

Cleveland's A.B. duPont: Engineer, Reformer, Visionary

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Attempting to synthesize the events, agents, and accomplishments of the years spanning the late-nineteenth and early-twentieth centuries into a neat package labeled "The Progressive Era" can prove frustrating for the modern historian. Reformers of the period were a diffuse and diverse group, often more noteworthy for their disunity and incongruities than for coherence to any set of standards; they included pacifists, municipal ownership advocates, feminists, Single Taxers, civil rights crusaders, efficiency experts, and countless others. This lack of commonality led Peter Filene to assert, in a seminal article published over thirty years ago, that progressivism was merely an artificial creation of historians, and that the dynamics of this period were the result of "agents and forces more complex than a progressive movement."¹

In an essay of later vintage, historian Daniel Rodgers acknowledged the difficulty of defining progressivism, while offering a useful counter-thesis to Filene. Rodgers suggested that Progressive Era reformers shared at least one of three "idea clusters," or "shared languages of discontent."² The first of these languages, antimonopolism, was traceable to the Jacksonian era, and had once been the exclusive domain of "outsiders," such as farmers and Populists; by the turn of the twentieth century, however, the crusade against inequitable taxation and abusive business practices had gained acceptance among "respectable" segments of American society. The second language, that of "social bonds," was more specific to the Progressive Era, and encompassed an attack on a "set of formal fictions," including notions of racial, sexual, or ethnic inferiority; it sought to create a "consciously contrived harmony" among societal groups. The third language of discontent was that of "social efficiency," and could be applied to a broad range of reformers, from those seeking to rationalize and streamline municipal government to engineers designing modern manufacturing plants.

Like so many reformers of his era, Antoine Bidermann duPont, friend and confidant of Cleveland Mayor Tom L. Johnson, was a complex person who defies easy categorization. Throughout his life he applied his low-key efficiency to sundry endeavors and crusades, nearly all of them intended to make the world better in some way. Despite his wealth and family name, duPont was a proponent of tax equalization, free trade, and municipal ownership of public utilities. He supported the causes of feminism and civil rights, and was an associate of some of America's most renowned reformers. And duPont became an expert in the efficient

management and modernization of street railway lines and other commercial concerns. His efforts at an eclectic mix of reforms and activities conform to all three of the “idea clusters” posited by Rodgers. A.B. duPont is not a well-known figure, usually mentioned only in an obscure footnote or in the index of an old book, and he spent only the final thirteen years of his life in Cleveland. But he was a major public figure during one of Northeast Ohio’s most dynamic eras. More importantly, his life helps define the very essence of the Progressive Era, and that is what makes him worth studying.

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Antoine Bidermann duPont Jr. was born in 1865 in Louisville, the great-grandson of the French-born industrialist Eleuthere Ireneé duPont deNemours. Eleven years earlier duPont’s father, Antoine Bidermann Sr., and his uncle, Alfred Victor II, had left Delaware to seek their fortunes in Kentucky. The brothers soon established successful enterprises in paper manufacturing, explosives, coal mining, iron and steel production, and newspaper publishing, and at one point enjoyed monopoly control of Louisville’s street railway system.³ In 1861 Antoine Bidermann duPont Sr. married Ellen Coleman of Louisville; Antoine Bidermann Jr. was the third of eight children, the second of three sons. Although as an adult he would shorten his name to “A.B.” to facilitate the signing of documents, young Antoine Bidermann became known affectionately as “Ermann,” a nickname close friends would call him throughout his life.⁴

The offices of Louisville’s Fourth and Walnut Line, a mule-drawn street railway owned by the duPonts, was the venue for the first meeting between young Ermann duPont and the “chubby, round faced, curly headed” Tom L. Johnson. In 1869 Alfred Victor duPont had hired the Kentucky-born Johnson, a distant relative then fifteen years old, to empty fare boxes. As the enterprise expanded to become the Louisville Central Passenger Street Railway, Johnson earned promotion to company secretary. Ermann, meanwhile, went to work at age twelve, packing coins into paper rolls on Saturdays and during his summer vacations. As duPont grew into adulthood, he and Johnson developed a mutually beneficial relationship that would endure over the next four decades.⁵

The friends parted company for a time. The invention of an innovative fare box in 1873 earned Johnson a fortune, and he left Louisville to invest in street railways in Cleveland and other cities, as well as in steel manufacturing plants in Ohio and Pennsylvania. He soon became one of America’s wealthiest entrepreneurs, and in the 1890s served two terms in Congress, representing Ohio’s Twentieth District.⁶ Ermann duPont went off to prep school in Boston, and later to Rensselaer Polytechnic institute in Troy, New York, where in 1885 he earned a degree in civil and electrical engineering. DuPont’s first employment after graduation was as chief engineer with the Maine Jellico Mountain Coal Company in Nansee, Kentucky. He then served briefly as assistant superintendent for a cable-drawn streetcar line in Brooklyn, New York, before returning to Louisville to work for the family-owned Central Passenger Railway; it was in this capacity as a street railway engineer that A.B. duPont first earned a national reputation for efficiency and innovation.⁷

Despite his father's doubts about the practicality of electric street railways, in 1889 young A.B. duPont supervised the electrification of the new Louisville Railway Company, an enterprise which had been created through the merger of the Central line and the competing City Railway Company. Louisville thus became one of the first cities in the United States to convert entirely to electric-powered cars, while many larger cities still depended on horses. It was also in Louisville that duPont perfected what would be the most important of his sundry streetcar-related inventions, the "duPont Patent Motor Truck." A streetcar "truck" was the vehicle's chassis, upon which the car body rested. DuPont designed his new truck to carry the larger and heavier electric cars, yet it was as lightweight as earlier trucks, and "of the utmost simplicity of construction combined with great strength." With sidebars and cross bars forged from a single piece of steel, there were "consequently no bolts to work loose" and "no small pieces to break and rattle out." First used by the Louisville system, the device was soon the truck of choice for transit lines in Buffalo, St. Louis, and Owensboro, Kentucky. By 1893 manufacture of the item had shifted from Cleveland to Louisville, where it became known as the "Louisville Truck." Continually improved over the years, it became standard equipment for street railways throughout the country, including those owned or managed by Tom L. Johnson.⁸

One such line was the Citizens' Street Railway Company of Detroit, which in 1894 had been purchased by a group headed by Johnson's brother, Albert. The following year, after losing his reelection bid to Congress, Tom Johnson went to Detroit to manage the decrepit system, which was then in battle with Mayor Hazen Pingree over a number of issues, including outmoded equipment, poor service, and high fares. Pingree had determined that Detroit's streetcar system was the worst of any major American city, and through the creation of a quasi-publicly owned competing company he had attempted to force the Citizens' Line to lower fares, modernize its equipment, and expand its service. The subsequent battles between Pingree and Tom Johnson are thoroughly chronicled elsewhere; it is sufficient to note that Johnson eventually converted to Pingree's crusade for lowered fares, and the two men became allies. Refurbishment of the Detroit system was never a contentious issue, however; from the day he assumed control of the Citizens' Company Johnson's goal was to make it the most modern and efficiently managed transit system in the country. To oversee this endeavor he chose his friend, Ermann duPont.⁹

DuPont became general manager and chief engineer of the Citizens' Line in March 1895. He supervised a six-million-dollar renovation of the company's ninety-seven miles of track, including the electrification of horse-drawn sections. DuPont purchased hundreds of new electric cars, and to facilitate the weight of the new rolling stock he replaced obsolete track with heavier gauge rails manufactured at Tom Johnson's Pennsylvania mill. DuPont also won praise from trade publications for his innovations and inventions in Detroit. These included a thirty-inch diameter pipe designed to discharge condensation from the company's power plant, arranged to prevent clogging and freezing in winter, and a novel inspection car mounted on a pivoting turntable, which enabled duPont to travel on tracks of varying diameter during his inspections without switching cars. It was also likely during his stay in Detroit that duPont

developed a new electric heating and ventilating system for large streetcars, which was soon adopted by street railways throughout the United States. DuPont was also obsessed with the “little touches” designed to cultivate a positive public image for the Citizens’ Line, ranging from clean cars to easy-to-read signs.¹⁰ Little wonder Tom Johnson later praised his friend for creating “the best electrically equipped street railroad in existence.”¹¹ In 1898 the Citizens’ Line merged with a competing system to form the Detroit, Fort Wayne, & Belle Isle Railway, and duPont became general manager of the new, expanded, company.¹²

The duPont years in Detroit were characterized not only by efficiency, but also by good employee relations. The motormen and conductors of the Detroit street railways, represented by the Amalgamated Association of Street and Railway Employees, had a reputation for “[going] around with a chip on their shoulder,” and had engaged in a bloody strike in 1891.¹³ A dearth of source material makes it impossible to assess the intricacies of collective bargaining and labor-management relations during the duPont years, but the feeling of mutual respect between manager duPont and his workers was so strong that upon the announcement, in December 1900, that he was leaving for a position in St. Louis, one thousand members of the Association held a farewell banquet in his honor. The union’s president, W.D. Mahon, thanked duPont for “the honorable, respectful way he treated his men.” The *Detroit Free Press* called duPont “one of the best street railway men in the country, one of the best citizens and one of the best fellows,” and the *Detroit News* proclaimed that duPont would “never be more popular with the street railway men in St. Louis than he has been in Detroit.”¹⁴

It is difficult to ascertain the origins of A.B. duPont’s enlightened attitude towards labor. His father had shown no qualms about taking a firm line with unions and breaking strikes in Louisville, and his older brother, Thomas Coleman duPont, destined to become president of E.I duPont deNumours, had once used convict labor to break a strike in a family-owned Kentucky coal mine.¹⁵ But many of the duPonts, despite their wealth and positions of privilege, also exhibited degrees of independent idealism. For example, Antoine Bidermann duPont Sr. had boldly supported the Union cause in the Civil War, despite the presence in Louisville of significant Confederate sympathy, and Ermann’s sister Zara would, in later years, march in support of the Loyalist cause in the Spanish Civil War.¹⁶ But duPont was undoubtedly also influenced by his friend, Tom Johnson, who had long cultivated a reputation for enlightened labor policies. Johnson’s companies generally paid higher wages than those of his competitors, and even during economic recessions he refused to enact layoffs. As a congressman Johnson had backed legislation to enact an eight-hour day for federal employees, and no less a figure than Samuel Gompers of the American Federation of Labor later commended Johnson for endorsing “the measures in which labor was interested.”¹⁷ As Tom Johnson and Antoine duPont developed a close relationship, the younger man fell under the influence of his mentor, adopting Johnson’s belief in the fair treatment of workers. As historian Hoyt Landon Warner has written, “Johnson’s talent for inspiring followers was extraordinary.”¹⁸

Tom Johnson also educated his disciple in the movement for equitable taxation, as Ermann duPont’s years in Detroit were marked by a growing allegiance to the Single Tax

philosophy of reformer Henry George. In his 1879 treatise, *Progress and Poverty*, George argued that the inequality between the taxes paid by privileged interests and those paid by working class people was responsible for nearly all of the world's social problems. George proposed replacing all taxes with a "Single Tax" on real estate appreciation. More than simply a tax reform measure, Henry George considered his idea a panacea for all of society's ills.¹⁹

DuPont's original introduction to the Single Tax probably occurred in a New York City hotel room in 1883 or 1884, during a meeting with Johnson, Cleveland attorney L.A. Russell, and Johnson's business associate Arthur Moxham. Upon reading *Progress and Poverty*, Johnson became troubled that he had possibly gained his wealth through unfair "privilege," thereby contributing to America's social and economic inequality. Johnson asked his friends to read the book, and to find whatever inconsistencies they could. When the group met in New York to discuss the book, they conceded that all of George's arguments were sound, marking a turning point in the lives of both Johnson and duPont. Johnson soon became a close friend of George, who convinced his new disciple to enter politics as a reformer, a course that led Johnson to Congress and, eventually, the Cleveland mayoralty.²⁰ Johnson then introduced A.B. duPont to George, who responded by saying, "I shall refuse to instruct this young man in the Single Tax. His ancestor [Physiocrat Pierre Samuel duPont] had the philosophy before I was born."²¹

Within a short time Henry George was staying with the duPonts on his visits to Detroit. Ermann duPont's wife, Mary Ethel, later recalled how the couple's young daughters would playfully pin flowers on George's hat and clothing as he conversed with their father, then giggle with affection as the absent-minded reformer rode away on his bicycle, oblivious to his ridiculous appearance.²² George died in 1897, but duPont and Tom Johnson remained true to their friend's memory, determined to do all they could in the causes of tax reform and social justice. Thus, as a friend of labor and an unabashed proponent of the Single Tax, A.B. duPont entered the new century, and his new position as second vice president and general manager of the St. Louis Transit System.²³

DuPont's departure for America's Gateway City was a consequence of the sale of the Detroit, Fort Wayne & Belle Isle Railway Company in late 1900 to a syndicate that consolidated all existing streetcar lines into a new company, the Detroit United Railway (DUR). Tom Johnson, having sold his interests, left for Cleveland, where he planned to run for mayor. DuPont retained a part-time position as "consulting engineer" to the DUR; he also maintained his ties to Detroit by remaining part owner of an interurban line, the Wyandotte & Detroit River Railroad.²⁴

Turn-of-the-century St. Louis was a natural magnet for the talents of A.B. duPont. It was home to some of America's largest manufacturers of street railway cars and related equipment, and the St. Louis Transit System, created in 1899, boasted one of the highest ridership rates in the nation. But the city's railways had long been plagued with labor troubles, and St. Louis had experienced a particularly violent 56-day strike in the spring of 1900, described in a contemporary account as "one of the greatest clashes that has ever occurred between capital

and labor." The strike had crippled employee morale and created a negative public image for the company. Poor service caused by the strike lingered on once the work stoppage ended, and outmoded equipment and dirty cars exacerbated the situation. Thus, the company turned to a man whose "practical as well as theoretical knowledge of all things pertaining to the operation of a street railway is well known."²⁵

In barely three years General Manager duPont rejuvenated the St. Louis Transit System. A colleague later reminisced that "it took only a short time with his pencil to solve . . . many of the intricate problems that were brought before him. He was ready to accept any new idea and with equal readiness find means to put it in operation."²⁶ Others noted A.B. duPont's mastery of every facet of street railway operations in St. Louis, "from the handling of the affairs of a great corporation and laying of power houses, car equipment, road beds, shops, and . . . even the putting up of trolley wires."²⁷ And, just as he had done in Detroit, duPont eliminated labor animosities through his willingness to cooperate with unions; his tenure was marked by a complete absence of any strikes which, coupled with improved service, restored the company's good standing with the public. By the time duPont resigned his position in 1904 to return to Detroit, the St. Louis Transit System had earned a reputation for providing "the best streetcar service in the United States."²⁸

In Detroit from 1904 to 1906, A.B. duPont served as president of the Seamless Steel Bathtub Company, while overseeing his interurban line. He also continued to work on new inventions, among them a mechanized farm vehicle; duPont's sister later suggested that he might have given this idea to Henry Ford, resulting in the first tractor. By this time he had also begun to exhibit some unusual personal characteristics, particularly extreme single-mindedness, as he would lock onto an idea and become oblivious to all else. DuPont's Detroit friends once played a prank by engaging him in conversation over dinner, during which every course consisted entirely of mashed potatoes. So focused was duPont in making his points, he never noticed what he was eating, and never commented on the food. It was also not uncommon for duPont to be so deep in thought that he would walk past associates, even family members, without acknowledging them. Mary Ethel duPont told of once sitting near her husband on a streetcar leaving downtown Detroit and saying nothing, curious at how long it would take him to recognize her. Not until they disembarked in front of the family's suburban residence did he realize they had been on the same car.²⁹

DuPont soon expanded his interest in streetcars from purely technical and managerial aspects to the movement for municipal ownership. He had been introduced to the idea by Hazen Pingree during his first stay in Detroit. In 1906 Chicago's reform mayor Edward Dunne called on duPont to help arbitrate a price for the sale of the privately owned street railway system to the city. These negotiations eventually failed, but duPont enhanced his reputation as a street railway expert, earning the respect of Chicago city officials as well as representatives of the private company. Fittingly, in the spring of 1906, Mayor Tom L. Johnson once again asked for his friend's assistance, this time in the creation of a municipally operated street railway in Cleveland.³⁰

Elected mayor as a Democrat in 1901, Johnson had battled “privileged” interests, most notably Cleveland’s privately owned street railways, with the goal of creating a low fare, publicly operated system. Most of the city’s lucrative streetcar lines had been franchised to entrepreneurs on a street-by-street basis in the 1880s, usually for a twenty-year period. As most of the franchises were due to expire, the mayor planned to convert the lines into a municipally owned operation, pledged to a fare of three cents. Ohio laws forbade direct public ownership of street railways, so Johnson copied an idea he had learned in his encounters with Detroit’s Mayor Pingree: grant the new franchises to a technically private company, but one whose directorate consisted of political and ideological associates.³¹

In June 1906 Tom Johnson appointed A.B. duPont president and general manager of Municipal Traction, a holding company created for the two three-cent municipally operated lines the mayor had created since 1903. Dozens of court injunctions filed by the privately owned Cleveland Electric Railway Company, popularly known as “Concon,” had delayed implementation of the mayor’s plan, and legal battles continued throughout the summer. Undeterred, duPont busily purchased cars, hired motormen and conductors, laid new track, and hung power lines. “So busy he makes a whirlwind look like an idler,” duPont gained a reputation as a “human steam engine,” who “would sleep on [his] desk if he could.” He met daily with Johnson for a morning conference, lunch, and dinner, to devise strategies for winning the city’s battles with Concon, and to plan for the day when the first municipally operated three-cent car would run.³²

That day arrived on November 1, 1906, after Concon had exhausted its last injunction against Municipal Traction. Johnson and duPont each purchased five dollars worth of three-cent tickets, and gave them away to bystanders who “almost tore the clothes off the two men in [their] mad rush to get the souvenirs.” At duPont’s invitation, the mayor served as the motorman on the first three-cent car, which bore the symbolic number “3331.”³³ The events in Cleveland drew nationwide attention, and in the following days high profile visitors, including Chicago’s Mayor Dunne and Single Tax champion Louis Post, accompanied duPont and Johnson on rides aboard the “Three-fer” streetcar line.³⁴ Throughout the spring and summer of 1907, A.B. duPont engaged in a series of frustrating and often-acrimonious meetings with Concon officials, attempting to negotiate the sale of the entire system to Municipal Traction. The company was merely biding its time, hoping for the election of an anti-municipal ownership mayor in November, but Johnson’s overwhelming reelection forced Concon into serious negotiations, and the property officially changed ownership on April 27, 1908. Tom Johnson had reached the apex of his political career, an achievement made possible by the expertise of his friend, Ermann duPont. The joy of the men was short-lived, however, due to an impending labor impasse.³⁵

When Municipal Traction absorbed Concon, it had also inherited a labor contract negotiated between the old company and Division 268 of the Amalgamated Association, which provided a higher rate of pay than that earned by the men employed by Johnson’s original low fare company, who were represented by Division 245 of the Association. Despite their

reputation for amicable labor relations, Johnson and duPont now acted out of character and insisted that all men work under the Division 245 contract. Rather than accept a pay cut, the members of Division 268 went on strike in May 1908, resulting in one of the most violent weeks in Cleveland history, marked by widespread vandalism of Municipal Traction property and beatings of strikebreakers by angry mobs. But it was all for naught, as duPont refused to negotiate, even turning down an overture from his old friend, Amalgamated Association president W.D. Mahon. When the walkout ended in failure, approximately 1200 men lost their jobs.³⁶

Unfortunately for duPont and Johnson, the now-unemployed members of Division 268, seeking revenge and hoping to regain their jobs, circulated petitions and gathered enough signatures to place on the ballot a referendum to rescind Tom Johnson's franchise for Municipal Traction. Cleveland's voters, blaming Johnson for poor service caused by the strike, approved the measure in October 1908. Placed in receivership, the company began hiring back the discharged strikers and, in a move which the union men must have seen as poetic justice, retained duPont at a salary of \$6000 per year, considerably less than the \$15,000 pay he had earned under Johnson. The mayor, meanwhile, lost his reelection bid in 1909 and, drained by his political battles, died two years later.³⁷

It is difficult to explain the heavy-handed reaction of duPont and Johnson to the labor complications of May 1908. The only logical conclusion is that the pair provoked the strike in order to eliminate the union. The purchase of expensive new equipment and the business recession of 1907-1908 combined to necessitate the implementation of strict economies in the operation of Municipal Traction. DuPont and Johnson may have considered the removal of over one thousand highly paid workers an unpleasant necessity in ensuring the viability of the three-cent line. Although historian Eugene C. Murdock has written that duPont "thirsted for the fight" and was "deficient in basic common sense," Elizabeth Hauser's observation that duPont's devotion to Tom Johnson made him "not only willing, but eager, to assume the responsibility for all unpopular acts which seemed necessary," is probably a more accurate assessment; in later years the Amalgamated Association continued to blame duPont for the strike, rather than Johnson. In this case the unpopular, but necessary, act for DuPont was the destruction of Division 268. Whatever the interpretation, the 1908 Cleveland streetcar strike and its aftermath marked the low point in the otherwise distinguished careers of Tom Johnson and A.B. duPont.³⁸

DuPont soon resigned his position with Municipal Traction and began experimenting with new forms of public transportation. As early as 1907 he had noted that Cleveland was "rapidly becoming a city of such size that traffic facilities other than surface lines will have to be provided to give adequate service," and expressed his fear that the city would not reach the vaunted one-million population mark by 1920 unless it revamped its transportation system. Like many civic leaders throughout the country, duPont had been impressed with underground systems in London, Paris, and New York, and he became fascinated with the idea of a subway for Cleveland. Since the major drawback of subways was the high cost of excavation, he

designed a novel compact car, which placed its wheels at the extreme front and rear, allowing it to be lowered to within a few inches of the ground. Consequently, the car was a mere six-and-one-half-feet in height, large enough for even the tallest person in a seated position, in contrast to the fourteen feet commonly used by subways at the time. The resultant smaller diameter tube, duPont reasoned, would cut the cost of construction in half.³⁹

DuPont and railroad expert W.R. Hopkins assembled a group of investors in 1909 to form the Cleveland Underground Rapid Transit Railroad Company. The group proposed constructing, at its own expense, both a "high level" and "low level" subway. The high level system would permit use of the duPont car, while the low level system would utilize conventional equipment, with tunnels large enough to "provide for the delivery of freight cars into the basements of stores in the business district." The company pledged to begin its program no later than June 1912, with construction of a duPont-style subway under busy Euclid Avenue, starting at Public Square and projecting five-and-one-half miles east to University Circle. Impressed by the proposal, Cleveland's city council granted the company permission to begin construction, contingent upon voter approval in a referendum scheduled for November 1910.⁴⁰

The centerpiece of the company's campaign for approval of the referendum was a prototype model subway constructed by duPont near Cleveland's Luna Park. Unveiled in August, the duPont subway was an immediate sensation, as hundreds of people per day ventured across the street from the amusement park to enjoy free demonstration rides. The *Cleveland Leader* reported on the unique features of the futuristic subway, including its closeness to the ground, which eliminated the chance of people being pinned underneath, and the elimination of the dangerous "third rail," since the duPont cars were powered by an underground electric cable. Throughout the summer and fall of 1910 over 60,000 visitors sampled the test rides, which the company advertised prominently in Cleveland's daily newspapers.⁴¹ Despite the opposition of the still-angry streetcar men of Division 268, who mocked the subway as "duPont's Groundhog," and *Cleveland News* publisher Charles Otis, who hated Tom Johnson and all of his associates, voters overwhelmingly approved both subways. On the evening of the referendum a triumphant A.B. duPont declared, "It looks now as though Cleveland [will] really have 1,000,000 in 1920. The subway will make this possible."⁴²

This enthusiasm notwithstanding, the subway project never got off the ground. DuPont and Hopkins had difficulty raising capital, and missed the 1912 deadline for breaking ground on the Euclid Avenue segment. Although the city later extended the start-up date, an economic downturn prior to World War I made it even more difficult for the company to obtain financing. American entry into the conflict in 1917, coupled with duPont's death in 1919, meant the end of Cleveland's first subway plan; the city never achieved a population of one million. To the present day, many urban experts consider the failure to construct a subway to be one of the city's seminal blunders.⁴³

As the subway plan floundered, A.B. duPont engaged in a variety of activities. One of his saddest duties was helping to care for the terminally ill Tom Johnson, and then serving as a

pallbearer when his friend died in April 1911. Later that year, as an expert in the valuation of public utilities, duPont returned to Detroit to arbitrate a price for the city's proposed purchase of the DUR. He also rejected suggestions that he be hired to head the Cleveland Railway Company, an entity created by the "Tayler Grant" of 1910, which placed the city's transit system in technically private hands, but with strict controls on fares, enforced by a city-appointed commissioner. DuPont did serve as one of the city's arbitrators in hearings held in 1913 to determine fares and a final valuation of former Concon properties. This led to yet another controversy for duPont, as Cleveland's daily papers criticized him for charging a fee of \$5000 for less than three month's work. He indignantly refused demands that he refund part of the money, describing his expertise as "well worth" the fee. Modesty prevented duPont from revealing to his critics that he had already donated the entire amount to charity, something known only to his friend, Mayor Newton D. Baker.⁴⁴

In the years following Tom Johnson's death DuPont also continued to devote considerable energy to his mentor's favorite cause, the Single Tax. He was a significant financial contributor to various Single Tax publications, and was also a potent fundraiser. This led to duPont's appointment, in 1911, to replace Johnson as treasurer of the Joseph Fels Fund, an organization founded to promote the adoption of the Single Tax by American municipalities; duPont was particularly interested in Canadian cities that had revamped their tax structure, and attempted to convince Detroit to do likewise.⁴⁵

This position with the Fels Fund also presented duPont an opportunity to demonstrate his enlightened racial attitude. During a meeting of the organization in Chicago, the restaurant at the LaSalle hotel refused to serve the Fund's African American members. At the insistence of duPont, the Fels Fund moved its meetings to a different hotel where its black members would be treated equally. When later commended for this gesture duPont replied curtly that, "I did that on my own account. I won't let any hotel clerk tell me with whom I may or may not eat. My freedom was involved as much as that of the colored fellows."⁴⁶

DuPont, in fact, supported nearly all of the most popular causes of the Progressive Era. In addition to promoting tax reform and civil rights, he was an early feminist. Regular visitors to the family home on Cleveland's East 98th Street included Ohio's leading suffragist, Elizabeth Hauser, and Florence Allen, who was destined to become America's first female state supreme court judge and, later, its first female federal court judge. And when duPont's wife Mary Ethel died in 1909, his sister Zara -- "Aunt Zadie" -- an outspoken feminist, arrived from Louisville to help care for the couple's three daughters. DuPont was also a free trade advocate, supporting President Woodrow Wilson's low tariff policies, and as a pacifist he blamed the war in Europe on men who "want to have advantage in trade over others," concluding that "free men cannot exist until trade is free." Ermann duPont also corresponded with some of the country's most celebrated reformers, such as Newton D. Baker, Edward Bemis, Louis Post, and Frederic Howe, and a perusal of his personal papers reveals sundry bits of evidence of his progressive tendencies: copies of reform periodicals, such as *The Public* and *Outlook*; a program from a Cleveland speech by conservationist Gifford Pinchot; and a copy of *On the Enforcement of Law in*

Cities, Toledo Mayor Brand Whitlock's call for a humane urban society."⁴⁷

Despite his acquaintance with people of renown, and despite his family name and wealth, A.B. duPont practiced a non-ostentatious lifestyle. Hauser has written that "carpets and lace curtains and elaborate house furnishings were rubbish to him." Accordingly, duPont drove a Ford Model T, probably a 1908 model, which he claimed was the second to ever come off the assembly line. DuPont owned the car for years, and declined to purchase a new one as long it remained functional. At the time of his death he still drove a Ford of unknown vintage, and Hauser commented that "it would never have occurred to him to explain it or to apologize for it."⁴⁸

During the final years of his life A.B. duPont applied his energies to one project after another. In 1915 he founded the Inventory Calculating Service in Cleveland, to provide arbitration services to cities seeking to purchase existing public utilities for conversion to municipal ownership. He developed a novel method for determining the worth of these utilities, which placed a premium on their efficiency. DuPont's last major project outside of Cleveland was the designing of a factory in Tennessee, for an industrialist seeking "the engineer who could construct a manufacturing plant in the least possible time and in the best possible way." And in a humorous, somewhat fitting, end to his career, duPont purchased Cleveland's Champion Stove Company, where in 1918 he developed the top-of-the-line "Model 80," a fuel-efficient stove so futuristic and equipped with so many accessories that his own salesmen often had difficulty operating it.⁴⁹

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On April 11, 1919, 53-year-old Antoine Bidermann duPont died at his Cleveland home after a brief illness, a victim of the influenza pandemic.⁵⁰ Although any mention of duPont is usually made in connection to his more famous friend, Tom L. Johnson, his career is noteworthy in its classic representation of the spirit of progressivism that enveloped the United States one hundred years ago. In contrast to many reformers of the era, duPont was not an exponent of a single cause, but instead worked at a number of projects; in this way he provides a near-prototypical example of the progressive model proposed by Daniel Rogers. As a Single Taxer, supporter of free trade, and crusader for municipally owned public transit systems, he fits into the antimonopolist "idea cluster"; as a pacifist, feminist, and advocate of civil rights for African Americans, he conforms to the "language of social bonds"; and duPont's efforts to make municipal transit more efficient and affordable for the urban masses, as well as his many inventions and utility valuation formula, qualify him for the "efficiency and rationalization" cluster.

While it is an almost unpardonable sin for a historian to write that a person "left the world a better place," this is no doubt true in the case of A.B. duPont. He was not only a superb engineer; he was also a sincere reformer, a visionary, and a true progressive. Even his failures, such as the duPont subway, were admirable and inspirational in their boldness. And he performed all of his lifetime tasks with a refreshing spirit of independence and lack of concern for the opinions of his detractors. It is difficult to dispute the conclusion of his friend, Elizabeth Hauser, that Ermann duPont died as he had lived – "a free man."⁵¹

NOTES

¹ Peter G. Filene, "An Obituary for the 'Progressive Movement,'" *American Quarterly* 22 (Spring 1970), 20-34.

² Daniel T. Rodgers, "In Search of Progressivism," *Reviews in American History* 10 (December 1982), 113-32.

³ Louisville was hardly a random choice; the duPont Company had established a western sales office there in the 1830s for its gunpowder and related products. From 1859 to 1873, Alfred Victor duPont served as the company's sales agent. See Raymond F. Pisney, "The Louisville Agency of E.I. duPont deNumours and Company, 1831-1887" (M.A. thesis, University of Delaware, 1965), particularly 5-9. On duPont involvement in the Louisville streetcar system, see "Louisville Scenes: The Autobiography of Fr. Richard J. Meaney," *Filson Club History Quarterly* 58 (January 1984), 5-12.

⁴ "DuPont Burial in Kentucky," *Cleveland Press*, 12 April 1919, 3; Charles H. MacKay, "Antoine Bidermann duPont," in John E. Kleber, ed., *The Encyclopedia of Louisville* (Lexington: University Press of Kentucky, 2001), 257-59.

⁵ "Will Leave," *Detroit Tribune*, 16 December 1900, n.p., clipping, Antoine Bidermann duPont Papers, Mss. A, D938, Folder 1, Filson Historical Society, Louisville, KY (hereafter A.B. duPont Papers, FHS); "DuPont Burial in Kentucky." On Tom L. Johnson's years in Louisville and his relationship with the duPonts, see his autobiography, *My Story*, ed. Elizabeth J. Hauser, (New York: B.W. Huebsch, 1911), 9-16. See also Alfred D. Chandler, Jr., and Stephen Salisbury, *Pierre S. duPont and the Making of the Modern Corporation* (New York: Harper & Row, 1971), 25-28; Michael Massouh, "Tom Loftin Johnson: Engineer-Entrepreneur, 1869-1900" (Ph.D. diss., Case Western Reserve University, 1971), 6-7; and Eugene C. Murdock, *Tom Johnson of Cleveland* (Dayton, OH: Wright State University Press, 1994), 7-9.

⁶ For a succinct biographical sketch of Tom L. Johnson, see David D. Van Tassel and John J. Grabowski, eds., *The Dictionary of Cleveland Biography* (Bloomington: Indiana University Press, 1996), 249; also useful, despite its age, is Louis Post, "Tom L. Johnson," *The Public*, 6 January 1906, 646-57. On Johnson's career as a United States Representative, see Robert Gordon Rawlinson, "Tom Johnson and His Congressional Years" (M.A. thesis, Ohio State University, 1958).

⁷ "A.B. duPont Goes to St. Louis," *Detroit Free Press*, 16 December 1900, n.p., clipping, A.B. duPont Papers, Folder 1, FHS; Elizabeth J. Hauser, "A.B. duPont – An Appreciation," non-paginated reprint of an article originally published in *The Public*, 28 June 1919, 684-86, A.B.

duPont Papers, Folder 3, FHS. Elizabeth Hauser, one of Ohio's leading suffragists, edited Tom L. Johnson's biography, *My Story*. She was also a friend to duPont and his wife, Mary Ethel Clark duPont. Hauser's article in *The Public* is the only published biographical sketch of A.B. duPont. The reprinted version in the duPont Papers at the Filson Historical Society provides material not found in the original, and is therefore cited throughout this article. On Hauser, see Van Tassel and Grabowski, *Dictionary of Cleveland Biography*, 210.

⁸ "Central Pass. R.R. Co.," *Street Railway Journal*, February 1888, 81; "Louisville, Ky.," *Street Railway Journal*, January 1890, 79; "A New Motor Truck," *Street Railway Journal*, April 1890, 176-77; "Equipment Notes," *Street Railway Journal*, June 1890, 311, 450; "Equipment Notes," *Street Railway Journal*, June 1891, 329; "The 'Louisville' Truck," *Street Railway Journal*, July 1893, 474; "The duPont Truck," *Street Railway Journal Souvenir*, the Convention of the American Steel Railway Association, Montreal, October 1895, 93; "New Truck," *Street Railway Journal*, May 1896, 310; "Mr. A.B. duPont," *Street Railway Review*, 15 January 1901, 66; "News and Comments," *Filson Club History Quarterly* 13 (July 1939), 176-77; Hauser, "A.B. duPont"; "A.B. duPont Goes to St. Louis." Tom Johnson's company in Johnstown, Pennsylvania, eventually purchased the patent and assumed exclusive manufacture of the Louisville Truck; see "Some Important Exhibits," *Street Railway Journal*, November 1894, 740, and Massouh, "Tom L. Johnson: Engineer-Entrepreneur," 165-66.

⁹ The most thorough and balanced narrative of Pingree's battles with Tom Johnson is Melvin G. Holli, *Reform in Detroit: Hazen S. Pingree and Urban Politics* (New York: Oxford University Press, 1969), particularly 103-24; on the condition of Detroit's street railways in the 1890s, see Holli, 37-38; Johnson provides a self-serving version of his experiences with Pingree in *My Story*, 91-97. See also Murdock, *Tom Johnson of Cleveland*, 43-53. Graeme O'Geran, *A History of the Detroit Street Railways* (Detroit: Conover Press, 1931), is an exhaustive account of the legal battles to improve the system and achieve municipal ownership over the course of six decades. For a contemporary description of Pingree's quasi-public competing streetcar line, see "The System of the Detroit Railway Company," *Street Railway Journal*, January 1896, 1-9.

¹⁰ "The Detroit Citizens' Street Railway Company," *Street Railway Journal*, September 1895, 559-64; "Inspection Car with Portable Turn Table," *Street Railway Review*, 15 August 1898, 578; Hauser, "A.B. duPont"; Massouh, "Tom L. Johnson: Engineer-Entrepreneur," 116-17.

¹¹ Johnson, *My Story*, 92

¹² "New Name for a Detroit Company," *Street Railway Review*, 15 March 1898, 203.

¹³ Holli, *Reform in Detroit*, 38-41; O'Geran, *History of the Detroit Street Railways*, 78-92; "Are Sorry," *Detroit Tribune*, 29 December 1900, n.p., clipping, A.B. duPont Papers, Folder 1, FHS.

¹⁴ "Silver Cup for Manager duPont," *Detroit Journal*, 29 December 1900, n.p., "Big Smoker for duPont," *Detroit Free Press*, n.d., n.p., and "Farewell Smoker," *Detroit News*, 29 December 1900, n.p., clippings, A.B. duPont Papers, Folder 1, FHS.

¹⁵ MacKay, "Antoine Bidermann duPont," and "Thomas Coleman duPont," in Kleber, *Encyclopedia of Louisville*, 258-59.

¹⁶ William H.A. Carr, *The duPonts of Delaware* (New York: Dodd, Mead, 1964), 313-18; Gerard Colby, *DuPont Dynasty* (Secaucus, NJ: Lyle Stuart, 1984), 617-18; MacKay, "Antoine Bidermann duPont."

¹⁷ Michael Massouh, "Technological and Managerial Innovation: The Johnson Company, 1883-1898," *Business History Review* 50 (Spring 1976), 61, and "Tom L. Johnson" Engineer-Entrepreneur," 111-14; Hoyt Landon Warner, *Progressivism in Ohio, 1897-1917* (Columbus: Ohio State University Press, 1964), 71-72, 83(n.50); "Gompers' Letter on Mayor Held," *Cleveland Plain Dealer*, 1 November 1907, 2.

¹⁸ Warner, *Progressivism in Ohio*, 68.

¹⁹ Henry George, *Progress and Poverty: An Inquiry Into the Cause of Industrial Depressions and of Increase of Want With Increase of Wealth* (New York: Appleton, 1880); Daniel Aaron, *Men of Good Hope: A Story of American Progressives* (New York: Oxford University Press, 1951), 55-91.

²⁰ Frederic C. Howe, *The Confessions of a Reformer* (1925: Reprint, with introduction by James F. Richardson. Kent, OH, and London: Kent State University Press, 1988), 95-97; Johnson tells of his conversion to the Single Tax and his relationship to Henry George in *My Story*, 48-58.

²¹ Hauser, "A.B. duPont." The French Physiocrats of the late-eighteenth century, of whom Pierre Samuel duPont was a prominent member, argued, among other things, that all wealth originated with the land; see Max Beer, *An Inquiry Into Physiocracy* (London: Frank Cass & Co., 1966).

²² Hauser, "A.B. duPont."

²³ "DuPont Resigns," *Detroit News*, 15 December 1900, n.p., A.B. duPont Papers, Folder 1, FHS; "Mr. A.B. duPont," *Street Railway Review*, 15 January 1901, 66.

²⁴ "Consolidation in Detroit," *Street Railway Journal*, 12 January 1901, 90; "Consolidation in Detroit," *Street Railway Review*, 15 January 1901, 56; "The Electric Railways of Detroit," *Street Railway Review*, 15 March 1901, 180; O'Geran, *History of the Detroit Street Railways*, 189-90; "A.B.

duPont Goes to St. Louis.”

²⁵ “Street Car Systems of St. Louis, Mo.,” *Street Railway Journal*, January 1890, 56-59; “The St. Louis Strike,” *Street Railway Review*, 15 July 1900, 375; “St. Louis,” *Street Railway Review*, 15 January 1901, 21; “Manufacturers and Supply Houses of St. Louis Prominent in the Electric Railway Field,” *Street Railway Review*, 20 September 1904, 650-51; James Adkins, “Farewell,” and Mort Jourdan, “Our Guest,” from duPont testimonial dinner, St. Louis Mercantile Club, 22 April 1907, A.B. duPont Papers, Folder 7, FHS; “Will Leave”; Hauser, “A.B. duPont.”

²⁶ Jourdan, “Our Guest.”

²⁷ Untitled statement of Chicago mayor Edward F. Dunne, duPont testimonial dinner, 22 April 1907, A.B. duPont Papers, Folder 7, FHS.

²⁸ Hauser, “A.B. duPont”; Jourdan, “Our Guest.”

²⁹ Hauser, “A.B. duPont”; statement of Edward F. Dunne, 22 April 1907.

³⁰ “A.B. duPont for Chicago,” unidentified newspaper clipping, A.B. duPont Papers, Scrapbook, Folder 17, FHS; John D. Buenker, “Edward F. Dunne: The Limits of Municipal Reform,” in Paul M. Green and Melvin G. Holli, eds., *The Mayors: The Chicago Political Tradition*, rev. ed. (Carbondale: Southern Illinois University Press, 1995), 34-40; Hauser, “A.B. duPont.”

³¹ On Johnson’s crusade for municipal ownership of the Cleveland street railways, see *My Story*, 237-94; Murdock, *Tom Johnson of Cleveland*, 197-265; and Robert H. Bremner, “The Street Railway Controversy in Cleveland,” *American Journal of Economics and Sociology* 10 (January 1951), 185-206.

³² Murdock, *Tom Johnson of Cleveland*, 201; “New Line Will Have the Call,” *Cleveland Plain Dealer*, 24 June 1906, Part II, 1; “To Rush 3-fer Cars Through,” *Cleveland Press*, 24 October 1906, 9; “Two Fine Cars Are Speeding Towards City for 3-fer,” *Cleveland Press*, 29 October 1906, 2; “Two Cars Reach City; To Operate Thursday,” *Cleveland Press*, 31 October 1906, 1-2; “Traction Developments in Cleveland,” *Electric Railway Review*, July 1906, 431-32; “Around the Clock With a Human Steam Engine,” and “A.B. duPont’s Daily Dose,” unidentified clippings, n.d., A.B. duPont Papers, Scrapbook, Folder 17, FHS.

³³ “May Ride for 3 Cents Today,” *Cleveland Plain Dealer*, 1 November 1906, 1-2; “3 Cent Fare at Last,” *Cleveland Press*, 1 November 1906, 1; “Hosts Cheer as First Car Runs,” *Cleveland Plain Dealer*, 2 November 1906, 1, 9; James A. Toman and Blaine S. Hays, *Horse Trails to Regional Rails: The Story of Public Transit in Cleveland* (Kent, OH, and London: Kent State University Press), 70-

71; Murdock, *Tom Johnson of Cleveland*, 203-04.

³⁴ "Chicago Mayor Has 3-Cent Ride," *Cleveland Plain Dealer*, 6 November 1906, 4. Louis Post published *The Public*, America's most important Single Tax publication during the first two decades of the twentieth century. Tom Johnson had long been Post's main benefactor, helping to finance *The Public* and other Single Tax publications; see Murdock, *Tom Johnson of Cleveland*, 27.

³⁵ "Cleveland Traction Developments," *Electric Railway Review*, 12 January 1907, 55; "A Holding Company in Cleveland," *Electric Railway Review*, 19 January 1907, 66-67; "Disagreement on Valuation of Cleveland Electric Railway," *Electric Railway Review*, 30 March 1907, 432-33. There are regular accounts of the complicated negotiations between Municipal Traction and Concon published in *Electric Railway Review* and other street railway trade journals throughout the spring, summer, and fall of 1907.

"Negotiations Between A.B. duPont and Henry Davies, Arbitrators, October 3, 1907," A.B. duPont Papers, Folder 8, FHS; "The Cleveland Situation," *Electric Railway Review*, 2 November 1907, 742; "Mayor Tom Johnson is a Winner," *Cleveland Plain Dealer*, 6 November 1907, 1; "Tom L. Johnson Re-elected Mayor of Cleveland," *Electric Railway Review*, 9 November 1907, 770; "Rides, Rides, Rides, Does Joyous City," *Cleveland Plain Dealer*, 29 April 1908, 3; Toman and Hayes, *Horse Trails to Regional Rails*, 73-74; Eugene C. Murdock, "Cleveland's Johnson: The Burton Campaign," *American Journal of Economics and Sociology* 15 (July 1956), 405-24, and *Tom Johnson of Cleveland*, 206-31.

³⁶ "The Cleveland Electric Ry. Co. and Amalgamated Association of Street and Electric Railway Employes [sic] of America Division No. 268, Memorandum of Agreement, Cleveland, O., December 22nd, 1906," Pamphlet c1646, Western Reserve Historical Society, Cleveland, OH; "Strike Threatened in Cleveland," *Electric Railway Review*, 9 May 1908, 578; "The Progress of the Municipal Traction Company of Cleveland," *Street Railway Journal*, 16 May 1908, 833; "Strike in Cleveland," *Electric Railway Review*, 23 May 1908, 630-31; Bremner, "Street Railway Controversy in Cleveland," 198; Murdock, *Tom Johnson of Cleveland*, 233-38; "Report of the Grievance Committee on the Street Railway Strike," *Cleveland Citizen*, 2 May 1908, 13 June 1908, n.p. The *Citizen* was the official newspaper of Cleveland's United Trades and Labor Council. For a detailed account of the reactions of Johnson and duPont to the labor troubles of 1908, and the subsequent damage to Johnson's career, see Arthur E. DeMatteo, "The Downfall of a Progressive: Mayor Tom L. Johnson and the Cleveland Streetcar Strike of 1908," *Ohio History* 104 (Winter-Spring 1995), 24-41.

³⁷ "Crowded Car at East Cleveland," *Electric Railway Journal*, 5 September 1908, 599; "Security Grant, At First Thought Safe, Loses," *Cleveland Plain Dealer*, 23 October 1908, 1-2; "People of Cleveland Vote Against Security Franchise," *Electric Railway Journal*, 31 October 1908, 1287-89;

"Who Owns the Roads?," *The Referendum*, 10 October 1908, n.p., and "Antonio duPont" [sic], *The Referendum*, 15 July 1909, 6, anti-Tom Johnson, anti-duPont publication of municipal ownership opponents, A.B. duPont Papers, Folder 9, FHS; Murdock, *Tom Johnson of Cleveland*, 241-53.

³⁸ Murdock, *Tom Johnson of Cleveland*, 239; Hauser, "A.B. duPont." Historians studying Johnson and the 1908 strike tend to defend the mayor, placing the blame on "privileged" interests which supposedly encouraged and financed the strikers, particularly during the ensuing petition drive. Unfortunately, these interpretations usually rely on Johnson's autobiography, contemporary accounts written by the mayor's associates, or the pro-Johnson *Cleveland Press*. However, no documentary evidence has ever surfaced to indicate that the streetcar men were doing anything but acting independently and in their own interest.

³⁹ "Cleveland Traction Situation," *Electric Railway Review*, 2 March 1907, 301; "City, Ending Great Decade, Presses to Million Mark," *Cleveland Plain Dealer*, 1 January 1910, 1, 12; "Million Club is Gaining Strength," *Cleveland Plain Dealer*, 2 January 1910, 2B; "Cross Section of the duPont Subway," blueprint, A.B. duPont Papers, Folder 5, FHS; "United States Patent Office. Antoine B. duPont, of Cleveland, Ohio. Car Adapted for Subway Use. [Patent number] 945,247. Patented Jan. 4, 1910." A.B. duPont Papers, Folder 6, FHS; Alan C. Thompson to duPont, 30 August 1910, containing clipping, "To Cheapen Tube Railways," *Toronto Globe*, 26 August 1910, n.p., A.B. duPont Papers, Folder 7, FHS; "A Few Salient Facts About Cleveland and Its Subway Program," unidentified document, apparently written by duPont and distributed by the Cleveland Underground Rapid Transit Railroad Company, ca. 1911, A.B. duPont Papers, Folder 7, FHS; A.B. duPont, "The Transportation Problems of Greater Cleveland," n.d., n.p., A.B. duPont Papers, Folder 13, FHS; "Public Demand for Subways," *Electric Railway Journal*, 17 August 1912, 1.

⁴⁰ "The Cleveland Subway Company, Cleveland, Ohio, December 1910," prospectus, A.B. duPont Papers, Folder 2, FHS; "Memorandum of Agreement, Cleveland, Ohio, 26 July 1912," between duPont and Hopkins, for creation of the Cleveland Underground Rapid Transit Railroad Company, A.B. duPont Papers, Folder 6, FHS; "A Few Salient Facts About Cleveland and Its Subway Program"; "Subways Win by Large Majorities," *Cleveland Plain Dealer*, 9 November 1910, 4. DuPont's partner, W.R. Hopkins, would later become Cleveland City Manager in the 1920s; the city's airport is named for him. See Van Tassel and Grabowski, *Dictionary of Cleveland Biography*, 226.

⁴¹ DuPont to Spend \$20,000 on Model Subway for Car," *Cleveland Press*, 6 May 1910, 2; "New Subway Car is Demonstrated," *Cleveland Leader*, 11 August 1910, 10; "Subway Car Makes Good in Test Run," *Cleveland Press*, 11 August 1910, 2; "Free Rides," advertisement, *Cleveland Leader*, 22 October 1910, 2; "First They Said We Couldn't, Then They Said We Wouldn't, Now They Say

We'll Do Too Much," advertisement, *Cleveland Press*, 22 October 1910, 13; "To the Public," advertisement, *Cleveland Leader*, 26 October 1910, 10; "A Few Salient Facts About Cleveland and Its Subway Program."

⁴² "Street Car Men to Fight Subway," *Cleveland Plain Dealer*, 21 October 1910, 4; "Curious Angles of the Subway Grab," *Cleveland News*, 29 October 1910, 1; "The Voters Scotched This Serpent Once; Will They Let it Get Away Now?," *Cleveland News*, 31 October 1910, 1; "Gold Brick Offer of the Subway Promoters," *Cleveland News*, 3 November 1910, 1; "Both Subways Safe," *Cleveland Press*, 9 November 1910, 1; "Subways Win by Large Majorities."

⁴³ "Favor Quick Work on Subway Tubes," *Cleveland Plain Dealer*, 10 November 1910, 1, 6; "Subway Vote is Possible Block," *Cleveland News*, 18 March 1912, 8; "Denies Wanting Vote on Subway," *Cleveland News*, 19 March 1912, 8; "Heart and Artery," *Cleveland Free Times*, on-line edition, 23-29 January 2002, n.p.; Hauser, "A.B. duPont."

⁴⁴ "Burial of Tom L. Johnson," *The Public*, 21 April 1911, 365; Toman and Hayes, *Horse Trails to Regional Rails*, 76-77, 82-85; Murdock, *Tom Johnson of Cleveland*, 274-75, 259-60; O'Geran, *History of the Detroit Street Railways*, 242; "DuPont Out of Question," *Cleveland Plain Dealer*, 25 October 1911, 1; Hauser, "A.B. duPont"; "Scrapbook Regarding Contract and Arbitration Between City of Cleveland and the Cleveland Railway Company, 29 April 1913 – 10 July 1913," A.B. duPont Papers, Folder 15, FHS; "Arbitrators Charge \$5000 Each for Month's Work," *Cleveland Press*, 20 June 1913, n.p., "How Did the Arbitrators Fix the Fee?," *Cleveland Press*, 21 June 1913, n.p., and "Earned His \$5,000 Arbitration Fee, Replies DuPont," *Cleveland Leader*, 23 June 1913, n.p., A.B. duPont Papers, Scrapbook, Folder 15, FHS.

⁴⁵ Hauser, "A.B. duPont"; "Promoting the Single Tax Movement," *The Public*, 19 February 1909, 177-78; "The Joseph Fels Fund of America," *The Public*, 14 May 1909, 466; "American Singletax Conference," *The Public*, 1 December 1911, 1215-18; "Says Single Tax is Detroit's Hope," *Detroit Journal*, 10 April 1913, 6. Joseph Fels was the inventor of Fels Naptha Soap, and a major benefactor of the Single Tax crusade; see Arthur Power Dudden, *Joseph Fels and the Single-Tax Movement* (Philadelphia: Temple University Press, 1971).

⁴⁶ Hauser, "A.B. duPont"; "American Singletax Conference."

⁴⁷ Carr, *The duPonts of Delaware*, 313-18; Hauser, "A.B. duPont"; MacKay, "Ethel B. duPont," in Kleber, *Encyclopedia of Louisville*, 258; "DuPont Burial in Kentucky"; Jeanette E. Tuve, *First Lady of the Law: Florence Ellinwood Allen* (Lanham, MD: University Press of America, 1984), 32, 36; A.B. duPont, "The Cause of the European War," 1 April 1915, and duPont to Howe, 5 December 1910, A.B. duPont Papers, Folder 7, FHS; duPont to Bemis, 20 February 1915, Post to duPont, 13 March 1915, and duPont to Post, 28 May 1915, A.B. duPont Papers, Folder 16, FHS;

miscellaneous items, A.B. duPont Papers, Folder 3, FHS.

⁴⁸ Hauser, "A.B. duPont"; "A.B. duPont, the street car man, claims he has the luckiest automobile in the world," unidentified newspaper clipping, n.d., A.B. duPont Papers, Scrapbook, Folder 17, FHS.

⁴⁹ "DuPont Has New Valuation Plan," *Cleveland Press*, 10 November 1915, 4; A.B. duPont, *A Method for Ascertaining the Non-Monopolistic Value of the Property of Public Utilities* (Cleveland: 1915), A.B. duPont Papers, Folder 2, FHS; "Champion Model 80," advertising circular, A.B. duPont Papers, Folder 2, FHS; "DuPont Burial in Kentucky"; Hauser, "A.B. duPont."

⁵⁰ "A.B. duPont, Car Inventor, Dead," *Cleveland News*, 12 April 1919, 4; Hauser, "A.B. duPont."

⁵¹ Hauser, "A.B. duPont."