed urban views was also accelerated by the perfecting of lithographic processes, enabling much greater precision in printing pictorial detail, in delineating texture and in the use of color, and more importantly, resulting in a substantial reduction in the cost of printing. This made printed documents of all kinds far more available, and firms such as Currier & Ives took pride in calling themselves "publishers of

cheap and popular pictures" for broad consumption. Merchants, real estate entrepreneurs, and civic boosters took ready advantage, realizing the potential of distributing both civic and commercial information to mass audiences, including information of the kind that had historically only been available to the elite of society. Between 1825 and the end of the 19th century, several thousand bird's eye maps were drawn and most of these were reproduced in great quantity.

The American version of the bird's eye map may thus be considered among the first modern forms of mass merchandizing and civic boosterism. Professor John Reps of Cornell University, arguably the world's leading authority on bird's eye views drawn of American cities, described their appeal and diverse use thus:

"Owners of these prints displayed them on the walls of parlors, offices, and such public places as banks, hotels and

government buildings. Everyone regarded these urban views as convincing evidence of their city's prosperity and importance and looked on them with pride, consulted them for information, sent them to friends, or admired them as decoration for their homes or places of business." (*Cities of the Mississippi,* University of Missouri Press, 1994, p. 4)

Reps does not use the word 'everyone' carelessly. Many bird's eyes were printed in enormous quantities which is why it is not unusual to still find copies of a particular view though often originally printed on inexpensive and not particularly durable paper.

Since each property owner in town was a potential customer, a peculiar rendering style became preferred. This involved combining aspects of perspective and isometric drafting; consequently, most buildings in the view appear nearly equal in prominence, unlike in true perspective where objects further away diminish

in size. This was intentional, not an amateurish misunderstanding of the role of the vanishing point in perspective. If more people could identify their homes or businesses, or other important town landmarks, more would be proud to own or display such a view, or even invest in the production of a new view. Every town leader wished to have such a view drawn of their town as an indicator of the important advances being made to make that town more competitive and desirable. Newly developing towns tended to produce the quickest views, an indication of the pride (and salesmanship) related to creating communities by their builders. For a town's status, it was just as important to produce a view, as it is today to maintain a town web page. For an individual, while direct comparison to today's need of cell phones and I-pods is not perfect, a similar intensity of desire existed. A prominent merchant, if not every

citizen, wanted to own a bird's eye view. Throughout much of the second half of the 19th century, this desire to display one's own town, or occasionally a particularly admired nearby town, increased with the availability of such views. Bird's eye views were a source of information, community awareness, and sheer civic pride.

Since they were often born of entrepreneurship and boosterism, accuracy was not often the foremost objective. Like any artistic endeavor, the views were about a narrative, not a mere description of facts. One aspect of their charm for us today is the combination of exuberance with choice of emphasis in selected vantage points or artistic compositions. Propaganda may be too strong a word, but neither the artist nor the sponsors of a particular view shied away from exaggerating specific characteristics. Viewpoints were selected strategically. The town

Cartographic information in general expresses optimism, ... But as a category of cartography, the bird's eye views exude a particular degree of optimism.

harbor may be foregrounded and subtly enhanced for an oceanfront or riverfront town, with boats or barges filling the scene. For an industrial town, an impressive collection of utilitarian structures were prominently positioned in the view, rail lines emanating in several directions like umbilical cords, which in a sense they were. Nearly always, a town's street grid extended outward towards the horizon, implying the abundance of land and further opportunities to grow and prosper. A touch of "Manifest Destiny" was evident in many of the views, as in the minds of many 19th-century Americans. Indeed, while this catalog focuses on New England views, it was the great migration westward across the century that produced city views by the hundreds, both of

nascent towns and still "paper" towns aspiring to become real towns.

Cartographic information in general expresses optimism, revealing relationships in space and ways of passage less clear to the observer prior to examining the information. But as a category of cartography, the bird's eye views exude a particular degree of optimism. During the 19th century, America was being made, and the bird's eye views were vivid evidence of this construction! These views were reminders of the reach for and attainability of the American Dream, inspiring land speculators, "town fathers"' and ordinary citizens alike! Occasionally the future was depicted before it had actually arrived. Surely there were cases of citizens, having been inspired by a seductive bird's eye, arriving in town

to discover a slightly less impressive place. No doubt the disappointment was mostly short-lived, as the recent arrivals began to understand that through their own enterprise and hard work the future depicted in the bird's eye might come about forthwith.

None of this, except in degree of exuberance, was unprecedented. Several centuries earlier, Venetian merchant princes had commissioned impressive depictions of the growing prosperity and international reach of mercantile Venice and other Mediterranean ports of call. The gradual transformation of medieval Europe from predominantly feudal to mercantile and nascent capitalist cultures created a need for marketing and promotional materials, of which pictorial maps were an important

source. To compete in the modern world meant advertising a town's attributes and its leaders' ambitions for the future. One of the most paradigmatic images of an American city, a woodcut showing the original four wards of Savannah, Georgia, carved out of the surrounding pine forest, was commissioned by James Oglethorpe *prior* to setting sail to found his colony in 1732. So the earliest bird's eye of an American settlement was purely anticipatory, a real estate advertisement really, enticing adventurers to join Oglethorpe in his expedition to the New World to build the already rendered future city — and they came and they did!

Rapid growth also warranted frequent updates of certain town views. Boston was a prime example. This catalog presents ten views of Boston from the 1850s into the early 20th century. Few cities underwent as remarkable a topographical transformation as did Boston during the last half of the 19th century. As wharves grew in response to the growth of the clipper ship fleet, as landfills fundamentally transformed the local landscape, as catastrophic events such as fires required recording, as approaching centennial celebrations inspired more dramatic depictions of Revolutionary era places and commemorations, newer views were produced. For example, Boston in the views of John Bachmann and John W. Hill is a remarkably vibrant city, teeming with mercantile and industrial activity (see Figures 6 and 7). A comparable contemporary aerial photograph of the city and the harbor shows a mound of skyscrapers but far less bustle. It is an interesting reminder that 'factual' information, such as a photograph contains, but does not necessarily convey reality better than the old bird's eye view (see Figure 1). Boston, after all, continues to bustle today, albeit in different ways and places.

Similarly, spectacular bird's eye views of teeming Chicago, St. Louis, San Francisco, and of course Manhattan, published during the last three decades of the 19th century portray what some have called the "furnace stage" of American industrial urbanization. The views and the cities were amazing to behold, as are for us today's images of the unprecedented scale of Asian urbanization. But the apotheosis in both citizens' wonder in their city's growth and of the art of the bird's eye was at hand. The major cities had grown to a size where a bird's eye view, while more intricate and impressive then ever, had lost the intimacy associated with views of smaller towns in which people could connect with individual buildings, especially their own or their neighbors. The firm of Currier & Ives, by then a hugely profitable operation, was producing
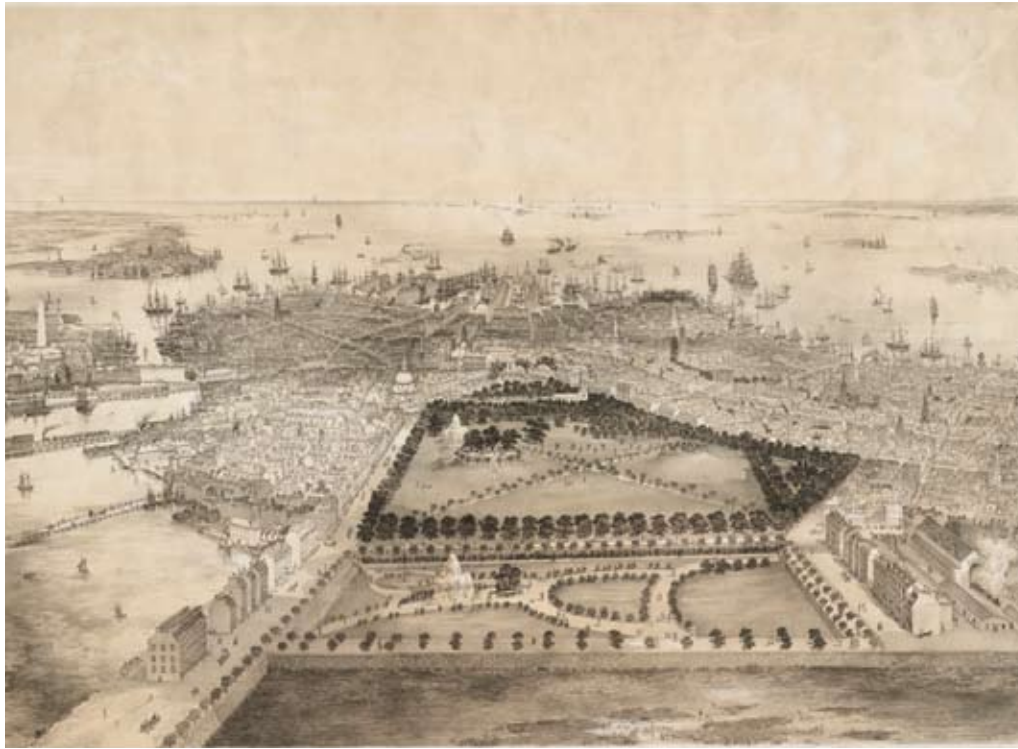
Figure 6 (Plate 8).
John Bachmann,
Bird's Eye View of Boston
(New York, 1850).

Figure 7 (Plate 10).
John W. Hill,
Boston (New York, 1857).

thousands of prints but sought to maintain intimacy between viewer and view by romanticizing scenes from daily life. The company still produced spectacular urban bird's eyes, but the majority of their output was vignettes of normal, everyday human activities not citywide panoramas. What had begun earlier in the century as a vehicle for helping citizens understand and relate to their growing towns had, at least in the larger cities, become as overwhelming as the cities themselves. Meanwhile, various other innovations in printed matter, mapping and photography were now competing as conveyors of general information about contemporary urban life.

Near the century's end, the urban bird's eye view began its inevitable transition from vehicle of urban promotion to charming artistic object; of more interest to historians and collectors than to newly arriving citizens. Yet, as we examine the

range of bird's eyes in this catalog, most more than a century removed from their creation, we remain both charmed and informed. In the views of Boston and Worcester, we marvel at the enterprise and the sheer energy on display. We try to track the immense changes, marveling further at how much change a century can bring to an urban setting. In the views of towns that have remained small, like a Newburyport or a Provincetown, we delight in locating places that are still there, relatively unscathed by time (see Figure 8). Or, in looking at the views of a Waltham or a Holyoke we may lament the demise of the traditional industries that first gave these towns purpose, even as we admire them as nurturing places to live (see Figure 9). We still treasure these views, partially out of sentimentality for a simpler past; partially out of admiration for the tenacity, imagination and ingenuity of the artists who created them;

certainly because we enjoy tracing urban change across time; and not least for the optimism in a future urban society that they intended to convey.

A particular response to our era's successor to the bird's eye view, 'Google Earth,' provides a telling postscript. Almost immediately following Google's introduction of

this world-roaming feature as an educational and navigational tool, protests were heard from various nations about the potential breaching of security. A 2005 *New York Times* online article, entitled "Governments Tremble at Google's Bird's-Eye View," includes several amusing expressions of dismay. An analyst for Russia's Federal Security Agency, the

Figure 8 (Plate 48). George Walker, *Provincetown, Mass.* (Boston, 1910).

successor organization to the K.G.B., is quoted as saying; "Terrorists don't need to reconnoiter their target. Now an American Company is working for them," while a South Korean official demands that certain government buildings be blocked so as to maintain their security. Such angst may be another reason why we admire these 19th-century bird's eyes. Despite highly limited means, their creators and sponsors proudly revealed as much as possible about the places that they were depicting. We have the means to zoom into most corners of the world at a click of a key, but worry about the consequences of doing so.

Perhaps it is the innocence displayed by the 19th-century bird's eyes that also appeals to us, portraying a time of optimism in reaching for tomorrow's possibilities. Even though for us they depict a bygone period, examining these bird's eye views still inspires our imagination, and this ultimately was their purpose.

Figure 9 (Plate 33). Oakley H. Bailey, *View of Waltham, Mass.* (Boston, 1877).

TIME SHIFTS: A Changing America, 1850-1900

By Debra Block

The United States changed dramatically between 1850 and 1900.

The nation moved from a largely agrarian, rural and marginally-connected group of states to an urban, industrial, and more unified country. Manufacturing goods through large-scale factory production was at the core of this transformation. Cities were the center of this change, and migrants, either from rural areas or from overseas, provided the labor.

Certainly, all three of these major forces — industrialization, urbanization and immigration — existed before 1850, but the acceleration and pace during the second half of the 19th century was remarkable. A loose confederation of states was evolving into the mighty force that would dominate the world in the century that followed. Although the transformation was not completed during this period, the course upon which the nation would travel was set. The mechanization of both industrial and agricultural production, the separation of home and work, and the changing complexion of American life all created upheaval. The desire for and eventual imposition of order would take time and there was a palpable awareness of a shifting world.

Cities reflected and shaped this transformation. As home and work became separate, so did commercial and residential areas. Likewise, societal institutions adopted the specialization of tasks so efficient in factory production. Despite the increasing diversity of America's population, the rise of mass culture masked these differences and created a sense of a shared national experience.

One example of the shift to the mass production of culture was the publication of bird's eye view maps. These lithographs, which were popular wall hangings of the Victorian era, provided non-photographic representations of cities. They presented three-dimensional geographic features as though they were seen from above. As many as 500 views were printed in one lot and inexpensive production techniques resulted in a purchase price between three and five dollars. The bird's eye views were usually commissioned by chambers

of commerce and other civic groups as a way to promote their rapidly growing cities. They were drawn by commercial artists who were often given specific aspects of the town to highlight. These views defied standard cartographic conventions. The maps' orientation rarely placed north at the top. The perspective was skewed as some physical components of the landscape were made more prominent while others were minimized or simply omitted.

Because of limited space, all cartographers make choices about what physical and cultural features to include. These decisions make maps a very valuable way to learn about history. They reveal priorities and values. Bird's eye views are not an exception; they are a rich resource for the second half of the 19th century when almost 80 percent of these maps were created. Their middle-class patrons were active participants in the nation's transformation. The views highlight what many deemed positive about the changing urban and industrial landscape, and gloss over or ignore the problems this rapid growth generated.

Bird's eye view maps of New England cities and towns show a changing nation and an attempt to cast a positive image on these transformations. Boston and environs had long been at the forefront of innovation in the United States. It led the way in industrial manufacturing, especially with factory production of textiles as early as the 1810s. New England had reinvented itself several times in its 250 years and these views provide an illustration of this era that is both general and unique. Boston expanded, annexed other towns, and filled in its swamps. It built on what it was, yet changed itself without losing its essential character. A survey of New England bird's eye views captures the essence of this changing era.

INDUSTRIALIZATION

Bird's eye views illustrate the transformation of industrial production, as the United States completed its transition from a mercantile to a market economy. The scope of both production and consumption now existed on a national level. These changes were made possible by the shift from water to steam and electrical power, freeing manufacturers from locations near rivers to the placement of factories close to labor and capital sources. For New England, in particular, the decline of shipping and maritime industries released capital, and manufacturing and transportation provided new investment opportunities. Factories literally loom large in the bird's eye view maps and, by not using the standard orientation of north at the top, artists were able to place them in the forefront of the map. In New England, civic leaders felt that it was important to show
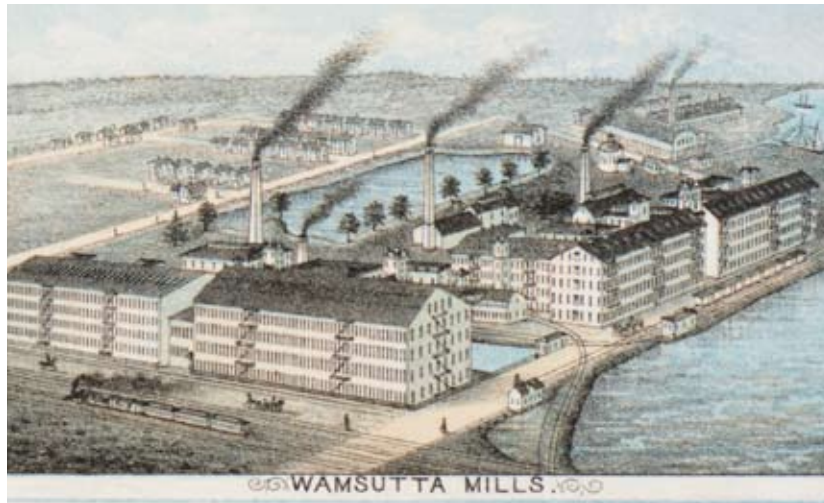
Figure 10 (Plate 40). Detail showing marginal illustration of Wamsutta factory from Oakley H. Bailey, *View of the City of New Bedford, Mass.* (Boston, 1876).

Figure 11 (Plate 51). Detail of factories adjacent to canals from Howard H. Bailey and James C. Hazen, *Bird's Eye View of Lowell, Mass.* (Boston, 1876).

Figure 12 (Plate 53). Detail of factory with clock tower from Oakley H. Bailey, *Nashua, New Hampshire* (Boston, 1883).

that the transition to new economic power had been made, successfully building on older foundations.

The bird's eye view of New Bedford highlights both the importance of the factory as well as the progress of the city. For the former whaling town, manufacturing portends the future. The prominent placement of the Wamsutta factory in the right foreground of the map illustrates this emphasis (see Figure 10). Likewise, the bird's eye view of Lowell highlights factory production. This town along the Merrimac River had been the nation's first major site of wide-scale textile manufacturing using water power generated from the river. The billowing smoke that issues forth from the factories located on the canals heralds the steam that now powers these factories (see Figure 11). Old and new would combine together in a positive harmony in this new era. The publication date of both of these views, 1876, trumpets the

nation's centennial as well. These lithographs were also commissioned with an eye to the future. Economic leaders were conscious of what their contemporaries and those in the future would know of their time and place.

Industrial production was different in big factories. Large initial investment costs necessitated high productivity to reap returns. New power sources enabled factories to operate 24 hours a day. The factories in these views have smoke streaming forth from stacks as a herald of the new and complete transformation of production. Nowhere was this change more evident than in an altered sense of time. The western world, including the United States, was realizing a different sensibility. Schedules, from the work place to railroads, infiltrated daily life. This imposition mirrored the transition of production from a time where one person made the entire product to an assembly line

where most tasks in the industrial process were broken down into simplistic, rote steps. The natural pace of the 18th-century household and farm economy, where all that was consumed in the household was produced there, was now replaced with the artificial rhythms of the clock and the factory. The 1883 view of Nashua, New Hampshire, places a large factory in the center of the view. And on the top of the factory is a large clock (see Figure 12).

New systems of production, judged by quantity, became the purview of those who were neither owners nor workers. Factory owners hired experts which led to an increasing distance between those who knew and those who worked. There were now many levels in the production hierarchy. Skilled workers protested management's efforts to change the pace of production. Blue Mondays, work slow downs, and machine tampering were all subtle forms of

Figure 13 (Plate 18). Detail of railroad terminating at harbor from Oakley H. Bailey, *View of East Boston, Mass.* (Boston, 1879).

protest over the right to control the rate of production.

The creation and imposition of a bureaucracy with the insertion of managerial levels led to many more rungs on the ladder towards upward mobility. The rise of a middle class and service providers added a new dynamic to the social fabric. Bird's eye views provided these new managers opportunity to promote their vision and their successes as well as relatively inexpensive art to

hang on the walls of their parlors and offices.

In some measure, the creation of bird's eye view maps reflected the shifting nature of production. Many critics did not consider these views to be art and the ability to mass produce these drawings highlighted the changing relationship between commerce and art during this period. While civic leaders used these maps to promote their towns, their creators were trying to make money. The entire notion of commercial art seemed to fly in the face of the image of the starving artist who lived off the largess of patrons and relatives. Artistic talent was now a skill to be marketed, and increasingly the distinction between art and illustration revealed the widening chasm between the person of real talent and those who pandered to the

materialism of mass consumption.

In general, much of the growth of this period was fueled by rapid technological advancements in production techniques, communication and transportation. The U.S. Patent Office, which had issued only 36,000 patents from its inception in 1791 to 1860, granted 440,000 such licenses between 1860 and 1890. At the core of this innovation were railroads, a crucial industry on its own as well as an integral part of every other industry. From financing these large operations to the rates that they charged to ship both raw materials and finished goods, trains were the centerpiece of industrial expansion during this half century. Trains, tracks, and round houses are often placed prominently in the bird's eye views. The 1875 view of Nashua places a disproportionately

large railroad station on the left side of the map. The 1879 view of East Boston has the railroad heading into the port indicating that new forms of industrial production would build upon the shipping strengths of New England (see Figure 13).

The importance of the railroad also reflects the integral role of the federal government in this industrial expansion. In addition to providing land, protectionist tariffs, resources and subsidies, the nation's judicial system granted corporations the legal status of individuals while denying the same standing to trade unions. Political leaders also used troops to support owners in their conflicts with workers. Other laws, such as those that limited the liability of stockholders, enabled entrepreneurs to raise the necessary capital for large-scale production. The failure to enforce laws intended to limit abuse, such as the Sherman Anti-Trust Act of 1890, gave corporations the

protection to thrive.

The creation of trusts enabled producers to realize necessary economies of scale and integrate on both horizontal and vertical levels. The result was often the domination by one group within each industry. Individuals such as J.D. Rockefeller used trusts and holding companies to control an entire industry. These strategies certainly brought efficiency, yet in eliminating waste conveniently got rid of competition as well. These titans of industry reflected the prevailing spirit, an industrial embodiment of America's founding republican vision that hard work and determination were the keys to success.

This enormous transformation was not without its costs. Elimination of competition hurt consumers as well as those whose businesses failed. When the economy did falter, as the vagaries of capitalism dictate, the increasing connectedness of

industries resulted in more extensive failure and hardship.

This ascension of powerful magnates was not automatic or uncontested. Workers and farmers fought for control over production rates and methods. Groups such as the Knights of Labor and the Populists promoted an alternative vision for the country in which cooperation rather than competition would frame this industrial growth. Activism on the part of the workers was often quite violent and frequently involved armed conflict. The entire community waged these wars, not just in the factories but in their urban neighborhoods as well. The textile town of Lawrence, Massachusetts, was the site of much union agitation as labor organizers galvanized workers to recognize their common problems of low wages, horrid tenement conditions, and unsanitary and unsafe living circumstances. The International Workers of the World

united all the textile workers in town so when a strike occurred in 1912, the Irish, Italian and French workers, using methods of industrial warfare, prevented anyone from crossing the picket lines. Management tried to use parish priests to divide workers along ethnic lines, but this effort was unsuccessful. American workers were fighting to be included in the decision making process.

Just as they highlighted the positive and ignored the negative aspects of an industrializing America, bird's eye view maps presented an incomplete rendition of the changing urban landscape. Civic leaders commissioned artists to emphasize the good while softening or omitting the negative often found in the nation's growing cities. The absence of strict representation in these views was a way to show the values and priorities of the expanding middle class as objectivity blurred into optimism for the future. The bird's eye views drawn during this period show expanding cities, orderly harbors and depots, and as one historian quipped, "The sun was always shining."

In reality, the industrial city of the second half of the 19th century was often quite gloomy as it reflected and shaped the transformation of the United States. While the rural population of the country doubled during this time, the number of urban dwellers increased sevenfold. Certainly cities had existed since the nation's inception, but their very nature changed. The pre-industrial city was a walking city, with a mix of functions. Commercial and residential areas were interspersed. The most fashionable areas were in the center. Congestion was not undesirable. Since antiquity, crowded urban conditions meant safety. Walls guarded those inside and home fronts were only a few feet from the street to alert dwellers to intruders.

Cities changed during the second half of the 19th century, primarily to accommodate the large-scale factory production that occurred within them. Urban areas needed to provide housing, sanitation, and transportation to their increasing number of residents. Cities themselves expanded physically in an effort to accommodate this growth and change. Boston, for example, grew from a radius of a few miles with a population of 200,000 in 1850 to a 10-mile radius and a population of more than one million by 1900. The physical growth was achieved by filling in marshland and annexing neighboring locations. By 1873 Roxbury, Dorchester, Charlestown, Brighton, and West Roxbury were within Boston's city limits. The Back Bay and Fenway were filled in from land hauled in by trains 24 hours a day from areas west of the city. The

Figure 14 (Plate 15). Detail of Back Bay area from Oakley H. Bailey and James C. Hazen, *The City of Boston* (Boston, 1879).

1879 bird's eye view of Boston shows the congestion but displays the newly filled in Back Bay as a commercial and residential haven. (see Figure 14). Since it orients the city from the vantage point of the waterfront, the viewer's eye is also drawn in the direction of the newly annexed Roxbury and Dorchester where ample land can meet the burgeoning city's need to expand.

One joint component of the industrialization and urbanization of this period was the connection between home and work. The class dimension of this distinction was becoming more apparent. Factory workers and their families stayed in the increasingly congested central cities, to be close to manufacturing sites. Those who could afford to leave the city center did, leading to the advent of outlying areas and suburbs. Home came to represent privacy and an absence of work for those who could afford to leave the urban core.

Figure 15 (Plate 23). Edwin Whitefield, *View of Dedham, Mass. in 1876, Drawn from Nature* (Boston, 1877).

It was a sanctuary from the squalor of city life. The 1876 view of the Boston suburb of Dedham is a latter day Eden, emphasizing the bucolic and pastoral aspects of the town (see Figure 15).

Most workers resided in central, urban areas. For the older, pre-industrial cities of the northeast, this reality meant the burden of accommodating many changes without sufficient infrastructure. The result was overcrowding, filth, disease, and crime. City governments provided services with varying degrees of success but corruption often tainted even the best efforts. The political machines that flourished during this time were a necessary evil to administering the growing city. The bird's eye view maps do not clearly identify the working class neighborhoods. Small buildings are often located near

factories in many of these lithographs but they are not labeled as housing. They give no indication of crowded conditions as they were drawn simplistically.

Much good did come from this urban expansion. Public parks, recreation, and mass entertainment provided activities and distraction from the grind of daily life. Railway companies provided entertainment in the form of amusement parks and race tracks near the terminal points of their rail lines as a means of generating travel. The rise of professional sports, particularly baseball, was emblematic of this period (see Figure 16). Factory workers, bound by the rigidity of the production schedule, could escape to the ball fields where accomplishment was defined not by time, but by results. Meanwhile, the advent of opera, ballet and theater, intended primarily for the elite, also colored the urban landscape. For example, the

Figure 16 (Plate 19). Detail of baseball stadium from Oakley H. Bailey, *Boston Highlands, Massachusetts, Wards 19, 20, 21 & 22 of Boston* (Boston, 1888).

Figure 17 (Plate 49). Detail of marginal illustration of Opera House Block from Albert F. Poole, *Bird's Eye View of the City of Brockton, Plymouth County, Mass.* (Madison, 1882).

1882 view of Brockton depicts an opera house on Main Street (see Figure 17).

These commercial enterprises were matched by the efforts of city governments. As they expanded physically, cities such as Boston developed extensive networks that included parks, playgrounds and recreation centers. City fathers laid out the Arnold Arboretum and set aside the Blue Hills for public use. The ultimate expression was the creation of the Emerald Necklace, a ring of parks designed by Frederick Law Olmstead. The bird's eye view maps highlight these parks and pastoral areas. The 1891 view of Jamaica Plain vividly shows parks and its pond. Public schools, where local government increasingly mandated attendance, are centrally located and clearly labeled on most of the bird's eye views. Schools were the great agents of assimilation for the rapidly growing immigrant population

of America's cities. Despite many historians' claims that their real purpose was to create a docile work force, to contemporaries, the public schools served as markers of progress and opportunity.

Mirroring trends towards specialization in industrial production, societal institutions differentiated between those who needed assistance, leading to the creation of orphanages, prisons, and mental institutions. Again, New England led the nation in such endeavors but the bird's eye view maps tend to place these institutions on the fringe of the scene. The 1875 view of Northampton includes the town's homes for deaf mutes and lunatics, but places them in the background of the map (see Figure 18).

There was a marked difference between the intense community of the urban neighborhood, where immigrant newcomers crowded together, and the more individual existence of the new middle and upper class residential neighborhoods at city fringes and newly built suburbs. These elite distinctions are evident in the layout of a city's streets. Pre-industrial urban areas, such as the hub of Boston, were marked by meandering cow paths that had to be adapted to modern needs. For newer cities, a grid layout provided a sense of order in the rapidly changing time. Residential areas, particularly in the newer suburbs, attempted to invoke a more pastoral setting with winding roads and large lawns. The bird's eye views served to promote these new sections of urban America that would encourage the best people to stay in the city. Jamaica Plain, technically within the city limits of Boston, revealed these possibilities. The 1891 view prominently displays a clubhouse for its wealthy residents, beautiful churches, spacious houses with lawns, a public library, and a high school (see Figure 19).

The natural bonds of community that are formed by those who live, work and recreate together, did not materialize naturally in these new middle and upper class neighborhoods. These social connections had to be created artificially. The rise of voluntary associations during the last half of the 19th century provided a sense of community for those who lived more isolated and individual lives. The 1879 view of Lynn, Massachusetts, identifies a Pythian Hall, an Odd Fellows Hall, and a Masonic Lodge that were the gathering places for the many shoe manufacturers whose factories were so prominently displayed on the map.

Business men's associations, where those of similar commercial interests could meet, became a new form of community. It was these organizations that spearheaded the production of bird's eye view maps
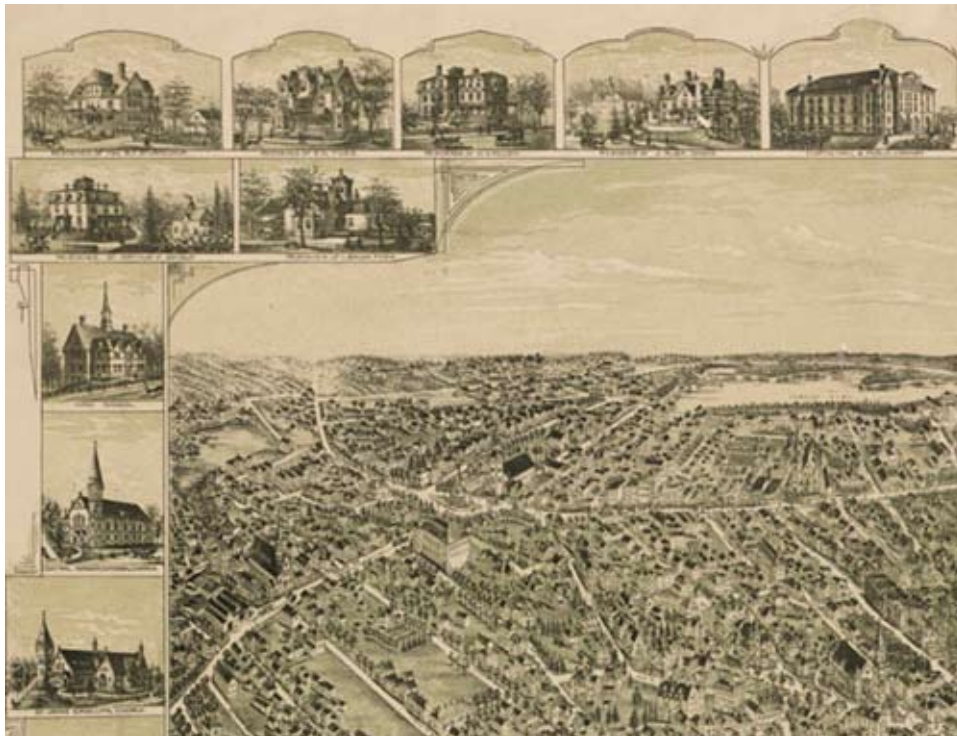
Figure 18 (Plate 57).
Detail showing
(A) lunatic hospital and
(B) school for
deaf mutes, from
Howard H. Bailey,
Northampton, Mass.
(Boston, 1875).

Figure 19 (Plate 20).
Detail showing
Jamaica Pond, wealthy
residences, churches
and public library
from Oakley H.Bailey,
*Jamaica Plain,
Massachusetts,
Ward 23, City of Boston*
(Boston, 1891).

during the second half of the 19th century. These lithographs were effective means to display success. They not only provided a positive marker of the present but gave an optimistic window to the future. It was also a way to acquire art, hitherto an activity confined to society's elite. Bird's eye views provided access to culture that was useful, decorative and affordable.

The changing American city and growing industrial labor force was marked by an influx of immigrants. After 1850, immigrants increasingly came from Southern and Eastern Europe, although many continued to arrive from Ireland and the Germanic areas of central Europe. These new arrivals flooded the newly industrializing cities and in a matter of decades changed their composition. By 1890, immigrants and their children comprised 87% of Chicago,

80% of New York City, and 84% of Detroit. Immigrants to Boston prior to 1860 were disproportionately Irish. Germany, the other primary source of emigration prior to the Civil War, did not figure prominently in arrivals to New England. After 1870, similar to other east coast port cities, Boston received immigrants from Russia, Poland, Italy, and other areas of Eastern and Southern Europe.

These massive changes were not well documented in the bird's eye view maps. The absence of clearly identified immigrant neighborhoods and institutions, despite ample evidence of their existence, is one of the most disappointing aspects of these historical documents. The middle class promoters of these towns did not want to extol the arrival of foreigners whose language, dress, and behavior made them seem quite alien, despite the valuable labor they provided.

Most immigrants arriving in the

United States between 1850 and 1900 did not come looking for freedom from persecution, nor did they expect to find the streets paved with gold. In the majority of cases, emigration was undertaken as a strategy to achieve economic goals at home. The onset of industrial capitalism altered the way people earned their living. As more people no longer produced all that they consumed within their households, they were increasingly linked to markets as both producers and consumers. The enclosure movement and the mechanization of agriculture accompanied this shift in rural areas as cities rose at the site of factories and manufacturing. Varying rates of industrialization in Europe had a large impact on patterns of migration.

The economic transformation was sporadic and uneven within individual countries and throughout Europe. It is more accurate to focus on region rather than nation of origin.

Migration was part of a family strategy. Sons, daughters, and fathers came and sent money back home, either to acquire land or send for other members of the family.

Certainly political and religious upheavals, as well as natural disaster, have prompted movement throughout history, but the primary source of emigration between 1850 and 1900 was largely from places where the economy had shifted and dislocated people from traditional livelihoods.

Trans-Atlantic migration was often preceded by either seasonal or internal migration. Families would send a son, daughter, or father a few months a year to one city to locate a job. As opportunity and demand presented themselves, migrants made their moves permanent or extended the range of locations where they sought work. Those who came to the United States were not the 'dregs' of their society but rather those who could both afford the price of a boat ticket and had reason to believe

they would enhance their chances of economic security by migrating.

Migration was part of a family strategy. Sons, daughters, and fathers came and sent money back home, either to acquire land or send for other members of the family. Historically, the decision to sacrifice a child's wages so that he or she could attend school only occurred when there was a perceived economic gain from the short-term sacrifice. Until the 20th century, most economic success did not require a formal education and children were more beneficial to the family as wage earners. Again Massachusetts led the nation. By 1850, eleven weeks of school were mandatory for all children under fifteen although the high demand for child labor frequently led to truancy as parents

believed that children's wages were more beneficial to the family economy. The high incidence of women working was hardly a marker of feminism but of a family economy where all were expected to contribute.

In addition to economic concerns, the entire migration experience was not one of individual efforts but of networks or chains of kin and friends from the same area of emigration. They assisted each other every step of the way, from departure to arrival, including finding places to live and work. In 1897 the St. Vincent de Paul Society in Boston surveyed Irish female arrivals and found that out of 2,945 arrivals that year, only 76 were not met by friends or relatives. For those newcomers who did not speak English, it was crucial to have a place to work where people literally

These illustrations cast an optimistic view on New England cities and towns that wore the banner of this changing landscape with pride.

and figuratively spoke their language. Likewise, the destination was rarely random. Immigrants went where they knew there were others who could help them settle.

The phenomenon of immigrants working and living amongst one another reflects both the base of adjustment that the immigrants provided for one another as well as the desire on the part of the native born not to associate with these newcomers. The bird's eye view maps reveal these attitudes. There is almost no identification of ethnic neighborhoods or institutions, particularly in Boston which would become the home of the Immigration Restriction League in 1891. Living and working with those from their same region of origin led to the creation of ethnic economic enclaves that served

as an enormous resource for an immigrant's adjustment. In addition concentrations in certain industries created a false sense of predisposition or special talent for one group. Immigrants went where they found work, so garment factories in New York, often owned by Jews, were more likely to hire their co-religionists.

Immigrants adopted some aspects of American culture over time, such as language and dress, but retained many of their most important values and behaviors, especially regarding marriage, child rearing, and religion. The ethnic church was an incredibly important aspect of life for the newcomers. It provided services, both religious and otherwise. Construction of one's own sacred edifice signified accomplishment for that group. Churches were established

along regional lines. The first Italian immigrants to Boston had to use Irish Catholic churches, but by 1873 they established St. Leonard's Catholic in the North End and Sacred Heart Catholic in 1888. Out of these churches came benevolent societies, schools, and social clubs. The many Catholic churches shown on the New Bedford view of 1876 are an indication of the establishment of these religious institutions by ethnicity although the map does not identify them as such. Middle class commercial leaders did not wish to acknowledge these differences on the bird's eye views whose production they underwrote.

After arrival, the immigrants established their own communal organizations whose purposes ranged from mutual aid to recreation. In addition to these formal

organizations, there were informal networks based in the neighborhood. These were especially important to immigrant women as they relied on one another and often served as the foundation for community protest. Immigrants received and certainly preferred support in adjustment from more established members of their own group, whose cultural values they shared, rather than from charitable organizations established by the native born.

Through these networks and organizations, newcomers began to see themselves not only as having come from a specific town or village, but from a country. Indeed the Catholic Church's desire to standardize and co-ordinate practices was much more than an application of the industrial spirit affecting religious organization. It was a way for the Archdiocese to take the shanty Irish and highlight their assimilation, Americanization, and virtue. This

process of ethnicization, seeing oneself as part of a larger group with common interests and identity, is an important component in America's immigrant history.

CONCLUSION

Bird's eye view maps captured the essential elements of a changing New England landscape. A rising middle class not only shaped the nation's future, it also attempted to construct a positive image that highlighted the best of the major influences of the second half of the 19th century. Civic leaders commissioned these representations to confirm that industrial production signaled progress and growth. They believed that an America where manufacturing was the economic centerpiece was desirable and beneficial for all residents. These illustrations cast an optimistic view on New England cities and towns that wore the banner of this changing landscape with pride.

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