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Working Paper, No. 75

**The University of California  
Transportation Center**

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**Promoters and Investors in Antebellum America:  
The Spread of Plank Road Fever**

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## Summary

Plank road fever struck New York when George Geddes and other promoters greatly exaggerated the durability of the wooden surfacing. Within a few years Americans built hundreds of plank roads across the nation. The episode highlights how promoters diffused investment information in an era with that had few institutions to safeguard against egregious mistakes. The plank road story also gives insight into the motivations of promoters, who worked for rewards other than direct monetary returns.

## Promoters and Investors in Antebellum America: The Spread of Plank Road Fever

### I. Introduction

The idea of plank roads may sound absurd, but antebellum Americans thought that wooden planks could provide a smooth, all-weather surface at a lower price than alternative road improvements. Organized as private companies with the right to take tolls, plank roads spread like wild flowers. In New York about 340 companies built more than 3,000 miles of plank roads between 1844 and 1854. States like Pennsylvania, Ohio and Michigan also chartered hundreds of roads (see Table 1).

But the plank road boom came to a sudden end. Promoters had predicted that the wooden planks would last from 7-12 years, but companies soon discovered that they became rotten and worn within 3 or 4. Many companies, finding themselves without enough revenue to replank, quickly folded.

How did investors make such a mistake? The blunder emanated from the word of a single man--George Geddes, a gentlemen farmer from the Syracuse area. Other promoters perpetuated and exaggerated the erroneous durability claims made by Geddes. Using engineering jargon, evidence from a few unrepresentative roads, and an occasional outright lie, the promoters convinced thousands of investors to invest in plank roads. The New York State legislature and other state governments helped legitimize plank roads with favorable reports and easy incorporation laws.

The plank road episode highlights aspects of information diffusion in the antebellum period. Those who promoted new ideas did so not for financial gain, but for the chance of

renown. The story also suggests that antebellum state governments could foster internal improvements by simply disseminating information about them.

## II. Plank Road Fever Strikes New York

In the summer of 1844 the citizens of Salina, a village outside of Syracuse, met to discuss the idea of plank roads.<sup>1</sup> Like many towns scattered throughout New York, Salina found itself just off the route of canals and railroads. Facing the specter of declining trade and plummeting land values, the village needed better access to the main lines. Although the idea of plank roads had been mentioned as early as 1836, nobody at the meeting had ever seen a plank road in operation. The town needed a volunteer to visit Toronto to see how they actually worked.<sup>2</sup>

George Geddes was the right man for the job. According to the 1850 census, Geddes farmed land worth \$10,000, giving him ample resources to make the trip to Toronto. More important than Geddes' wealth was his disposition for invention and improvement. Geddes could tinker for days to develop the "Geddes' Swinging Gate" or the "Geddes' Harrow." He also served as a surveyor for various railroads and canals, jobs which reflected his avid interest in engineering<sup>3</sup>. In a speech before a county agricultural fair, Geddes expounded on the glory of the inventor, earnestly declaring that "any man who can by the power of his mind render labor more efficient in any processes...does really add to the happiness of every member of this vast partnership."<sup>4</sup>

Many antebellum Americans shared such attitudes towards invention<sup>5</sup>, but Geddes'

calling was perhaps chosen to fit the model of his father, James Geddes. James Geddes was a humble civil engineer until his involvement in the Erie Canal as surveyor and co-engineer. Referred to as "Geddes' Canal" in its early years, the Erie brought James great prominence. Besides surveying canals in several other states, he was elected for several county offices, and twice won a seat in Congress.<sup>6</sup> George tried with mixed success to match his father's eminence, winning two terms in the state legislature but failing to win the office of state engineer in 1857. One wonders if George saw plank roads as his Erie Canal.

In Toronto, Geddes found that the plank roads had been built by the government, but the right to collect tolls had been auctioned to private parties. Geddes consulted various road commissioners, road-makers, and gatekeepers. After putting all of the information in order, Geddes determined that the planks deteriorated according to the amount traffic. Lots of traffic entailed wear and tear, but it also meant high toll revenues. Geddes reasoned that the high toll revenues would give the road more than enough revenue to replace worn planks, with plenty left over for stockholder dividends. Geddes estimated that plank roads could make a profit of 20 percent. Farm periodicals like the Albany Cultivator reported the assessment as early as 1844.<sup>7</sup>

After another trip to Canada, Geddes directed the construction of the Salina-Central Square Plank Road, which was completed in 1846. As the first American plank road, the Salina-Central Square was a crucial test case. The road seemed a brilliant success. In 1851 a writer proclaimed that "The road has fully and completely succeeded..The revenue justifies the prediction which was made by its builder."<sup>8</sup> By 1847, the New York State legislature had received so many petitions for plank road charters that it passed a general incorporation



law. The law opened the floodgates, as more than 340 plank road companies received charters between 1847 and 1854. As Figure 1 illustrates, most of the mileage was chartered in 1849 and 1850. Plank road fever had hit New York.

[Figure 1 here].

As the boom expanded, Geddes remained an important source of information. Several New York companies requested his advice. People across the nation--including the likes of John C. Calhoun--asked him for information on construction techniques. Geddes even published a short description of the Salina-Central road in Scientific American.<sup>9</sup> Remarking that the consultation and correspondence took up too much of his time, Geddes wrote Observations upon Plank Roads in 1850. In the voice of the practical engineer, Geddes furnished his readers with the details of plank road construction. Geddes repeated his arguments about durability: roads would only wear with heavy traffic, which would generate sufficient revenue to replank. But Geddes also provided readers with a concrete durability figure, estimating that planks on the Toronto road had lasted eight years.<sup>10</sup>

The state legislature joined Geddes in spreading the word by issuing a highly favorable report on plank roads. Whereas Geddes wrote in a staid engineering tone, the legislature's report reads like promotional script. Using evidence from the Salina-Central Square road, which had been operating for about a year, the legislature paraded the prospects of improved transportation and higher property values. The legislature also claimed that the planks "will last 7-12 years; and that from the improvements already made in the mode of

building, that average can be enlarged."<sup>11</sup>

More important than the report was the 1847 general incorporation law.<sup>12</sup> The law greatly simplified the process of starting a plank road company. Instead of petitioning the legislature, the company merely had to certify that subscribers had purchased at least \$500 of stock per mile, and then file articles of association with the Secretary of State's office. Filing the articles required no great effort--they gave the name of company, location of the road, name of directors and stockholders, and other basic information. Companies could not pay annual dividends greater than 10 percent of the capital stock, and were not allowed to put more than 10 percent of the capital stock into a repair fund.<sup>13</sup> For many plank road companies, meeting the regulations proved all too easy.

The impetus behind the legislature's promotion of plank roads was the desire to find a dependable road surface that did not require state funds. Travelers complained incessantly about the rural roads in New York, as spring and autumn rains often made them impassable.<sup>14</sup> As the report of the 1836 internal improvement convention outlined, surfacing roads with crushed rocks (a surfacing known as Macadam) would require millions.<sup>15</sup> Thanks to loans and subsidies to unprofitable canals and railroads, the state government neared bankruptcy in the 1840s.<sup>16</sup> The prevailing atmosphere of fiscal retrenchment made large public expenditures for improved roads impossible. Since private investors financed almost all plank roads, the legislature could ride the crest of the plank road wave without dipping into the treasury.

William Gillespie, an engineering professor at Union College, joined the state legislature in promoting Geddes' durability estimates. Reviews in business journals and

agricultural journals established Gillespie's Manual on the Principles and Practices of Road Making as an authoritative guide to road building.<sup>17</sup> By the 1850 edition Gillespie had included a lengthy section on plank roads. Like any good fisherman's tale, the story about plank durability got better and better. After acknowledging the help of Geddes, Gillespie maintained that "sanded plank on this road [Toronto] would wear at least ten years...It is believed that oak plank, well laid, would last twelve or fifteen years."<sup>18</sup> Citizens in towns like Ithaca firmly believed in such "expert" opinion. A report of an 1849 town meeting cited Gillespie's "recent and most valuable American publication" as proof that "the duration of plank roads is from eight to twelve years."<sup>19</sup>

The crowning piece of plank road promotionalism, however, belonged to William Kingsford, who wrote an 1851 essay "A Few Words on Plank Roads."<sup>20</sup> The 1850 census lists Kingsford as a draftsman with Hudson River Railroad Company. Why Kingsford took the time to write about plank roads is unclear, but circumstantial evidence suggests that he was a young, struggling writer trying to establish himself. According to the census manuscripts, Kingsford (31 years old) lived in a boarding house with his wife and a nine month old son. The plank road essay began a prolific writing career, as Kingsford later wrote a pamphlet advocating the extension of the Canadian canal system (1865), a historical monograph titled A Canadian Political Coin (1874), and a ten volume history of Canada (1887-98).<sup>21</sup> If Kingsford was looking for publicity, he succeeded. Hunt's Magazine recommended that Kingsford's pamphlet "should be well circulated throughout the country."<sup>22</sup>

Kingsford tried to impress upon his readers the liberating effects of improved

transportation. Plank roads would not only make the farmer's trip to market shorter, but it would also bring him closer to "civilization;" he would dress better, go to church more often, and improve his manners. To bring the point home, Kingsford quotes an unnamed "gentleman" as saying that the farmer's "wives and daughters are no longer the same persons. They have improved wonderfully...Such are the results that have in every instance attended the introduction of plank roads."<sup>23</sup> Kingsford cited the example of sparsely populated Hamilton county, where plank roads supposedly had stimulated commerce and raised land values. Kingsford's claims would undoubtedly have surprised the residents of Hamilton county, who did not build a single plank road.<sup>24</sup>

Kingsford also had little restraint when discussing the engineering aspects of the roads. He claimed that plank roads were cheaper than Macadam. He even argued that plank roads were more efficient than railroads, at least for traveling short distances. An informed reader would have been suspicious of such conclusions, if only because of Kingsford's many factual errors. Kingsford reports, for instance, that the Salina-Central Square Road was built in 1837, nine years before its actual construction.<sup>25</sup> With the impression of a 13 year-old plank road in operation, durability claims of eight years would seem reliable.

J. S. Skinner, the editor of The Plough, The Loom, and the Anvil, wrote the introduction of Kingsford's pamphlet and a companion essay titled "On Roads in General."<sup>26</sup> As a supervisor for the Post Office and a champion of scientific agriculture, Skinner thought that improved roads would dramatically increase farm productivity and lead to growing, vibrant cities. Skinner thought that plank roads provided a remedy to the mud and ruts that slowed highway travel. Not surprisingly, Skinner's Plough, Loom and Anvil frequently

mentioned plank roads, running a long article by Geddes and an extract from Gillespie.<sup>27</sup>

### III. Plank Road Fever and the Rest of the Country.

As Table 1 illustrates, plank road fever proved contagious. More than 1000 plank road companies were chartered throughout the nation. Although all sections of the country chartered plank roads (with the notable exception of New England), heavily-wooded states like Pennsylvania, Ohio, Michigan, and Illinois joined New York as the leaders. Promoters in the Midwest echoed estimates of various New York writers, printing exaggerations that might have made even Kingsford blush.

[Table 1 here]

The best example of Midwest promotionalism was Robert Dale Owen's A Brief Practical Treatise on the Construction and Management of Plank Roads.<sup>28</sup> Owen's career in many ways parallels that of George Geddes. In 1849 the New Harmony and Mount Vernon Plank Road Company nominated Owen (a director of the company) to visit western New York to ascertain construction methods. After visiting numerous roads (including the Salina and Central Square) and meeting with numerous plank road enthusiasts, Owen wrote several newspaper articles. Owen, receiving so many requests for information that it became impossible for him to answer in private correspondence, penned A Brief Practical Treatise in March of 1850. The book became the bible for those spreading the gospel of plank roads in

the Midwest. As his biographer notes, "Owen's [book] proved the most useful and accessible for the people of Indiana, Illinois, Kentucky, and Ohio. It was greeted by the Western press without distinction of party."<sup>29</sup>

Like his father, Owen was a free-thinking visionary who promoted a host of idealistic schemes for improvement, ranging from temperance to educational reform. He was especially dedicated to schemes that could further his father's utopian community of New Harmony, Indiana. He imagined New Harmony as a center of an entire network of plank roads, drawing commerce from as far away as St. Louis. Plank roads could also help Owen's political career. As a politician who served in numerous state offices and Congress, Owen "was the first to admit a natural ambition for influence and prestige."<sup>30</sup>

Although Owen filled his book with detailed instructions on plank road construction, he also included overtly promotional material. Confidently claiming that planks would last 12 years, Owen frequently cited examples of the profitability of the New York plank roads. He declared that he "could not hear of one [New York Plank Road] in full operation, that paid less than ten per cent over expenses."<sup>31</sup> He added that "Some of them divide 20, some 25, 30, and even 40 per cent of yearly profit over expenses."<sup>32</sup> As we argue in greater detail below, the most profitable plank roads in New York would be lucky to pay a five percent, much less 20 to 40.

Although the South lagged behind in plank road construction, southern promoters showed no less zeal than their counterparts in the North. The best example of southern promotionalism was William Gregg, a well-known cotton manufacturer from South Carolina. Like Owen, Gregg was a visionary. Rejecting the ethos of the planter class, Gregg

envisioned a Southern countryside dotted with textile mills and iron foundries. He strongly believed that more manufacturing would help liberate the South from its commercial vassalage to the North. Gregg honed his promotional skills by regularly publicizing his own Graniteville textile factory as a successful southern factory.<sup>33</sup>

Plank roads, of course, would help enterprises like Graniteville succeed. Gregg presented his pamphlet Essay on Plank Roads before the Literary Club of Charleston in 1851. The pamphlet, broken into three parts, was also published in DeBow's Review in the same year.<sup>34</sup> Gregg, echoing some of the claims of Kingsford, believed that plank roads could provide less expensive and more flexible transportation than railroads. A series of exaggerations about New York plank roads provided support for his argument. Gregg, for instance, claimed that many New York plank roads were "regularly paying twenty to twenty-five per cent. on the capital invested," while the planks themselves "will last from fifteen to twenty years."<sup>35</sup>

A number of other promoters in the Midwest and South cited the law and lore of New York. The Prairie Farmer of Chicago published lengthy excerpts from Geddes and Gillespie.<sup>36</sup> Further south, a Virginia civil engineer named Wall quoted "a civil engineer in New York" in speech promoting plank roads.<sup>37</sup> Similarly, an engineer in Alabama reported that "in the state of New York plank roads have now a recognized place in the economy of the social system."<sup>38</sup> In Kentucky, the Secretary of the Board of Improvements promoted plank roads and reiterated the durability estimate of 8 to 12 years.<sup>39</sup>

#### IV. Why Did Investors Believe the Promoters?

The pattern of diffusion resembled a pyramid. The word of Geddes rested on the apex, filtering down to promoters like Kingsford and Owen, who then influenced a number of other enthusiasts, who in turn persuaded thousands of investors. Back in 1836 a "Report on Roads" published in New York state recommended a demonstration project for plank roads<sup>40</sup>, but no individual took the initiative. Ten years later the entire country embraced the plank road idea on the word of a few promoters. Why did people so eagerly embrace plank roads?

Part of the answer rests on the cleverness of the promoters in using seemingly "scientific" engineering calculations. The figures and statistics put forward by Geddes, Gillespie, and Kingsford must have impressed investors who had little training in engineering. The following passage from Kingsford, comparing macadam roads with plank roads, is representative of the engineering rhetoric used by plank road promoters:

When newly laid, the resistance for heavy trains on the latter [plank roads] has been calculated variously at 1 in 98 and 1 in 70, while that of the stone road in perfect condition is named at 1 in 67. But while the plank road for at least two years after it has been laid down retains an equality of surface, the stone road is never in such order that so low a ratio of resistance can be received. In ordinary condition, the resistance of 1 in 25 is received. Taking a mean of the two, we may call the average resistance of the Macadam road 1 in 46.<sup>41</sup>

Translated into plain English, Kingsford's argument is that a horse could pull between 98 and 70 pounds on plank road as easily as it could pull 46 pounds on a macadam road. Kingsford never tells the source of the experiments, and uses vague phrases like "heavy trains," yet arrives at definitive conclusions that convey scientific certainty. Kingsford also substitutes complex phrases like "retains an equality of surface" for simple ideas like "remains smooth." More rigorous experiments at the turn of the century showed that Kingsford's



argument (surprise, surprise) is greatly exaggerated. The tractive resistance of a plank road in good condition is 1/67 and 1/40 after two years of wear; the resistance of a typical macadam road is around 1/60.<sup>42</sup>

Plank road investors needed little prompting to accept Kingsford's overstated claims. Most of them were eager to embrace plank roads as a lifeline to bigger markets, expanding population, and higher property values. Using the articles of association filed at the Secretary of State's office in New York, we examined the residence of investors of plank roads that terminated in the major cities of Albany, Buffalo, Rochester, Syracuse, and Utica. As Table 2 shows, almost 70 percent of the investment came from the smaller towns, despite the huge disparity in wealth and population with the cities.

[Table 2 here]

Many of New York's small towns had been by-passed by the prosperity brought by canals and railroads. Canals and railroads, in fact, often attracted trade and population away from areas that had once been a local or regional hub. Roberta Miller's study of Onondaga county, for example, shows how early settlers built a number of thriving villages along turnpikes. The completion of the Erie canal, however, decimated the turnpike villages. While the county as a whole grew rapidly, turnpike townships like Manlius lost more than 25% of its population. As early as 1827, a resident of Manlius despaired that his village had "an old, dilapidated, forlorn look...the construction of the Erie Canal, had a very injurious effect upon the business of the village."<sup>43</sup> Anxious to avoid the continued economic

deterioration, the investors from small towns like Manlius readily believed the soothing words of the promoters. A speaker before a Delaware County meeting captured the desperation felt by many. A plank road, he declared, "is the only hope for an adequate thoroughfare to market. If this long-cherished project fails, this county **MUST REMAIN A SEQUESTERED AND ISOLATED REGION FOR ALL TIME.**"<sup>44</sup>

Town boosterism may have muffled any dissenting voices. Given that the economic life of the entire town was at stake, plank roads were perceived as a community project as well as a profitable undertaking. Newspaper editorials urged public-spirited citizens to contribute to the project. An 1850 article in the The Long Island Democrat, for example, remarked that "Now that the opportunity is offered for doing something that will promote the prosperity of the village and enhance the value of property along the line of the proposed plank road, we trust that our citizens will subscribe liberally."<sup>45</sup> Newspapers like The Fredonia Censor also praised investors for exhibiting "a commendable degree of enterprise in getting up the stock" of a local plank road company<sup>46</sup> In such an atmosphere, critics of plank roads might be smeared as unpatriotic. The report of town meeting in Ithaca, recommended "that we have no more croaking, and that the words, 'can't' and 'impossible' become less fashionable."<sup>47</sup> A plank road skeptic wishing to preserve his image as public-spirited citizen would have been wise to invest a few hundred dollars and keep his mouth shut.

A related factor encouraging investment was the perception that other towns were investing in plank roads. As Harry Scheiber and other scholars have noted, development in the first-half of the nineteenth century often became a zero-sum game of luring trade and

people from a rival locality.<sup>48</sup> Such intense competition meant "keeping up with the Jones" at all costs. Even if people believed that plank roads would probably fail, the risk of another town's plank road succeeding was too great to ignore. A plank road that failed would mean little to the town--presumably its competitors would also have wasted its resources. Success would enable the small town to compete for trade and population.

For the individual investor, the specter of thousands of other people investing in plank roads must have lent legitimacy to the idea. If everybody else believes it, investors reasoned, how can the idea be wrong? Social psychologist Robert B. Cialdini explains (in a chapter subtitled "Truths are Us") how a rootless idea can come to prevail in a group through mimetic behavior.<sup>49</sup> Similarly, economist Robert J. Shiller has found that fads and fashion profoundly influence today's sophisticated stock markets. One should not be surprised that the same factors inspired investors in the nineteenth century.<sup>50</sup>

Investors might have paused if they had read a pamphlet on plank roads by Canadian engineer Thomas Roy. Roy must have been both amused and amazed by the host of articles, pamphlets, and books championing plank roads. In a pamphlet published years before Geddes even visited Toronto, Roy pointed out that the planked portion of the famed Toronto-Kingston road had a thick covering of sand. The thick sand would normally impede travel, but since most heavy traffic traveled downhill into the city, it presented little problem. Travelers rarely used the other planked portions of the roads because of a series of difficult passes. Calling the success of the Toronto-Kingston road a "mere delusion," Roy argued that estimates from wooden wharves and canal locks showed that plank roads would last 3 to 4 years. Roy implored that "the present mania for plank roads may be arrested, before it

produces so much evil."<sup>51</sup>

## V. The End of Plank Road Fever.

Roy's words proved prophetic. By 1852 many plank road companies faced the task of replacing worn planks without sufficient revenue. According to a the promoters and a few surviving cost estimates, the cost of relaying a plank road was about 60% of the original cost of the road.<sup>52</sup> To meet replanking costs, companies would have to generate annual net revenues of 12 to 15 percent of their capital stock. Most companies, caught by surprise, did not have enough revenue to replank.

The plight of the Saranac River Plank Road Company of New York was probably typical. In an 1853 report to stockholders, the company sourly remarked that "the originators of these roads and the legislature were greatly mistaken both as regards to the durability of the roads, and the amount of tolls that would be earned under that act."<sup>53</sup> The company reported that three years of heavy travel had already destroyed half of their road, with the remainder expected to last only another two years. Already more than \$15,000 in debt, the company claimed that it would fold unless the legislature increased its toll rates.

The Saranac was not alone in seeking legislative help. The New York legislature granted numerous rate increases and other concessions to plank road companies. In 1852, 1853, and 1854 we find dozens of acts authorizing companies to borrow money, to erect additional tollgates, and to increase their tolls. In 1853 a general law increased toll rates about 25 percent.<sup>54</sup> Numerous acts provided for highway labor to be performed on specific

plank roads, until an 1853 general law grant the privilege to all companies.<sup>55</sup> In 1853, 19 acts authorized plank road companies to abandon or turnpike part of their road, including an act to permit sale or abandonment of any plank road in Clinton or Essex County.<sup>56</sup> In 1854, the legislature seemed to officially acknowledge the failure of plank roads by permitting all companies to abandon or turnpike all or part of their road.<sup>57</sup>

Despite the favorable legislation, most companies were not as lucky as the Saranac. Concentrating our efforts on New York State, we checked county histories, local historical societies, court cases, and annual reports to find out how long plank road companies operated. We could find mention of only 68 companies operating after 1865.<sup>58</sup> According to the evidence in the county histories and annual reports, many of the surviving companies functioned as ordinary turnpikes without a special surfacing. For most communities the hopes of improved short-haul transportation were dashed upon a heap of rotten planks.

The minority of companies that survived seemed to perform moderately well after enduring the moment of revelation. The Northern Plank Road Company of Oneida County, New York provides a good example. According to account books, dividends for the company's first two years (1849 and 1850) averaged more than 11 percent. But then the moment of revelation struck, and for the next three years dividends averaged a paltry two percent as the company struggled to replank. During one of the sub-par years (1852), dividends were zero and the company advertised bids for one million board feet of plank. After the initial storm passed, the company seemed to adjust to the new replanking schedule. For the remaining four years covered in the company's financial books, dividends averaged

about four percent a year.<sup>59</sup> The Northern Plank Road suggests that if a company could survive the initial shock of early replanking, it had a good chance of providing both improved transportation and moderate dividends.

We have examined in detail the annual reports filed by plank roads from Albany and Monroe counties in New York to see if many roads could match the profitability of the Northern. The majority of the roads in the two counties did not file any annual reports, suggesting that they quickly went under. John Taylor, a prominent businessman in the Albany area, typified the plight of their investors. In 1850 Taylor invested \$900 in three local plank roads. Over the twelve year period his combined dividends totaled less than \$80. In 1856 he unloaded \$250 worth of stock in the Albany and Rensselaerville Plank Road Company for the rock-bottom price of \$25. His investment in the Albany and Fort Hunter Plank Road was especially disastrous. Taylor scribbled in his account book that "This road worn out and burst out without paying dividends, leaving heavy debts."<sup>60</sup>

As suggested by Table 3, even the longer-lasting roads in the two counties paid sub-par dividends. Table 3 shows the companies that filed at least 3 consecutive annual reports in Albany and Monroe counties. In the early years of the boom most companies did not file annual reports regularly; only 9 out of 26 filed three or more consecutive annual reports. The few companies that did file reports usually did so in the 1860s and 1870s, when such bureaucratic procedures had become more common. The companies represented in Table 3 are therefore the longest-lasting roads, and hence the most profitable. With the exception of the Coreyman's and Westerloo Road, the companies in Table 3 paid dividends below 5 percent, and the average dividend of all the companies was barely above 2 percent. The

reports of the companies also suggest that their roads had been converted to stone surfacing, while the original routes had been greatly shortened. Indicative is an 1879 report of the Rochester and Hemlock Plank Road company to the commissioners of Monroe County. Despite switching to stone and shortening the road from 12 to 3 miles, the company "has for the last six years paid only a two and one-half per cent. dividend, while for the ten years just preceding that time no dividends whatever had been paid to its stockholders."<sup>61</sup>

[Table 3 here].

## V. Concluding Comments

State governments, especially the New York State legislature, greatly aided the dissemination of information about plank roads. As historian Carl Abbott has noted, "the passage of the New York plank road law...may have seemed a kind of official seal of approval."<sup>62</sup> Both Geddes and Owen included a copy of the New York laws in his promotional pamphlet to help legitimize plank roads.

The "official seal of approval" for the highly exaggerated durability estimates highlighted the glaring lack of means to evaluate investment information. Short of travelling to Toronto, investors had no ways of independently evaluating the claims of plank road promoters. The same problem also existed for antebellum railroad securities, many of which misled investors about their chances of success. State and local governments took no responsibility for protecting naive investors. Indeed, the plank road boom demonstrates that

state governments played a crucial role in disseminating inaccurate information. As Alfred Chandler has outlined, the proliferation of investment opportunities led to the rise of business analysts like Henry Varnum Poor, who specialized in providing potential investors with accurate information about railroads. Poor, ironically enough, began publishing the American Railroad Journal in 1849, the height of the plank road movement.<sup>63</sup>

One of the most interesting aspects of the plank road boom were the motivations of the various promoters.<sup>64</sup> Although promoters could reap some pecuniary rewards--a well-known book usually sells well, and an acknowledged expert is sometimes a high-paid consultant--people like Geddes, Kingsford, and Owen hungered for something more than money. As historian Richard Brown shows in his recent study Knowledge is Power, the diffusion of information became a preoccupation with many nineteenth-century Americans.<sup>65</sup> Following Brown, our study suggests that antebellum Americans attached considerable social status to those who spread useful information. The desire for renown may have led the promoters to fool themselves into thinking that plank roads would last ten years instead of four.

Promoters searching for fame often benefit society, and it often pays to be on the cutting edge of an improvement. But such a promoter always runs the risk of backing the wrong horse. George Geddes' horse opened well--the plank road boom probably helped George win a state senate seat in 1848--but it faltered down the stretch. His career as a promoter and engineer was badly damaged. Although Geddes won the Republican nomination for state engineer in 1857, the opposition argued--perhaps with plank roads in mind--that "It is impossible for him [Geddes] to make the proper calculations from an



engineer's calculation book, or to make accurate computations."<sup>66</sup> Geddes lost, and never held an official position after he departed the Senate in 1851. He retreated to his farm near Syracuse, spending his remaining days as a farmer, amateur inventor, agricultural writer, and local orator.

## Endnotes

1. The story of how plank roads got their start was first told by William H. Bogart, a clerk with the New York state legislature, in "The First Plank Road Movement," Hunt's Merchant Magazine, 24 (1851), pp. 63-65.
2. Plank roads had apparently been introduced in Canada by a British diplomat who had seen them in Russia. The story is mentioned in many of the promotional pamphlets, but we have found no independent documentation.
3. Norman Geddes, Genealogy of the Geddes Family Deriving from Paul Geddes, 1660-1720 (No publisher, 1926), pp. 22-23. This genealogy can be found at the Brooklyn Historical Society.
4. George Geddes, Address of the Hon. George Geddes Delivered at the First Agricultural Fair, of the Skaneateles Farmers' Club (Auburn: Knapp and Peck Printers, 1856), pp. 3-4.
5. Kenneth Sokoloff and B. Zorina Khan, "The Democratization of Invention During Industrialization: Evidence from the United States, 1790-1846," NBER Working Paper Series on Historical Factors in Long-Run Growth, No. 10 (December 1989).
6. Geddes Genealogy, pp. 19-21.
7. The Cultivator, 1 (October 1844), p. 309.
8. Bogart, "First Plank Road Movement," p. 65.
9. George Geddes, "Plank Roads," Scientific American, 5 (April 27, 1850), p. 254.
10. George Geddes, Observations Upon Plank Roads (Syracuse: L. W. Hall, 1850), p. 11.
11. "Report of the Committee on Roads and Bridges, in Relation to a General Law for Plank Roads," New York State Senate Documents, Document 50 (1847), p. 5.
12. Laws of New York, 70th Session (1847), Chapter 210, pp. 216-31.
13. Laws of New York, 70th Session (1847), p. 226.
14. See, for example, George Rogers Taylor, The Transportation Revolution, 1815-1860 (New York: Rinehart and Company, 1951), p. 18; Roger Haydon, Upstate Travels: British Views of Nineteenth-Century New York (Syracuse: Syracuse University Press, 1982), pp. 15-20.

15. "Reports on Roads, at the Internal Improvement Convention of the State of New York..." Bound with item 385 N559 at the New York State Library (1836), p. 4.
16. Ronald Seavoy, The Origins of the American Business Corporation, 1784-1855 (Westport, CT: Greenwood Press, 1984), pp. 177-79.
17. See, for example, The Plough, Loom, and Anvil (May 1847), pp. 507-509.
18. W. M. Gillespie, A Manual of the Principles and Practice of Roadmaking, Third Edition (New York: A. S. Barnes, 1850), p. 248.
19. "The Report of the Committee, Appointed at a Meeting of the Citizens of Ithaca, New York," Pamphlet at the New York City Public Library (1848), p. 16.
20. William Kingsford, "A Few Words on Plank Roads," in History, Structure, and Statistics of Plank Roads in the United States and Canada (Philadelphia: A Hart, 1851).
21. William Kingsford, The Canadian Canals: Their History and Cost (Toronto: Rollo and Adam, 1865); A Canadian Political Coin: A Monograph (Ottawa: E. A. Perry, 1874); and The History of Canada, Ten Volumes (Toronto: Roswell and Hutchison, 1887-98).
22. "Progress of Plank Roads in New York and Canada," Hunt's Merchant Magazine, 27 (October 1852), p. 508.
23. Kingsford, "A Few Words," p. 17.
24. The two "Hamilton County" plank roads that Kingsford mentions ended more than five miles from the Hamilton county line, and nobody from Hamilton county invested in them.
25. Kingsford, "A Few Words," p. 6.
26. J. S. Skinner, "On Roads in General" in History, Structure, and Statistics of Plank Roads in the United States and Canada (Philadelphia: A. Hart, 1851).
27. Plough, Loom, and Anvil (May 1847), pp. 507-09; (June 1849), pp. 762-65.
28. Robert Dale Owen, A Brief Practical Treatise on the Construction and Management of Plank Roads (New Albany: Kent and Norman Publishers, 1850).
29. Richard William Leopold, Robert Dale Owen: A Biography (Cambridge: Harvard University Press, 1940), p. 266.
30. Leopold, Biography, p. 252.

31. Owen, Practical Treatise, pp. 17-18.
32. Owen, Practical Treatise, p. 85.
33. Gregg's promotional activities are outlined in Broadus Mitchell, William Gregg, Factory Master of the Old South (Chapel Hill, North Carolina: University of North Carolina Press, 1928), pp. 152-63.
34. William Gregg, "Essay on Plank Roads," DeBow's Southern and Western Review, published in three parts: 10 (April 1851), p. 475; 10 (June 1851), pp. 665-667; 11 (July 1851), pp. 63-64.
35. Gregg, "Plank Roads," final part (June 1851), p. 667.
36. Prairie Farmer, VII (March 1847), pp. 123-4; IX (July, November 1849), pp. 228-9; p. 347.
37. North Todd Gentry, "Plank Roads in Missouri," Missouri Historical Review, 30 (1937), pp. 272-87.
38. Quoted in Joseph Durrenberger, Turnpikes: A Study in the Toll Road Movement in the Middle Atlantic States and Maryland (Valdosta, Georgia: Southern Stationary and Printing Company, 1931), p. 146.
39. DeBow's Review, 2 (1854), p. 382.
40. "Report on Roads, at the Internal Improvement Convention," p. 3.
41. Kingsford, "A Few Words," p. 7.
42. Ira Osborn Baker, A Treatise on Roads and Pavements (New York: John Wiley and Sons, 1905), p. 31.
43. Roberta Balstad Miller, City and Hinderland: A Case Study of Urban Growth and Regional Development (Westport, Connecticut: Greenwood Press, 1979), p. 51.
44. Quoted in John E. Raitt, Ruts in the Road, vol. 3 (Delhi, NY: John E. Raitt, 1983), p. 25.
45. The Long Island Democrat (March 12, 1850), p. 2c.
46. Fredonia Censor (December 30, 1851), p. 1.
47. "The Report of a Committee...of Ithaca New York" (1848), p. 6.
48. "Federalism and the American Economic Order, 1789-1910," Law and Society, 10 (1975), pp. 57-118.
49. Robert B. Cialdini, Influence: How and Why People Agree to Things (New York: William Morrow & Co., 1984), pp. 115-162.

50. Robert J. Shiller, "Stock Prices and Social Dynamics," Brookings Papers on Economic Activity, 2 (1984), pp. 457-498. We thank Kenneth Sokoloff for this reference.

51. Thomas Roy, Remarks on the Principles and Practice of Road-Making, Applicable to Canada (Toronto: H. and W. Roswell, 1841), p. 32.

52. Kingsford (p. 10) estimates that planks were about 70 percent of the initial cost of the road; Owen (p. 80) says that planks would make up about 57 percent of the initial cost of the road; while Gillespie (p. 245) argues that planks would make up 67 percent of the initial cost. Most of the annual reports do not give cost breakdowns, but we have found cost figures of 4 plank roads in historical societies and libraries: The New Baltimore Plank Road (Greene County Historical Society in Coxsackie, New York), New Berlin and Brookfield Plank Road Company (New Berlin Public Library in New Berlin, New York), Northern Plank Road (Oneida Historical Society in Utica, New York), and the Saranac River Plank Road ("Report of Directors," cited below). The average cost of the planking for the four roads was 63 percent.

53. Report of the Directors of the Saranac River Plank Road Company, Submitted to the Stockholders (Saranac (?), NY: J. W. Tuttle, 1853), p. 2.

54. Laws of New York, 76th Session (1853), p. 535.

55. Laws of New York, 76th Session, (1853), p. 1206.

56. Laws of New York, 76th Session (1853), p. 32.

57. Laws of New York, 77th Session (1854), p. 167.

58. Our figure of 68 is a minimum. A company could have been in business without filing an annual report, and county historians sometimes overlooked functioning roads. On the other hand, longer-lasting roads would have been likely to leave some documentation of their existence. The 68 figure underestimates the number of surviving plank roads, but not by much.

59. Northern Plank Road Company Dividend Book, Oneida County Historical Society in Utica, New York (1848-58).

60. Private notebook of John Taylor of Albany, New York. Photostat copy in the manuscript collection of the New York State Library.

61. Petition of the Rochester and Hemlock Plank Road Company for Reincorporation (1879), filed at the New York Secretary of State's Office.

62. Carl Abbott, "The Plank Road Enthusiasm in the Antebellum Middle West," Indiana Magazine of History, 67 (June 1971), p. 115.

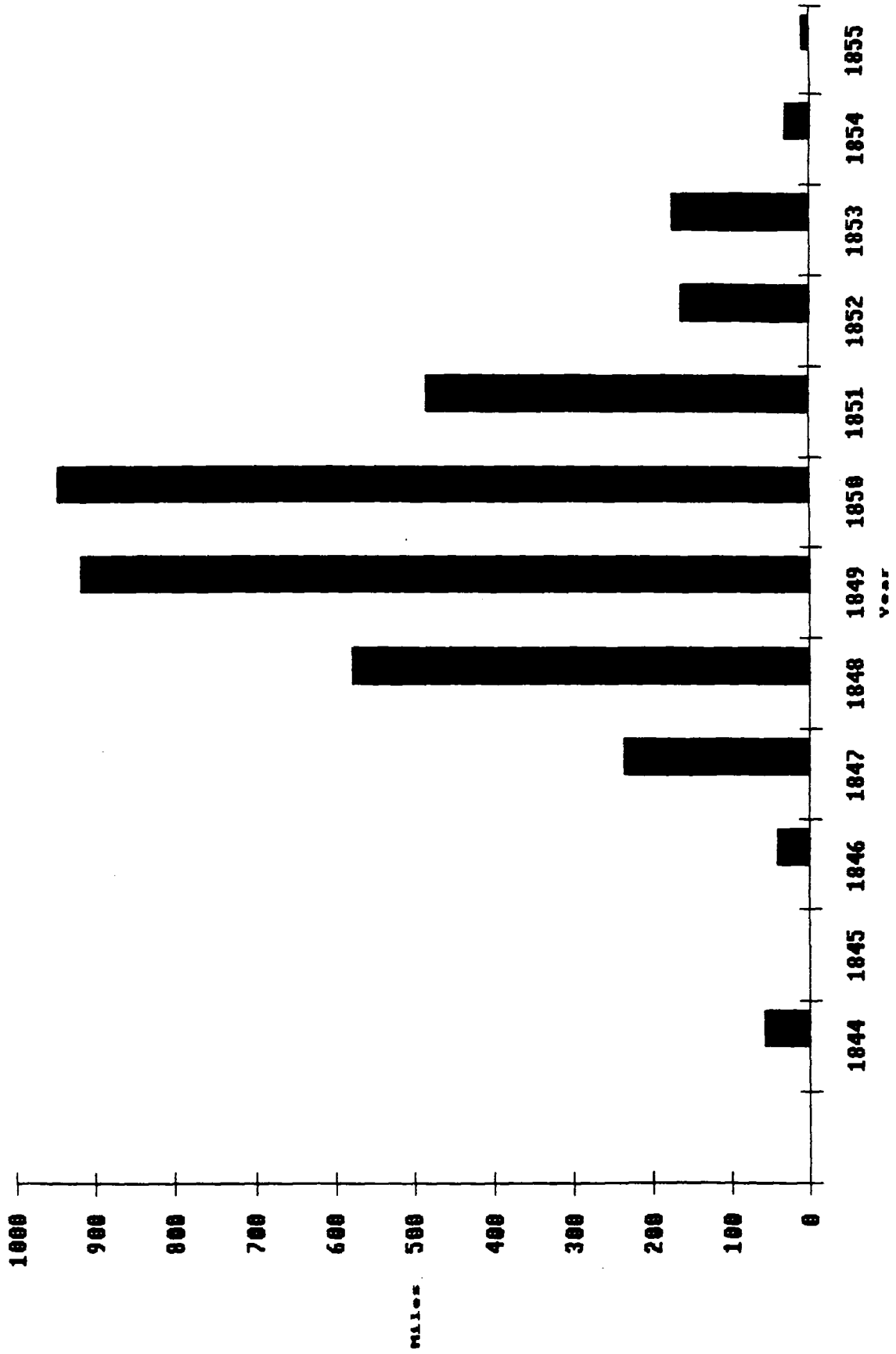
63. Alfred Chandler, "Henry Varnum Poor: Business Analyst," in Thomas K. McCraw, The Essential Alfred Chandler: Essays Toward A Historical Theory of Big Business (Boston: Harvard Business School Press, 1990), 23-45; originally published in Explorations in Entrepreneurial History, 2 (1950), 180-202.

64. We want to stress that promoters--those who provided information about plank roads--were a distinct group from investors, those who provided capital. The prospect of large dividends, higher land values, and increased business primarily motivated most investors.

65. Richard Brown, Knowledge is Power: The Diffusion of Information in Early America, 1700-1860 (New York: Oxford University Press, 1989).

66. Atlas and Argus (October 18, 1857).

**Figure 1**  
**Plank Road Miles Chartered in New York State, 1844-1855**



Source: Session Laws of New York Legislature and "Plank Road Reports," 5 vol. MSS in New York State Department.

Table 1  
Plank Road Incorporation by State

<u>State</u>	<u>Number</u>
New York	335
Pennsylvania	315
Ohio	205
Michigan	122
Illinois	88
North Carolina	54
Missouri	49
New Jersey	25
Georgia	16
Iowa	14
Vermont	14
Maryland	13
Connecticut	7
Massachusetts	1
Rhode Island	0
Maine	0

Notes: Ohio is through 1851; Pennsylvania, New Jersey, and Maryland are through 1857. Few plank roads were chartered after 1857.



Table 1 (Continued)

Sources:

New York: "Plank Road Reports;" 5 vol. MSS in New York State Department containing articles of association of plank road companies; Pennsylvania, Maryland, and New Jersey: Joseph Durrenberger, Turnpikes: A Study of the Toll Road Movement in the Middle Atlantic States and Maryland (Valdosta, Georgia: Southern Stationary Company, 1931), p. 145; Ohio, Iowa: Carl Abbott, "The Plank Road Enthusiasm in the Antebellum Middle West," Indiana Magazine of History, 67 (June 1971), p. 107; Michigan: Index of Local and Special Acts of the State of Michigan, 1803-1927, Compiled by Dennis E. Alward and Charles F. Pierce (Lansing, Michigan: Robert Smith, 1928); Illinois: "Charters Granted by Special Act prior to 1872, Roads," Illinois Office of the Secretary of State, undated; North Carolina: Robert B. Starling, "The Plank Road Movement in North Carolina--Part I," North Carolina Historical Review, 14 (January 1939), p. 8; Missouri: North Todd Gentry, "Plank Roads in Missouri," Missouri Historical Review, 30 (1937), pp. 273; Georgia: Official Code of Georgia Annotated 42 (Charlottesville, VA: The Michie Co., 1982), pp. 895-96; Connecticut, Maine, Massachusetts, Rhode Island, and Vermont: Frederick J. Wood, The Turnpikes of New England (Boston: Marshall Jones Co., 1919), p. 43.

Table 3

Profitability of P. R. Companies Filing 3 or more Annual Reports  
Albany and Monroe Counties, New York

Name of Plank Road Company	Years for Reports	Average Annual Tolls (\$) (Avg. per mile)	Average Annual Costs (\$) (Avg. per mile)	Average Annual Dividends (\$)
Albany, Fort Hunter	1851-54	3,482 (?)	-----	0
Albany, Mohawk	1864-68	2,078 (594)	2,306 (658)	0
Albany, Schoharie, and Rensselaerville	1878-90	7,468 (679)	5,179 (470)	2,086 (4%)
Albany, Sandlake	1888-90	2,927 (?)	2,939 (?)	0
Coreyman's, Westerloo	1863-82	3,585 (1,119)	2,076 (692)	1,035 (7.5%)
Rochester, Gates	1866-90	1,582 (?)	1,209 (?)	374 (2.7%)
Rochester, Greece	1853-59	4,182 (?)	-----	370 (3%)
Rochester, Hemlock	1863-79	-----	-----	450 (1%)
Rochester, Pittsford	1865-76	2,638 (879)	1,696 (565)	983 (4.6%)

Table 2  
Percentage of Plank Road Investors from Small Towns

Major City (Number of Roads)	Capital Invested by Residents of Major City	Capital Invested by Residents of Surrounding Towns	Percentage of Capital Invested by Surrounding Towns
Albany (6)	\$37,625	\$64,525	63%
Buffalo (3)	\$2,600	\$24,925	91%
Rochester (10)	\$20,125	\$94,400	18%
Syracuse (6)	\$35,300	\$37,550	52%
Utica (7)	\$40,950	\$105,900	72%
<b>TOTALS</b>	<b>\$95,650</b>	<b>\$327,300.</b>	<b>77%</b>

Note: The only roads covered are those that terminated in major city.

Sources: "Plank Road Reports;" 5 vol. MSS in New York State Department containing articles of association of plank road companies.

Table 3 (continued)

Sources: "Plank Road Reports;" 5 vol. MSS in New York State Department containing articles of association of plank road companies.

Notes: The table only covers companies that filed three or more consecutive annual reports.

Seventeen (17) chartered companies in the two counties failed to meet this requirement.

Many companies in the table may have been operating as ordinary turnpikes. The percentage figure in the dividend column refers to percentage of capital stock.