

## Critique of Paul B. Goodwin's "The Central Argentine Railway and the Economic Development of Argentina, 1854--1881"<sup>1</sup>

by Sylvester Damus<sup>2</sup>

Professor Paul Goodwin argues that: the Central Argentine Railway ( CAR ) was not built ahead of demand but "in response to clearly discerned market patterns and economic opportunity;" and that "analysis of the Central's early years also provides a test to a variant but similar theme---the railroad created demand and was a prime mover in economic development."<sup>3</sup> His conclusions rest on a study of indicators of increased economic activity in the 1850s and 1860s, and especially on a number of glowing descriptions of central Argentina made by contemporaries on the eve of the construction of the CAR or shortly after its arrival to the city of Córdoba. The first conclusion is correct if the emphasis is put on economic opportunity rather than on achievement. The second of his conclusions cannot be totally supported by a detailed analysis of the Central's early years.

The descriptions of Argentina made at the time of the CAR's construction must be discounted, since to some extent they reflected not what the country was like but rather what it was expected to become. Certainly, the shareholders of the railway did not concur in those expectations. And once the railway was in operation, the guarantee and the land grant which induced its construction gave rise to a number of problems, none of which aided the development of the area, but led to the rescission of the guarantee in 1884. By that date, the railway could at last live up to its promise.

Regarding prerailway development, consider Goodwin's statement that population had begun to move into the area between Rosario and Córdoba; in 1859, Villa Nueva counted 1,100 inhabitants and Fraile Muerto, 1,700. The significance of this statement must be diminished by M. G. Mulhall's description of those towns as rather miserable places.<sup>4</sup> These descriptions were still being published in 1875, eight years after the railway had reached Villa Nueva and nine years after it had gone through Fraile Muerto.

The best evidence Goodwin has on the level of economic activity in the province of Córdoba is found in his Table I (p. 617), where he shows the level and increase in trade-related taxes collected by the provincial government from 1867 to 1870. Those figures increased by no less than the runaway rate of 162 percent annually. It must be remembered that in 1867, the CAR had reached Villa Nueva, halfway through the province, and was finished all the way to Córdoba in 1870. Therefore, the trade of Córdoba increased rather late, and at such a phenomenal rate that it must have started from a depressingly low level.

An almost equally tremendous and instantaneous growth occurred at the other end of the line. Allan Campbell's estimates of traffic show 5,200 tons carried by carts and mules in the four months of August to November 1855, or perhaps 16,000 tons per year.<sup>5</sup> Compare this to the two estimates quoted by Goodwin, giving 20,000 tons per year in the 1850s and 14,000 to 16,000 tons in 1864. If there was any trend in these figures, it was downward. Goodwin was led to say, "it is likely that a plateau had been reached and that further expansion of the economy waited on the distinctly superior technology of the railroad" ( p. 622 ). Actually, that plateau had left a line of vision open to a higher peak. In 1866, cartloads in and out of Rosario

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<sup>1</sup> *Hispanic American Historical Review*, vol 58. No. 3, 1978, pages 468-73.

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<sup>3</sup> Paul B. Goodwin, jr. "The Central Argentine Railway and the Economic Development of Argentina, 1854-1881," *HAHR*, 57 (Nov. 1977), 613-632.

<sup>4</sup> M. G. and E. T. Mulhall, *Handbook of the River Plate Republics*, (London, 1875), pp.181-182.

<sup>5</sup> Allan Campbell, *Report of a Survey for a Line of Rail Road Between the City of Córdoba and Some Point on the River Paraná* (London, 1857), pp. 45-46.

were estimated to have been 40,000 to 42,000 tons.<sup>6</sup> Thus carting proved to have been fairly elastic, whereas it was the railway that seems to have been hung up on a plateau. In 1884, eighty percent of the tonnage carried by the CAR either originated or terminated in Rosario. If this measure of the traffic pattern had been constant, it would have taken seven years before the railway consistently surpassed the carts' performance by carrying 42,000 tons in and out of Rosario.

Neither are we impressed by the fact that "the railway was able to earn a profit on an incomplete line with modest passenger and freight traffic (p. 625) and that profits and traffic increased dramatically from 1866 to 1876, as shown in his Table III. Goodwin's interpolations of traffic statistics gave incorrect results and were quite unnecessary. The statistics published by the Argentine government show generally lower figures than the interpolation. For example, Goodwin estimated that 34,000 passengers were carried in the financial year from May 1867 to May 1868, whereas the government statistics give only 22,000 in each of the calendar years of 1867 and 1868.<sup>7</sup>

Traffic statistics properly interpreted show that the CAR was more of a local line serving the neighborhood of Rosario than a factor of transcontinental development. The data we have show that traffic with Córdoba lagged far behind that in Santa Fe. In 1884, 45,203 passengers boarded CAR trains at Rosario. Another 52,043 got on at stations from Ávila to Tortugas, all in the province of Santa Fe.<sup>8</sup> The total number of passengers carried that year was 139,193. It follows that 41,947 originated at stations in the province of Córdoba. There are 111 kilometers from Rosario to Tortugas, and 284 from there to Córdoba. Thus, there were 876 passengers per kilometer of line in Santa Fe, but only 148 in Córdoba. Similar calculations can be made for freight.

**TABLE I: Central Argentine Railway: Distribution of Freight Traffic Between Provinces, 1882 and 1884.**

	Tons originating		Tons terminating	
	1882	1884	1882	1884
At Rosario	....	145,488	....	101,070
Ávila to Tortugas	....	49,790	....	12,439
Total in Santa Fe	86,627	195,278	111,134	113,509
Stations in Córdoba	95,003	109,501	70,496	191,270
Total for the line	181,630	304,779	181,630	304,779
Tons per kilometer:				
Santa Fe	780	1,760	1,001	1,423
Córdoba	334	386	248	673

Sources: Carrasco, *Descripción*, p. 195, and Dirección General de Ferrocarriles, *Estadística*, pp. 30, 32, for distances and p. 417 for the tons carried.

<sup>6</sup>Report of the CAR company meeting of Mar. 28, 1867, in the *Money Market Review*, March 30, 1867.

<sup>7</sup>Argentine Republic, Dirección General de Ferrocarriles, *Estadística de los ferrocarriles en explotación*, Vol. XXII (Buenos Aires, 1916), 415.

<sup>8</sup>Gabriel Carrasco, *Descripción geográfica y estadística de la Provincia de Santa Fe* (Buenos Aires, 1886), p. 194.

One may wonder why the CAR obtained relatively little traffic in Córdoba, even though this included the interchange with the government railways to Cuyo and Tucumán. The problems that arose from the land grant provide part of the answer.

Of 907,392 acres granted to the railway in 1862, 290,000 were received by the company as late as 1883, and in 1887, the government still owed 53,376 acres. All this undelivered acreage was in Córdoba.<sup>9</sup> At first, landowners quite naturally opposed the expropriations required by the grant, asking a compensation which the government could not afford to pay.<sup>10</sup> Then, in 1870, the railway transferred its rights to the newly formed Central Argentine Land Company, and expropriations were halted because the government would not recognize the land company.<sup>11</sup> It was not until 1880 that the government approved the statutes of the land company and took up the allotment of shares to which it was entitled as a railway shareholder.<sup>12</sup> To complicate matters further, the company at one time refused to receive title to any more land unless the provincial governments exempted them from property tax. The company argued that the original concession had exempted them from all taxes. Furthermore, a trade depression had made colonization difficult, and they did not want to pay tax on undeveloped land.<sup>13</sup> According to directors' reports to the shareholders of the company, only one-third of the land grant had been disposed of by sale or lease in 1883, and there was no discernible trend in the average selling price of land until the mid-1880s.

The railway shareholders were a correspondingly unhappy lot. From 1864 to 1881, the railway returned them only five percent per annum.<sup>14</sup> This means that, at least according to the terms of the concession, the railway was unprofitable until 1881, and that the guarantee did not operate as the shareholders were led to expect. Neither did the railway earn seven percent nor did the government make up the difference. The shares of the company were correspondingly quoted below par from January 1871 to January 1881, reaching a low of fifty percent of their par value in 1877. Whatever its causes, this did not help additional railway investment for further development of the trade of the interior provinces.

While the railway was less profitable than expected, the land grant did not increase the profits reaped by the British investors. In 1889, when about half the land had been sold and the company began acquiring land in other areas, a proprietor who had accepted and paid for the land company shares allotted to him in 1870 was actually worse off than one who did not. By reinvestment of all dividends in the company's shares, the first would have had in 1889 a capital of £10,068 accumulated from an initial investment of £1,000 in 1864, while the other--- who had rejected his allotment of land company shares---would have seen the same initial investment grow to £10,183 by 1889. Those brokers unimpressed by Buschenthal's offer of a land grant in lieu of guarantees were not all that wrong.

The guarantee presented further problems impeding the development of the area served by the CAR. The government had insisted on a maximum guaranteed capital of £6,400 per mile. The immediate effect of this was that the original articles of association of the company denied the directors the power to build

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<sup>9</sup>Reports of CAR company meeting of March 10 1876 and Central Argentine Land company meeting of July 31, 1877; June 19, 1884; and June 1, 1888, in the *Money Market Review* of March 11, 1876; Aug. 4, 1877; June 21, 1884; and June 2, 1888.

<sup>10</sup>*Money Market Review*, Oct. 5, 1867.

<sup>11</sup>Report of the Central Argentine Land company meeting of July 31, 1877, in *Money Market Review*, Aug. 4, 1877.

<sup>12</sup>*Ibid.*, July 24, 1880.

<sup>13</sup>*Ibid.*, Aug. 3, 1878.

<sup>14</sup>The rate of return was calculated as the compounded rate of growth of capital by reinvestment of all cash dividends in shares of the company.

extensions or branch lines. It had the additional effect of inhibiting expenditures on the line which were not essential to safeguard the guarantee.<sup>15</sup> Having set a maximum on the guaranteed capital, it was in the government's interest to see as many expenditures as possible accounted for as investments while the railway would have preferred to add them to operating expenses.<sup>16</sup> This problem was aggravated by the railway's declaration of a surplus of revenue---in excess of seven percent of capital---for the year ending May 1875. After that date, the government no longer felt it was necessary to pay the sums claimed annually by the company on account of the guarantee.<sup>17</sup> The fact is that 1874-1875 was an unusual year in which railway revenues were increased by extraordinary items. Freight traffic rose from 75,000 tons in 1874 to 101,000 tons in 1875 and fell back to 62,000 tons in 1876. The 1875 peak was due to extensions of the Central Northern and Andino railways, for which the CAR carried an estimated 33,700 tons of rails, fastenings, and pot sleepers, not counting other construction materials.<sup>18</sup>

It would have been most unusual if an unprofitable railway, unprotected by a government whose guarantee payments had been in arrears, and running through a wasteland of 343,376 acres without definite owners, could have acted as a prime mover in economic development. Its enactment of that role was postponed by fifteen years and required the rescission of the guarantee. The development of the country can therefore not be simply extrapolated straight through the 1870s from developments in the 1850s and 1860s.

In conclusion, while Professor Goodwin's statements quoted at the beginning may still prove correct as generalizations about Argentine development, the Central Argentine Railway provides a particularly unsuitable example of them. Support for them might be found in the study of other Argentine railways.

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### **THE RAILWAY TRAFFIC OF THE PROVINCE OF CÓRDOBA.**

Failing to show much increase in the trade of Córdoba carried out by railway during the first eight years since the Central Argentine Railway Company took the line over from the contractors in May of 1872, the figures below add to the argument made in the above note on *The Central Argentine Railway and the Economic Development of Argentina, 1854-1881*, disputing an early and strong effect of the railway on the development of the province.

The author was gladdened by the confirmation of his estimate of the tonnage of materials carried for public works in 1875. The very similar figure below is not a statistical estimate but an unassailable result of administrative data derived from audited accounts and published in a work that was not accessible at the time of writing the above note. The anomaly of financial results produced by this traffic was noted by Robert Crawford, M.A., in his *Across the Pampas and the Andes*, London: Longmans, Green & Co., 1884, page 290).

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<sup>15</sup>*Investor's Monthly Manual*, May 30, 1874, p. 192; *Money Market Review*, Jan. 10, 1874; Jan. 17, 1874; and CAR meeting report, Sept. 28, 1882; and the *Economist*, July 18, 1874, p. 882.

<sup>16</sup>*Money Market Review*, July 30, 1881.

<sup>17</sup>*South American Journal*, Jan. 20, 1881, p. 15.

<sup>18</sup>The author will supply details of this estimation upon request.

Goods originating at Central Argentine Railway stations in the Province of Córdoba (Tortugas to Córdoba) - 1873 to 1880.

	1873	1874	1875	1876	1877	1878	1879	1880	Total
	(In metric tons)								
Copper	...	...	...	...	...	486	285	159	931
Tin	...	...	...	...	...	4	2	59	64
Lead	...	...	...	...	...	13	34	33	80
Regulus	...	...	...	...	...	112	97	15	225
Various other metals	591	615	536	464	586	24	39	230	3,086
Fresh fruit	111	...	68	74	201	226	172	225	1,076
Dried fruit	21	...	15	16	44	21	104	7	228
Beans, legumes	...	...	...	...	...	65	804	201	1,070
Vegetables	...	...	...	...	...	9	0	...	9
Cereal grains	485	3,569	236	373	746	...	...	...	5,410
Maize	...	...	...	...	...	573	366	39	978
Wheat	...	...	...	...	...	25	1,616	4,274	5,916
Various other grains	...	...	...	...	...	23	36	17	77
Flour	...	...	...	...	...	17	87	241	345
Alfalfa seed	...	...	...	...	...	1	5	35	40
Rice	...	...	...	...	...	1	7	...	8
Tobacco	499	633	387	437	1,304	969	765	958	5,953
Sugar	...	...	...	...	...	0	1	594	595
Animal hair	165	292	338	259	375	236	258	277	2,200
Tallow	...	...	...	...	...	110	88	...	198
Salted hides	307	274	394	336	420	129	289	534	2,683
Dry hides	4,082	3,647	5,240	4,463	5,573	4,429	4,330	5,555	37,319
Hide corners	...	...	...	...	...	...	...	23	23
Leather soles	...	...	...	...	...	658	789	605	2,051
Bones and horns	89	213	2,779	3,472	12,227	11,047	4,565	2,597	36,989
Wool	2,965	1,898	3,612	3,196	3,103	3,293	3,284	3,232	24,582
Firewood	2,198	2,014	3,384	1,193	737	2,602	3,241	3,793	19,162
Hardwoods	...	...	...	...	1,962	147	18	51	2,179
Fence posts	...	...	...	...	...	11	28	...	40
Algarrobo lumber	...	...	...	...	...	328	687	903	1,918

Goods originating at Central Argentine Railway stations in the Province of Córdoba (Tortugas to Córdoba) - 1873 to 1880.

	<b>1873</b>	<b>1874</b>	<b>1875</b>	<b>1876</b>	<b>1877</b>	<b>1878</b>	<b>1879</b>	<b>1880</b>	<b>Total</b>
	(In metric tons)								
Charcoal	...	...	...	...	...	14	61	17	93
Cedar	...	...	...	...	...	341	1,474	1,064	2,878
Material for public works	...	...	...	...	...	0	1,051	...	1,052
Stone and gravel	...	...	...	...	...	197	88	44	329
Limestone	...	...	...	...	...	1,457	4,206	2,755	8,418
Lime	3,628	5,208	1,785	482	452	349	1,011	1,857	14,771
Salt	...	...	...	...	...	...	0	143	143
Cloth	...	...	...	...	...	68	80	55	203
Liquors and "caña"	...	...	...	...	...	654	325	140	1,119
Wines	...	...	...	...	...	107	271	20	398
Various other articles	<u>1,475</u>	<u>1,563</u>	<u>1,280</u>	<u>1,033</u>	<u>1,679</u>	<u>524</u>	<u>793</u>	<u>470</u>	<u>8,817</u>
Total in Córdoba	16,616	19,925	20,054	15,798	29,410	29,269	31,359	31,224	193,656
Total FCCA	60,362	75,003	101,074	62,403	71,927	88,703	111,496	113,317	684,285
In % of total	28	27	20	25	41	33	28	28	28
<i>Per km. of line in:</i>									
Córdoba	59	70	71	56	104	103	110	110	682
Santa Fe	394	496	730	420	383	535	722	740	4,420

Goods received at Central Argentine Railway stations in the Province of Córdoba (Tortugas to Córdoba) - 1873 to 1880.

	<b>1873</b>	<b>1874</b>	<b>1875</b>	<b>1876</b>	<b>1877</b>	<b>1878</b>	<b>1879</b>	<b>1880</b>	<b>Total</b>
	(In metric tons)								
Baggage	...	...	...	...	...	16	29	24	69
Flour	520	38	...	...	...	699	163	73	1,492
Flour and cereal grains	...	...	2,021	384	241	...	...	...	2,646
Bran	...	...	...	...	...	249	58	141	448
Maize	...	...	...	...	...	1	5	3,910	3,917
Potatoes and onions	...	...	...	...	...	384	281	598	1,264
Yerba Mate	2,788	2,372	3,429	1,902	2,440	1,947	2,312	2,763	19,954
Foodstuffs and rice	...	...	...	...	...	381	682	800	1,863
Beer	531	414	806	462	394	499	485	569	4,160

Goods received at Central Argentine Railway stations in the Province of Córdoba (Tortugas to Córdoba) - 1873 to 1880.

	1873	1874	1875	1876	1877	1878	1879	1880	Total
	(In metric tons)								
Demijohns	822	696	1,054	682	527	303	396	401	4,881
Staves	...	...	...	...	...	114	52	70	236
Sugar	2,936	3,817	5,733	3,148	2,388	2,173	1,953	1,711	23,861
Iron	250	621	601	715	324	967	1,557	1,571	6,607
Coal	...	...	...	...	...	125	267	239	630
Kerosene and matches	...	...	...	...	...	585	406	404	1,394
Liquors	2,561	2,222	3,228	1,900	1,559	1,301	1,750	1,455	15,977
Machinery	...	...	...	...	...	475	1,689	961	3,126
Lumber	...	...	...	...	...	123	194	230	547
Bricks and roofing tiles	...	...	...	...	...	177	204	79	460
Fencing wire	...	...	...	...	...	40	239	241	520
Fencing posts	...	...	...	...	...	10	167	78	255
Pine and other wood	738	871	1,008	523	329	...	...	...	3,469
White pine	...	...	...	...	...	310	357	166	833
Drugs and perfumes	...	...	...	...	...	...	87	93	180
Furniture	...	...	...	...	...	133	188	189	510
General merchandise	9,880	9,795	9,122	3,973	8,211	476	3,179	3,367	48,003
Crystals and tableware	...	...	...	...	...	471	365	230	1,066
Dangerous goods	...	...	...	...	...	117	143	205	465
Materials for public works	4,822	17,667	33,713	4,618	384	376	368	99	62,046
Various other articles	<u>1,564</u>	<u>953</u>	<u>3,145</u>	<u>4,051</u>	<u>1,359</u>	<u>1,234</u>	<u>2,476</u>	<u>2,119</u>	<u>16,901</u>
Total in Córdoba	27,413	39,464	63,861	22,358	18,156	13,688	20,051	22,786	227,778
Total by FCCA	60,362	75,003	101,074	62,403	71,927	88,703	111,496	113,317	684,285
In % of total	45	53	63	36	25	15	18	20	33
<i>Per km. of line in:</i>									
Córdoba	97	139	225	79	64	48	71	80	802
Santa Fe	297	320	335	361	484	676	824	816	4,113

Source: Emilio A Rojas de Villafañe, **La economía de Córdoba en el siglo xix**, Revista de Economía del Banco de la Provincia de Córdoba, Córdoba, June 1976, pages 203, 205, based on *Anuario Estadístico de la Provincia de Córdoba*, 1876-1880.

NOTE: Original figures were given in kilogrammes. A zero denotes an amount less than 501 kilogrammes. A blank denotes an exact zero.

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