Celebrating Philadelphia's Century IV

Philadelphia is one of the premier cities of the world whose citizens have made many significant contributions to urban life as we know it today. Philadelphia was, for example, one of the first planned cities in the modern world. It installed the first street lights in the country, built the first turnpike, and established the first waterworks. The first bank in America was here as was the first general hospital. Although the list of firsts is endless, many of Philadelphia's accomplishments are relatively unknown and her influence barely understood. Thus, it seemed particularly appropriate during the occasion of the city's 300th birthday that the Faculty of Arts and Sciences present a series of seven lectures on the contributions made by our city to the civic, scientific and cultural life of America. Following are excerpts from four of those lectures.

The Age of Penn and Franklin, 1682-1790

Richard Dunn is Professor of History and former Chairman of the department as well as the former Director of the Philadelphia Center for Early American History. He is currently co-editor, along with his wife Professor Mary Maples Dunn, of The Papers of William Penn, a five-volume series whose first two volumes have been published by the University of Pennsylvania Press.

William Penn and Benjamin Franklin were quite extraordinary men who had an extraordinary impact on the City of Philadelphia. Both were by habit social engineers who liked to try to improve the settings in which they found themselves; both used our city as a kind of experimental laboratory. As a result, much of what is distinctive about colonial Philadelphia is very much attributable to the works of these two men.

William Penn was essentially a late seventeenth-century man and Franklin an eighteenth-century man. Penn only spent a total of four years in America, 1682-1684 and 1699-1701, while Franklin came to Philadelphia for the first time in 1723, settled here as a citizen in 1727 and lived here for much of the rest of his life.

There were other differences. Penn was a Quaker at a time when Quakerism was new, when the Society of Friends was hated and treacherously persecuted. Certainly Penn, especially in the decade or so before he came to Philadelphia, was a real incendiary. A vigorous champion of Quakerism in England, he was continually in and out of jail and wrote endless political tracts attacking people of every religious persuasion except his own. He delighted to take on all comers in religious disputes and would debate for hours with non-Quakers. In many respects he had the sort of attributes that we might associate with such religious movements as the Moonies today.

Franklin, on the other hand, was never a religious activist. He did, of course, subscribe to most of the churches here in Philadelphia, but that does not mean that he took religion very seriously. Certainly he would never engage in the kind of polemics that Penn did.

The other very obvious difference between the two men is that of social background. Penn was a well-born English gentleman, the son of an admiral. This presented a slight problem for him. Quakers are supposed to believe in simplicity and austerity, yet Penn was a country gentleman with a handsome fortune who had a large country house in England and connections to the court. He was very conscious of his social standing. Franklin is, of course, the epitome of the self-made man who rises as high as he cares to. He was so gifted. I think he could have pursued almost any career he wanted, but he was always very clear in his mind that he was a printer, a leather apron man; he worked with his hands.

Yet these two men had much in common.

Let me read to you a few quotations:

"Love labour. It is wholesome for your body and good for your mind." "The most common things are the most useful things." "The laborious bee draws honey from every flower." "Speak last and little, but to the point." "Keep your own secrets and do not covet others." "Diligence gives great advantages to men; it is the way to wealth." "A penny saved is a penny got."

Every single one of these quotations is by William Penn. He wrote a number of moral tracts, letters of advice to fellow Quakers and to his own children and to the world at large. And they were filled...
living within his income as he urged in was not as good at keeping books and claimed to be. and Penn most certainly social gospel, although it can't be said both men preached the same sort of with the same kind of bourgeois morality that you find in Franklin's Poor Richard's aphorisms. To some extent both men preached the same sort of social gospel, although it can't be said that either of them entirely lived up to their preaching. Franklin himself admitted that he was not as businesslike as he claimed to be, and Penn most certainly was not as good at keeping books and living within his income as he urged in his moral tracts.

Penn was a visionary who shaped the City of Philadelphia in two very fundamental ways. As a Quaker, Penn envisioned a place of refuge for the persecuted. He desired brotherhood and peace. It was Penn himself who christened our city, deliberately naming it Philadelphia, the city of brotherly love. There were other cities named Philadelphia—there was an ancient Christian city in Turkey of that name—but Penn. I think, was clearly moved by the Greek meaning. Penn really believed in religious toleration and religious liberty. He wanted a city where not only Quakers could be at peace with each other, but where non-Quakers could come and live in harmony as well. Penn also made peace with the Indians because it was important for him to have a city that did not need to be fortified; he did not believe in war.

Penn also developed an unusual plan for the city. He wanted to found a great town that would be the center of commerce and needed to have plenty of land for it. So he instructed his commissioners to find approximately ten miles of river frontage where they could set out a long strip of gentlemen's estates, about a quarter of a mile apart, which would be occupied by the proprietor and the chief purchasers of land in Pennsylvania. They could not carry out their plan, however, because almost all of the river frontage on the west side of the Delaware, from the falls of the Delaware at the city of Trenton right down to the sea, was occupied—and the site of Philadelphia was occupied by some Swedes. All Penn's commissioners could do was to buy a mile of river frontage from those Swedes.

When Penn arrived, he bought another mile of river front on the Schuylkill directly west. He and his surveyor, Thomas Holme, then drew up a plan for the city of Philadelphia. It was an unusual plan, consisting of a symmetrical gridiron pattern of wide streets intersecting five large squares—now Center Square (the site of City Hall), Rittenhouse, Washington and Franklin Squares, and Logan Circle. The city was to span from the Schuylkill to the Delaware, two miles wide east and west, and one mile in length, north and south. The idea was to spread out the settlers across this very large territory. Each of the chief purchasers would have a full acre lot, the bigger ones along High Street (what is now Market Street), with smaller back lots of half an acre each; every single inhabitant in Philadelphia would have enough land to have an orchard and garden surrounding his house which would be set in the middle of the lot. As Penn said, the whole idea was to have a green country town which would always be wholesome and would never be burned.

Just how unusual Penn's plan is can be seen by looking at a plan for Charleston, South Carolina, laid out at just about the same time. Charleston is tremendously smaller; nor is it a green country town; it is a little citadel behind a bastion of walls to protect the port from the Indians, French and the Spaniards. One can also look at Williamsburg, Virginia, which was laid out a few years later in the 1690s. Williamsburg is a sort of backwoods baroque, attempting to emulate on a very small rustic scale what was going on in Paris and Rome and other European metropolises in the late seventeenth-century; buildings such as the Governor's Palace and the Capitol were given grand vistas. Penn's plan for Philadelphia offered no possibility for this kind of display. Every house was to be hidden in trees and the principal buildings, insofar as there were any, were to be semi-hidden also. The whole purpose of Philadelphia was to be a comfortable place for people to live in retirement, not a place for dramatic display.

But Philadelphia was also shaped by the hundreds of colonists who moved into the new settlement during the 1680s and 1690s. They rejected Penn's design for a green country town enveloped in gardens and orchards and by the time Benjamin Franklin arrived in 1723, as a seventeen-year-old boy running away from Boston, Philadelphia was one of the most congested cities in the country, consisting of compact brick townhouses hugging the Delaware riverfront. Any semblance of the green country town was gone.

When Franklin arrived in Philadelphia it was a town of under 10,000 people. When he died in 1790, it was a town of 50,000 people, the largest town in America by that time, and more importantly, the national capital and the nation's business and intellectual center. And Franklin certainly had a lot to do with that.

In his autobiography, Franklin describes how as a callow youth he was able to get a job as a journeyman printer and then set up his own printing shop, produce his own newspaper, produce his own almanac, make a success of his stationery business, begin to acquire a post office business and then by 1748, when he was only 42-years-old, retire.

He clearly could have made more money, but making money was never his chief objective. Nor was living in a grand style. He didn't wish to live as a country gentleman as William Penn had. But he did wish to live in an interesting place, and he wished to make that place more interesting. What he wanted was a town that provided opportunities for general social betterment. And although we get tired of hearing that Franklin founded this and Franklin founded that, it is important to consider why he founded the institutions he did.
Philadelphia’s Contributions to Music

Dr. Otto Albrecht is Professor Emeritus of Music and since 1934 has been curator of the University’s Music Library, which was named for him upon his retirement from teaching in 1970. Throughout his career and since his retirement, he has worked faithfully to increase the resources of Penn’s Music Library to the point where it is today without question one of the best music research libraries on the East Coast. The remarks below are from a talk he gave last spring describing the people and institutions that have helped to place Philadelphia in the forefront of musical activity.

Although the Quakers who settled in Philadelphia did not have much interest in music—indeed, many did not approve of it—William Penn was insistent on freedom of religion for all and it was not long before the Church of England, Scottish Presbyterians, Methodism, Irish Catholicism and German Lutheranism were represented in the new colony and, with them, their music. Indeed, the first evidence of music making has been found among a small German religious sect known as the Hermits of the Wissahickon, who brought with them an organ, a viol, an oboe, trumpets and kettle drums. From that time on, Philadelphia has been at the forefront of new ideas, developments and explorations in music, traditionally excelling in such areas as composition, performance and educational opportunities.

Today, four giants of modern music live in Philadelphia—Vincent Persichetti, George Crumb, George Rochberg and Richard Wernick. Three of these composers are on the faculty of the University and Crumb and Wernick have both received Pulitzer Prizes for their work. But Philadelphia has always been a city of composers. Among the earliest was Francis Hopkinson.

A distinguished statesman, signer of the Declaration of Independence and the first graduate of the University of Pennsylvania, Hopkinson was probably our first native-born American composer. In 1759 he wrote the song “My Days Have Been So Wondrous Free,” preserved in manuscript in the Library of Congress. All his songs were in the conventional style of his British contemporaries and are neither better nor worse than hundreds of such songs published in England at that time. Hopkinson directed music as well and eventually became organist at St. Peter’s. More importantly, Hopkinson established a series of subscription concerts performed by local orchestras consisting of both professional and amateur musicians. His importance in the musical life of Philadelphia is confirmed by the fact that when he visited England in 1766-77, there is no record of any concert taking place in the city.

Francis Hopkinson’s son Joseph was also interested in music. In 1793, during the first year of Washington’s second term, an obscure musician of German descent named Philip Pule published a piece called “The President’s March.” Some years later, during the height of the animosity between the federalists and the anti-federalists, the singer Gilbert Fox was to have a benefit concert and, afraid that with all the political excitement he would not draw a big house, he

One of the first institutions he founded was the Junto club which was to be made up of people like himself, self-educated young men, who would meet together and discuss books and debate and try to sharpen their intellectual talents. He helped to found the Library Company, which has just celebrated its 250th birthday. It organized the American Philosophical Society, obviously modeled on the Royal Society in London; although, who brought with them like Thomas Jefferson and others from both northern and southern states. It was basically a Philadelphia institution designed to bring people of intellect together because more could be achieved that way. Franklin is credited with founding Pennsylvania Hospital but he took rather a back seat in its formation. He knew that the Quakers were not very interested in organizations like the American Philosophical Society but would be interested in a hospital, so he took care that it was the Quakers who chiefly organized it. Franklin also helped to found the Academy and the College which later became the University of Pennsylvania.

Franklin was also a politician. When he retired from his job as a printer and publisher in 1748, he became a member of the Pennsylvania Assembly. There he attempted to wrest political control in Pennsylvania away from William Penn’s sons. Then he immediately plunged into the business of helping to organize the Revolution and, of course, helped to write the Declaration of Independence; later, he became a diplomat in France and after the war, helped negotiate the first federal constitution.

It is clear that while both William Penn and Franklin were social engineers and both helped to shape Philadelphia, Franklin was far the more successful. Doubtless because they were too visionary and too impractical. Most of Penn’s chief aspirations for Philadelphia were defeated almost from the beginning. Franklin was far more successful, but it could be said, in part, this was because he aimed a little lower. He aimed at doing things that he was pretty sure people would do, and if they wouldn’t do them he dropped the projects like a hot potato. Franklin was always very practical that way. In any case, it remains true that by the end of the eighteenth-century thanks in part to Penn and more to Franklin, this town was the most exciting, interesting and lively town in America.
asked Joseph Hopkinson to write in one night words to Phile's music. Hopkinson did and the song was a huge success: "Hail Columbia, Happy Land" lasted well down through the twentieth century.

The first keyboard pieces published by a resident of the city were written by William Brown, an immigrant from Germany. In 1787, he published "Three Rondos for Harpsichord," which he dedicated to Francis Hopkinson. Other Philadelphia composers of note included John Bray, who wrote the music to a play about Focahuntas and Captain John Smith, called "The Indian Princess," the first American play to be produced in England; William Henry Fry, editor of the Philadelphia Ledger, who began to compose at the age of fourteen and was the first Philadelphian to write grand opera; John Christopher Moller, a German composer who arrived here in 1790 as an organist at Zion Lutheran Church and was instrumental in establishing one of the earliest music publishing firms; and Benjamin Carr, born in London, who along with his father and brother set up a musical repository which became one of the most important music shops and publishing houses in the country, eventually opening branches in New York and Baltimore. His "Federal Overture" contains, among many other airs, the first printing of the music of "Yankee Doodle."

Francis Johnson, a black trumpeter and bandleader, was a prolific composer of both band and dance music. He was also the leader of an all-black band which he took to Europe in 1837, playing a command performance for Queen Victoria. This was almost certainly the first time that an American musical group had undertaken a European tour. Septimus Winner, who spent his entire life in this city, wrote under the pen name of Alice Hawthorne, "Listen to the Mockingbird." He sold the copyright for five dollars and lived to see two million copies in print. He later got into trouble by rewriting the song "Give Us Back Our Old Commander," meaning General McClellan, but escaped a treason trial and ingeniously rewrote the song for Grant's Presidential Campaign. His published pieces run into the thousands.

Two composers played a key role in establishing musical groups here. Phillipo Traetta, composer of oratorios, operas and string quartets, founded the American Conservatorio while Raymond Taylor, a chorister in the Chapel Royal in London and later an organist and director of music, came to Philadelphia at the age of forty-six and helped found the Musical Fund Society.

The Musical Fund Society evolved from a group of professionals and amateurs who played chamber music together (their archives of instrumental music are still preserved in the Free Library). It was founded in 1820, with a charter thing that "its essential object shall be the relief of decayed musicians and their families and the cultivation of skill and diffusion of taste in music." A few widows of professional musicians are still receiving relief today, but the principal efforts of the fund are to commission works of young artists, offer scholarships and financial support to local musical organizations and sponsor concerts in which prominent artists perform free of charge. Two of its early members were well known in other arts. Thomas Sully painted the portraits of several of his fellow members and William Strickland, the famous architect, designed the Society's concert hall which was completed in 1824 and cost all of $13,000. Early in this century the hall was used by the city's first professional basketball team and later as a warehouse for imported cigars. Although strenuous efforts have been made over the last twenty years to restore it to a concert hall, it has recently been sold for a condominium.

Another influential group devoted to music was the Symphony Club, founded in 1900 by Edwin Fleisher, which trained young boys in orchestral playing. The group acquired an extraordinarily large collection of scores and parts which were eventually housed in the Free Library as a separate collection with its own curator. It is now the largest collection of its kind in the world and lends music not otherwise easily obtainable to orchestras throughout the country.

A good many organizations were established for performance. These ranged from German singing groups to male choruses to women's glee clubs. Today, many Philadelphia groups perform nationally and internationally, including the All Philadelphia Boys Choir, the Mendelssohn Club of Philadelphia, Singing City, the Philadelphia Singers, the Philadelphia Operatic Society, the Savoy Company, the Collegium Musicum (a University-based group), the Pennsylvania Pro Musica, the Society of Ancient Instruments and, of course, the Philadelphia Orchestra.

Philadelphia has long been a mecca for music students from all over the world. As early as 1848, Girard College offered courses in music. The University of Pennsylvania engaged Hugh Clarke as professor of the history and science of music in 1875. The Philadelphia Musical Academy and the Philadelphia Conservatory, both founded in the 1870s, merged a few years ago to become the Philadelphia College of Performing Arts; Combs Musical College dates from 1885 and still operates in Germantown. Settlement Music School, Temple University's School of Music, the New School of Music, the Academy of Vocal Arts and the Curtis Institute are all Philadelphia traditions that offer young musicians some of the finest musical training available in the world.

Finally, Philadelphia has contributed to music through its dynamic personalities. One such individual was Henry S. Drinker, a distinguished Philadelphia attorney, who invested almost as much time in his musical interests as he did in his legal practice. He rightly felt that there was a great beauty in choral music that was seldom performed and set about inviting his musical friends and acquaintances to convene in his home in Merion to sing them. On occasion there were as many as a hundred and twenty singers and perhaps eight instrumentalists backed up by a piano and organ. During the years 1930 to 1960, some 2,200 people were his guests in what he termed the "Accademia di Diletanti di Musica." No public performances were ever given, but tremendous enthusiasm was generated.

Feeling that the singers should understand a foreign text, Drinker undertook to make English translations of more than three hundred works. He made copies of many of them and made them available to choral groups throughout the country as the Drinker Library of Choral Music. These included one hundred and seven cantatas of Johann Sebastian Bach, and translations of the complete songs of Schubert, Brahms and Mussorgsky.

Other local musicians whose names are recognized abroad include Marian Anderson, who left all her correspondence and music to this University; and the Biagioni family, who are all Philadelphia traditions and, of course, the Philadelphia Orchestra.

Philadelphia's musical life continues to flourish into its fourth century. The Philadelphia Orchestra offers a year-round basis, and two opera companies and a host of instrumental and vocal groups offer many concerts to appreciative audiences. Visiting performers from all over the world offer recitals, as they have done since the days of Malbin and Jenny Lind. All in all, if the city is no longer the undisputed musical capital of the country, it is still one of the most exciting centers of musical activity.
Philadelphia's Contributions to Urban Engineering

Jacob Abel is professor and chairman of the Department of Mechanical Engineering and Applied Mechanics in the School of Engineering and Applied Science. He served as Ombudsman of the University from 1976 to 1978. In the following excerpt from his talk, he examines Philadelphia's history with special regard for its claim to being "The City of Brotherly Love" to ask if its uses of engineering can be construed as fulfilling Penn's dream for the metropolis he founded.

Chekov once wrote: "Shrewdness and justice tell me that there is greater love for man in electricity and steam than there is in continence and abstinence from meat.

Electricity and steam were the technologies which essentially bracketed the nineteenth century. The story of their use in Philadelphia centers on two engineers whose careers were bound up with the improvement of conditions in Philadelphia through the application of advanced and relatively unproven technology: Benjamin Henry Latrobe and William Dennis Marks.

Benjamin Latrobe was the nation's first professional engineer and architect, a man who made an extraordinary contribution to the country through his works and through his influence on his profession. He came to America in 1796 at the age of 32, having been educated in Europe and serving a successful apprenticeship under Smeaton, the distinguished British engineer. After a short tenure in Virginia, he decided that his future lay in Philadelphia, then the capital of both the Commonwealth and the nation. His first commission was the Bank of Pennsylvania. This highly successful structure embodied Latrobe's hallmarks: the Greek revival motif, and the use of simple geometric forms.

In April of 1798, Latrobe recorded his impression of the city, noting two serious problems which beset it: the annual Yellow Fever epidemic, whose cause was not understood, and the extremely bad quality of the water obtained from wells in the densely populated eastern part of the town. After commenting on the brilliant choice of the site for the city and the favorable geology which allowed the fresh water from the Schuylkill to percolate through the subsurface sand, Latrobe wrote:

"This advantage, however, soon loses its value wherever neighborhoods become crowded and many sinks and privies are sunk. The permeability of the soil permits a comixture of the most noxious substances with the water and from the Delaware to Fifth Street it is scarcely fit for drinking or culinary purposes." He speculated that impure water is "the great cause of the contagion which now appears to be an annual disease in Philadelphia, the Yellow Fever."

City Council had been under pressure for some time to develop a supply of fresh water for the city and had already given a charter to the Delaware and Schuylkill Canal Navigation Company for this purpose. In December of that same year, Latrobe published a landmark document in the history of urban engineering, "A View of the Practicability and Means of Supplying the City of Philadelphia with wholesome Water." In it, he proposed a radical plan for bringing Schuylkill water—chosen for its "uncommon purity"—to the city. The plan called for the use of two steam-powered pumps, one at the Schuylkill, the other at Center Square (Broad and Market); water was to be conveyed through a tunnel under Chestnut Street to Center Square from which it would be distributed through a system of pipes throughout the town.

The City Council was persuaded by Latrobe's proposal and by a subsequent letter in which he described steam as being "as tame and innocent as a clock." Council mortgaged the city's property to underwrite the project despite strong opposition from canal company owners and others who were skeptical of Latrobe and the technology he proposed to introduce. Midway through the project, a write in the Philadelphia Gazette called it "a ridiculous project," and "a public nuisance and the cause of general calamity to our city," pointing out that steam engines "are machines of all machinery, the least to be relied on subject to casualties and accidents of every kind."

Latrobe's efforts were strongly influenced by two very different individuals. Nicholas Roosevelt and Thomas Cope, Roosevelt was a charismatic entrepreneur and builder of steam engines, always more exuberantly optimistic than Latrobe was in his most reckless moments. His building of the steam engines for the waterworks was the stuff of opera: comic for Roosevelt who seemed to thrive on disaster narrowly averted, tragic for Latrobe who bore the brunt of the criticism for delay and over-expenditure and who got Roosevelt for a son-in-law to boot.

Thomas Cope was the quintessential Quaker merchant and a member of Council's Watering Committee which was charged with overseeing the water supply project. A man of great humanitarian inclinations, Cope was at first a strong supporter of Latrobe but soon became a harsh critic as the costs of the project bounded past Latrobe's estimates. Fortunately, Latrobe's supporters withstood Cope's fury which is recorded in his journal: "Latrobe had played a high game of deception." "They know he has wasted the public's money."

The Center Square pump house of Philadelphia's original water works, located at present day Market and Broad Streets.
Amid turmoil, criticism and delay, Latrobe persevered, even pledging his own commission to cover Roosevelt's obligations. Cope's journal for January 27, 1801, records the inauguration of the water supply: "The first Schuylkill water is now in the city and the water runs freely."

By year's end, the system supplied 63 houses, 4 breweries, 1 sugar refinery and 37 public hydrants. By 1802, the list of users had lost two houses but had gained 2 breweries, 2 sugar refineries, some banks and stables for an aggregate rental of $8537 per year. The city's investment had cost $8250,000.

Direct financial return was of course an absurdity. The city had invested in technology to solve a grave and threatening problem, submitting itself to an experiment in urban engineering at the hands of a brilliant engineer. Later, when this system became obsolete, Latrobe's apprentice Graff created its replacement, the remnants of which stand beneath the Art Museum today.

William Dennis Marks was a very different man from Latrobe. A creative, aggressive and often abrasive engineer, he arrived in Philadelphia in 1877 just after the city had concluded its Centennial Exposition, a celebration of technology whose epitome was the giant Corliss steam engine in Machinery Hall. Marks had studied engineering at Yale and after a few years in industry and a year at Lehigh, was asked by the University of Pennsylvania to become the Asa Whitney Professor of Dynamical Engineering and to establish the department of Dynamical Engineering, the forerunner of today's department of Mechanical Engineering and Applied Mechanics. Marks had written a book, "The Relative Proportions of Steam Engines," which was much sought after as a consultant in machine design (at 40 cents per hour) and recognized very early the enormous potential of the dynamo or electric generator. His curriculum in Dynamical Engineering encompassed what was known then of the two fields, mechanical engineering and electrical engineering.

In 1884, Marks was appointed General Superintendent of the great international Electrical Exposition. Sponsored by the Franklin Institute, the Exposition drew hundreds of exhibits from around the world and several hundred thousand visitors. Perhaps the most impressive exhibit was Edison's Tower of Light, a 1,200-bulb display of his invention, the incandescent lamp.

The exhibition and display impressed a group of Philadelphia entrepreneurs who approached Marks for advice on developing an electric lighting company. On Mark's advice, the group invested $1 million in the construction of a 30,000 lamp station. Marks was asked to participate and took on the responsibilities of supervisor of the new Edison Electric Light Company while still retaining his professorial appointment. He designed the new power plant, the building, its equipment, its organization and its operating procedures. The entire enterprise was a creature of his intellect, his energy and his business skills.

In developing the power plant, Marks faced not only technical challenges but a City Council which was not so much hostile as it was venal. Council, by a coincidence of a kind that frequently happens in big-city politics, had leased the streets surrounding the new 9th and Sansom Street electrical plant to a Jersey corporation, the Penn Company. Thus, Marks was forced to pay the Penn Company for the privilege of laying his cables beneath the streets. The Penn Company had no other business, nor had it any assets; what it did have was some owners who sat on Philadelphia City Council.

Marks persevered and the plant rose. When the stupendous noise emitted by the plant shook the nearby Continental Hotel, Marks propitiated the hotel owners by supplying them with free steam. When the city wanted too high a fee for the water needed to run the plant, Marks dug a well, tapping a creek that ran under Sansom Street.

In May of 1888, Marks requested a leave of absence from the University for the following year in order to devote himself completely to the running of the station. The Edison station supplied its first customer on March 5, 1889 and on June 11th Marks resigned his professorship.

The Edison station was the largest plant of its kind and was the first building in the country to have been designed expressly as a power station. Mark's design was in some ways revolutionary and his scrupulous attention to detail resulted in what was probably the most efficient station in the country. The "Professor," as Marks was always addressed, was an astute businessman and frequently wrote and spoke on "How to get paying loads for stations." He was blunt. "The underlying law of all business is selfish money getting or saving," he said. "Light consumers (are) profitable in the following order: Restaurants, gambing houses, Protestant churches... The only advantage that can be claimed by churches is that they burn light when almost everyone else does not do so."

By 1892, Marks was President of the company which had become an immensely profitable enterprise (profits were 50 percent of sales and 12 percent of investment). The company became the target of the shrewd financier, Martin Maloney, who sought to create an electrical monopoly in Philadelphia. Marks opposed leasing the Edison plant to Maloney's trust and lost the battle as well as his position in January of 1896. History later showed that Marks was wrong: monopoly was the way to improve power distribution and to standardize voltages and equipment.

The Edison plant went on to become the key element in the monopoly which was the forerunner of the Philadelphia Electric Company, and Philadelphia was the best-lighted city in the country at that time. Its citizens enjoying a cheaper and more reliable electric supply than did those in other cities. The benefits in terms of comfort, convenience and safety were enormous and the impact of readily available power on industrial development was immeasurable; steam and the dynamo brought light and convenient power to the city.

Philadelphia, in its fourth century, would do well to examine its policies and attitudes towards urban engineering and ask some questions. Does the restoration and improvement of housing, transportation systems, streets, water supply, sewers, sanitation and the provision of reliable and cheaper electricity ultimately produce more benefit to the population than programs of another character? If, in fact, the answer is yes, then the resumption of the city's role as a leader among cities in the application of technology to urban societal needs may indeed prove to be the realization of William Penn's vision of the city as a place of promise infused by the spirit of brotherly love.
Philadelphia's Contributions to Urban Political Economy

Martin Meyerson served as President of the University of Pennsylvania for eleven years. He is currently chairman of the University of Pennsylvania Foundation and University Professor here. In his talk, excerpted below, he describes Philadelphia's impact on the urban political economy (which he defines as the interrelatedness of policies and programs, of personalities and economic forces), as well as the particular contributions of the University of Pennsylvania to the understanding and shaping of the city.

Unique among the early and larger Colonial communities on this continent, William Penn carefully conceived and planned his "holy" experiment. He boldly omitted fortifications against the Indians upon whose friendly relations and trade the city's prosperity depended; thus the city was free to expand in the 1200 acre rectangle between the two rivers, and then beyond. Philadelphia was to welcome newcomers regardless of their religion or ethnic origin; thus a multiple of neighborhoods developed and still persist today, not as originally settled of course, but in marked attachment to a particular geographic area, each with a special character.

We take for granted these early contributions; they are for us so much a part of our heritage that they are accepted cliches. Philadelphia was intended to be a livable city and it still is.

Humanely intended as Penn's holy experiment may have been, however, the city of Philadelphia did not escape the poverty and degradation, filth and crime of the urban setting of the nineteenth century. Thomas Jefferson shunned urban life and said a city is a "cancer upon the body politic." By the turn of this century, Philadelphia had become a city which Lincoln Steffens derided as "corrupt and contented." A decade before, the National Municipal League, a center of municipal reform, was started in Philadelphia, but had only the most modest of impacts here. As political and social reform movements continued to sweep American municipalities, Philadelphia preferred not to heed their call. By 1931, Steffens pronounced Philadelphia "defeated." He was wrong.

In those first years of the municipal reform movement and of the scholarly contributions to a literature of urbanism which provided a knowledge base for reform and civic action, the most important study to come out in Philadelphia was a book by an assistant instructor at Pennsylvania, W. E. B. Du Bois' The Negro in Philadelphia (1899), perhaps the first scholarly book published by the University of Pennsylvania as well as the first serious study about blacks in any American city.

There were inadvertent contributions in Philadelphia as well. In the early 1900s, Frederick Winslow Taylor developed the concepts and practices of scientific management, using the Midvale steelworks in Philadelphia as a case example. Unintentionally, the scientific management movement was quickly joined to the municipal reform movement and helped contribute to now commonplace managerial practices such as budgeting. Taylor's reliance on investigation and knowledge became a mark of public as well as industrial management.

Another inadvertent contribution to urban affairs was made through the work of a man at the University of Pennsylvania who is now largely forgotten. Simon Nelson Fatten was professor of political economy here from 1888 to 1916. To many, Fatten was the American parallel to, and even the forerunner of, John Maynard Keynes. He saw that government could, through investments and economic policies, provide a countercyclical effect on business cycles. His...
impact on his students was immense, and these included Frances Perkins, the first woman to hold a U.S. Cabinet post, and Rexford Tugwell, whose memoirs the University Press has just published.

Tugwell, who began his teaching career here, was among the few professors at an earlier time in American political life to go from the scholarly world to that of government (Woodrow Wilson had, of course, become President). Tugwell was part of that special coterie that worked with F. D. R. and James Roosevelt among his terms in office. Some of Roosevelt's policies came from Tugwell and, in turn, they were stimulated by Simon Nelson Patten. Rexford Tugwell was also the first chairman of the New York City Planning Commission, and some of his concepts there were gleaned from the work of Patten and Taylor.

The initiation of Philadelphia's early efforts at city planning, though constructed on a base which goes back to William Penn, spawned such inadvertent contributions as the Fairmount Waterworks and the Benjamin Franklin Parkway. Neither project, and others like them, had an analytical base. In the early forties, the City Planning Commission was established, with Robert B. Mitchell as its first director, largely as a result of the efforts of voluntary organizations and partly because the Republican Party machine at that time thought it might quiet the protest of reformers. That successful effort prompted the University to bring Holmes Perkins from Harvard to run its School of Fine Arts. Dean Perkins soon recruited Robert Mitchell as Professor, first director of the University's Institute for Urban Studies and chairman of its new city planning department. It was Mitchell who brought Edmund Bacon back to this city, fully expecting that one day he would head the Planning Commission, which he did, and brilliantly.

It was during this period of the last thirty years that the University of Pennsylvania began to make more and more significant contributions to the literature and the theory of urbanism, of regionalism, and of planning policy. I like to think that I was a significant contributor to that literature, but more important, some of the best minds here at Pennsylvania had been my students at the University of Chicago: John Dyckman, Herbert Gans, and Britton Harris.

William Wheaton, Chester Rapkin and William Grigsby began to publish perceptive literature on housing and land markets. The City Planning Department helped to attract to the University Russell Ackoff—philosopher, mathematician, architect, and one of the founders of operations research; it helped attract Walter Isard in locational economics, who then established the first department of Regional Science. This, in turn, brought an entire generation of people who were to form a new literature ranging from utopian thought to transportation studies.

In American Civilization, Anthony Carvan added yet another dimension with his deep interest in the early history of civic development. The years that Lewis Mumford spent here reinforced the historic concerns and efforts at Pennsylvania. I helped bring E. A. Guttkind into Philadelphia and his set of volumes at the University on the history of cities represents, if nothing else, a source of raw materials that are probably unsurpassed.

The Fels Institute, which had been started before the second world war, found itself in the years after the war stimulated by the more theoretical, conceptual work going on in other departments. It began to contribute a literature dealing with some of the immediate problems of local government.

There was the demographic work being conducted by Dorothy Thomas and others in Sociology, who had not intended to focus on Philadelphia but found it a useful setting. And there were others—Oliver Williams in Political Science, Thorsten Sellin, surely the best-known criminologist of his day, and his disciple, Marvin Wolfgang, Jefferson Fordham, for seventeen years the Dean of our Law School, was one of the eminent students of municipal law. Digby Baltzell, who has spent his entire academic career at the University, conducted a study of the social elite and the influential elite, a study which later blossomed into a monumental comparison of Philadelphia and Boston. We began to understand this city as never before, and we began to make comparisons with other cities, both at home and abroad.

Among the most significant efforts at the University in recent years has been the social history project of Professor Theodore Hershberg. He has obtained and analyzed more historical, statistical data than exists for any other city in the world, resulting in insight which will increasingly aid in the understanding of urbanization. His subsequent project, Philadelphia: Past, Present and Future, intends to formulate a set of policy strategies and help citizens throughout the Delaware Valley to implement them.

Never before has there been an extensive knowledge base for understanding the processes of urbanization and urbanism—though much is still undone—and for improving decision-making in the urban political economy. Fifteen years ago Professor Leo Schnore, in a book on social science in the city, wrote, "The interest in the city has reached enormous proportions and it is hardly likely to subside in the near future. Like it or not, we are an urbanized society, and an amounting proportion of our problems will be urban problems."

But those words of Schnore's or degree of interest now read like famous last words. The Ford Foundation, the largest private supporter of urban studies, has almost eliminated funds for the study of the urban political economy. The 84 million dollar contract from the Department of Housing and Urban Development to the University may be the last governmental contract for years at that scale. Mrs. Thatcher in London is closing the Center for Environmental Studies, of which I have been the international governor from its founding in 1965. And even the ablest young people who are skilled in urban political economics, in policy planning, in political science and in regional studies are not getting posts. In this Century IV of the city of Philadelphia, after one hundred years of slow and painful development of the princi- ples of urban political economizing nationally and internationally, our advances can easily be obliterated in a decade. We, everywhere, including those of us in universities, must not let this happen.