



**A SURGE OF HOPE: PUBLIC REACTION TO  
ARGUMENTS FOR CONSTRUCTION OF  
NARROW-GAUGE RAILROADS IN  
CALIFORNIA, 1870-1873**

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**Two Decades of Improvements**

From the onset of the 1849 gold rush until the present day, Californians have been among the most transportation-conscious of Americans. In the twenty-year period from 1849 to 1869, Californians witnessed what can only be described as an impressive array of changes in the provision of transportation services. Indeed, from the early summer of 1849, when virtually no public transportation services were available, until the spring of 1869, when the first trans-continental railroad was completed, an unending succession of internal and external transportation improvements occurred.

Between 1849 and 1850, for example, approximately fifty steamships were put into service on the waters of San Francisco Bay and at various points along the Sacramento and San Joaquin Rivers.<sup>1</sup> The same period saw the inauguration of regularly-scheduled overland transportation by stagecoach,<sup>2</sup> and by the 1860's at least twenty-eight daily

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stage lines were operating over almost 2,000 miles of California roads.<sup>3</sup> Between 1855 and 1868, approximately 300 miles of railroad were constructed within the state,<sup>4</sup> which meant that Californians in 1869, in sharp contrast to their 1849 counterparts, were served by almost every form of transportation and communication facility that the technology of their day had produced.

### **Pessimism in the Face of Progress**

At the outset of the 1870's, however, Californians were anything but satisfied with their transportation system. Discontent focused upon the railroads, most notably upon the Central and Southern Pacific Railroad Companies. In earlier days, Californians had witnessed transportation monopolies in both steamboating and staging.\* Yet, these failed to arouse anywhere near the high pitch of indignation that was evoked by the Central Pacific's apparent stranglehold on the state's economy. At a time when mining was decreasing in significance and agriculture, especially the growing of wheat, was assuming increasing importance as a source of wealth to both the state and the individual, Central Pacific's cavalier approach to routing and rates, more than any other combination of factors, served to alert California communities and citizens to the effects that transportation facilities, or the lack of the same, might have upon their future prospects for growth and prosperity.

Several comments which appeared in California newspapers during 1869 and early 1870 may help to illustrate not only how conscious of transportation Califor-

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\*By 1854 competitive rate wars prompted a majority of the state's steamboat operators to band together and form the California Steam Navigation Company, which then stabilized rates and for several years thereafter was able to force most would-be competitors from the field. In the same year, rate wars also prompted a majority of stage line operators to amalgamate and form the California Stage Company. For at least two decades this company then controlled most of the staging north of the Techachapis.

nians had become by the late 1860's, but also why news of a system for building theoretically inexpensive narrow-gauge railroads would provide such an immediate flurry of excitement in the state. The Sacramento *Union*, in January, 1869, for example, noted that "in order to extend railways, especially into sparsely settled districts, they must be cheapened . . . if a cheap and popular system of railroad construction can be devised, it will be more economical in the end than ordinary wagon roads, while it will avoid the extension of vast monopolies."<sup>5</sup> At the time, the *Union* could suggest only that wooden rails might be used for the construction of feeder lines in agricultural and sparsely settled areas in order to reduce the cost of such feeders to levels which local communities could afford.<sup>6</sup>

Early in 1870 the San Francisco *Call* ran three articles by J. Ross Browne, who argued that without railroads growth and progress were impossible; and, therefore, every effort should be made to aid their construction. Eastern states, noted Browne, outstripped California, not because they had better natural resource potentials or climatic possibilities, but because of their better transportation facilities. An Easterner arriving in California, said Browne, could:

. . . travel through the lower tier of [inland] counties and see magnificent tracts of arable lands, lying waste and desolate . . . [and] find in many places indications of decay rather than progress; no provision made to meet the seasons of drought; no means of communication with market, save natural roads, almost impracticable in wet weather; no organized effort to secure population or facilities for travel and the transportation of freight . . .<sup>7</sup>

In Browne's day it cost as much, by round trip from San Francisco, to visit some of California's southern San Joaquin Valley counties as it did to cross the continent, while the cost of transportation from many central valley points of production to a port of shipment exceeded freight charges by water from San Francisco to New York.<sup>8</sup> All that was needed to change this situation and develop the vast

agricultural and industrial potential of these areas, held Browne, was to make them accessible. Lack of adequate transportation, argued Browne, was costing the southern counties more, in terms of lost potential production and land values, than it would to build railroads, whatever their cost.<sup>9</sup> Browne's calculations were, by the way, all based upon the cost of constructing standard-gauge lines.\*

The *Stockton Gazette*, in June of 1870, printed a letter to the editor claiming that California trailed all other states in aiding internal improvements, and especially in aiding its railroad system. Lamenting this situation the writer observed:

It cannot but be evident to all Californians that we need railroads instead of mule and bull teams for transportation; not a mountain county in the state, to say nothing of the agricultural districts that has not paid more since 1850, millions of dollars more for merchandise by extra freight over and above railroad freight . . . than would cost to thread the state with railroads.<sup>10</sup>

Like Browne, this writer speaks of standard-gauge railroads; and, in effect, declared that even as expensive as they were, it was costing Californians more *not* to build railroads than it would to build them.

The *Mining and Scientific Press* also chose June of 1870 to point out that Santa Cruz County needed a railroad to bring it into more direct communication with the rest of the world. Coasting vessels, steamers, and stages, which then provided the county's links to the rest of the world, suggested the *Press*, were not only slow but also inefficient. The *Press* reporter, however, was a bit more conservative than Browne, for he did not demand railroads whatever their cost; rather, he stressed that citizens:

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\*Technically, no "standard" gauge existed in Browne's day. In his articles, Browne alludes to the 4 feet 8½ inch gauge used by the Central Pacific Company. It was not until 1886, however, that the 4 feet 8½ inch gauge was formally adopted as the "standard" gauge of the United States.

. . . should not be taxed to build a railroad for the benefit of capitalists; but themselves should take stock in a joint company, so organized that no advantage can be taken to swell the grasping avarice of pretending benefactors. Railroads are needed; but no country should be despoiled to build them for greeding companies as a means of sapping the very life out of industrial pursuits. Railroads should benefit, not ruin a country; assist, not impoverish it. But until some things change, not much hope remains.<sup>11</sup>

By mid 1870 observations such as these had become commonplace. Whether or not California's 1870 transportation facilities really were inadequate to community needs is irrelevant. The significant fact is that Californians *believed* their transportation facilities were inadequate and sought something better. Clearly, most California residents felt railroads offered the best hope for a solution to their transportation problems, but in many parts of the state lack of population often made it impossible for local communities either to finance their own railroads or to attract outside capital to build them. Many Californians simply could not agree with Browne's assertion that it cost more *not* to build railroads than to construct them at standard-gauge prices, usually considerably in excess of \$40,000 per mile. Often, the only alternative was to invite in the existing Central Pacific monopoly and then pay its exorbitant rates. For many communities the *Press* reporter's observation, ". . . until some things change, not much hope remains,"<sup>12</sup> seemed all too true. Yet, though the *Press* reporter in question had no way of knowing it, even as he framed his sentences the potential for change was at hand, and hope would be rekindled anew.

### **A New Idea from the Old World**

The basis of change and rekindled hope would come from Wales, where since 1863 Charles Easton Spooner and Robert Fairlie had been experimenting with what we now call the narrow gauge. In the early months of 1870, Fairlie, at an An-

nual Meeting of the British Railway Association, summed up the results of their work in a paper entitled, "The Gauge for the Railways of the Future."<sup>13</sup> Essentially, Fairlie asserted that narrow-gauge railways could provide:

1. A large saving in the cost of initial construction.
2. Improved ratios of paying to non-paying train loads.
3. A significant reduction of wear and tear of permanent way, resulting from the use of light rolling stock.
4. Savings from reduced wear and tear of train wheels, due to reduced weight on each wheel.
5. A large proportionate increase in locomotive power.
6. A proportionate increase in velocity resulting from the light system.
7. Greater economy in working traffic.
8. Comparative increase in capabilities of traffic.<sup>14</sup>

As early as July, 1870, the *Mining and Scientific Press* took note of an early statement by C. E. Spooner to the effect that railroads built to a gauge of 2 feet 6 inches, at half the cost of standard-gauge roads, could handle all envisionable traffic and would last for twenty years.<sup>15</sup> In September, the *Press* reported briefly on a 2 foot 6 inch-gauge industrial railroad in Pennsylvania, but referred the reader to *Van Nostrand's Magazine* for a full account.<sup>16</sup> The narrow-gauge concept first made front page news in California on October 29, 1870, when the *Mining and Scientific Press* devoted four full columns to a summary of Fairlie's previously mentioned paper.<sup>17</sup> A few days later the popular press took notice of the narrow gauge, as the *San Francisco Call* observed:

The subject of constructing railroads of narrow gauge . . . for the transportation of grain from the interior to the coast has been . . . widely discussed in California of late. It seems . . . these narrow-gauge roads are peculiarly adapted to the physical characteristics of the state, and would, by their cheapness, come into general use if once introduced. It is said they would cost only one-half to three-fifths as much as ordinary railroads, and that the newly developed Fairlie engines give at once great tractile power, a good rate of speed, and perfect evenness of movement.<sup>18</sup>

The *Call* further indicated that the *Monterey Republican* was already urging construction of a narrow-gauge road to the Salinas Valley, where:

. . . grain products would keep the line in active and profitable employment, and the building of . . . [the line] would prove of inestimable benefit to the country whose resources it would develop.<sup>19</sup>

The *Call* expressed little doubt that in the course of a few years California would have a number of "narrow-gauge railroads penetrating . . . agricultural and mining sections, in which the building of ordinary roads would be highly difficult and expensive."<sup>20</sup>

Private citizens, as well as *Call* editors, evidently envisioned a bright future for the narrow-gauge in California. On November 15, 1870, San Francisco's *Alta California* carried news of a new million-dollar corporation. Said the *Alta*:

The Narrow Gauge Railroad Company filed a certificate of incorporation in the County Clerk's office yesterday. The objects of the corporation will be to take contracts to construct, equip, and operate narrow-gauge railroads throughout the United States and countries adjacent thereto, and to receive pay therefore in cash, stocks, bonds, lands and properties or securities of any kind as to this corporation may seem fit; also to own, hold or sell same as may be deemed advisable by the company.<sup>21</sup>

Active promotional efforts during the next two years notwithstanding, the Narrow Gauge Railroad Company attained very few of its declared objectives. It is mentioned here mainly as an illustration of the speed with which some individuals sought to capitalize on Fairlie's claims once they were made known to a transportation-hungry public. Four days later, on November 19, the *Alta* printed a detailed summary of Fairlie's assertions and urged that a proposed Stockton and Copperopolis railway adopt the narrow gauge.<sup>22</sup>

On the same day that the *Alta* urged a narrow-gauge Stockton and Copperopolis, the *Antioch Ledger*, while ad-

mitting that a line conforming to Central Pacific's gauge would be preferred, vowed that a narrow-gauge line from Antioch to Banta would be very welcome indeed. The *Ledger* editor's comments pertaining to the benefits that could accrue from a narrow-gauge road would be repeated time and time again in reference to virtually every narrow-gauge project suggested during the next three years. Said the *Ledger*:

. . . would not the railroad double—yes, quadruple—the value of land for a distance of two miles on each side of it? . . . It is a fact that a railroad from here to Banta's Station would cost hardly more than a macadamized turnpike, and would return a greater percentage on the actual outlay than any other road in the State. No scheme of the kind elsewhere offers so many inducements to the capitalist, none promises so well for the farmer, and nothing else would add so much to the general prosperity of the county.<sup>23</sup>

Though all these assertions could have been true, there is no indication that any entrepreneur ever sought to organize an Antioch to Banta narrow-gauge line and reap the benefits so positively declared. Nonetheless, the claim that land values would double or even quadruple along the line of the route if the road were built is significant; for in the years to come the prospect of increased land value became one of the most commonly used and successful ploys of most narrow-gauge promoters.

Along with the general enthusiasm for the narrow-gauge there was, of course, some doubt and dissent. In late November an article in the San Francisco *Examiner* sharply questioned Fairlie's claims as to the cost and capabilities of narrow-gauge roads, but nonetheless expressed the hope that:

. . . the people of Monterey and Salinas City will try the experiment of building the first narrow-gauge railroad in the United States. We think that a narrow-gauge road would be only a temporary convenience and would soon be converted into a broad [read standard] gauge, conforming with the

gauge of the Southern Pacific Railroad with the view of direct connection with it.<sup>24</sup>

Here the *Examiner* proved a partial prophet, for though a Monterey to Salinas line, as proposed, did not become the first narrow-gauge line in the United States, such a line did become the first narrow-gauge road to operate in California; and it did prove only a temporary expedient. Even as a temporary expedient, however, the *Examiner* could foresee great benefits from the project. Declared the *Examiner*:

The road will open up to settlement a splendid section of country, attract immigration, and greatly enhance the price of landed property along its line . . . With this railroad built every acre of land in the Salinas Valley will be doubled in value. Monterey, moribund, despite its fine harbor and back country, will reverse its backward course and again assume the direction of prosperity.<sup>25</sup>

Again the claim was made for increased land values, this time not just for acreage along the route of the line itself, but for every acre of land in the entire Salinas Valley.

The *Examiner* might have looked upon the narrow gauge as a temporary expedient, but the *Alta California* definitely did not. In response to a letter inquiring about narrow-gauge oscillation and sleeping cars, the *Alta* vowed that the former was no longer a problem, while the latter would surely be available. The *Alta* then continued by expressing its belief that California was:

. . . on the brink of a new era in railways—the narrow gauge era—an era of renewed activity, when every village, almost every farm, may have its railway . . . because science, time, and patience, and a thorough series of experiments have succeeded in working out the great problem that to most people seems an impossibility, namely: That a narrow gauge road . . . can, with proper machinery, handle the same amount of freight in the same length of time over the same length of road for less than 50% of cost in running expenses than it can be done over any wider gauge road . . . the saving in the original cost of the road not being taken into consideration.<sup>26</sup>

As 1870 drew to a close, most Californians probably would have agreed that the *Alta's* concept of a "new era of railways" more accurately depicted the future role of narrow gauges in California than did the *Examiner's* view that these gauges would be but a "temporary convenience." The state's growing contingent of transportation-hungry farmers, its lumbermen and industrialists, its sparsely settled districts and small, isolated communities suddenly could envision railroads built for thousands instead of millions of dollars.

### **Lots of Hope, Little Action**

Following the initial excitement over narrow gauges during November of 1870, news of the new railway system tailed off in December. However, as the new year dawned, the narrow gauge crept back into the news, and there it stayed, as at least a dozen narrow-gauge lines were proposed and discussed. The great majority of narrow-gauge projects suggested during 1871 seldom progressed beyond the stage of talk. Even so, they are important, for they contain information that enables us to single out many of the functions for which Californians felt narrow gauges might be used.

For example, a proposed Marysville, Grass Valley, and Nevada City line elicited this observation from a February edition of San Francisco's *Call*:

The Nevadans are in some sort driven to build this road to Marysville, in preference to tapping the Central Pacific [at Colfax], on account of the present high prices of freight. The Central Pacific Company . . . should take the hint before other communities arrive at a conclusion similar to that of . . . Grass Valley and Nevada, and build detached local lines which must greatly damage its trade . . .<sup>27</sup>

A few weeks later a *Call* editorial observed that expensive (that is, standard-gauge) railroads were only practical where extensive business existed, and suggested that the narrow

gauge seemed likely to solve the difficulty of providing rail access to areas with only a limited business.<sup>28</sup> In May the *Antioch Ledger*, speaking of narrow-gauge railroads in general rather than of a particular road, declared that:

. . . districts where the nature of the territory has hitherto prevented the establishment of rapid means of transportation have now opened to them a sure relief . . . and people of these isolated regions . . . may rest assured that with the advent of the new gauge . . . a new turn of prosperity will dawn upon them.<sup>29</sup>

To the south the *Los Angeles Express* complained not only of that city's isolated position, but also of the advantages being gained by surrounding regions for want of a Los Angeles rail outlet. In response to a suggested narrow-gauge link between San Diego and San Bernardino, the *Express* urged construction of a Los Angeles-San Bernardino line with the observation:

We have repeatedly urged the necessity of a railroad to San Bernardino, as a means of preventing the diversion of the Owens River trade. It now appears that unless speedy action is taken, we are likely to lose not only the trade of the Owens River, but of San Bernardino and the surrounding country as well.<sup>30</sup>

Los Angeles was not alone in its feeling of isolation. *San Francisco's Bulletin*, in commenting upon the need for a rail outlet from Santa Cruz, which served as the state's southernmost point for the shipment of redwood and lime, noted that the city had:

. . . suffered of late years from its isolated position . . . during the heavy weather of winter there may be ten days or more when no vessel can touch at that point; and we have known mail facilities to be cut off for an equal length of time, the road over the mountains having been carried away by floods . . .<sup>31</sup>

Thus, it is clear that Californians early saw the narrow gauge as, among other things, a vehicle for (1) circumventing repressive freight rates, (2) providing rail transportation to areas with only a limited business, (3) providing rail service

in areas of adverse territory, (4) preserving existing trade connections, and (5) eliminating the isolation of local communities from the rest of the state.

Narrow-gauge schemes set forth ranged from those of a purely local nature, such as a proposal to link Walnut Creek and Oakland,<sup>32</sup> to rather grandiose developmental projects many hundreds of miles in length, such as a plan to build from San Francisco to San Diego.<sup>33</sup> Early in 1871, a State Supreme Court decision, which, within limits, authorized cities and counties to aid railroad corporations with money or bonds, was hailed as a stimulus to railroad building.<sup>34</sup> Also adding to the generally favorable impression being made by narrow gauges were the initial reports of operations of the first major narrow-gauge line in the United States, the Denver and Rio Grande Railroad.<sup>35</sup> Even the Southern Pacific was reported ready to lay some three-foot track, if it could be done without invalidating the terms of the company's land grant.<sup>36</sup>

### **Abundant Enthusiasm But No Construction**

Yet, despite an abundance of proposals for lines, a favorable court decision, and a notable absence of opposition to the adoption of narrow gauges, no narrow-gauge lines were being built. A few route surveys were undertaken, but that was all. In June, San Francisco's *Alta California* lamented the lack of progress, while observing that:

. . . If evidence and argument can prove anything, the superior value of narrow gauge railroads for most of the proposed routes in California is conclusively proved . . . yet the public seems to be apathetic on the subject; and . . . movements to push ahead narrow roads . . . have not been promptly undertaken and supported.<sup>37</sup>

The *Alta* went on, however, to express its belief that in the future the railroad would be indispensable to every township and county in which the soil was tilled. Said the *Alta*:

We are fully confident that not many years will pass before every large farm will have its little railroad for transportation within its own borders, and also a connection with the railroad system of the State.<sup>38</sup>

Toward year's end the *Call* could see no public apathy. Rather, the *Call* asserted that narrow-gauge enterprises were being pushed as rapidly as circumstance would admit, and noted that:

. . . Everywhere throughout the State—from Humbolt to San Diego—from Siskiyou to San Bernardino—the demand is made—'Give us railroads that we may develop our natural wealth, and secure a natural market for our products!'<sup>39</sup>

Throughout 1872 and 1873 the rapid proliferation of suggestions for narrow-gauge projects continued. Indeed, so numerous did the proposals become that by April of 1874, J. P. Abbott, owner-editor of the *Antioch Ledger*, was led to remark:

People have gone insane over narrow-gauge railroads. Every county in the State, and almost every village in each, has proposed a narrow-gauge railroad; and to listen to the barroom arguments one would suppose they would all be constructed forthwith.<sup>40</sup>

Though editor Abbott probably exaggerated the situation somewhat, he nonetheless aptly described the mood of the times; for up and down the state, meetings called to discuss the merits of various narrow-gauge schemes had become almost as common as Sunday picnics.

In reviewing the records of various meetings and proposals, it becomes evident that, apart from the ubiquitous opportunity the narrow gauge presented for enhancing real estate values, perhaps the most commonly expressed aim of promoters was to provide a means for resisting existing monopolies, especially the state's railroad monopoly, and securing relief from excessive freight rates.<sup>41</sup> The prevailing attitude toward monopoly is well depicted by a correspondent to the *Sacramento Union* who vows that the absence of a narrow gauge line in his district:

. . . simply means, in the face of the grain-sack 'ring,' the San Francisco wheat 'ring,' the foreign shipping 'ring,' and the railroad monopoly, that the farmer who threshes a thousand tons of wheat this year is just as poor as when he began to fallow his land for the crop.<sup>42</sup>

Closely allied to the anti-monopoly theme of many proposed roads was the notion that the finished line should be, in effect, a people's railroad. The idea was that farmers should take advantage of the slack season to build their own railroads, that is, to get out with their teams, grade roadbeds, lay ties and track, and thus reduce first construction costs to an absolute minimum. Pushing this line of thought, San Francisco's *Call* declared:

. . . short lines of narrow-gauge railroad can be built in every county of the State where such improvements are needed, if only the residents of the counties will themselves take the work in hand. In such cases their own labor, and the labor of their teams, may be called into use; and after the roads are completed, the builders will own them, and derive whatever profit may accrue from their construction.<sup>43</sup>

Though this suggestion was in the long run little heeded, much of the grading done on the Monterey and Salinas Valley Railroad, which in 1874 would become the state's first operable narrow-gauge line, was destined to be performed just as here described, by farmers who owned property along the right-of-way.

There can be no doubt that by January of 1874 a majority of Californians were fully convinced that actual construction of narrow-gauge roads would usher in a period of vigorous growth and prosperity. If, however, narrow-gauge railway systems really were:

- (a) so inexpensive to construct that they cost only one-half to three-fifths as much as standard-gauge lines, and were, in fact,
- (b) well adapted to the physical characteristics of the state,
- (c) capable of increasing land values many fold,
- (d) good for the general prosperity,

- (e) a magnet for immigration,
- (f) capable of restoring life to moribund communities,
- (g) capable of doing the same work as standard-gauge lines at less than half the running expense,
- (h) able to operate profitably even in the most physically adverse territories,
- (i) useful for preserving old trade ties,
- (j) an excellent medium for developing new trade connections,
- (k) able to provide relief from the effects of an isolated position,
- (l) ideal for helping to develop natural wealth,
- (m) a viable means of preventing the extension of monopoly,

and so on, one cannot but wonder why Californians spent almost four years doing little more than talking about this transportation innovation, rather than setting to and building lines and availing themselves of all these many benefits.

In retrospect, it is evident that the delay was due not to any lack of faith in the narrow-gauge system itself, but rather to a lack of funds with which to implement it. Shortly after completion of the first transcontinental railroad in 1869, California suffered a severe economic depression that endured for the better part of a decade. Curiously, Californians had long believed that a transcontinental connection would virtually assure the proper development of their industry and commerce; and as the line neared completion, residents were filled with confidence that their state was about to "enter a new era of prosperity more brilliant than any known in the past."<sup>44</sup> Unfortunately, the railroad did not bring the anticipated benefits. Californians, it seems had:

. . . calculated upon too much, and had invested their money on the basis not of realized results, but of extravagant expectations; and when the completion of the road compelled a comparison between results and expectations, it was found that prices of land generally, and especially in suburban

districts, were far beyond any permanent demand. Everybody wanted to sell, and nobody wanted to buy; and a general and severe panic ensued.<sup>45</sup>

Thus, instead of the expected "era of prosperity," Californians were suddenly faced with an era of intense competition from the East. Local markets were quickly glutted with low-priced goods shipped in by rail;<sup>46</sup> Sacramento, which had taken the lead in building the transcontinental line, shortly found itself declining to a way-station on the route to San Francisco;<sup>47</sup> and even San Francisco itself endured hard times as the new railroad began to haul in large quantities of freight that had formerly come to the state by sea.<sup>48</sup> The panic of 1873 which struck the national economy served only to intensify the depression that had hit California four years earlier.<sup>49</sup> Indeed, in light of the generally unfavorable economic atmosphere of the early 1870's, the initial delay of Californians in implementing narrow-gauge roads is really less surprising than the speed with which some Californians eventually managed to build them.

### **A Promise Largely Unfulfilled**

In the final quarter of the last century, dozens of narrow-gauge railroads would be constructed in California. At various times and in various parts of the state, the narrow gauge would be employed at virtually every task for which a railroad could be utilized. By the early 1890's, when approximately 5 percent of all railroad mileage in the United States was classed as narrow gauge, Californians could claim that almost 16 percent of their trackage was narrow gauge.<sup>50</sup> Even so, it would be difficult to maintain that the narrow gauge ever came close to fulfilling the promise which so many Californians had envisioned for it in the early 1870's.

A relative handful of California's narrow-gauge lines were, at least for a short time, moderately successful. In general, though, whether built to serve as industrial roads

or as common carriers, narrow-gauge lines in California rarely enjoyed either great financial success or a long life. Indeed, the fate of the state's first narrow-gauge line, the Monterey and Salinas Valley Railroad, which went bankrupt after only five years, might be taken as an unhappy symbol of the eventual fate of almost all. In retrospect it is not difficult to find reasons for the general failure of the narrow gauge in California. Though narrow-gauge lines were less expensive to build and operate than standard-gauge lines, they were by no means as inexpensive as their early proponents had claimed. Occasionally a line was built which cost as little as \$8,000 to \$12,000 per mile: but costs of \$20,000 to \$40,000 per mile were more common, while significantly higher costs were now and then recorded. Construction costs, however, ultimately proved less of a hindrance to the narrow-gauge cause than did certain aspects of demography, changes in the legal code, and advancing technology.

A majority of California's narrow-gauge lines had at least one terminus in a county with no more than 20,000 and sometimes fewer than 10,000 inhabitants. In such situations attracting enough business to maintain a profitable operation was a constant challenge. Where lack of customers alone did not suffice to cause narrow-gauge entrepreneurs many a headache, the formation of national and state regulatory commissions, such as the Interstate Commerce Commission and the California Railroad Commission, surely did; for as these new agencies gradually curbed many of the more flagrant policies of the major rail carriers, they also eliminated one of the prime motives that had spurred construction of narrow-gauge railroads. I refer, of course, to the kind of extremely hostile feelings which so many of California's 1870 residents held for the Central and Southern Pacific Railroad Companies. Add to all this a whole series of changes and advances in technology which over a twenty-year period served to increase the operational

efficiency of standard-gauge roads. Add in as well an expanded range of technological options, among them the possibility of utilizing electricity as an energy source, and it is hardly surprising that by the turn of the century a majority of California's narrow-gauge lines were simply hanging on rather than expanding.

By virtually any standard of measurement, the narrow-gauge did not prove to be the panacea for the ills of public transportation which Californians of the 1870's so ardently desired. Still, it would be unfair to deem the narrow-gauge a complete failure. Because of the narrow-gauge, some California communities and rural areas that otherwise might never have been served by a railroad (Tomales, on the line of the North Pacific Coast, for example) were able to enjoy the benefits of rail service; and still other communities were served by rail much earlier than might otherwise have been the case (San Luis Obispo, on the line of the Pacific Coast Railroad, and the Owens Valley, traversed by the Carson & Colorado). Indeed, in light of the entrenched position which both the Central and Southern Pacific had already attained in California before the narrow-gauge was put to the test, perhaps it accomplished all that could reasonably have been expected.

## NOTES

1. John W. Caughey, *California* (New York: Prentice-Hall, Inc., 1953), p. 347.
2. Caughey, pp. 349-350.
3. Oscar Osburn Winther, *The Transportation Frontier: Trans-Mississippi West, 1865-1890* (New York: Holt, Rinehart and Winston, 1964), p. 82.
4. Titus Fey Cronise, *The Natural Wealth of California* (San Francisco: H. M. Bancroft & Company, 1868), p. 668.
5. *Sacramento Union*, January 7, 1869.
6. *Ibid.*
7. Article by J. Ross Browne, *San Francisco Call*, February 2, 1870.
8. *Ibid.*

9. Article by J. Ross Browne, *San Francisco Call*, February 5, 1870.
10. Letter to editor of *Stockton Gazette*, June, 1870.
11. *Mining and Scientific Press*, June 25, 1870.
12. *Ibid.*
13. Robert F. Fairlie, "The Gauge for the Railways of the Future," *Engineering*, Vol. X (September, 1870), pp. 230-231.
14. Fairlie's arguments are neatly summarized in: C. E. Spooner, *Narrow Gauge Railways* (London: E. & F.N. Spon, 1871), pp. 41-42.
15. *Mining and Scientific Press*, July 9, 1870.
16. *Mining and Scientific Press*, September 10, 1870.
17. *Mining and Scientific Press*, October 29, 1870.
18. *San Francisco Call*, November 13, 1870.
19. *Ibid.*
20. *Ibid.*
21. *San Francisco Alta California*, November 15, 1870.
22. *San Francisco Alta California*, November 19, 1870.
23. *Antioch Ledger*, November 19, 1870.
24. *Monterey Republican*, November 24, 1870 (quoting the *San Francisco Examiner*).
25. *Ibid.*
26. *San Francisco Alta California*, November 27, 1870.
27. *San Francisco Call*, February 12, 1871.
28. *San Francisco Call*, March 21, 1871.
29. *Antioch Ledger*, May 20, 1871.
30. *Los Angeles Express*, as quoted in the *San Francisco Call*, September 24, 1871.
31. *San Francisco Bulletin*, August 15, 1871.
32. *Contra Costa Gazette*, July 22, 1871.
33. *San Francisco Call*, June 28, 1871.
34. *San Francisco Call*, May 14, 1871.
35. *San Francisco Call*, August 24, August 31, and October 26, 1871.
36. *San Francisco Bulletin*, August 15, 1871.
37. *San Francisco Alta California*, June 15, 1871.
38. *Ibid.*
39. *San Francisco Call*, November 19, 1871
40. *Antioch Ledger*, April 3, 1873.
41. *Sacramento Union*, April 15, July 11, July 19, and August 17, 1872; also *San Francisco Call*, October 13, October 14, November 10, December 10, and December 15, 1872.
42. *Sacramento Union*, July, 11, 1872.
43. *San Francisco Call*, August 1, 1872; see also *San Francisco Call*, May 18, July 23, and November 28, 1872.

44. John S. Hittell, *A History of the City of San Francisco* (San Francisco: A. L. Bancroft & Company, 1878), p. 367.
45. Hittell, pp. 373-374.
46. Walton Bean, *California: An Interpretive History* (New York: McGraw-Hill Book Company, 1968), p. 219.
47. Caughey, p. 327.
48. Hittell, p. 374.
49. Bean, p. 220.
50. *Eleventh Annual Report of the Board of Railroad Commissioners of the State of California* (Sacramento, Calif., 1889), p. 52.