

**Book Review: Corpuz, Arturo G. *The Colonial Iron Horse: Railroads and Regional Development in the Philippines, 1875-1935*. Quezon City: University of the Philippines Press, 1999.**

**Luzon's Once Extensive Railways**

**Carlos Joaquin R. TABALON**

University of the Philippines Diliman


crtabalon@up.edu.ph

<https://orcid.org/0009-0001-5292-4622>

**ABSTRACT**

The Philippines' experience with rail transport may be characterized as one that is riddled with underappreciation towards the latter. Nevertheless, Arturo G. Corpuz has proven in his book, *The Colonial Iron Horse: Railroads and Regional Development in the Philippines, 1875-1935* (1999), that a diligent look at repositories both in the Philippines and abroad allows the reconstruction of the still-nascent subject of the history of rail transportation in the Philippines. Corpuz shows in *The Colonial Iron Horse* that beyond simply moving people and freight, Luzon's once extensive railways were also a significant factor in the development of its towns in the period straddling the latter part of the Spanish colonial period to the beginning of the Commonwealth period. Despite Corpuz not being a trained historian, *The Colonial Iron Horse* has remained an unparalleled work in Philippine railway history. Beyond documenting Luzon's formerly extensive railway system and discussing its role in shaping the historical trajectories of different places, Corpuz' work is also a useful guide book in our presently transport crisis-laden cities illustrating that transportation infrastructure should always take into account local realities for it to be efficient, economical, and beneficial.

**Keywords:** *colonial iron horse, railways, railway history, regional development, Luzon*

he Philippines' experience with rail transport may be characterized as one that is marked by underappreciation towards the latter. Although it may be argued that in the case of railway history in the Philippines, "there is possibly no history to write

about,”<sup>1</sup> let alone glean any extensive collection of material evidence for historical study, Arturo G. Corpuz demonstrates in his book, *The Colonial Iron Horse: Railroads and Regional Development in the Philippines, 1875–1935* (1999), that a diligent look at repositories both in the Philippines and abroad enables the reconstruction of the still-nascent subject of the history of rail transportation in the Philippines.<sup>2</sup> Corpuz first wrote the material for his

<sup>1</sup> Quoted from Michael Manuel Gonzalez, “The de Manila a Dagupan,” *Asian Studies* 17 (1979): 18–36, <https://www.asj.upd.edu.ph/mediabox/archive/ASJ-17-1979/gonzalez-manila-dagupan.pdf>.

<sup>2</sup> Although there have been efforts to write railway histories of the Philippines, these efforts are nevertheless fragmented and are far more limited in scope as compared to the present work being reviewed. See Felice P. Sta. Maria, “Wheels: Transportation from Waterborne to Air Travel,” in *The Spanish Colonial Period (Late 19th Century): The Awakening*, vol. 7, Filipino Heritage: The Making of a Nation (Felta Book Sales, Incorporated, 1977), 1737–43; Edilberto C. De Jesus, “The Tranvía: A Neat Network of Trolley Cars Links a Contented City to Its Suburbs,” in *The Spanish Colonial Period (Late 19th Century): The Awakening*, vol. 7, Filipino Heritage: The Making of a Nation (Felta Book Sales, Incorporated, 1977), 1788–92; Serafin R. Quiason, “The Philippine Iron Horse,” in *The Spanish Colonial Period (Late 19th Century): The Awakening*, vol. 7, Filipino Heritage: The Making of a Nation (Felta Book Sales, Incorporated, 1977), 1827–33; Vanessa Jane Glynn, “Railroad Policy and Administration in the Philippines in the American Period: 1898–1924” (Masters Thesis, Quezon City, University of the Philippines, 1987); Michael Manuel Gonzalez, “Railroad to Baguio: Progress and Folly,” *Positively Filipino*, January 17, 2018, <https://www.positivelyfilipino.com/magazine/railroad-to-baguio-progress-and-folly>; Michael M. Gonzalez, “Philippine Railroads: Ideology of ‘Progress’ in an American Colony,” *Philippine Social Sciences and Humanities Review* XLV, no. 1–4 (1981): 271–83; Gonzalez, “The de Manila a Dagupan”; Gary L. Satre, “The Metro Manila LRT System - A Historical Perspective,” *Japan Railway & Transport Review* 16 (June 1998): 33–37, [https://web.archive.org/web/20060505060037/http://www.jrtr.net/jrtr16/pdf/f33\\_satre.pdf](https://web.archive.org/web/20060505060037/http://www.jrtr.net/jrtr16/pdf/f33_satre.pdf); Gary L. Satre, “The Cagayan Valley Railway Extension Project: Future Prospects for Global Reach, Local Needs” (8th Annual Conference of the Transportation Science Society of the Philippines, Crown Peak Garden Hotel, Subic Bay Freeport Zone: Transportation Science Society of the Philippines, 2000), <https://ncts.upd.edu.ph/tssp/wp-content/uploads/2018/08/Satre00.pdf>; the articles, research notes, and conference papers in “The Mass Transit System in Metro Manila: From Tranvia to MRT, 1879–2014,” accessed April 30, 2024, <https://riles.upd.edu.ph/>; Judith Camille E. Rosette, “Manila’s Unbuilt Monorail: Transportation and an Alternative Modern Imaginary in the Marcos Period,” *Art Studies Journal* 3, no. 1 (2024): 14–29, [https://artstudiesjournal.upd.edu.ph/wp-content/uploads/2024/03/VOL3\\_ISS1\\_2024\\_ASJ-ARTICLE1.pdf](https://artstudiesjournal.upd.edu.ph/wp-content/uploads/2024/03/VOL3_ISS1_2024_ASJ-ARTICLE1.pdf); Dídac Cubeiro, “El tranvía de Manila (1884–1935),” in *Ferrocarril y Ciudad En Perspectiva Histórica* (VI Congreso de Historia Ferroviaria, Vitoria-Gazteiz, 2012), <http://www.docutren.com/HistoriaFerroviaria/Vitoria2012/pdf/2089.pdf>; Dídac Cubeiro, “Conectando la ciudad al mar: cambios en Manila con la llegada del tranvía (1880–1898),” *TST* 37 (2018): 91–121, [https://www.tstrevista.com/tstpdf/tst\\_37/TST37\\_91-121.pdf](https://www.tstrevista.com/tstpdf/tst_37/TST37_91-121.pdf); Dídac Cubeiro, “The Philippines Railway: A Link with Hong Kong,” in *The Pearl of the East: The Economic Impact of the Colonial Railways in the Age of High Imperialism in Southeast Asia*, Palgrave Studies in Economic History (Palgrave Macmillan, 2023), 121–64; Michael D. Pante, “Ang Sasakyang at Lansangan Bilang Paaralan: Modernisasyon ng Transportasyong Panlungsod at Lipunan sa Manila, 1900–1941,” *Malay* 23, no. 2 (2011): 111–26, <https://www.ejournals.ph/article.php?id=7996>; Michael D. Pante, “The Cocheros of American-Occupied Manila: Representations and Persistence,” *Philippine Studies: Historical and Ethnographic Viewpoints* 60, no. 4 (2012): 429–62, <https://doi.org/10.1353/phs.2012.0035>; Michael D. Pante, “Mga Modernong Manggagawa ng Transportasyong Panlungsod ng Manila, 1900–1941,” *Malay*

dissertation at the graduate program of the Department of City and Regional Planning at Cornell University in 1989 and published it a decade later at a time when reviving railways to solve the already increasing traffic congestion in Metro Manila had become a matter regularly discussed in print news media.<sup>3</sup>

As can be inferred from the title, Corpuz illustrates in *The Colonial Iron Horse* that beyond merely transporting people and freight, Luzon's once extensive railways were also a significant factor in the development of its towns in the period straddling the latter part of the Spanish colonial period to the beginning of the Commonwealth period. The chronological scope of Corpuz' work begins in 1875, when King Alfonso XII of Spain directed the Office of the Inspector of Public Works in the Philippines to develop a plan for a system of railways in Luzon.<sup>4</sup> Corpuz ends the scope of his analysis in 1935, the beginning of the Commonwealth period, which is when the Manila Railroad Company (MRR), the operator of Luzon's railway network, experienced its lowest revenues owing to low levels of sugar haulage and the economic downturn of the earlier years of the 1930s.<sup>5</sup>

In *The Colonial Iron Horse*, Corpuz traces three (3) trends of regional development associated with a railway presence; (1) development following

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25, no. 2 (2013): 21–35, <https://ejournals.ph/article.php?id=8032>; Michael D. Pante, "A Collision of Masculinities: Men, Modernity and Urban Transportation in American-Colonial Manila," *Asian Studies Review* 38, no. 2 (April 3, 2014): 253–73, <https://doi.org/10.1080/10357823.2014.902034>; Michael D. Pante, "Mobility and Modernity in the Urban Transport Systems of Colonial Manila and Singapore," *Journal of Social History* 47, no. 4 (June 1, 2014): 855–77, <https://doi.org/10.1093/jsh/shu023>; Michael D. Pante, "Racialized Capacities and Transgressive Mobility: 'Asian' Laborers and 'Western' Urban Transportation in Colonial Manila and Singapore," *Transfers* 4, no. 3 (December 1, 2014): 49–67, <https://doi.org/10.3167/TRANS.2014.040305>; Michael D. Pante, "Urban Mobility and a Healthy City: Intertwined Transport and Public Health Policies in American-Colonial Manila," *Philippine Studies: Historical and Ethnographic Viewpoints* 64, no. 1 (March 2016): 73–101, <https://search.informit.org/doi/abs/10.3316/informit.851437751593519>.

<sup>3</sup> See Arturo G. Corpuz, "Railroads and Regional Development in the Philippines: Views from the Colonial Iron Horse, 1875–1935" (Doctoral Dissertation, New York, Cornell University, 1989), <https://www.proquest.com/docview/303699704/abstract/63D6FF1FBE064CC9PQ/1>. For a listing of newspaper articles which discuss revival of the Manila area's railways as well as construction of new ones amidst the problem of traffic congestion during the 1990s, see "Newspaper Sources," *The Mass Transit System in Manila: From Tranvia to MRT, 1879–2014*, accessed April 30, 2024, <https://riles.upd.edu.ph/index.php/newspaper-sources/>.

<sup>4</sup> Arturo G. Corpuz, *The Colonial Iron Horse: Railroads and Regional Development in the Philippines, 1875–1935* (Quezon City: University of the Philippines Press, 1999), 28.

<sup>5</sup> Corpuz, *The Colonial Iron Horse*, 196.

railway construction, (2) non-development despite years of railway operation, and (3) development without the railway. Tarlac province's towns fall under the first trend, which Corpuz discusses in Chapter 2. Tarlac's towns served by the Manila-Dagupan line benefited the most following the completion of the line in 1892. As compared to other localities in the adjacent provinces of Bulacan and Pampanga which have access to waterways leading to Manila, the colonial capital, Tarlac towns previously had an inherent disadvantage in establishing seamless linkages with the Manila-centric colonial economy owing to the province being landlocked – this would change when the Manila-Dagupan line was completed. In fact, during the line's first years of operation, Tarlac, the provincial capital, was the most popular passenger and freight destination, and it registered the fastest population growth among other towns served by the line.<sup>6</sup>

Hondagua, a small port town which is now a barangay under the jurisdiction of the municipality of Lopez in Quezon province, exemplifies the second trend of regional development, wherein no significant development occurred even after years of railway operation. In Chapter 8, Corpuz attributes Hondagua's failure to become a bustling town even though it had been served by the Manila-Legazpi South Main Line to the town's position in the wider colonial economy. Hondagua lacked an agricultural commodity to offer; after all, other larger southern towns along the South Main Line such as Lucena and Legazpi were where hemp and copra hauled. Passenger movement was also highly localized, with longer-distance passengers – which constituted the bulk of passenger traffic along the South Main Line – bypassing Hondagua to reach other larger towns.<sup>7</sup>

Olongapo and Baguio illustrate the third trend of regional development. Notwithstanding unrealized plans to construct railway lines heading to Olongapo and Baguio, Corpuz states in Chapters 6 and 7 that the two towns nevertheless grew owing to the particularity of their development factors. Olongapo's isolation from overland transportation links made it dependent on the needs of the Subic Bay Naval Base which the Americans greatly expanded, while Baguio's reputation as a recuperative mountain resort afforded it tremendous developmental support from the American colonial administration and other economically-able private entities.<sup>8</sup>

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<sup>6</sup> Corpuz, *The Colonial Iron Horse*, 36–47.

<sup>7</sup> Corpuz, *The Colonial Iron Horse*, 168–71.

<sup>8</sup> Corpuz, *The Colonial Iron Horse*, 116–22; 141–45, 152–55.

Apart from discussing the railways' impact on regional development, Corpuz also relates them with other themes, such as the MRR officials' persistent attempts to shield railway management from political interference,<sup>9</sup> the MRR's responses to motor vehicle competition,<sup>10</sup> the battling Filipino and American troops' utilization of the Manila-Dagupan line during the Philippine-American War,<sup>11</sup> and the MRR's management of labor challenges during construction of railway lines which passed through difficult terrain.<sup>12</sup> Corpuz' inclusion of such topics supplements the book's focus on regional development, and shows that transport is intertwined with other aspects of history.

The sixty-year periodization of Corpuz' work is made possible by his thorough archival research mainly at the Philippine National Railways Archives in Caloocan and the Bureau of Insular Affairs section at the United States National Archives in Washington D.C. Among the documents which Corpuz mainly perused are MRR reports, correspondences, and memoranda, Philippine Commission reports, US War Department reports, American colonial officials' and soldiers' reports, US Congressional and Senate reports, newspaper clippings, and annual censuses. It is thus not surprising that Corpuz' work is replete with data—much information and many statistics are presented in the form of maps and tables—but the book is not a cold, detached report employing technical jargon. Corpuz' prose is commendable, and by not confining himself to academic literature on urban and regional development, Corpuz' work is further enriched by allusions to José Rizal's optimistic view on railways and discussions on whether certain frameworks – such as the Marxist view that railways are means for military conquest and imperialist exploitation – are appropriate for application in the context of Luzon's railways.<sup>13</sup>

The title, however, is a misnomer, because the book's geographical scope is actually confined to Luzon, as James J. Halsema has pointed out in an earlier review.<sup>14</sup> Moreover, Corpuz inadvertently perpetuates the Black

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<sup>9</sup> Corpuz, *The Colonial Iron Horse*, 60–63.

<sup>10</sup> Corpuz, *The Colonial Iron Horse*, 76–94.

<sup>11</sup> Corpuz, *The Colonial Iron Horse*, 99–107.

<sup>12</sup> Corpuz, *The Colonial Iron Horse*, 145–52, 159–64.

<sup>13</sup> Corpuz, *The Colonial Iron Horse*, 1–3, 96–98.

<sup>14</sup> James J. Halsema, review of *The Colonial Iron Horse*, *Bulletin of the American Historical Collection* 27, no. 4 (1999): 77.

Legend—in the Introduction, he states that “the Manila-Dagupan railroad was the single most important infrastructure built in the Philippines during the Spanish colonial period that was not initiated by the Church.”<sup>15</sup> Nevertheless, his oversight is forgivable because works which discuss Spanish colonial public works only began to emerge in the years after Corpuz had already published *The Colonial Iron Horse*.<sup>16</sup>

Despite Corpuz not being a trained historian, *The Colonial Iron Horse* has remained unmatched work in Philippine railway history in its scope and depth, as no other work has been able to surpass the scope and depth of *The Colonial Iron Horse*. Corpuz’ work also provides an innovative way of looking at the historical development of Luzon’s regions and towns by examining the impact of a certain form of transportation—in this case, railways. Hence, Corpuz’ work is also a good reference for students specializing in local and regional history, particularly those who are concerned with local and regional planning and development. In conjunction with the matter of planning and development, the relevance of *The Colonial Iron Horse* remains in the present given the still worsening transportation crisis which plagues our cities in the present day. At a time when railway projects are being constructed, planned, and eagerly advocated to address the car-centric configuration of our cities’ transportation infrastructure, it has become too easy to nostalgically extol the economic, social, and environmental benefits of railways vis-à-vis road-based transportation.<sup>17</sup> Nevertheless, Corpuz’ work manages to temper overly nostalgic and romantic visions of rail travel which might otherwise obscure our judgment from advocating carefully-informed transportation decisions through his judicious analysis of the varying effects of the railway on the developmental trajectories of certain locales in Luzon. More than its contribution to historical scholarship, *The Colonial Iron Horse* is also a useful guide book that teaches us that

<sup>15</sup> Quoted from Corpuz, *The Colonial Iron Horse*, 1.

<sup>16</sup> For works which discuss Spanish colonial public works, see Xavier Huetz de Lempis, “Waters in Nineteenth Century Manila,” *Philippine Studies* 49, no. 4 (2001): 488–517, <https://www.jstor.org/stable/42633496>; Aitor Anduaga, “Earthquake Building Overseas: Military Engineers, Cyclonic-Seismic Affinity and the Spanish Dominion in the Philippines, 1860–1898,” *Engineering Studies* 6, no. 1 (2014): 1–22, <https://doi.org/10.1080/19378629.2014.903491>; Cubeiro, “El tranvía de Manila (1884–1935)”; Cubeiro, “Conectando la ciudad al mar”; Cubeiro, “The Philippines Railway”; María Dolores Elizalde, ed., *Transforming the 19th Century Philippines* (Madrid: Ediciones Polifemo, 2022).

<sup>17</sup> For an example of a work which nostalgically and romantically reminisces the days when rail significantly dominated transportation modes, see Leonardo Q. Liongson, ““A “Must” Reading for Regional and Urban Planners and Railroad Enthusiasts Alike,” review of *The Colonial Iron Horse: Railroads and Regional Development in the Philippines, 1875–1935*, by Arturo G. Corpuz, *Social Science Diliman* 1, no. 1 (June 2000): 128–33.

transportation infrastructure should always take into account local realities to be efficient, economical, and beneficial.

## BIBLIOGRAPHY

Anduaga, Aitor. "Earthquake Building Overseas: Military Engineers, Cyclonic-Seismic Affinity and the Spanish Dominion in the Philippines, 1860-1898." *Engineering Studies* 6, no. 1 (2014): 1–22. <https://doi.org/10.1080/19378629.2014.903491>.

Corpuz, Arturo G. 1989. "Railroads and Regional Development in the Philippines: Views from the Colonial Iron Horse, 1875-1935." Doctoral Dissertation, Cornell University, 1989. <https://www.proquest.com/docview/303699704/abstract/63D6FF1FBE064CC9PQ/1>.

\_\_\_\_\_. *The Colonial Iron Horse: Railroads and Regional Development in the Philippines, 1875-1935*. Quezon City: University of the Philippines Press, 1999.

Cubeiro, Dídac. "El tranvía de Manila (1884-1935)." In *Ferrocarril y Ciudad En Perspectiva Histórica*. Vitoria-Gazteiz, 2012. <http://www.docutren.com/HistoriaFerroviaria/Vitoria2012/pdf/2089.pdf>.

\_\_\_\_\_. "Conectando la ciudad al mar: cambios en Manila con la llegada del tranvía (1880-1898)." *TST* 37 (2018): 91–121. [https://www.tstrevista.com/tstpdf/tst\\_37/TST37\\_91-121.pdf](https://www.tstrevista.com/tstpdf/tst_37/TST37_91-121.pdf).

\_\_\_\_\_. "The Philippines Railway: A Link with Hong Kong." In *The Pearl of the East: The Economic Impact of the Colonial Railways in the Age of High Imperialism in Southeast Asia*, 121–64. Palgrave Studies in Economic History. Palgrave Macmillan, 2023.

De Jesus, Edilberto C. "The Tranvía: A Neat Network of Trolley Cars Links a Contented City to Its Suburbs." In *The Spanish Colonial Period (Late 19th Century): The Awakening*, 7:1788–92. Filipino Heritage: The Making of a Nation. Felta Book Sales, Incorporated, 1977.

De Lemps, Xavier Huetz. "Waters in Nineteenth Century Manila." *Philippine Studies* 49, no. 4 (2001): 488–517. <https://www.jstor.org/stable/42633496>.

- Elizalde, María Dolores, ed. *Transforming the 19th Century Philippines*. Madrid: Ediciones Polifemo, 2022.
- Glynn, Vanessa Jane. 1987. "Railroad Policy and Administration in the Philippines in the American Period: 1898-1924." Master's Thesis, University of the Philippines, 1987.
- Gonzalez, Michael Manuel. "The de Manila a Dagupan." *Asian Studies* 17 (1979): 18–36. <https://www.asj.upd.edu.ph/mediabox/archive/ASJ-17-1979/gonzalez-manila-dagupan.pdf>.
- \_\_\_\_\_. "Philippine Railroads: Ideology of 'Progress' in an American Colony." *Philippine Social Sciences and Humanities Review* XLV, nos. 1–4 (1981): 271–83.
- \_\_\_\_\_. "Railroad to Baguio: Progress and Folly." *Positively Filipino*, January 17, 2018. <https://www.positivelyfilipino.com/magazine/railroad-to-baguio-progress-and-folly>.
- Halsema, James J. Review of *The Colonial Iron Horse: Railroads and Regional Development in the Philippines, 1875-1935*, by Arturo G. Corpuz. *Bulletin of the American Historical Collection* 27, no. 4 (1999): 77–78.
- Liongson, Leonardo Q. "A "Must" Reading for Regional and Urban Planners and Railroad Enthusiasts Alike." Review of *The Colonial Iron Horse: Railroads and Regional Development in the Philippines, 1875-1935*, by Arturo G. Corpuz. *Social Science Diliman* 1, no. 1 (June 2000): 128–33.
- Pante, Michael D. "Ang Sasakyan at Lansangan Bilang Paaralan: Modernisasyon ng Transportasyong Panlungsod at Lipunan sa Manila, 1900-1941." *Malay* 23, no. 2 (2011): 111–26. <https://www.ejournals.ph/article.php?id=7996>.
- \_\_\_\_\_. "The Cocheros of American-Occupied Manila: Representations and Persistence." *Philippine Studies: Historical and Ethnographic Viewpoints* 60, no. 4 (2012): 429–62. <https://doi.org/10.1353/phs.2012.0035>.
- \_\_\_\_\_. "Mga Modernong Manggagawa ng Transportasyong Panlungsod ng Manila, 1900-1941." *Malay* 25, no. 2 (2013): 21–35. <https://ejournals.ph/article.php?id=8032>.



- \_\_\_\_\_. “A Collision of Masculinities: Men, Modernity and Urban Transportation in American-Colonial Manila.” *Asian Studies Review* 38, no. 2 (2014): 253–73. <https://doi.org/10.1080/10357823.2014.902034>.
- \_\_\_\_\_. “Mobility and Modernity in the Urban Transport Systems of Colonial Manila and Singapore.” *Journal of Social History* 47, no. 4 (2014): 855–77. <https://doi.org/10.1093/jsh/shu023>.
- \_\_\_\_\_. “Racialized Capacities and Transgressive Mobility: ‘Asian’ Laborers and ‘Western’ Urban Transportation in Colonial Manila and Singapore.” *Transfers* 4, no. 3 (2014): 49–67. <https://doi.org/10.3167/TRANS.2014.040305>.
- \_\_\_\_\_. “Urban Mobility and a Healthy City: Intertwined Transport and Public Health Policies in American-Colonial Manila.” *Philippine Studies: Historical and Ethnographic Viewpoints* 64, no. 1 (2016): 73–101. <https://search.informit.org/doi/abs/10.3316/informit.851437751593519>.
- Quiason, Serafin R. “The Philippine Iron Horse.” In *The Spanish Colonial Period (Late 19th Century): The Awakening*, 7:1827–33. Filipino Heritage: The Making of a Nation. Felta Book Sales, Incorporated, 1977.
- Rosette, Judith Camille E. “Manila’s Unbuilt Monorail: Transportation and an Alternative Modern Imaginary in the Marcos Period.” *Art Studies Journal* 3, no. 1 (2024): 14–29. [https://artstudiesjournal.upd.edu.ph/wp-content/uploads/2024/03/VOL3\\_ISS1\\_2024\\_ASJ-ARTICLE1.pdf](https://artstudiesjournal.upd.edu.ph/wp-content/uploads/2024/03/VOL3_ISS1_2024_ASJ-ARTICLE1.pdf).
- Satre, Gary L. “The Metro Manila LRT System - A Historical Perspective.” *Japan Railway & Transport Review* 16 (June 1998): 33–37. [https://web.archive.org/web/20060505060037/http://www.jrtr.net/jrtr16/pdf/f33\\_satre.pdf](https://web.archive.org/web/20060505060037/http://www.jrtr.net/jrtr16/pdf/f33_satre.pdf).
- \_\_\_\_\_. “The Cagayan Valley Railway Extension Project: Future Prospects for Global Reach, Local Needs.” In *8th Annual Conference of the Transportation Science Society of the Philippines*. Crown Peak Garden Hotel, Subic Bay Freeport Zone: Transportation Science Society of the Philippines, 2000. <https://ncts.upd.edu.ph/tssp/wp-content/uploads/2018/08/Satre00.pdf>.

Sta. Maria, Felice P. "Wheels: Transportation from Waterborne to Air Travel." In *The Spanish Colonial Period (Late 19th Century): The Awakening*, 7:1737–43. Filipino Heritage: The Making of a Nation. Felta Book Sales, Incorporated, 1977.

The Mass Transit System in Manila: From Tranvia to MRT, 1879-2014. "Newspaper Sources." Accessed June 9, 2024. <https://riles.upd.edu.ph/index.php/newspaper-sources/>.

"The Mass Transit System in Metro Manila: From Tranvia to MRT, 1879-2014." Accessed June 9, 2024. <https://riles.upd.edu.ph/>.