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# Natural Disasters and Comparative State-Formation and Nation-Building: Earthquakes in Argentina and Chile (1822-1939)

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FLORIDA INTERNATIONAL UNIVERSITY

Miami, Florida

NATURAL DISASTERS AND COMPARATIVE  
STATE-FORMATION AND NATION-BUILDING:  
EARTHQUAKES IN ARGENTINA AND CHILE (1822-1939)

A dissertation submitted in partial fulfillment of the

requirements for the degree of

DOCTOR OF PHILOSOPHY

in

HISTORY

by

Quinn P. Dauer

2012

To: Dean Kenneth G. Furton  
College of Arts and Sciences

This dissertation written by Quinn P. Dauer, and entitled Natural Disasters and Comparative State-Formation and Nation-Building: Earthquakes in Argentina and Chile (1822-1939), having been approved in respect to style and intellectual content, is referred to you for judgment.

We have read this dissertation and recommend that it be approved.

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This dissertation of Quinn P. Dauer is approved.

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## DEDICATION

For Roland A. Gurgel, who inspired and encouraged a love of learning and athletics.

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ABSTRACT OF THE DISSERTATION  
NATURAL DISASTERS AND COMPARATIVE  
STATE-FORMATION AND NATION-BUILDING:  
EARTHQUAKES IN ARGENTINA AND CHILE (1822-1939)

by

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Natural disasters in Argentina and Chile played a significant role in the state-formation and nation-building process (1822-1939). This dissertation explores state and society responses to earthquakes by studying public and private relief efforts reconstruction plans, crime and disorder, religious interpretations of catastrophes, national and transnational cultures of disaster, science and technology, and popular politics. Although Argentina and Chile share a political border and geological boundary, the two countries provide contrasting examples of state formation. Most disaster relief and reconstruction efforts emanated from the centralized Chilean state in Santiago. In Argentina, provincial officials made the majority of decisions in a catastrophe's aftermath. Patriotic citizens raised money and collected clothing for survivors that helped to weave divergent regions together into a nation. The shared experience of earthquakes in all regions of Chile created a national disaster culture. Similarly, common disaster experiences, reciprocal relief efforts, and aid commissions linked Chileans with Western Argentine societies and generated a transnational disaster culture. Political leaders



viewed reconstruction as opportunities to implement their visions for the nation on the urban landscape. These rebuilding projects threatened existing social hierarchies and often failed to come to fruition. Rebuilding brought new technologies from Europe to the Southern Cone. New building materials and systems, however, had to be adapted to the South American economic and natural environment. In a catastrophe's aftermath, newspapers projected images of disorder and the authorities feared lawlessness and social unrest. Judicial and criminal records, however, show that crime often decreased after a disaster. Finally, nineteenth-century earthquakes heightened antagonism and conflict between the Catholic Church and the state. Conservative clergy asserted that disasters were divine punishments for the state's anti-clerical measures and later railed against scientific explanations of earthquakes.

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## CHAPTER 1

### INTRODUCTION: THE HISTORICAL SIGNIFICANCE OF DISASTERS

This project analyzes the responses of the Argentine and Chilean governments and societies to earthquakes during the period of the centralization of state authority between 1822 and 1939. Natural disasters provide a window to view the development of the state and its linkages with the citizenry.<sup>1</sup> Argentina and Chile present comparable case studies because of their geophysical and political characteristics. They share a similar geological location on the border between the Nazca and South American plates and offer contrasting paths to achieving the centralization of state authority in a broader Spanish American political context. This study addresses several questions about the nature and development of central authority in response to earthquakes in the Southern Cone during the last half of the nineteenth and early twentieth centuries. How did the national state use disasters as opportunities to centralize authority? How did the response to natural

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1. Stuart B. Schwartz, "The Hurricane of San Ciriaco: Disaster, Politics, and Society in Puerto Rico, 1899–1901," *Hispanic American Historical Review* 72, no. 3 (August 1992): 303–34; Virginia ed. García Acosta, *Historia y desastres en América Latina*, 2 vols (Colombia: La RED/CIESAS: Tercer Mundo Editores, 1996–97); Louis A. Pérez Jr., *Winds of Change: Hurricanes and the Transformation of Nineteenth-Century Cuba* (Chapel Hill: The University of North Carolina Press, 2001); Mark Healey, "The Fragility of the Moment: Politics and Class in the Aftermath of the 1944 Argentine Earthquake," *International Labor and Working Class History* 62, no. 2 (Fall 2002): 50–59; John Dickie, John Foot, and Frank M. Snowden, eds., *Disastro! Disasters in Italy Since 1860: Culture, Politics, Society* (New York: Palgrave, 2002); Sherry Johnson, "El Niño, Environmental Crisis, and the Emergence of Alternative Markets in the Hispanic Caribbean, 1760s–70s," *William and Mary Quarterly* 62, no. 3 (July 2005): 365–410; Matthew Mulcahy, *Hurricanes and Society in the British Greater Caribbean, 1624–1783* (Baltimore: Johns Hopkins University Press, 2005); Gregory Clancey, *Earthquake Nation: The Cultural Politics of Japanese Seismicity, 1868–1930* (Berkeley: University of California Press, 2006); Charles F. Walker, *Shaky Colonialism: The 1746 Earthquake-Tsunami in Lima, Peru and Its Long Aftermath* (Durham: Duke University Press, 2008).

disasters change between 1860 and 1920? How did central authority change by 1939 in their response to catastrophes?

Natural disasters provide scholars with opportunities to examine political cohesion and rupture, to study associations among divergent regions, the erosion of social and economic boundaries, directions in public policy, and the opportunity to examine the nature of the bonds between the state and interior regions. Argentine history is characterized by the antagonism between the urban coastal center of political and economic power, Buenos Aires, and the interior provinces where federalist, anti-centralist traditions, led to long and bloody conflicts.<sup>2</sup> By contrast, state centrality followed a different path in Chile.<sup>3</sup> This study explores these differences in strengthening their respective states by focusing on case studies that include Argentine earthquakes in Mendoza (1861), San Juan (1894), and Chilean disasters in Valparaíso (1822), Arica (1868), and Chillán (1939).<sup>4</sup>

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2. David Rock, *Argentina 1516–1987: From Spanish Colonization to Alfonsín* (Berkeley: University of California Press, 1987).

3. Simon Collier and William F. Sater, *A History of Chile, 1808–2002*, 2nd ed. (Cambridge: Cambridge University Press, 2004).

4. Information on historical earthquakes around the world and in the United States is available from the United States Geological Society (USGS). Data for specific earthquakes in Argentina is available from the Instituto Nacional de Prevención Sísmica and for Chile from the Servicio Sismológico Universidad de Chile. See also James R. Scobie, *Secondary Cities of Argentina: The Social History of Corrientes, Salta, and Mendoza, 1850–1910*, comp. and ed. Samuel L. Baily (Stanford: Stanford University Press, 1988), 110–19. Scobie highlights the impact of the 1861 earthquake in Mendoza in the urban development of this Argentine regional center. See also Samuel Martland, “Reconstructing the City, Constructing the State: Government in Valparaíso After the Earthquake of 1906,” *Hispanic American Historical Review* 87, no. 2 (May 2007): 221–54. Martland explores the 1906 Valparaíso earthquake’s effect on the port’s infrastructure and the relationship between the municipality and the Chilean central government in Santiago.

## Historical Background

Much of Latin America's geographical location and geological characteristics have caused numerous and repeated natural disasters that mark the historical record from colonial times to the present. Latin America sits on five active tectonic plates: the Caribbean, Cocos, Nazca, Scotia, and South American. The Pacific coast of South America is on the western edge of the ring of fire which experiences no less than 80 percent of the world's disasters, primarily in the form of volcanic and seismic events. Countries with the largest seismological risk include Mexico, which has experienced 84 earthquakes at a magnitude of seven or higher on the Richter scale during the twentieth century, Chile, Colombia, Costa Rica, Ecuador, Guatemala, and Peru. In addition to seismic risks, climatic fluctuations in the form of the El Niño phenomenon bring droughts, floods, and hurricanes especially to Central America, the Caribbean, Northeast Brazil, Peru, Ecuador, Chile, and Argentina. Geographer César N. Caviedes and historians Robert Claxton, Mike Davis, and Sherry Johnson have established the presence of El Niño weather events dating from the colonial period in Latin America and their affect on the direction of history. Similarly, the historical record in Latin America serves as a repository chronicling seismic activity since in the colonial period.<sup>5</sup>

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5. John Luke Gallup, Alejandro Gaviria, and Eduardo Lora, *Is Geography Destiny? Lessons from Latin America* (Washington, D.C.: Inter-American Development Bank, 2003), 41; César N. Caviedes, *El Niño in History: Storming Through the Ages* (Gainesville: University of Florida Press, 2001); Robert H. Claxton, "Climate and History: From Speculation to Systematic Study," *Historian* 45, no. 2 (February 1983): 220–36; Robert H. Claxton, "The Record of Drought and Its Impact in Colonial Spanish America," in *Themes in Rural History of the Western World*, ed. Richard Herr (Ames: Iowa State University, 1993), 194–226; Mike Davis, *Late Victorian Holocausts: El Niño Famines and the Making of the Third World* (London: Verso, 2001); Sherry Johnson, "Climate, Community, and Commerce Among Florida, Cuba, and the Atlantic World, 1784–1795," *Florida Historical Quarterly* 80, no. 4 (Spring 2002): 455–82; Johnson, "El Niño," 365–410; Sherry Johnson, *Climate and Catastrophe in Cuba and the Atlantic World in the Age of Revolution* (Chapel Hill: University of North Carolina Press, 2011).



The integration of the environmental, economic, and political consequences of these events is slowly becoming incorporated into the larger Latin American historical narrative. The most southern regions of South America did not figure as prominent components of the Spanish American empires. Starting in the late sixteenth century, the Río de la Plata and the city of Buenos Aires were marginal locations in the Spain's American colonies. This changed in 1776, however, when the administrative elements of the Bourbon Reforms created the Viceroyalty of Río de la Plata with its capital in Buenos Aires. The city was quickly transformed from a backwater that harbored smugglers to a commercial, administrative, and military center. In addition, Buenos Aires was catapulted into a leadership position over its hinterland that it never relinquished.

After independence, the viceroyalty split up into different nations leaving the formation of Argentina to be determined through a long and bloody process that centered on the struggle between the provinces and the hegemonic urban center, Buenos Aires. During the 1810s, the first attempt at creating a united national government of Argentina failed. The 1820s saw the provinces guard their autonomy despite the brief attempt by unitarian president, Bernardino Rivadavia to form a new central government from 1826 to 1827. The federalist caudillo Juan Manuel de Rosas restored order after taking control of Buenos Aires in 1829 and continued to be a powerful leader in the provinces until 1852. While Rosas maintained de facto control over the territory of Argentina, the Federal Pact of 1831 gave Buenos Aires the duty to carry out foreign relations, one of the few institutionalized links between the provinces and Buenos Aires. In 1852, a Federalist caudillo from the litoral province of Entre Ríos rebelled, defeating Rosas at the Battle of Caseros in February.

The fall of Rosas started the process of state consolidation in Argentina. The provinces called a constitutional convention and passed a federal constitution in 1853 that established the Argentine Confederation. Buenos Aires refused to participate in the convention and continued to be a separate state in conflict with the Argentine Confederation. The stalemate ended at the Battle of Pavón in September of 1861, when General Bartolomé Mitre, the unitarian governor of Buenos Aires defeated Urquiza. As a result, Buenos Aires established the Argentine Republic in 1862 but maintained the federal constitution. Over the course of the next decades, the state-formation process centered on the national government's attempt to establish its authority over the provinces. The state consolidation process reached its culmination with the federalization of the city of Buenos Aires and its designation as the national capital in 1880.<sup>6</sup> Against this turbulent political background of contested authority, how were major natural disasters managed? What were their effects on the peoples of Argentina's western provinces?

Earthquakes open a window into the state-formation process in Argentina. For example, Mendoza's 1861 earthquake struck at a crucial moment in Argentine history. During Holy Week in March, the earthquake leveled every building except for one. Tremors were felt as far away as the cities of Buenos Aires and Rosario to the east and Chile to the west. Estimates of the dead ranged from 6,000 to 16,000. Fires from kitchen stoves and oil lamps quickly spread through the ruins of the city and continued for four days after the earthquake struck. The tremors caused water from irrigation canals to flood numerous blocks on the city's west side, drowning victims still trapped beneath the

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6. Rock, *Argentina 1516–1987*, see especially chapters three and four.

rubble. In addition to the difficulties of finding potable water, fresh food, and medicine, human bodies and animal carcasses putrefying in the rubble threatened survivors' health. In the midst of such an overwhelming tragedy, provincial and municipal officials argued about remedies, rebuilding strategies and new regulations, hampering the city's return to normal life. After successfully defeating the Argentine Confederation at the Battle of Pavón earlier in 1861, Buenos Aires' troops occupied a ruined Mendoza at the end of year, replacing provincial officials. All political levels, national, provincial, and municipal, struggled over the multiplicity of proposed strategies to rebuild the city. The 1861 Mendoza earthquake placed the struggle between Buenos Aires, the exemplar hegemonic urban center and the provinces regarding issues of authority and legitimacy over the maintenance of the population's well-being into the fore of the national consciousness.<sup>7</sup>

By contrast, Chile emerged from the post-independence period of instability more quickly than most of Latin America. Between 1829 and 1833, the conservatives led by Diego Portales created a strong central state that constitutionally transferred power until 1891. The political stability encouraged commerce and trade. Valparaíso, Chile's largest port, imported goods and merchandise for Santiago, the capital city and the country's largest market, located a short distance from the coast. During the Portalian period, the national government set trade policy, created a military force to defend its borders, established effective mechanisms of social control, and collected taxes. From 1842 until 1892, the structure of provincial and municipal governments was dominated by a provincial intendant who was a national official appointed by the president and who acted

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7. Scobie, *Secondary Cities of Argentina*, 110–19.

as a municipal executive presiding over the elected city council. These intendants played a central role in unifying national politics by mobilizing voters in favor of the president's candidates in elections. The 1891 Civil War, however, changed the institutional locus of authority, ushering in the parliamentary era. In 1892, the Ley de la Comuna Autónoma gave Chile's municipal governments greater autonomy. The legislation, based on Swiss and United States examples and promoted by Conservative José Miguel Irarrazaval, signaled a move away from centralized power in the national executive. But by 1910, the promise of more responsive governance by the municipality had largely failed, exemplified by the lack of attention paid to the pressing need of sanitation reform. Thus, citizens pushed for a return to the national government's oversight of municipalities, culminating in the Law of Exception in 1919. The push for municipal reform and the Law of Exception demonstrate the acceptance of the national state's involvement in local affairs.<sup>8</sup>

Earthquakes, such as the one that struck Valparaíso in 1906, brought to the forefront the need for greater state coordination in municipal affairs concerning reconstruction projects and the allocation of national government funds by the local authorities that could be accepted or contested. Not only did the 1906 earthquake destroy Valparaíso, but it also turned out to be emblematic of a loss of municipal governments' power relative to the state. On the evening of August 16, 1906, an earthquake struck, causing fires to burn the majority of the buildings in the Almedral, the city's most modern neighborhood. Other areas of the city experienced structures' collapse and

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8. Collier and Sater, *A History of Chile*, See especially parts two and three; Samuel Martland, "Reconstructing the City," 226–35; Richard J. Walter, *Politics and Urban Growth in Santiago, Chile, 1891–1941* (Stanford: Stanford University Press, 2005).

burning such as in the Puerto business district. Approximately 3,000 of the 160,000 residents of the city died. The survivors pulled themselves out of the rubble, huddling in the streets and parks. The earthquake inflicted light damage in Santiago. The earthquake cut all means of communication and transportation. Messengers carried news of the catastrophe to the nearest functioning telegraph office, a significant distance from the city. In the aftermath of the disaster, national officials took control of the relief effort and, ultimately, a large majority of the municipality's functions. A reconstruction commission packed with presidential appointees and requiring presidential approval oversaw the relief and recovery efforts. The Reconstruction Commission had the responsibility for rebuilding, flood prevention, and improving sanitary conditions. The Reconstruction Commission had the power to build, eliminate, straighten, widen, grade, and pave streets. It rebuilt plazas and undertook infrastructure projects. Similarly, the national government took over the rebuilding, expansion, and operation of utilities and street car lines from the municipal government. The centralization of planning and decision-making would also occur in other Chilean cities during the early twentieth century.<sup>9</sup>

### **Theoretical Framework**

Two theoretical frameworks are employed in this study to explore the development of the nation-state in areas outside of the capital and hegemonic urban centers of Argentina and Chile: critical juncture and the “triangle of accommodation.” A critical juncture framework developed by Ruth Berins Collier and David Collier and modified by Richard Stuart Olson and Vincent T. Gawronski is used to determine the nature and scope of Western Argentina’s and Chile’s earthquakes lasting legacies. A

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9. Samuel Martland, “Reconstructing the City,” 221–54.

critical juncture represents a matrix of factors—political, economic, administrative, or military—that responds to a disaster and whose aftermath clearly changes the trajectory of a historic process. Legacies are subsequent trends, or a sequence of events, that produce critical change in politics, economics, or culture. A critical juncture framework counterbalances the sensationalized or extraordinary emphasis that is often placed on disasters in the popular media. This methodology can also clarify the chronological order of events following significant episodes involving catastrophes. Collier and Collier first developed critical juncture to examine the patterns and consequences of urban labor’s integration into national politics in Brazil, Chile, Mexico, Venezuela, Uruguay, Colombia, Peru, and Argentina during the twentieth century. Olson and Gawronski adopt the framework to natural disasters, focusing on the Nicaraguan (1972) and the Mexican (1985) earthquakes. The Nicaraguan earthquake was a critical juncture because it brought about political change as the government shifted from authoritarian to quasi-Marxist to quasi-democratic by 1982. The earthquake in Mexico, however, was not a critical juncture because the change from a one-party political system to more open electoral system was more complex. A positive feature of the “critical juncture” framework was that it clarified the time-line of events surrounding Institutional Revolutionary Party’s loss of power in Mexico.<sup>10</sup>

The “triangle of accommodation” developed by Joel S. Migdal will be used to gauge the effectiveness and outcomes of the central government’s policies in the

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10. Ruth Berins Collier and David Collier, *Shaping the Political Arena: Critical Junctures, The Labor Movement, and Regime Dynamics in Latin America* (Princeton: Princeton University Press, 1991); Richard Stuart Olson and Vincent T. Gawronski, “Disasters as Critical Junctures? Managua, Nicaragua 1972 and Mexico City 1985,” *International Journal of Mass Emergencies and Disasters* 21, no. 1 (2003): 5–35.

disasters' aftermaths. Midgal's theoretical framework addresses the relationship between state and society at the local level in areas outside of the country's capital. At the apex of the triangle are the implementors—mid level officials or bureaucrats—who are entrusted with administering the policy received from the central government. Implementors are strategically placed between the central state's top policy makers and the majority of the country's population. They are the “key switchmen” who move state resources from the urban centers and capital to the villages, towns and cities across the country. At one end of the triangle, strongmen—landlords, caciques, local businessmen, or moneylenders—control a large proportion of the population. They are able to place themselves between sectors of the population and critical resources, such as land, credit, and jobs that are given to the strongmen's clients. This structure of society fragments social control and denies the state the ability to mobilize the strongmen's clients on behalf of political objectives. At the other end of the triangle, local party officials—district leaders, state governors, local party chiefs, local and regional political agents—achieve the party's objectives by mobilizing and delivering the support of their followers. The local party officials' reward is the central government's goods and services that are usually channeled through the bureaucracy. The “triangle of accommodation” at the local level means that neither the implementors, nor strongmen, nor local party officials monopolize power. Accommodation takes place at two levels. On a national level, leaders have generally allowed strongmen to create “enclaves of social control” that can guarantee social stability. At a local and regional level, the three groups must accommodate each another within a web of political, economic, and social exchanges. The ensuing bargaining determines the allocation of state resources in the region and shapes the nature

of state agencies in villages or towns. The quality of implementation of the central state's policies reflects the degree to which state leaders are able to mobilize support and create different and complex agencies.<sup>11</sup>

### **What is a Disaster?**

Geographers, sociologists, anthropologists, and political scientists have engaged in heated debates regarding a definition of disaster but have come to no consensus, leading E.L. Quarantelli to worry that this is unhealthy for the growth of disaster studies as a field. The word “disaster” is used in popular language to describe anything from a failed social uprising to a hurricane or earthquake. At a minimum, disasters have been defined as simply a physical force, purely a social construction emphasizing the disruption of society, or the result of human behavior within a specific natural or technological context. In the end, social scientists agree that sources of disasters can be divided into either natural or technological. Timing is dynamic: a disaster can range from a slowly developing process—a drought or disease outbreak—to a sudden natural phenomenon—an earthquake or hurricane—or technological such as a nuclear reactor meltdown or airplane crash. The wide varieties of disasters make it difficult for scholars to define disasters by a common set of characteristics. This lack of consensus, however, does not necessarily mean stagnation for the field. Anthony Oliver-Smith points out that anthropologists have 164 definitions for culture. The debates surrounding the definition of culture led to the development of different theoretical frameworks and methodologies.

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11. Joel S. Migdal, *Strong Societies and Weak States: State-Society Relations and State Capabilities in the Third World* (Princeton: Princeton University Press, 1988).



The objectives of researchers determine the definition of a disaster for each topic of study.<sup>12</sup>

### **Review of the Literature**

This project derives its significance from the growing field of environmental history. The field first developed in the 1970s by pioneers such as Alfred W. Crosby and William Cronon. The field has been influenced and developed around three themes: the transfer and interaction among flora, fauna, and disease (especially between the Old and new Worlds); sustainability and urban development; and contemporary environmental movements in the United States and western Europe.<sup>13</sup>

The study of disasters represents an important new turn in the environmental history's literature. The first significant call for historical studies of disasters occurred after John C. Burnham, a science historian, joined E.L. Quarantelli and Russel Dynes the founders and heads of Ohio State University's disaster research center on their trip to Alaska to examine the Anchorage earthquake of 1964. After perusing published works, Burnham found that virtually no historian had bothered to study the consequences of disasters with the exception of local histories and T.D. Kendrick's study of the 1755 Lisbon earthquake's religious consequences. Burnham urged historians to examine

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12. E.L. Quarantelli, "What is a Disaster?" *International Journal of Mass Emergencies and Disasters* 13, no. 3 (1995): 221–30; E.L. Quarantelli, ed., *Disasters: Theory and Research* (London: Sage Publications, 1978); Anthony Oliver-Smith, "What is a Disaster?: Anthropological Perspectives on a Persistent Question," in *The Angry Earth: Disasters in Anthropological Perspective*, ed. Anthony Oliver-Smith and Susanna M. Hoffman (New York: Routledge, 1999), 18–21, 22–24.

13. Alfred W. Crosby, *The Columbian Exchange: Biological and Cultural Consequences of 1492* (Westport, CT: Greenwood Press, 1972); William Cronon, *Changes in the Land: Indians, Colonists, and the Ecology of New England* (New York: Hill and Wang, 1983); Shawn William Miller, *An Environmental History of Latin America* (New York: Cambridge University Press, 2007).

disasters affects on politics and society, pointing out that catastrophes provide views of institutions under stress that are otherwise unobtainable from the published scholarship.<sup>14</sup> The debate between religion and reason re-emerges in the aftermath of natural disasters. T.D. Kendrick focuses on eighteenth century theology in the wake of the 1755 Lisbon earthquake based on his collection of pamphlets and sermons that illustrated the religious reaction to the disaster. While Voltaire interpreted the event through an enlightened—reasoned and scientific—lens, Lisbon’s clergy and parishioners believed that God sent the earthquake as punishment for their sins. Similarly in London, Kendrick finds that Protestant ministers and much of the population viewed the earthquake as God’s divine retribution for the Catholic Inquisition. Lima’s earthquake and Tsunami of 1746 also released an unusual display of religious devotion in the aftermath. Arguments quickly ensued about the proper form and extent of devotion and larger debates about “religion, guilt, and reception” ensued. A minority of limeños argued that subterranean gases caused the earthquake and subsequent tsunami.<sup>15</sup> The majority of Lima’s citizens, however, believed that the disaster was God’s judgment for their immorality. Moral reforms critiqued women’s clothing and excessive independence before the catastrophe. The earthquake also caused a “referendum” on the city itself. Viceroy José Manso de Velasco and his French adviser, Louis Godin, tried to reconstruct the city in a rational manner to meet European standards of urban reform. Their vision of a reconstructed Lima would increase the power and authority of the viceroy at the expense of the upper

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14. John C. Burnham, “A Neglected Field: The History of Natural Disasters,” *Perspectives* 26, no. 4 (April 1988): 22–24; T. D. Kendrick, *The Lisbon Earthquake* (Philadelphia: Lippincott, 1957).

15. For an analysis of eighteenth-century scientific theories of earthquakes see John Gates Taylor, “Eighteenth-Century Earthquake Theories: A Case-History Investigation into the Character of the Study of the Earth in the Enlightenment,” Ph.D. diss. (Norman: University of Oklahoma, 1975).

classes, the Church, and other corporate groups. The viceroy was partly motivated by his belief that the excessive amount of wealth controlled by the Church and the upper classes was wasted in frivolous spending that triggered God's wrath. In addition, in order to maintain control over the city's population, the viceroy restricted the behavior of the working classes and tried to dampen the excessive religious fervor by restricting religious celebrations.<sup>16</sup>

To the north, Kevin Rozario notes that the Puritans during the seventeenth and eighteenth centuries laid the foundation of modern American responses to disasters. Although the Puritans viewed the disasters, especially the earthquake of 1638, as punishments sent from God, they also believed that catastrophes provided opportunities to reform their immoral behaviors and turn back to Christ. The centrality of religion in the everyday lives of the early modern New Englanders created a resilient faith in the blessing of disasters. The destruction that resulted from the catastrophe led to rebuilding and a chance to start anew. Rozario traces the continuity of Puritan cosmology through United States' history noting the American notion that calamities are seen as vehicles of progress.<sup>17</sup>

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16. Kendrick, *The Lisbon Earthquake*; Kenneth Maxwell, *Pombal, Paradox of the Enlightenment* (Cambridge: Cambridge University Press, 1995), 18–32; Charles F. Walker, "Shaking the Unstable Empire: Lima, Quito, and Arequipa Earthquakes, 1746, 1783, and 1797," in *Dreadful Visitations: Confronting Natural Catastrophe in the Age of Enlightenment*, ed. Alessa Johns (New York: Routledge, 1999), 113–44; Charles F. Walker, "The Upper Classes and Their Upper Stories: Architecture and the Aftermath of the Lima Earthquake of 1746," *Hispanic American Historical Review* 83, no. 1 (February 2003): 53–82; Charles F. Walker, *Shaky Colonialism*; Charles F. Walker, "Great Balls of Fire: Premonitions and the Destruction of Lima, 1746," in *Aftershocks: Earthquakes and Popular Politics in Latin America*, eds. Jürgen Buchenau and Lyman L. Johnson (Albuquerque: University of New Mexico Press, 2009), 18–42.

17. Kevin Rozario, *The Culture of Calamity: Disaster and the Making of Modern America* (Chicago: University of Chicago Press, 2007). See also Charles Edwin Clark, "Science, Reason, and an Angry God: The Literature of an Earthquake," *The New England Quarterly* 38, no. 3 (1965): 340–65 and

Economic effects can range from crisis or stagnation to spurring development. Measures of disasters' influence on economic performance include the direct costs (physical damage), indirect costs (the disruption of the flow of goods and services), and secondary effects (both long and short term economic performance on a macro-scale through the analysis of balance of trade, government balance sheets, inflation, and distribution of wealth). According to Charlotte Benson and Edward J. Clay, the determinants of economic vulnerability are the type of hazard, the geographical area and the scale of impact, the structure of the economy, the prevailing economic conditions, the state of economic development, and the level of technical and scientific advancement. The state of development is defined by "the degree of sectoral and geographical integration, economic specialization, integration of financial flows, and government revenue raising capabilities."<sup>18</sup> Thus, disasters adversely affect developing economies disproportionately. The effect of catastrophes on different regions of the country and the economy can be limited by poor transportation or self-provisioning. Developing economies are usually based on a large agricultural sector and little available capital. By contrast, an economy at an intermediate level of development is more integrated both among economic sectors and geographic regions. Increased integration only multiplies the consequences of disasters on other sectors of the economy both in the affected geographic region and other areas of the country. Little investment in infrastructure, poor risk management, and preparedness policies by the government exacerbate the effect of

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Michael Nathaniel Shute, "Earthquakes and Early American Imagination: Decline and Renewal in Eighteenth-Century Puritan Culture," Ph.D. diss. (Berkeley: University of California, Berkeley, 1977).

18. Charlotte Benson and Edward J. Clay, "Developing Countries and the Economic Impacts of Natural Disasters," in *Managing Disaster Risk in Emerging Economies*, eds. Alcira Kreimer and Margaret Arnold (Washington, D.C.: World Bank, 2000), 16.

natural disasters. Little government or public investment in infrastructure puts the population at greater risk and also causes more deaths, disrupts the economy for a longer period of time, and makes it difficult for food and water to enter the area effected by the disaster. J.M. Albala-Bertrand's study finds that catastrophes in third world countries over the course of the twentieth century less frequently had adverse affects on national economic performance but overwhelmingly affected the poorest members of society. Latin American case studies included Chile (1960), Venezuela (1967), Peru (1970), Nicaragua (1972), Honduras (1974), Guatemala (1976), Mexico (1976), Haiti (1977), the Dominican Republic (1979), Paraguay (1979), and Colombia (1979). Albala-Bertrand's study covered five years: two before the disaster, the year of the catastrophe, and the two years after the calamity. In general, Latin American countries showed a positive growth rate, or at least recovered to levels at or near what they were before the disaster in the subsequent two years. At a minimum, catastrophes can stimulate short-term growth by spurring the construction sector during the rebuilding period. Disaster aid, however, whether internal or external usually reinforced existing power structures. The effects of natural disasters on the economy are complex and varied.<sup>19</sup>

Historical examinations of the economic consequences of disasters have focused on macro-economic transformations, including commodities and trade policy. In the Caribbean, a hurricane's physical damage to cities and commercial infrastructure was sometimes catastrophic. Matthew Mulcahy notes that after a hurricane in Barbados in 1780, all the public buildings—even the heavily-built stone churches—were flattened.

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19. Benson and Clay, "Developing Countries," 11–21; J.M. Albala-Bertrand, *The Political Economy of Large Natural Disasters With Special Reference to Developing Countries* (Oxford: Clarendon Press, 1993), 3–6, 63–67, 207; Gallup, Gaviria, and Lora, *Is Geography Destiny?* 45–46.

Warehouses and commercial buildings were razed by the storm surge. Sherry Johnson shows that the series of hurricanes that struck the Spanish Caribbean during the 1770s opened markets to the North American colonists to sell primarily flour. This environmental crisis allowed the Americans to expand their commercial networks into the Spanish Caribbean and helped to convince them of their ability to fend for themselves and declare independence from England. For its part, Spain was unable to provide food to its West Indies possessions and therefore temporarily allowed North American merchants, primarily from Philadelphia, to sell flour in Spanish ports. Louis A. Pérez, Jr. found that in 1844 a hurricane struck Havana and destroyed 200 ships in its protected harbor; the hurricane of 1846 destroyed another 300 ships. Usually, hurricanes struck during the late summer and fall, which coincided with the harvest of many crops. The high winds of hurricanes uprooted even the cassava plant with its deep and heavy roots. Thus, more fragile crops, such as coffee, sugar, and tobacco were easily destroyed during hurricanes and significant tropical storms. Pérez demonstrates that the three major hurricanes in 1842, 1844, 1846, all repeatedly striking Havana or near the capital in western Cuba caused the switch from producing coffee and sugar to a monoculture sugar based economy. The coffee crop took the greatest beating because the winds not only destroyed coffee trees but also the palms and ceiba trees that shaded coffee groves. Before the 1842 hurricane, coffee had been four times more valuable to the Cuban economy than sugar. After the 1846 hurricane, coffee planters could not afford to wait for the three-year planting cycle for the first crop to be harvested. Instead, they sold their

slaves and land to sugar planters because sugar, while also devastated by the strong winds, could be replanted and harvested for cash usually within the year.<sup>20</sup>

Catastrophes can engender political support and loyalty or be a catalyst for social unrest and rebellion. Political scientists Richard Stuart Olson and A. Cooper Drury examine the relationship between disasters and political unrest. Scholarly analysis of political unrest has failed to consider natural disasters as an important factor, and yet, natural disasters have significant long- and short-term consequences. Disasters often overwhelm the political system by multiplying the society's demands and fostering new groups to organize, while at the same time disintegrating economies and breaking up governments. Disasters also demonstrate a government's weakness in managing the economy, effectively deliver services through its bureaucratic agencies, and sustain its moral legitimacy. Disasters, however, may also solidify or strengthen a government or its leader, depending on how well the government responds to the disaster in terms of relief efforts and reconstruction. In general, the government must deal with the public's dissatisfaction or complaints. Olson and Drury find that disasters increase public dissatisfaction no matter how well or poorly the government responds. The more severe

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20. Mulcahy, *Hurricanes and Society*; Matthew Mulcahy, "'A Tempestuous Spirit Called Hurri Cano': Hurricanes and Colonial Society in the British Caribbean," in *American Disasters*, ed. Steven Biel (New York: New York University Press, 2001), 22–29; Pérez Jr., *Winds of Change*; Johnson, "El Niño," 365–410; Johnson, *Climate and Catastrophe*. See also Ted Steinberg, *Acts of God: The Unnatural History of Natural Disaster in America* (New York: Oxford University Press, 2000). For economic studies of the 1906 San Francisco earthquake see Ted Steinberg, "Smoke and Mirrors: The San Francisco Earthquake and Seismic Denial," in *American Disasters*, ed. Steven Biel (New York: New York University Press, 2001), 103–26, Kevin Rozario, "What Comes Down Must Go Up: Why Disasters Have Been Good for American Capitalism," in *American Disasters*, ed. Steven Biel (New York: New York University Press, 2001), 72–102, and Christopher Morris Douthy, *The Economics of Localized Disasters: The 1906 San Francisco Catastrophe*, Dissertations in American Economic History (New York: Arno Press, 1977). For the economic studies of nineteenth- and early twentieth-century Japanese earthquakes see Gregory Smits, "Shaking Up Japan: Edo Society and the 1855 Catfish Picture Prints," *Journal of Social History* 39, no. 4 (2006): 1045–78 and J. Charles Schencking, "Catastrophe, Opportunism, Contestation: The Fractured Politics of Reconstructing Tokyo Following the Great Kantō Earthquake of 1923," *Modern Asian Studies* 40, no. 4 (October 2006): 833–74.

the disaster is the more likely it is to cause political unrest. Repressive regimes are able to maintain their power in the face of a disaster because they use violence to control the situation. Wealthier societies experience less dissatisfaction because they have more resources than less developed countries and therefore enjoy greater political stability; by contrast, pre-disaster instability increases the likelihood of post-disaster instability. Finally, Olson and Drury also conclude that the long-held notion of greater harmony, that is societies lessen conflicts and raise altruism after disasters for a long period of time, is false.<sup>21</sup>

Historical studies have also demonstrated that governments' poor or lack of a response to disasters can cause rebellion. Laura Hoberman uses the flood of 1629 in Mexico City to analyze the government's response to extreme social stress, how the municipal government operates, and the relationship between the city outward to the metropolis and inward to provinces. The viceroy attempted to stop hoarding and mitigate the possibilities of riots, protests, or rebellions by ordering that bakeries to bring food to the regidores every morning at the local granary to distribute to the public. Sherry Johnson examines the Spanish Crown's response to hurricanes in the circum-Caribbean during the late eighteenth century. The failure of the Spanish Governor of Louisiana to remove trade restrictions after the hurricane of 1766 left much of the population without food, shelter, and basic necessities. The population's dire condition led to unrest and the

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21. Richard Stuart Olson and A. Cooper Drury, "Un-Therapeutic Communities: A Cross-National Analysis of Post-Disaster Political Unrest," *International Journal of Mass Emergencies and Disasters* 15 (August 1997): 221–38. See also Morris Davis and Steven Thomas Seitz, "Disasters and Government," *The Journal of Conflict Resolution* 26, no. 3 (September 1982): 547–68 and Walter Gillis Peacock, Betty Hern Morrow, and Hugh Gladwin, eds., *Hurricane Andrew: Ethnicity, Gender, and the Sociology of Disaster* (New York: Routledge, 1997). For a historical treatment of disasters as "agents of change" or "critical junctures" in a national history see Gregory Clancey, "Disasters as Change Agents: Three Earthquakes and Three Japans," *East Asian Science, Technology and Society: And International Journal* 5, no. 3 (2011): 395–402.



rebellion of 1766-68. Subsequent Spanish administrators and governors quickly removed trade restrictions and worked to provide food and basic necessities to circum-Caribbean communities struck by hurricanes, which maintained and even strengthened their subjects' loyalty. Johnson also examines the political consequences of the St. Augustine Hurricane of 1811. The Spanish government's quick, active, and appropriate response to the hurricane solidified the colonial city's loyalty to the crown. As a result of the positive response by the Spanish government, the citizens of St. Augustine fought off intrusions by General George Mathews and the Georgians in 1812. Mike Davis notes that famines and droughts in the Third World during the late nineteenth and early twentieth centuries and the lack of a response from European colonial powers especially the British led to local riots, the organization of insurrectionary groups with nationalist intentions, rebellion, and even revolution.<sup>22</sup>

Disasters in modern societies can produce outrage among citizens who perceive government institutions as betraying their trust. Tom Horlick-Jones notes that the media plays a central role in creating the perception of betrayal and inflating "disaster myths." The media's focus on accounts of disasters shows disasters as the loss of control and social order. For example, James Vernon notes that journalists used photography during the late nineteenth and early twentieth century to document the horrors of drought and famine in India which served to awaken the conscience of British citizens living in the

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22. Laura Hoberman, "Bureaucracy and Disaster: Mexico City and the Flood of 1629," *Journal of Latin American Studies* 6 (November 1974): 211-30; Johnson, "Climate, Community, and Commerce," 455-82; Sherry Johnson, "The St. Augustine Hurricane of 1811: Disaster and the Question of Political Unrest on the Florida Frontier," *Florida Historical Quarterly* 84, no. 2 (Summer 2005): 28-56; Davis, *Late Victorian Holocausts*. See also Noble David Cook and Alexandra Parma Cook, *The Plague Files: Crisis Management in Sixteenth-Century Seville* (Baton Rouge: Louisiana State University Press, 2009) and Johnson, *Climate and Catastrophe*.

metropole, who were horrified by such images. British citizens organized to provide humanitarian aid to the victims and expressed their outrage at the ineptitude of the British government. Similarly, in Halifax, Nova Scotia on December 6, 1917 a ship, the *Mont Blanc* carrying explosives and arms to the western front ran into another ship, the *Imo*, carrying grain in the narrows of the harbor. The *Mont Blanc* subsequently ran-a-ground in the harbor causing an explosion that destroyed the city. The Royal Canadian Navy (RCN) was in charge of ship traffic in Halifax harbor. Many Canadians, particularly Haligonians, felt that the RCN had betrayed their trust. The Canadian press leveled charges of criminal activity, possible sabotage, or ineptitude against the RCN. The journalists' creation of a "Tin-Pot" perception of the RCN left a negative legacy that had considerable effects on the morale of the RCN for many years. Through the media, disasters then can be used as a political critique of government institutions.<sup>23</sup>

Frequent catastrophes force cultures to adapt to these disruptions. At first, social scientists considered disasters as abnormal. Investigations focused on how quickly a society was able to return to the pre-disaster status quo. And then, beginning in the 1980s with Geographer Kenneth Hewitt's *Interpretations of Calamity from the Viewpoint of Human Ecology*, scholars began to view disasters as normal and continuous part of the environment and events that humans helped to generate. Disasters shape and mold a people as contested notions of what the nation is continued to develop. Greg Bankoff demonstrates that the frequency of natural disasters shapes the construction of culture and

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23. Tom Horlick-Jones, "Modern Disasters as Outrage and Blame," *International Journal of Mass Emergencies and Disasters* 13 (1995): 305–16; James Vernon, *Hunger: A Modern History* (Cambridge: The Belknap Press, 2007), 41–81; Davis, *Late Victorian Holocausts*; Laura M. MacDonald, *Curse of the Narrows* (New York: Walker & Company, 2005).

the mindset of Filipinos. Similarly, Kevin Rozario traces how disasters shaped the United States' ideal of progress. Disasters provided an opportunity for Americans to reflect on their values and social institutions. Destruction leads to rebuilding and the chance for a new start.<sup>24</sup>

Historians have noted how natural disasters allow the government to draw on a common identity to reinforce the nation or to weave together divergent regions. Catastrophes reveal the common symbols and traditions that bind people; but they also illustrate issues that divide citizens and define relations with the state. For example, Gregory Clancy points out that western technology and architecture dominated the Japanese skyline before the Great Nōbi Earthquake of 1891 during the Meiji period (1868-1912). The earthquake left intact traditional wooden Japanese buildings while destroying the majority of the structures built using western technology and advice. As a result, the earthquake sparked a nativist reaction against western technology using the still-standing traditional Japanese buildings as common national symbols of superiority. Disasters can also unite divergent regions within a nation. John Dickie shows how the 1908 Messina-Reggio and Calabria earthquake marked the culmination of the Italian nation-building project. The queen nursed survivors back to health at makeshift hospitals and children accompanied by their parents throughout the country donated funds wrapped in the tricolor, such demonstrations of recovery aid symbolized the nation's consolidation. The Italian state fully involved itself in disaster relief, but politicians, while able to agree on what should be done and ready to appeal to patriotism, nonetheless

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24. Kenneth Hewitt, *Interpretations of Calamity from the Viewpoint of Human Ecology* (Boston: Allen & Unwin, 1983); Greg Bankoff, *Cultures of Disaster: Society and Natural Hazards in the Philippines* (London: Routledge, 2002); Rozario, *The Culture of Calamity*.

engaged in statements that politicized the disaster. Despite their attempted subtlety in light of the human disaster, the politicians managed to highlight the differences between socialists and Catholics.<sup>25</sup>

The rebuilding of urban centers after a disaster reveals how national politics and recovery plans play out at the local level. Earthquakes also provide an opportunity for political leaders to implement their vision for the nation based on a particular community. In the aftermath of the 1746 earthquake, the Peruvian Viceroy's rebuilding plans for Lima, for example, met significant opposition from the Church, the Spanish Crown, and Lima's ethnically diverse population. The viceregal state used the rebuilding of Lima to work on its absolutist project of "centralizing power, rationalizing the bureaucracy, and increasing income from taxes."<sup>26</sup> The French urban planner, Godin, proposed a number of building ordinances that included widening the streets and limiting the height of buildings. The limeño elites argued that the two-story houses were a social right. It was a social marker that differentiated them from the plebe. The viceroy eventually relented and allowed most of the second stories of the elites to stay in place. Similarly, Mark Healey demonstrates that the 1944 earthquake that struck San Juan, Argentina allowed the military government an opportunity to deliver on its promises of social justice. The secretary of labor, Juan Perón, headed the relief efforts and the first reconstruction plans. Perón and the military filled the role of philanthropic organizations after the San Juan

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25. Clancey, *Earthquake Nation*; John Dickie, "A Patriotic Disaster: The Messina-Reggio Calabria Earthquake of 1908," in *The Politics of Italian National Identity: A Multidisciplinary Perspective*, eds Gino Bedani and Bruce Haddock (Cardiff: University of Wales Press, 2000), 50–71; John Dickie, "Timing, Memory and Disaster: Patriotic Narratives in the Aftermath of the Messina-Reggio Calabria Earthquake, 28 December 1908," *Modern Italy* 11, no. 2 (2006): 147–266.

26. Charles F. Walker, "The Upper Classes," 57.

earthquake of 1944. More important, Perón viewed the disaster as providing him with a blank slate capable of eroding all vestiges of liberalism in the city's reconstruction and with an opportunity to forge political unity, while making himself a hero. The reconstruction of San Juan was a model for the rest of the nation: the military demonstrated its technological superiority and a new social vision for the country. The military portrayed the relief effort as an act of altruism, a gift from the regime. Through such authoritarian paternalism, the government would open up space, mobilize, and organize the working class. Modernist architects hired by the regime drew up plans to rebuild the city with structures that demonstrated the centralized power of the nation-state. Urban planners proposed an industrialized city that quickly won the support of the working classes. These plans for the city, however, never reached fruition because of disputes over parts of the designs, political conflicts, and the local elites' resistance to the plans. Perón's plan for a new democratic city failed because San Juan's local elite opposed the proposed major changes to the city's layout. In the end, San Juan became a symbol of intractable conflict instead of a vision or model for the nation.<sup>27</sup>

The formation of the nation-state centers around two processes: the formation of the state and the building the nation. The state-formation process focuses on institutions as the state monopolizes resources and powers, while reducing and marginalizing those of competing organizations. During this process, the state gains the ability to legitimately

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27. Charles F. Walker, "The Upper Classes"; Mark Healey, "The Fragility of the Moment". See also Mark Alan Healey, "The Ruins of the New Argentina: Peronism, Architecture, and the Remaking of San Juan After the 1944 Earthquake," Ph.D. diss. (Durham, NC: Duke University, 2000); Mark Healey, *The Ruins of the New Argentina: Peronism and the Remaking of San Juan After the 1944 Earthquake* (Durham: Duke University Press, 2011); Mark Alan Healey, "The 'Superstition of Adobe' and the Certainty of Concrete: Shelter and Power After the 1944 San Juan Earthquake in Argentina," in *Aftershocks: Earthquakes and Popular Politics in Latin America*, eds Jürgen Buchenau and Lyman L. Johnson (Albuquerque: University of New Mexico Press, 2009), 100–28.

use force within its territory. The definition of the nation is more difficult to discern. In general, the nation is a collection of people who identify themselves commonly. Mark Szuchman has pointed out that the nation and the state can develop at different paces. Beginning in the early modern period, territorial and monarchical states worked to expand their power at the expense of other institutions, such as churches, towns, guilds, and monastic orders.<sup>28</sup> Alexis de Tocqueville recognized this phenomenon as central to the development of modern political systems.<sup>29</sup> Charles Tilly linked this process to competition among rival European monarchies and the need for revenue.<sup>30</sup> In Spanish America, Bourbon monarchs over the course of the eighteenth century started this process that would continue after independence. A number of historians have addressed the process of the state-formation in Latin America during the nineteenth century focusing on central themes including, caudillismo, militarism, regionalism, revenue collection, politics, government, peasants, legal institutions, family, and ethnicity.<sup>31</sup> Works on nation-building in Latin America highlight the slow development, missed

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28. Mark D. Szuchman, "Imagining the State, Building the Nation: The Case of Nineteenth-Century Argentina," *History Compass* 4, no. 2 (March 2006): 314–47.

29. Alexis Tocqueville, *The Old Regime and the French Revolution* (New York: Doubleday, 1955).

30. Charles Tilly, *Coercion, Capital, and European State, AD 990–1990* (Cambridge: Blackwell, 1990).

31. Charles F. Walker, *Smoldering Ashes: Cuzco and the Creation of Republican Peru* (Durham: Duke University Press, 1999); Tulio Halperín Donghi, *Revolución y guerra: formación de una élite dirigente en la Argentina criolla* (Buenos Aires: Siglo veintiuno editores Argentina, 1972); David Rock, *State Building and Political Movements in Argentina, 1860–1916* (Stanford: Stanford University Press, 2002); Mark D. Szuchman, *Order, Family, and Community in Buenos Aires, 1810–1860* (Stanford: Stanford University Press, 1988); Jeremy Adelman, *Republic of Capital: Buenos Aires and the Legal Transformation of the Atlantic World* (Stanford: Stanford University Press, 1999); Ariel De La Fuente, *Children of Facundo: Caudillo and Gaucho Insurgency During the Argentine State-Formation Process (La Rioja, 1853–1870)* (Durham: Duke University Press, 2000); Peter Guardino, *Peasants, Politics, and the Formation of Mexico's National State: Guerrero, 1800–1857* (Stanford: Stanford University Press, 1996).

opportunities, regionalized, and ethnically divided creations of the nation during the nineteenth and twentieth centuries.<sup>32</sup>

Argentine history is characterized by the antagonism between the urban center, Buenos Aires, and the interior provinces, especially in the west, where federalist, anti-centralist traditions led to long and bloody conflicts. Yet, most of the historical literature has focused on Buenos Aires as the center of the country's political development. This historiographical trend, however, has profited from refreshing exceptions such as David Rock's work, *State Building and Political Movements in Argentina* (2002) and James Scobie's foundational study, *Secondary Cities of Argentina* (1988). Rock examines the formation of the Argentine nation-state through political movements—Mitrismo, Roquismo, and Radicalismo—during the second half of the nineteenth century until the passage of the Saenz Peña Law in 1916. This period saw the federalization of Buenos Aires and the transition from an oligarchy to a more democratic system. All three movements attempted to gain allies in the provinces to create a national coalition. Mitre after a short period of national hegemony during the 1860s was ultimately unable to extend his reach past his base of Buenos Aires. By contrast, Roca, who started his career in Córdoba, came to power through military victories during the Conquest of the Desert (1878-79) and making political alliances at the local level in the provinces. Similarly, Radicalismo continued Roca's cultivation of provincial governors and local justices of the peace to maintain power. James Scobie also turns our attention to the provinces, highlighting the development of secondary cities—Corrientes, Salta, and Mendoza—

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32. Florencia Mallon, *Peasant and Nation: The Making of Postcolonial Mexico and Peru* (Berkeley: University of California Press, 1995); Mark Thurner, *From Two Republics to One Divided: Contradictions of Postcolonial Nationmaking in Andean Peru* (Durham: Duke University Press, 1997); Guardino, *Peasants, Politics, and the Formation of Mexico's National State*.

from 1850 until 1910. Scobie demonstrates that secondary cities linked their citizens and rural economies with areas far removed from the interior. At the same time these secondary cities were able to maintain a traditional rural environment unlike the continually changing and increasingly industrial character of major urban centers. Only with the extension of railroads did these secondary cities economic relationships and social structure change significantly. Conservatism and the continued gap between the major urban centers and the secondary cities, however, reinforced the provinces' resistance to central authority. My research places disaster in the western interior at the center of the narrative revealing the tensions that resulted when the city of Buenos Aires, the nation's political and economic epicenter, responded to the catastrophes in the interior during the second half of the nineteenth and early twentieth centuries.<sup>33</sup>

Chile portrays a very different picture. Its history is characterized by the state's stability and the country's relative absence of conflict. Scholars, however, have paid much attention to the hegemonic national state at the expense of the municipality as a locus of political and social interaction between state and citizen. Two recent exceptions to this trend are Richard J. Walter's *Politics and Urban Growth in Santiago, Chile 1891-1941* (2005) and Samuel Martland's article "Reconstructing the City, Constructing the State: Government in Valparaíso after the Earthquake of 1906" in the *Hispanic American Historical Review* (2007). Martland examines how political relationships among the national and municipal government and foreign investment responded to the 1906 Valparaíso earthquake. This city was a major port, and, in addition, served as the country's commercial and financial hub. Martland shows that despite the period being

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33. Rock, *State Building and Political Movements*; Scobie, *Secondary Cities of Argentina*.



known as the parliamentary era—during which municipalities legally had more autonomy—the national government used the disaster to re-centralize its authority. Like Martland, Walter is interested in the relationship between the municipal and national government during the parliamentary period in Santiago. Walter finds that at first the citizens of Santiago embraced their newly found autonomy. By the mid 1910s, however, citizens were unhappy with the municipal governments’ poor management of everyday needs. In order to rectify the situation, the Law of Exception was passed in 1919 that returned the city’s power to the central government. My project extends Martland’s thesis that the Valparaíso earthquake provided an opening for the state to expand its control over municipal activity to other regions outside of Chile’s central valley. This project will examine the tensions between the state and municipalities in the wake of earthquakes and in the face of a centralizing state during the second half of the nineteenth and early twentieth centuries.<sup>34</sup>

### **Sources and Organization**

This comparative study of state-formation and nation-building in Chile and Argentina during the second half of the nineteenth century and beginning of the twentieth century uses data gleaned from periodicals, government documents, correspondence, memoirs, census records, and court cases. National and provincial or regional archives and libraries contain important periodicals, official correspondence, judicial, and municipal records that chronicled disaster events and states’ varied responses. In Argentina, evidentiary data was gathered from Archivo General de la Nación and the Biblioteca Nacional de la República Argentina in Buenos Aires and provincial archives

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34. Samuel Martland, “Reconstructing the City”; Walter, *Politics and Urban Growth*.

and libraries in Mendoza, San Juan, and La Rioja. In Chile, primary source data was accumulated from The Archivo Nacional de Chile and the Biblioteca Nacional de Chile in Santiago. Printed primary sources, such as memoirs, travel accounts, and government documents, supplement the work.

First, this study explores the nature of central authority in the state's responses to natural disasters in different regions. The "triangle of accommodation" helps to understand the negotiations among national and local officials about recovery plans or the use of military force. Furthermore, the direction, use, and distribution of financial aid also reveal the relationship between the national government, strongmen, and local officials. Second, the nature of constitutional governance affected both the distribution of power and the dialogue between national and local authorities. Examining the federal and the presidential system that characterized Argentina and Chile helps to understand the differing levels of municipal or regional autonomy. Third, economic and technological development shaped and limited the states' capabilities to respond to natural disasters. Foreign investment was central to the development of technological capacities during the late nineteenth century. Fourth, religious institutions and the state fiercely competed for power and influence following disasters. Fifth, provincial and local authorities implemented measures to maintain order and protect private property. Authorities and elites shared fears of social chaos and dramatic upheaval, and yet, they were unfounded as crime generally decreased after disasters. Sixth, disasters represented opportunities for state authorities to achieve modernity and progress by reconstructing urban centers and rebuilding structures according to the latest European fashions and antiseismic designs. It quickly became clear, however, that these technology transfers had to be adapted to the

Southern Cone's natural and economic environments. Seventh, catastrophes allow for the assessment of the nation-building project of nineteenth-century Latin American countries. The relief efforts allowed citizens to participate in patriotic activities that helped to weave together divergent regions. Natural disasters became politicized events with patriotic actions appropriated by competing parties and interests. Finally, the reconstruction of cities represented opportunities for government officials and political leaders to inscribe their vision for the nation on the "new" urban centers.

## CHAPTER 2

### EXPANDING THE STATE: CATASTROPHES AND STATE-FORMATION

Natural disasters can trigger events ranging from public demonstrations protesting governments' performance, to riots and even to revolutions. The physical destruction forces political institutions and actors into closer contact with their citizens. In the aftermath of a slow, ineffective, or inefficient response, citizens question their country's institutions and the government's legitimacy. By contrast, a quick and efficient response from the state can elicit the loyalty and support from its citizens. Catastrophes can also transform a country's economy. Disasters provide opportunities for social reform or economic transformations that otherwise would have been politically impossible. The cost of relief and rebuilding, however, can exacerbate already existing fiscal deficits, especially at the local level. Politicians at the municipal, provincial, and national levels must make difficult decisions regarding the funds for rebuilding. The economic choices made by politicians reflect their priorities, networks, and constituencies. In addition they reveal their visions for the municipality, province, region, and nation.<sup>1</sup>

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1. Jürgen Buchenau and Lyman L. Johnson, eds, *Aftershocks: Earthquakes and Popular Politics in Latin America* (Albuquerque: University of New Mexico Press, 2009); Dickie, "A Patriotic Disaster"; Dickie, Foot, and Snowden, *Disastro!*; John Dickie, "The Smell of Disaster: Social Collapse in the Aftermath of the Messina-Reggio Calabria Earthquake 1908," in *Disastro! Disasters in Italy Since 1860: Culture, Politics, Society*, eds John Dickie, John Foot, and Frank M. Snowden (New York: Palgrave, 2002), 235–55; A. Cooper Drury and Richard Stuart Olson, "Disasters and Political Unrest: An Empirical Investigation," *Journal of Contingencies and Crisis Management* 6, no. 3 (September 1998): 153–61; Mark Healey, "The Fragility of the Moment"; Horlick-Jones, "Modern Disasters as Outrage and Blame"; Johnson, "St. Augustine Hurricane of 1811"; Naomi Klein, *The Shock Doctrine: The Rise of Disaster Capitalism* (New York: Picador, 2007); Richard Stuart Olson, "Towards a Politics of Disaster: Losses, Values, Agendas, and Blame," *International Journal of Mass Emergencies and Disasters* 18 (August 2000): 265–87; Olson and Gawronski, "Disasters as Critical Junctures"; Olson and Drury, "Un-Therapeutic Communities"; Charles F. Walker, *Shaky Colonialism*; C.R. Boxer, "Pombal's Dictatorship and the Great

Disasters presented a challenge for the Spanish colonial bureaucracy that functioned best through local family and social networks. Catastrophes during the colonial period, however, pushed bureaucrats to work outside of the established local customs or imperial policies. Furthermore, Spanish functionaries often lacked sufficient or adequate local fiscal resources to satisfy the subjects' demands. Colonial bureaucrats had two choices in responding to disasters: wait for directions from Spain, which could take months, or devise their own strategies using local resources. Both alternatives could have dangerous outcomes. A delayed response often provoked local resentment, or possibly a revolt. Using the king's resources could threaten a bureaucrat's career. Spanish authorities in secondary cities—Quito, Guatemala City, or Santiago—depended even more on the decisions and resources allocated to them from the colonial centers of Mexico City and Lima, and the imperial metropolis, Madrid. Political disputes also revolved around debates as to relocating cities after the catastrophes. Such discussions proved to be the most disruptive and difficult to manage. The outcome of these debates, normally led to rebuilding cities in the same location. After two and three destructive earthquakes some officials advocated relocation to more stable ground. Yet, colonial elites blocked such proposals because moving the city affected property rights and could upend their social status.<sup>2</sup>

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Earthquake of 1755," *History Today* 5 (November 1955): 729–36; Davis, *Late Victorian Holocausts*; Samuel Martland, "Reconstructing the City"; Schwartz, "The Hurricane of San Ciriaco"; Hoberman, "Bureaucracy and Disaster"; Davis and Seitz, "Disasters and Government"; Albala-Bertrand, *Political Economy*; Johnson, "El Niño"; Pérez Jr., *Winds of Change*.

2. Jüren Buchenau and Lyman L. Johnson, "Introduction: Earthquakes and Latin American Political Culture," in *Aftershocks: Earthquakes and Popular Politics in Latin America*, eds Jüren Buchenau and Lyman L. Johnson (Albuquerque: University of New Mexico Press, 2009), 7–8. In Chile, an earthquake in 1751 destroyed the frontier city of Concepción. After the disaster, the governor and cabildo agreed to relocate the city. New property lots were distributed but the Bishop of Concepción and many

By the end of the nineteenth century, republican governments had consolidated their resources, allowing the state to respond more actively to relief and reconstruction efforts. Unlike their colonial predecessors, Latin American leaders of the *belle époque* engaged their constituents in a more direct manner. They reacted more quickly in the aftermath of earthquakes and engaged in directing popular opinion to support their measures. And yet, such politicians could often find themselves as the targets of popular disaffection and blamed for perceived administrative incompetence, or personal enrichment from disasters. If unchecked, these complaints could lead to demands for new leadership. Regardless of process or outcome, reconstruction debates acquired a more popular character as multiple and diverse voices were transmitted through the mass media, evoking the sentiments of different constituencies. Treading across time, the state's legitimacy was put to the test in its efforts at relief and reconstruction. Whether as subjects or citizens, victims of natural disasters demanded immediate action and judged politicians and political institutions by their responses.<sup>3</sup>

### **The 1861 Mendoza Earthquake**

During Holy Week in March of 1861, an earthquake leveled every building except for one. Tremors were felt as far away as the cities of Buenos Aires and Rosario to the east and Chile to the west. Estimates of the dead ranged from 6,000 to 16,000. Fires from kitchen stoves and oil lamps quickly spread through the ruins of the city for four days after the earthquake. The tremors caused water from irrigation canals to flood numerous blocks on the city's west side, drowning victims still trapped beneath the

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elites remained in the old city. For more information, see Diego Barros Arana, *Historia General de Chile*, 2nd ed., tomo VI (Santiago: Universitaria, 2000), 134–37.

3. Jüren Buchenau and Lyman L. Johnson, "Introduction," 7–8.

rubble. In addition to the difficulties of finding potable water, fresh food, and medicine, human bodies and animal carcasses putrefying in the rubble threatened survivors' health. In the midst of such an overwhelming tragedy, national and provincial officials and citizens argued about remedies, rebuilding strategies and new urban regulations, hampering the city's return to normal life. After successfully defeating the Argentine Confederation at the Battle of Pavón earlier in 1861, Buenos Aires' troops occupied a ruined Mendoza at the end of the year, replacing provincial officials. All political levels, national, provincial, and municipal, struggled over the multiplicity of proposed strategies to rebuild the city. The 1861 Mendoza earthquake placed the struggle between Buenos Aires, the exemplar hegemonic urban center, and the provinces regarding issues of authority and legitimacy at the center of the national consciousness.

### **The Earthquake**

Mendoza, a city of approximately 10,000 inhabitants and “the Barcelona of Argentina,” according to Sarmiento, was reduced to rubble on the March 20, Thursday of Holy Week in 1861. The city had experienced both floods and earthquakes since its founding. Occasionally, spring snowmelts in the Andean foothills caused torrents of rushing water to wash away adobe houses and poorly built ranchos on the outskirts of the city. The last earthquake to cause significant damage was the 1782 Santa Rita earthquake—a warning long forgotten by 1861, according to observers after the later temblor. The Santa Rita earthquake, named for the saint because it struck on the feast of Saint Rita, caused severe damage to some houses and the Franciscan Church and School suffered damage to their foundations. Mendocinos learned to live with the occasional tremors as did residents of Salta and other Argentine cities along the Andean foothills.

Argentine cities, however, did not suffer as much or frequently as the strong earthquakes that struck their Chilean neighbors on the other side of the Andes.<sup>4</sup>

Accounts of the earthquake reported that significant numbers of people, especially women, were in churches attending Maundy Thursday mass. Other mendocinos walked along the Alameda on a clear evening in the late summer. At approximately 8:40 p.m., a long and deep rumble and a slow east to west movement, followed by a few seconds of violent convulsions, reduced the city to ruins. The earthquake was so strong that the tremor was felt throughout Chile to the west and in Buenos Aires to the east. The result was a great loss of life and no standing buildings as only moonlight illuminated the destroyed city that night. The dust kicked up from the collapse of the buildings suffocated many who were still trapped beneath demolished structures. Fire quickly spread through the provincial capital's remains, started and propelled by kitchen stoves and oil lamps. Destroyed irrigation canals unleashed water across the ruins, drowning many victims still trapped beneath buildings especially on the city's west side. Survivors emerged from the rubble that night and in the following days and later worked to uncover their families and neighbors from the wreckage. Looters and vandals took anything of value from the dead bodies, abandoned stores, and churches including watches, silver dishes, and candelabras. Strong aftershocks were felt periodically over the next couple of months. As residents struggled to find potable water, shelter, clothing, and medicine, while surrounded by

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4. Scobie, *Secondary Cities of Argentina*, 110–16. The Junta de Estudios Históricos de Mendoza, ed. and comp., *Revista de la Junta de Estudios Históricos de Mendoza*, Vol. 2 (1936) and *Revista de la Junta de Estudios Históricos de Mendoza*, Vol. 10 (1939) are particularly helpful in reconstructing the immediate events in the aftermath of the 1861 earthquake. Each volume contains printed primary sources such as eyewitness accounts, newspaper reports, government records, and scientific reports.



putrefying bodies, public officials struggled to reach decisions in the immediate aftermath of the earthquake.<sup>5</sup>

### **The Federalist's Response**

In the immediate aftermath of the earthquake, provincial officials were disorganized and indecisive. An eyewitness' diary published in the Buenos Aires' periodical *La Tribuna* notes that the day after the earthquake "the cries of the victims and injured were increased by the lack of help from organizations. Everything was in disorder and confusion because there was no authority present in the streets or the plazas."<sup>6</sup> The injured gathered in the main plaza and surviving families provided what assistance they could but there was a lack of provisions and water. These necessities could only be found at long distances from the city. In addition, large numbers of campesinos began to arrive in the destroyed city's plaza also looking for assistance, while others came to loot and pillage the remains of the city. The diary again notes that two days after the earthquake, "the authorities seemed to remain unmoved," as the reporter noted that he "did not see the authorities taking any steps" to stop criminal activity or organize the relief effort.<sup>7</sup>

The authorities struggled to maintain order and protect private property in the days immediately after the earthquake struck. A reporter observed that on the March 23, in addition to the 13 aftershocks jolting the ruined city, a fire broke out that consumed the rubble. The sacking of the city continued unabated despite Governor Nazar's decree that no one would be able to enter the city's center unless they brought papers with them

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5. Scobie, *Secondary Cities of Argentina*, 110–16. See also *Revista de la Junta de Estudios Históricos de Mendoza*, vol. 2 and 10.

6. *La Tribuna*, 14 April 1861.

7. *La Tribuna*, 14 April 1861.

showing that they own property in the disaster zone.<sup>8</sup> The reporter noted, however, that this was “a sterile measure that was not respected by the criminals.”<sup>9</sup> On March 25, the governor decreed that anyone caught looting or robbing would be executed. These measures came too late because the criminals had already built hideouts in the ruins of the city, promoting looting and protecting thieves.<sup>10</sup> The authorities did execute two bandits or marauders by firing squad, in addition to two bandits who already had been executed in the nearby city of San Vicente, although, as a report observed, “without the form or process that was required.”<sup>11</sup>

Governor Nazar left the city, leaving the relief efforts to leading citizens. The governor, facing public and personal difficulties and tragedy, withdrew to his hacienda at Las Tres Acequias, southwest of the Mendoza. As a result, many of the crucial decisions were left to the specially appointed public health commission that consisted of local landowners and merchants. Colonel D. Juan de Dios Videla headed this board in the absence of the governor. The seat of provincial government in the first week of April was established beneath the trees of the hacienda San Nicolás that had belonged to the Augustinian Order. When the legislature opened its session, it created multiple commissions charged with a specific task. For example, the treatment of the injured in the hospital, exhuming and burying cadavers, transportation, cleanup, repairs of canals, organization and payment of workers, public security, migration control, aid distribution,

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8. Provincia de Mendoza, *Registro Oficial*, 23 March 1861, 135.

9. *La Tribuna*, 14 April 1861.

10. Provincia de Mendoza, *Registro Oficial*, 10 April 1861, 137.

11. *La Tribuna*, 14 April 1861.

studies of urban relocation and reconstruction. The governor, who the legislature invited to the meeting, did not attend and because of his absence nothing could be determined or decided that same day.<sup>12</sup> The President of the Confederation, Santiago Derqui, received a report in the mid-April, noting that Colonel Videla was heading a relief commission and four hospitals had begun to function. Despite the creation of commissions, the Chilean Lucas González noted that “at this time nothing has been done” and the sick were being attended to by doctors sent by the Chilean government. González created a list of supplies necessary for the care of the sick and sent it to Valparaíso to be filled.<sup>13</sup>

The Confederation’s response to the earthquake varied from grand gestures by senators to commissions and requests for aid from the other provinces. Governor Nazar noted that “we face a dire situation, where the national government should muster any resources, as many as can be spared, to feed the population that has survived the catastrophe because they have nothing to eat.”<sup>14</sup> The minister of the interior replied to Nazar that the focus was on procuring and sending all the necessary resources needed by Mendoza. Furthermore, while waiting, the governor should obtain whatever resources are available for the victims and the national government would quickly pay for them.<sup>15</sup>

Grand gestures were made in the national congress toward Mendoza. For example, Senator Brigadier General Tomás Guido reportedly gave an eloquent speech stating that

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12. *La Tribuna*, 14 April 1861.

13. D. Lucas Gonzalez to President of the Republic to Dr. D. Santiago Derqui, Mendoza, Argentina, 12 April 1861 in *Revista de la Junta de Estudios Históricos de Mendoza*, vol. 10, 195.

14. Gobernador de Mendoza to Ministro del Interior [Confederation], Archivo General de la Nacion (AGN), Sala X, 29-5-10; *Boletín Oficial*, Paraná, 1 April 1861.

15. Minister del Interior [Confederation] to Gobernador de Mendoza, 31 March 1861, AGN, Sala X, 29-5-10; *Boletín Oficial*, Paraná, 1 April 1861.

“we will raise a temple from your ruins.” Furthermore, the Confederation was prepared to offer a subsidy of 20,000 pesos annually over twenty years for the construction of public works in Mendoza.<sup>16</sup> The President of the Confederation, upon receiving word of the catastrophe, sent a commission head by Dr. Melitón González del Solar. The commission was not only charged with medical aid but also with collecting a subscription in the city of Paraná, the Confederation’s capital, and throughout the federalized provinces and distributing it to the victims in Mendoza on their arrival.<sup>17</sup> The commission left Paraná on Sunday, March 31 and included medical doctors and pharmacists. González del Solar expected to recruit additional human and material resources from other locations as the commission made its way to Mendoza. Such hopes, however, were quickly dashed. For example, in Córdoba, the Confederation’s largest city, the commission’s request for additional doctors was met with failure. If the “National Government or the Government of Mendoza does not send money in accordance to the resources requested, who can go and help the mendocinos.”<sup>18</sup> Despite the many donations from each province, the Confederation proved unable to meet Mendoza’s needs. The Confederation was much more preoccupied with the political problem presented by Buenos Aires.

Mendoza’s catastrophe forced Buenos Aires to address its role in the Argentine nation. An article in *La Tribuna* noted that the earthquake had devastated one of the most productive and industrious provinces in the Confederation, but the author goes onto

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16. Aníbal Mario Romano, “Destrucción y reconstrucción de Mendoza: el terremoto de 1861,” in *Repercusiones de Pavón en Mendoza: a través del periodismo (1861–1863)*, ed. Pedro Santos Martínez C. (Mendoza: Universidad Nacional de Cuyo, Facultad de Filosofía y Letras, 1973), 45.

17. Decreto del Presidente de la Republica, AGN, Sala X, 29-5-10; *Boletín Oficial*, Paraná, 1 April 1861.

18. Dr. Melitón González del Solar, “Diario de Jornadas en mi viaje a Mendoza en Comisión del Gobierno Nacional.” in *Revista de la Junta de Estudios Históricos de Mendoza*, vol. 10, 203.

ponder what were the duties and obligations of Buenos Aires, those of the national government, and those of all the provinces. The article concluded that the population of Buenos Aires had already responded energetically in the cause of humanity for their fellow Argentines. Another editorial in *La Tribuna*, criticized governor Nazar's handling of the crisis and of the provincial government in general, warning that the province was in danger of "disappearing from the map of the Republic..."<sup>19</sup> The people of Buenos Aires, however, demonstrated their compassion and solidarity with all Argentines by their unprecedented acts of charity. The prevalent attitude of the periodical suggested that mendocinos are Argentines in spite of political differences between Buenos Aires and the Confederation: "when some Argentines suffer everyone suffers."<sup>20</sup>

Mitre and the government of Buenos Aires did not act passively in response to the disaster in Mendoza. The Buenos Aires' government formed the *Comisión Filantrópica* to organize, direct, and distribute the aid that was being gathered by the military, benevolent associations, and the Catholic Church, among other institutions. The Ministry of Government passed a circular around to all the justices of the peace in the city and province asking that they begin a subscription in their respective administrative districts and parishes to gather aid for the survivors of the Mendoza earthquake.<sup>21</sup> The government headed this great list, "for those who call themselves Argentines."<sup>22</sup> Three organizations collaborated to collect money and clothing for the citizens of Mendoza: San Vicente de

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19. *La Tribuna*, 2 April 1861.

20. *La Tribuna*, 2 April 1861.

21. Juez de Paz to Ministro del Gobierno, 15 April 1861, AGN, Sala X, 29-6-9, expediente 17773; Ministro de la Guerra Consul, 22 May 1861, AGN, Sala X, 29-6-9, expediente 19747.

22. *La Tribuna*, 2 April 1861.

Paul, the Club del Plata, and the Comisión Filantrópica. These organizations collected many donations from cities throughout the province of Buenos Aires. The Comisión Filantrópica functioned as a delegate of Buenos Aires to distribute the donations.

While the country's western provinces continued to be federalist strongholds, Mendoza initially proved to be an early adherent to the liberalism promoted by Buenos Aires. In late 1861, Colonel Rivas commanded a military force that traveled throughout San Luis to Mendoza. Rivas reported to Mitre that the disgruntled mendocinos met him and his men with shouts of "¡Viva Buenos Aires!"<sup>23</sup> Sarmiento, also traveling with Rivas on his way to a triumphant return as governor in San Juan, passed through Mendoza. He also noted the warm welcome he received and observed that only "debris and desolation, a decimated and scattered people, a mere parody of society" remained.<sup>24</sup>

The triumph of Buenos Aires at the Battle of Pavón in September 1861 and the presence of national troops in Mendoza placed the federalist governor's job in jeopardy. A revolution promoted forced Nazar to delegate power to Videla in December. Sarmiento, the auditor de guerra, however, did not recognize Videla's leadership and instead called an assembly in January 1862 in San Vicente, where Sarmiento nominated Luis Molina as governor. The new governor, in line with the liberal Buenos Aires government, now led the reconstruction process.<sup>25</sup>

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23. Rivas to Mitre, 6 January 1862, in *Archivo del General Mitre (AGM)*, vol. 11, *Pacificación y Reorganización Nacional*. Cited in Rock, *State Building and Political Movements*, 119.

24. *El Nacional*, 20 January 1862. Cited in Rock, *State Building and Political Movements*, 120.

25. Provincia de Mendoza, *Registro Oficial*, 18 December 1861, 182-183; Provincia de Mendoza, *Registro Oficial*, 19 December 1861, 184-185; Provincia de Mendoza, *Registro Oficial*, 2 January 1862, 191.

## **The Hegemony of Buenos Aires**

Across Argentina's interior, the lack of provincial resources for essential institutions such as education, military, police, judges, and like helped to turn the state-formation process over to the national government and centralization. The Buenos Aires controlled national government remained unsure how the centralization process should proceed. The 1860s witnessed the division of unitarians into two groups: unitarios puros and liberals though the differences were slight. The unitarios puros argued for the hegemony of Buenos Aires and the dissolution provincial sovereignty during a dominant state-formation process. Similarly, "old unitarians" argued that the centralization process should occur through the abolition of the federal constitution and the formation of a centralized government controlled by Buenos Aires. But Sarmiento and Mitre believed that these objectives went beyond the resources and capabilities of Buenos Aires. Liberals argued that the only influence in the provinces should be the national government and supported a strong centralized power led by Buenos Aires. They also called for the presence of the national agencies within the provinces in particular, the army and argued for the centralization in the application of justice. This liberal position, which more closely aligned with Mitre's view of national politics, did not mean, however, that the provinces would abdicate all their sovereignty.<sup>26</sup>

The provinces lack of resources, the presence of national troops in Mendoza at the end of 1861, and changes in provincial leadership at the beginning of 1862 turned the problem over to the Buenos Aires controlled national government. At the start of 1862,

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26. For an examination of the differences within the Unitarian or liberal movement during the 1860s, see Rock, *State Building and Political Movements*, 11–55. For an analysis of the state formation process in the province of La Rioja during the 1860s, see De La Fuente, *Children of Facundo*, 17–32.

the new governor's message to Mendoza's Legislature at its opening session noted the lack of funds as the principle obstacle to the construction of public buildings. For example, the hospital was unable to be built despite its necessity. The governor noted that according to an Interior Ministry report, a significant amount of money had been deposited in Buenos Aires. When the national government believed that the province had chosen a fixed place for the capital, the money would be distributed for the construction of public buildings. Governor Molina appointed a commission to examine the problem of reconstruction and offer recommendations on how to proceed. Attempts to reach a consensus, however, met repeated frustration and the governor appealed to the national authorities to intervene and impose a decision from Buenos Aires.<sup>27</sup>

By the end of 1861, the national government in Buenos Aires had taken over control of the funds donated for the relief of earthquake victims. Contributors to these funds, according to the Buenos Aires authorities aimed their donations at rebuilding basic public institutions. It was necessary to set firm plans and dates for reconstructing the new city; without such plans and timetables, the national government considered the Province of Mendoza to be defrauding their contributing supporters. After a meeting of the commission, and in accordance with the national government's decree of April 7, 1862, the province's subsidies were to go toward the following public building projects: hospitals, churches, boys' primary and secondary schools, girls' primary and secondary schools, a women's school, schools in the country, a public market place, a government house, rebuilding the public cemetery, and infrastructural public works projects such as

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27. *El Tupungato*, 11 February 1862.



bridges and drainage systems. The total sum for these projects amounted to 112,000 pesos.

Agreeing on a site to rebuild Mendoza proved to be a contentious issue among politicians, businessmen, and the general public. At first, Governor Nazar thought about rebuilding the new city on his own hacienda.<sup>28</sup> In June of 1861, the legislature passed a law that sanctioned the rebuilding of the city in the same place that it had been located before the earthquake with considerations to limit the height of walls and widths of streets. It also agreed to build four plazas, with the Plaza de Independencia surrounded by a government house, the legislature, the judiciary, a jail, and the police. Finally, it voted to beautify plazas with trees and vegetation.<sup>29</sup> Yet, nothing was done to clear the principal plaza, rebuild the cathedral, or the cabildo.<sup>30</sup> With the installation of the new provincial leadership, along with the national troops that occupied the city, the governor appointed new commissions to make recommendations for a new city. Unable to find consensus, Governor Molina requested the intervention of the national government. But in a countermove, the legislature passed a new law in July of 1862 that would relocate the city to the area of Las Tortugas south of the old city. But despite the distribution of lots, no building occurred.<sup>31</sup> Furthermore, as Richard Rickard, a British mining engineer, observed during his trip to the city in May of 1862, Mendoza continued to be in a state of

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28. Wenceslao Díaz, *Apuntes sobre el terremoto de Mendoza, 20 de Marzo de 1861*, 62.

29. Provincia de Mendoza, *Registro Oficial*, 18 June 1861, 148-149. Ministro General de Mendoza to Ministro de Gobierno de la Provincia de Buenos Aires, 1 July 1861, AGN, División Nacional, Sección Gobierno, Sala X, 29-5-12, expediente 19993.

30. Eusebio Blanco, "Relación histórica" in *Revista de la Junta de Estudios Históricos de Mendoza*, vol. 2, 194-195.

31. Scobie, *Secondary Cities of Argentina*, 113-16.

“desolation and ruin!”<sup>32</sup> Rickard inspected the ruins of the city, noting that at the cathedral of Santo Domingo, “I saw lying about its precincts several human skeletons, and portions of the human form protruding from beneath the heavier masses of masonry.”<sup>33</sup> As Rickard moved throughout the city, he continued to observe “the same horrible exhibition—skulls, arms, legs; lying about, some still decaying: especially near a convent on the south side of the city.”<sup>34</sup>

Despite the legislature’s decree to relocate the city to Las Tortugas, the populace continued rebuilding the city along the Alameda. In a discussion about the new city in *El Tupungato*, it was noted that there was no firm proposal for either the San Nicolás site or the Las Tortugas site and that the disadvantage to both was “local pessimism!”<sup>35</sup> Instead, it was noted that along the streets of the Alameda, houses and businesses had begun to fill fifteen blocks.<sup>36</sup> Furthermore, a police report in October of 1862 registered in the old city and along the Alameda, 596 houses that had been constructed, and 97 houses that were in the process of being built, in addition to 98 retail stores and 99 artisans’ shops already standing.<sup>37</sup>

But Governor Molina continued to favor the establishment of the city along the west side of San Nicolás and along the Alameda. The Ministry of the Interior in Buenos

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32. F. Ignacio Rickard, *A Mining Journey Across the Great Andes: With Explorations in the Silver Mining Districts of the Provinces of San Juan and Mendoza, and a Journey Across the Pampas to Buenos Ayres* (London: Smith, Elder and Co., 1863), 110.

33. Rickard, *A Mining Journey*, 112.

34. Rickard, *A Mining Journey*, 112.

35. *El Tupungato*, 19 May 1862.

36. *El Tupungato*, 3 June 1862.

37. *El Tupungato*, 4 October 1862. Quoted in Scobie, *Secondary Cities of Argentina*, 115.

Aires in a letter to Governor Molina announced that the national government would suspend all aid not only in the form of subsidies but also charitable donations until a final site was decided upon.<sup>38</sup> The governor noted in his speech at the opening session of the legislature, the population's negative reception of the Law of July 21, 1862 that proposed the existing location. Citizens' lack of will to comply with the law and move their business and homes to Las Tortugas forced the government to reconsider its proposed site for the new city. Thus, the government needed to reexamine the issue.<sup>39</sup> In the end, the legislature passed a law in March of 1863 that accepted the San Nicolás site—favored by the governor—and which incorporated the old city. Article six of the law noted that the population had already consented to this by building along the Alameda that was within the limits of the old city.<sup>40</sup> The leading members of society with businesses and homes along the Alameda organized in support of the San Nicolás plan through the Club del Progreso.<sup>41</sup>

The provincial government announced at the end of 1862 and the beginning of 1863 that it had significant budget problems that inhibited the city's reconstruction. *El Tupungato* reported that the legislature spent much time meeting about the lack of funds. The senate proposed a significant tax increase but no group of representatives commanded enough support to pass the proposal and the bill died for lack of legislative

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38. Ministro del Interior to Gobernador, 19 November 1862, Archivo Historico de la Provincia Mendoza, sección provincias, carpeta 620; *El Tupungato*, 16 December 1862.

39. *El Tupungato*, 11 February 1863.

40. Provincia de Mendoza, *Registro Oficial*, 24 March 1863, 219-220.

41. Scobie, *Secondary Cities of Argentina*, 115.

support.<sup>42</sup> Popular opposition to a tax increase and the manner in which the legislature was handling the budget situation caused numerous letters to be written to *El Tupungato*. One particularly angry letter accosted the government for the proposed use of funds in the new budget, complaining about the subsidy for the government printer, the salaries of the governor and other officials, and the amount of money paid to those working on the river and public instruction. The disgruntled author called the intended subsidies of the various government dependencies “absurd” and accused the group of congressmen proposing tax increases and the new budget of being deaf to public needs and of ruining the province with their bad intentions.<sup>43</sup>

The national government’s subsidy, however, was not enough to make up for the budget shortfalls caused by reconstruction and military costs. The budget forecast for 1864 recorded a shortfall of 34,180 pesos which would be requested from the national government.<sup>44</sup> The 1865 budget forecasted an annual deficit of 13,212 pesos. Article two of the document noted that the governor should request the shortfall from the national government in accordance with the constitutional protocol.<sup>45</sup> From April 1864 through July 1866, Buenos Aires provided the province of Mendoza its subsidy of 1,000 pesos even if the timeliness of the allocation was unreliable, as every few months a payment was late or a double payment was made to compensate for missing the previous month.<sup>46</sup>

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42. *El Tupungato*, 29 December 1862.

43. *El Tupungato*, 10 January 1863.

44. Provincia de Mendoza, *Registro Oficial*, 29 December 1863, 424.

45. Provincia de Mendoza, *Registro Oficial*, 15 November 1864, 530.

46. AGN, Fondo: Ministerio del Interior, Serie: Mendoza, Series Históricas III, N° 123.

Editorials complained that the subsidy was particularly small and could never cover reconstruction expenses let alone provide relief from the damage done to the provincial economy. *El Constitucional* argued that the 1861 earthquake left the Province of Mendoza in a peculiar situation. It had already lost its industry, jobs, and commerce. The 1861 earthquake and the circumstances resulting from it and the province's geographic position in the country justified an increased subsidy and aid to the city. The editorial went on to claim that "the cities of San Juan, San Luis, Córdoba, and Santa Fe are interested in the reestablishment of our city, because it represents a secure point of commerce."<sup>47</sup> Thus, Mendoza would have needed a subsidy of 56,000 pesos for eight to ten years in order to enable the city to recover its privileged position. The editorial concluded that reconstruction in one of the most beautiful regions of the nation would increase General Mitre's glory and raise him to "immortal status."<sup>48</sup> Another article in *El Constitucional* noted that the national government had failed to pay its subsidy to the provinces. The editorial goes on to state that "the national government is in a good position to pay these expenses" and it wonders "what declaration has the national government made that it has no more funds?"<sup>49</sup>

The reconstruction commission run from Buenos Aires, also, failed to effectively fund or obtain real tangible results. The national government created the reconstruction commission through a national directive on April 7, 1863. The purpose of the commission was to improve the investment of the national government's funds. The

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47. *El Constitucional*, 24 February 1863.

48. *El Constitucional*, 24 February 1863.

49. *El Constitucional*, 1 September 1863.

commission consisted of seven individuals charged with the administration and distribution of national funds. Along with the pronouncement that a commission had been formed, it was noted that Mendoza's primary need continued to be "the reconstruction of a population center, in order to maintain the moral order of the city, which was quickly fading since the earthquake had broken the bonds that had tied society together."<sup>50</sup> By August, however, angry editorials decried the government's and the commission's failure to fulfill their obligations primarily to the earthquake's victims. Particularly upsetting to some citizens of Mendoza, were the commission's close door meetings. In the mendocinos' estimation, the commission should consider the proposal that the government assign some of the funds that were under their administration but which had not been earmarked for a particular purpose to the provincials.<sup>51</sup> The construction of a hospital remained undecided because it was not possible to decide anything without the commission, a body which had proved to be as indecisive as the provincial legislature. The editorial argued that four months was plenty of time to decide on plans for a new hospital, school, government building, and river projects. Furthermore, the editorial wondered what the outcome would be. The national government could retract the commission and take away hundreds of thousands of pesos that had already entered the province but remained unspent. The national government's lack of effort on numerous reconstruction measures would convert good intentions into bad results.<sup>52</sup> In response to the public outrage over the commission, the government ran an article in *El*

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50. *El Constitucional*, 18 July 1863.

51. *El Constitucional*, 1 August 1863.

52. *El Constitucional*, 13 August 1863.

*Constitucional* that argued that the commission had great urgency to act with the funds available for the public good. The commission would now meet three times a week until all the most urgent projects had been addressed. It also called for budget estimates for indispensable reconstruction projects.<sup>53</sup>

Buenos Aires' wars against the remaining federal caudillos diverted not only funds but also the governor's attention and manpower away from the reconstruction effort. After the Battle of Pavón, Buenos Aires sought to impose its own choices as governors in western Argentina. They, however, soon found their positions threatened by federalist resistance or by provinces such as San Luis and La Rioja that fiercely resisted liberal unitarian forces. Soon public officials and generals carrying out programs of national pacification pleaded for money, men, horses, and supplies from Buenos Aires. The national government was unable to provide much financial or other support. As a result, provinces were forced to muster troops to defend their positions and fight against the stubborn federal resistance.<sup>54</sup> In Mendoza, the governor mobilized resources through a subscription in 1863, causing anger among the residents. A letter to the editor of *El Constitucional* noted that "nobody pretends that they are going to be paid. Everybody knows they are not. But everyone is clamoring for arms for the reconstruction of the province, ruined on March 20."<sup>55</sup> Instead of worrying about external issues, the governor "needs to focus on the province."<sup>56</sup>

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53. *El Constitucional*, 3 September 1863.

54. De La Fuente, *Children of Facundo*, see especially chapter 2; Rock, *State Building and Political Movements*, 32–36.

55. *El Constitucional*, 29 August 1863.

56. *El Constitucional*, 29 August 1863.

## A Slow Recovery

At the end of 1863, an editorial assessed the accomplishments of the liberal provincial regime installed by Buenos Aires. The citizens of Mendoza had helped to place a liberal government in power that promised liberty, order, and respect for the law. The editorial concluded that the mendocinos had seen their fortunes and commerce destroyed because of earthquake and war. The progress promised by the liberals had not come to pass. Instead, the editorial argued that Mendoza deserved to have its industry and rights protected in order that the mendocinos could reap the fruits of their own labor. Furthermore, the city and province deserved subsidies in order to continue the rebuilding process. The national government was supposed to be in charge of the well-being of all Argentines, yet, the lofty liberal promises had gone unfulfilled. The article concluded by stating that “a just and enlightened government tends to the needs of this disgraced province with its protecting arm.”<sup>57</sup>

The complaints about the liberal provincial government installed by Buenos Aires and the neglect the national government had shown for the province boiled over in late 1866 with the Colorados Rebellion. The former federalist governor of San Luis, Juan Saá was rumored to be leading a military force supported by the Chilean Government across the Andes into Mendoza. Upon hearing the rumors, the mendocino police and the 200 members of the Mendoza National Guard awaiting deployment to the Paraguayan War front were mobilized. *El Nacional* reported that “Mendoza has placed itself at the head of the movement...”<sup>58</sup> Thus, the local revolt in Mendoza gave Juan Saá and his partner

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57. *El Constitucional*, 27 August 1863.

58. *El Nacional*, 23 December 1866. Quoted in Rock, *State Building and Political Movements*, 43.



Felipe Varela, a montonera leader from Catamarca, the opportunity to bring their troops across the Andes and use Mendoza as a base for a larger rebellion against Buenos Aires. Saá declared the objective of the rebellion was to capture the provinces of Cuyo and return them to Chile and return to the regional alignment that existed before 1776, based on the strong ties the regions experienced. Initially, Buenos Aires was caught off guard: General Paunero found it difficult not only to muster troops in Córdoba but continued to lose men as he slowly marched toward Mendoza, and was ultimately defeated. The leaders of the Colorado Rebellion echoed many of the complaints of the mendocinos during the previous years. According to Varela, the “odious centralism of Mitre and his circle of sycophants” monopolized foreign trade revenues and left the people of provinces to be beggars “with neither country, nor liberty, nor rights” that the liberals had promised.<sup>59</sup>

### **Accommodation**

National governments’ reconstruction programs had to accommodate provincial and local political and economic interests. At the end of 1861, Buenos Aires authorities hoped to control the direction of mendocino reconstruction. The national government’s overseers believed that firm deadlines had to be set and one reconstruction plan followed. It proved to be difficult to find common ground among land owners, local businessmen, governors, provincial legislators, and the mendocino population. The first piece of reconstruction legislation, passed in June of 1861, sanctioned rebuilding Mendoza on its original site. At the end of 1861, new provincial leadership created new commissions to restudy reconstruction options. With the threat of national government intervention, the

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<sup>59</sup>. *El Nacional*, 4 January 1867. Quoted in Rock, *State Building and Political Movements in Argentina*, 45.

mendocino legislature enacted a new law in 1862 that would rebuild the provincial capital south of the original site. Members of the economic elite, however, failed to support this proposal because it favored some landowners over others and forced businessmen, who had already begun rebuilding their commercial houses along the Alameda to waste valuable time and resources tearing down their structures and relocating them. The threat of the national government's overseers removing state resources from the province created the necessary conditions for the landed elite, businessmen, citizens, and political officials to reach a firm agreement. No one at the provincial or local level monopolized power. Thus, the March 1863 Law accepted the locations where social and business elite along with much of the population had already started rebuilding. After two years of different reconstruction proposals, the location of the "new" Mendoza accommodated all political and economic interests.

### **The 1868 Arica Earthquake and Tsunami: An International Disaster**

The 1868 earthquake and tsunami in the area of Arica struck southern Peru and northern Chile—Cobija, Iquique, Arica, Tacna, Ilo, Islay, Mollendo, Chala, Pisco, Chincha, Callao and Lima, and Casma. The disaster spread misery among Chileans, Peruvians, Bolivians, British, and United States workers, businessmen, military personnel, diplomats, and politicians. Foreign officials, navy personnel, and mariners worked to help the region recover and protect their constituencies' economic interests. The Chilean government quickly responded to the catastrophe in the emerging nitrate region of southern Peru because many of the miners, railroad, and port workers were Chilean. A cycle of disasters—earthquakes, tsunamis, and epidemics—beginning in 1868 and continuing through the 1870s and persistent political instability caused reconstruction

to be neglected. The unstable Peruvian Government only funded the necessary rebuilding projects to maintain commerce. Instead, treasury funds helped to build railroads that carried Bolivian goods that bypassed Arica and destroyed coastal southern cities.

### **The Earthquake and Tsunami**

Around five in the afternoon on August 13, 1868, a strong earthquake shook the area stretching from Ica, Peru to Tarapacá, Chile. Later, a massive tsunami struck the Pacific Coast reaching the southern Chilean island of Chiloé and another wave touched the shores of New Zealand, Australia, Hawaii, California, and Japan. One correspondent noted that “nothing more appalling can be conceived than a complete catastrophe which has no parallel in the annals of the west coast since the destruction of Callao in 1746,”<sup>60</sup>

The earthquake and tsunami destroyed the guano and nitrate producing region’s chief port. An agent from the Pacific Steam Navigation Company reported that “Arica no longer exists.” Shortly after the five in the afternoon, witness noted the sea in the bay had retreated and boats in the harbor pulled out with the tide. A little while later, a great wave carrying boats with it in its wake swept ashore, destroying the customs house, and public and residential buildings alike. The Peruvian war-steamer *America* lost eighty-five men; the United State’s steamer *Wateree* which only lost one sailor came to rest about a mile inland near the railroad tracks; every sailor on the United States ship, the *Fredonia* perished except the captain, surgeon, and paymaster. The British ship *Chanarcillo* lost half its crew and only the hull remained beached on the shore. Similarly, a United States ship loaded with guano disappeared into the depths of the sea. The wave picked up a Peruvian rig and laid it to rest on the railroad tracks with ropes and spars still intact.

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60. Rosa Urrutia de Hazbún and Carlos Lanza Lazcano, *Catastrofes en Chile 1541–1992* (Santiago: Editorial La Noria, 1993).

Ariqueños fled to the hills surrounding the city and remained there for two days. The earthquake destroyed the principal part of the city and aftershocks brought down any buildings that remained standing. A great number of people were crushed beneath the ruins of their houses. The aftershocks continued for the next 18 hours. The economic effect of the disaster was great. The dead included Charles L. Worm, the manager of the Arica and Tanca Railroad. Property damage was immense. The customs houses contained about 15,300 packages at an estimated value of 1,800,000 pounds sterling. Public buildings—the custom’s house, post office, and hospital—churches, transportation links and hubs—the dock and the railroad station—and military installations—fort San José—were all destroyed.<sup>61</sup>

Before the disaster, Iquique’s commercial standing had been increasing. In the 1850s the railroad between Arica and Tacna was completed, a customs house was built, and foreign investment increased, primarily from British investors. The port’s reliance on Arica for potable water inhibited Iquique’s development. As a result, the city began to build desalinization plants. Iquique achieved a greater commercial status as a major port after the 1850s when six docks were built. These measures helped to end Iquique’s dependence on Arica and now allowed direct foreign and domestic commerce. Economic development encouraged Chilean laborers migration to southern Peruvian ports. But the 1868 earthquake and tsunami brought a halt to Iquique’s development. The disaster left the survivors hungry and thirsty; even the people with means were without food or drink. Desalinization and distillation machines were broken, eliminating the availability of water. The number of victims exceeded 100 and was probably closer to 150 people,

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61. *La República*, 31 August 1868.

including many notable families, according to various witnesses. One report noted that “Not a business establishment has escaped, nor does a vestige remain of the once opulent and handsome section of the town. The massive buildings mostly belonging to the nitrate merchants...have disappeared entirely and not even the remains of their whereabouts exist.”<sup>62</sup>

In 1868, Pisagua’s importance as a saltpeter processing center was increasing despite its geographic shortcomings. The uninviting narrow and rocky beach surrounded by hills that rose to a plateau of about 350 meters inhibited its potential growth as a port. Furthermore, drinking water had to be brought daily from Arica for the city’s 900 inhabitants. It proved to be well protected, however, from tsunamis, while the heights surrounding the city provided a safe place for fleeing inhabitants. According to a report from *El Mercurio de Vapor*, the earthquake produced little damage because most of the houses were wooden constructions, but the wave destroyed houses, storehouses and the Soruco Hermanos’—González Velis, Crousend, and the José Osorio—wharfs. Miraculously few boats were damaged.<sup>63</sup>

The earthquake and tsunami also destroyed the cities of Tacna and Arequipa and caused a panic in Peru’s chief port of Callao. Tacna housed 10,000 people, nearly three times as many inhabitants as Arica, its sister city. Many commercial houses remained in Arica but their larger offices were located in Tacna. The earthquake also destroyed Arequipa. The population camped in the Gran Plaza in the center of the city too scared to

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62. *La República*, 31 August 1868.

63. Fernando Lopez to Vincente G. De la Fuente, 15 August 1868 in Manuel Fernández Canque, *Arica, 1868: Un tsunami y un terremoto* (Arica, Chile: Universidad de Tarapacá/Arica, 2007), 108–09.

return to their houses. Churches lost their roofs and their walls collapsed, the hospital and the jail also disintegrated, and their occupants died beneath the ruins. One account reported that “Arequipa, the second city of the Republic, is leveled to the ground.” The city’s magnificent cathedral, while only losing its towers, remained in a dangerous condition.<sup>64</sup> The 1746 earthquake and tsunami in Callao and Lima was seared into the memory of Peruvians. The earthquake and its aftershocks raised alarms in Lima and sent off a panic in Callao. Even though, according to a Spaniard, the waves that crashed ashore after the earthquake were relatively small and did little damage, she and the British government official observed that the port’s citizens fled to Lima by train, horse, or on foot throughout the night of the disaster in ever-increasing waves of humanity. A correspondent for the Chilean newspaper, *El Independiente*, reported that the temblor and tsunami had caused little damage to the capital and no limeños had been found trapped underneath the ruins. A week after the catastrophe, the British Consul indicated that the waves had broken the moorings of docked ships causing collisions among the boats. Sailors on larger merchant or war ships tried to repair them at sea the next day. The British Consul blamed the port city’s citizens helter skelter flight during the night for a fire that incinerated 40 houses in an affluent neighborhood.<sup>65</sup>

### **The Peruvian Government’s Response**

The earthquake and tsunami struck at a time of political instability in Peru. Politicians and political observers called for the nation to unite behind the newly elected president and congress to address the fallout from the disasters. Two years before the

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64. Fernández Canque, *Arica, 1868*, 117–20.

65. “Detalles, sobre el terremoto del 13,” *El Independiente*, 28 August 1868; Fernández Canque, *Arica, 1868*, 115–17.

1868 catastrophe, alleged irregularities in the election caused political instability. Outside of Lima and Callao, the 1866 election results were ignored and a rebellion spread from Arequipa. General Pedro Diez Canseco triumphed over the capital and its port-city in January 1868. After a few months, the general convoked congress and called for new elections. The new election elevated José Balta to the presidency a scant 11 days before the earthquake and tsunami struck Arica and Peru's southern coast. A report from Lima noted the optimism that accompanied the inauguration of Balta's government and hoped the political conflicts that had relentlessly marred the past would end. The disaster tested the good intentions of its new leaders.

The new government responded quickly to the disaster. When news of the earthquake and tsunami reached Lima, the president and his ministers moved their base of operations to Callao in order to more efficiently direct commissions and supplies for victims up and down the Peruvian coast. The relief effort included French and United States war ships, Peruvian naval vessels, and an English steam ship. The amount of assistance directed to the southern cities and villages amounted to approximately one million pesos, about a third of which was cash. The congress cooperated with the president, passing a law that permitted the government to take all necessary measures to alleviate the suffering of the southern cities. Along with the aid sent out from Callao, the president also sent a message to the Peruvian people. Balta highlighted his patriotism and love of country and promised that with the help of congress and all citizens, he would reduce the effects of the calamity which had befallen the people along southern coast. The president praised congress for putting aside their conflicts and demonstrating their solidarity with the disaster victims. The congress voted to approve a disaster relief

commission. The president hoped that “the disaster would be the occasion to restore the country beset by both natural and political calamities and complete its regeneration in the aftermath of bloody riots, political mistakes, and earthquakes and tsunamis that have only yielded great misfortune.”<sup>66</sup>

The president, however, also used the disaster as an economic opportunity and induced further private investments from Europe and North America. The Peruvian President argued that the disaster could create a social renaissance that southern ports could be designated as free trade areas, increase agricultural production with the building of roads and irrigation systems, a mortgage law to eliminate the constraints of property values, widening credit, and reducing the army to transform soldiers into farmers and no longer be consumers but producers. The previous Finance Minister, García Calderón, announced that the new Balta government would need a massive investment of more than 25 million pounds sterling from London based on future guano production because the Peruvian state’s coffers were empty. The new president along with his Finance Minister, Nicolás de Piérola, constructed a grand plan to radically transform the guano appropriation system, replacing a system with multiple consignees with one centralized guano house. The new government gave the guano contract to the French merchant house Dreyfus and Brothers, four days after the ariqueño disaster. In order to transport guano, Peruvian railways needed to be rebuilt in the southern region. The Peruvian Congress authorized the government to raise 50 million soles to be used exclusively for the construction of railways. The primary transportation objective was to bring the mountains and the coast into contact with each other. The guano profit did not lead to any massive

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66. *La República*, 6 September 1868; *La República*, 7 September 1868.



investment in public infrastructure, the creation of a public health system to address the recurring epidemics that continually decimated the population, or rebuild the cities and ports destroyed by the recent earthquake and tsunami.<sup>67</sup>

Businessmen, who profited from government contracts, also contributed to the relief effort. Enrique Meiggs, the owner of the Mejía to Arequipa railroad line donated 50,000 soles. The donation was distributed to the following urban centers: 20,000 soles to Arequipa, 10,000 soles to Arica, 10,000 soles to Iquique, and the remaining 10,000 soles to a commission. Meiggs was working on connecting Arequipa with the littoral by railway and secured a government contract that guaranteed him the rights to the project. The guano haulage contractor, Alvarez Calderon, also gave 50,000 soles. An English steamship company allowed the government use of two ships and sent another to the littoral with a large quantity of provisions.<sup>68</sup>

Building a railway infrastructure that moved goods between the mountains and the coast proved to be the Balta's priority, not rebuilding the devastated southern ports. When the president visited Arica in 1871, he focused on finding more Chilean migrant workers for railroad construction. The majority of railroad workers died in a yellow fever epidemic that spread through the ruins of Arica and Tacna. While in Arica, the president stayed with the British Vice-Consul and reimbursed the British Crown 500 pounds for damages suffered during the earthquake and tsunami. The guano profit and foreign investment went to the ever growing state bureaucracy, commissions, and Peru's enormous debt service. Reconstruction was strictly circumscribed to those buildings

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67. *La República*, 8 September 1868; Fernández Canque, *Arica, 1868*, 289–96.

68. *La República*, 5 September 1868.

necessary for the normalization of commerce. Gustav Eiffel's rebuilt customs house had a lower capacity than the previous incarnation. The train station and rails were also rebuilt. Few public buildings, however, were rebuilt and those that were, only were modestly rebuilt. Often, private commercial houses not only rebuilt their own buildings but also some public structures. The new railroads, however, siphoned off Bolivian commerce that once flowed through Arica to northern ports. The new transportation networks—especially the Mollendo Puno railway line—impeded or stunted the rebuilding of Arica and many southern coastal ports.<sup>69</sup>

Arica's devastation persisted for years after natural disasters of 1868 and 1877. Alberto Davin, a Frenchman, who was visiting Arica during the War of the Pacific, described the city in 1882 as a "desolate place." The threat of continued disasters caused the new city to be built in a less grand style with mediocre buildings. But the citizens continually rebuilt because of the promise of rich commercial traffic from Bolivia. Davin observed the rhythm of the everyday life in the city and noted that "the streets are almost deserted."<sup>70</sup>

### **The Chilean Government's Response**

Municipal governments in Chile were the first to respond to the catastrophe that struck Peru's southern coast. The Chilean municipality of Caldera also provided shelter for incoming refugees that escaped the disaster zone. After the refugees arrived, Caldera sent provisions to the disaster zone on the U.S. warship *Kearsage*, including potable water and 1,500 pesos, and charged the Chilean government official in Arica with

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69. Fernández Canque, *Arica, 1868*, 289–95.

70. Fernández Canque, *Arica, 1868*, 293–96.

distributing the relief aid.<sup>71</sup> Valparaíso's businesses also voted to send 15,000 pesos to help in the relief efforts.

In Santiago, the state also took an active role in providing assistance and contributing to the relief efforts. The Congress authorized President José Joaquín Pérez to provide 50,000 pesos in aid to the earthquake victims. The president and congress argued Chileans had a humanitarian obligation to provide financial assistance to their neighbors. In the debate about funding in the congress, members pointed out that southern Peru was an extension of Chile and a "great number of the inhabitants of the effected regions were Chileans."<sup>72</sup> The population of Iquique, for example, was almost all Chilean. An editorial noted that it would be unjust to only explain the aid package as merely congress and the president acting in their own self interest. Instead, Chileans viewed the aid as engaging in fellowship and affirming brotherhood with Peru. The interior minister noted that the aid would almost certainly prevent the death of many victims in Iquique and Arica.<sup>73</sup> When news of the catastrophe reached Valparaíso, the government sent the *Maipú* filled with provisions and aid and the next day the sloop, *Esmeralda*, was also sent to the disaster area with similar resources. Congressman Arteaga Alemparte proposed increasing the amount the president requested by 100,000 pesos to aid Chilean citizens in the ports of

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71. *La República*, 21 August 1868.

72. "Un acto de humanidad," *La República*, 23 August 1868.

73. "Un acto de humanidad," *La República*, 23 August 1868.

Talcahuano and Tomé i Carrizal Baja. Furthermore, congress set up a relief commission to gather monetary and material donations throughout the country.<sup>74</sup>

The impact of the earthquake and tsunami followed by the yellow fever outbreak left Arica in ruins, inhibited rebuilding efforts, and left the majority of the population in abject poverty. The epidemic inflicted a significant human and economic toll up and down South American's Pacific coast. At the end of 1868, ships and boats applied a rigid isolation to all of the Peruvian coast's ports. The quarantine did not, however, have much affect because trains continued to run to Arica from the epidemic's epicenter in Tacna. Many ariqueños took refuge in interior cities. At the end January 1869, the prohibition was lifted. Arica's city council solicited help from Santiago. The Chilean government official in Arica, Riesco, noted that the small port of Pisagua, which had 900 inhabitants on the eve of the August disaster, was reduced to 300 people, from the ravages of yellow fever. This scourge purged the majority of the Chilean citizens living in the port. The Chilean Interior Minister, Miguel Luis Amunátegui, lamented the impossibility of responding to Arica's petition arguing that the republic did not have the resources to aid even its local populations; it had even fewer to send "relief to our nationals abroad." During the entire period of the epidemic, no government official came to visit Arica and no one thought to pursue reconstruction plans. When the epidemic began to abate towards the middle of 1869, then slowly reconstruction was undertaken as the city began to acquire a new physiognomy.<sup>75</sup>

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74. *La República*, 24 August 1868. After an earthquake struck Ecuador in September, the Chilean Congress voted in October to send another 50,000 pesos in assistance to the Ecuadorian victims.

75. Fernández Canque, *Arica, 1868*, 288.

## **Bolivian Response**

In Bolivia, President Mariano Melgarejo's political problems had become more acute and he resorted to taking a more autocratic grip on the state. Shortly before the earthquake, rumors spread that the opposition leader and the president of the Bolivian Congress would seek refuge in either Arica or Tacna. Using bayonets, Melgarejo ended criticism of his mandate by dissolving the Bolivian Congress. He imprisoned members of the political opposition. When news of the earthquake and tsunami arrived, the president acted ambivalently. Melgarejo worried about the potential loss of Bolivian goods in transit from the coast. The majority of these items were luxury goods for Melgarejo and his court. When informed that Bolivian goods were dispersed on ariqeña beaches and the object of looting by local soldiers, the general mobilized his forces to the border with the intention of invading Arica to recoup the misappropriated goods. His advisors pointed out the folly of this initiative, and Melgarejo instead imposed a compulsory contribution of one to ten pesos of all adult residents to help the Peruvian victims.<sup>76</sup>

## **Beyond 1868**

After the 1868 catastrophes, the southern region's neglect heightened local discontent by the end of the 1870s. In 1877, another earthquake and tsunami with its epicenter near Tarapacá devastated the Peru's southern coast ports. With guano deposits declining between 1830 and 1870, the Peruvian government nationalized the nitrate sector. But the bonds they issued to buy the oficinas devalued or were unable to be sold. The Peruvian government was unable to pay off the nitrate plant owners after two years

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76. The British Counsel in Lima's report to the Foreign Office, in Fernández Canque, *Arica, 1868*, 100; *El Imparcial* 24 October 1868.

as promised. The earthquake destroyed coastal loading platforms causing a 25 to 30 percent drop in nitrate exports. Peruvian certificate holders and guano creditors pressured the Chilean government to annex Tarapacá on the eve of the War of the Pacific (1879-1883).<sup>77</sup>

### **The 1894 San Juan and La Rioja Earthquake**

The October 27, 1894 earthquake left only 10 dead in the city of San Juan and 20 in the province but devastated the province's built environment. Many buildings lost their cornices, parapets, and plaster moldings. In some city centers, the ruins covered the streets. In the provincial capital, the most damaged structures were public buildings including the government house, cathedral, old churches and chapels, public barracks, the prison, and theaters. The large scale collapse of buildings drove people into the open spaces—patios, gardens, plazas—for two or three weeks. In La Rioja, the majority of the damage from the earthquake was found in the provincial capital. The seismic shock just past four in the afternoon surprised the inhabitants and produce confusion and panic. The citizens of the provincial capital fled from their homes into the streets, plazas, and orchards. Although there were reportedly only three deaths and three injured, the earthquake produced a great amount of serious material damage to La Rioja. Almost the entire built environment collapsed. Nearly all the churches and public buildings fell, leaving few structures still standing.<sup>78</sup>

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77. Brian Loveman, *Chile: The Legacy of Hispanic Capitalism*, 3rd ed. (Oxford: Oxford University Press, 2001), 146.

78. Armando R. Bazón, *Historia de La Rioja*, *Historia de Nuestras Provincias* (Buenos Aires: Editorial Plus Ultra, 1992), 524–25.

## San Juan

The Governor of San Juan, Domingo Morón, responded to the catastrophe in a systematic fashion. With Morón leading the bureaucracy, he assured that no measure would be delayed or omitted in the emergency response. The governor immediately organized the search and rescue for survivors trapped beneath buildings' ruins and provisioned clothing for the victims. Debris that cluttered the streets was quickly moved to allow for transportation to circulate. Morón issued public health measures to prevent the outbreak of epidemics. To rebuild the city, the governor solicited technical studies and commissioned proposals for the urban center's proper and stable foundation. Finally, Morón requested that the national government provide funds for reconstruction. The governor emerged as "the caudillo of the street" in the weeks after the earthquake. Morón's authoritative, quick, and efficient response to the disaster helped to earn him the designation as national senator a mere eight months after the catastrophe.<sup>79</sup>

The governor and provincial authorities organized the relief effort. One of the first official telegrams, the day after the earthquake, noted that "the government was working to administer every type of aid at their disposal."<sup>80</sup> The authorities immediately went to work pulling people from the ruins, ensuring security, inspecting buildings that remained partially standing, and tearing down any structures that threatened to collapse. Initially, sanjuaninos panicked but reportedly the government's measures helped to restore peace

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79. Horacio Videla, *Época Patria 1875–1914*, vol. VI of *Historia de San Juan* (Buenos Aires; San Juan: Academia del Plata; Universidad Católica de Cuyo, 1989), 516–19.

80. "Telegram oficial," *La Prensa*, 28 October 1894.

and calm.<sup>81</sup> From his tent in the main plaza, Morón issued a report about the earthquake and the measures he and the provincial government were taking to provide aid and relief to the population. The governor reassured the sanjuaninos he was working for the public good from the moment the earthquake struck. One of the first measures he undertook was naming a commission for each department in the province that suffered damage to assess the material and human destruction. In some of the hardest hit towns—for example, Albardón and Caucete—the provincial government organized all available resources to transport families out of the disaster zone. The governor requested that the national government close all the public schools to prevent any accidents from occurring to school children or teachers. Furthermore, he asked for scientists to be sent to the province to study the causes of the earthquake and recommend better building practices. In addition to requesting financial and material aid from Buenos Aires and the national government, Governor Morón noted his appreciation of the quick response to the earthquake made by the neighboring province of Mendoza. Finally, the governor noted the important relationship between the government and its citizens in a time of crisis. The government, according to Morón, acted in consultation and dialogue with its inhabitants. He also asked that all citizens whether they suffered damage in the earthquake or not, to cooperate with the government's directives and help their fellow sanjuaninos.<sup>82</sup>

The governor maintained the confidence of the people and the provincial legislature. The day following the earthquake, the legislature sanctioned a law that gave

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81. "Terremoto en San Juan—Conferencia del Dr. Cariés con el jefe de la oficina de San Juan," *La Prensa*, 28 October 1894.

82. Domingo Moron, "Manifiesto del Gobernador a los habitantes de la Provincia," 28 October 1894, folio 149, libro 491, Fondo Histórico, Archivo Histórico y Administrativo de San Juan (AHASJ).



Morón the ability to take all the necessary measures to protect and preserve the population's life and wealth. Only five days after the temblor, the legislature declared a holiday for the courts and suspended judicial and commercial terms until November 30, 1894. In order to avert an economic downturn, fiscal and municipal laws remained in place. The only exception was taxes. For the fourth quarter of 1894 and the following year in 1895 taxes would not be collected.<sup>83</sup>

The national government also responded quickly to the disaster. When it received news of the earthquake that struck San Juan, the government passed a resolution that placed at the governor of San Juan's discretion a sum of 50,000 pesos to attend to the primary and immediate needs of the survivors. The Department of Engineering ordered the engineers in neighboring Mendoza to place themselves under the direction of Governor Morón. Furthermore, the state sent an express train to the provincial capital loaded with medics, liniment, bandages, medicines, tents and stretchers.<sup>84</sup> In addition, the train also brought coats and jackets and 200 tents for the survivors still lacking any means of shelter.<sup>85</sup>

### **. La Rioja**

Reports from La Rioja, noted a greater extent of destruction than San Juan. Newspaper correspondents noted that "many tears were shed" because many "victims had lost everything they owned." The governor noted that the earthquake "left not even one building standing that did not have serious damage." Hardly a few minutes after

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83. Videla, *Historia de San Juan*, 519.

84. "Resoluciones del Gobierno," *La Prensa*, 28 October 1894.

85. "Tren expreso á San Juan," *La Prensa*, 30 October 1894.

sending word of the earthquake's devastation to Buenos Aires, the government building from where the communication was sent collapsed. All of the population took refuge underneath trees to avoid the danger of unstable structures. While not many deaths were associated with the catastrophe, many of the provincial cities were completely destroyed.<sup>86</sup>

The poor province of La Rioja required technical expertise and funds to rebuild. The local branch of the National Bank on the orders of the national government put the sum of 50,000 pesos at the discretion of the governor to help provide relief.<sup>87</sup> A newspaper reporter noted that Governor San Román decided to spend the fund judiciously in order to conserve as much money as possible for the relief effort. The Argentine Congress voted and approved two million pesos for the reconstruction effort in La Rioja. One observer noted that La Rioja did not have the materials available, the technical expertise, or the financial means to undertake such a massive project. Thus, the majority of the building materials would have to be shipped into the province from Buenos Aires. Such a large undertaking such as reconstruction required a special or provisional law to centralize rebuilding in the hands of a commission made up of the province's leading citizens.<sup>88</sup>

In addition to providing and distributing aid, one of the governor's first priorities like his counterpart in San Juan was appointing a commission of engineers to inspect the damage. The day after the earthquake, the governor set up a commission of provincial

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86. "Una palabra del Dr. San Roman," *La Prensa*, 30 October 1894.

87. "De nuestro corresponsal," *La Prensa*, 30 October 1894.

88. "Rioja, ecos de la catástrofe," *La Prensa*, 31 October 1894.

employees to inspect buildings that remained partially standing.<sup>89</sup> The commission of technical experts, one newspaper correspondent guessed, would find that the few buildings left standing had to be torn down because the earthquake had severely damaged the structures' integrity. Indeed, on one of the first streets the engineers and technical experts examined, all the buildings left standing or partially intact were in such poor condition and a dangerous state that they informed the governor that all the structures had to be demolished. Furthermore, those inhabitants who had taken shelter near their walls had to be evicted.<sup>90</sup>

### **The 1939 Chillán Earthquake**

Approximately a half hour before midnight on January 24, 1939, one of the strongest earthquakes in world history struck Chile's south-central region. The residents of Maule, Linares, Ñuble, and Concepción were the most devastated areas with the disaster zone ranging from north of Chillán to south of Concepción. The earthquake was felt from the Chilean coast to Buenos Aires. Almost nothing was left standing in the city of Chillán or Concepción. The Chilean press estimated the death toll at 30,000 people in the days after the catastrophe. The newly elected President Pedro Aguirre Cerda and his government quickly responded to the disaster. Supplies arrived in the disaster zone by land, sea, and air the next day after the disaster from both public and private entities. Repair crews worked to clear main transportation arteries to facilitate the delivery of relief aid. Engineers and public works commissions helped to build temporary shelters and basic facilities such as schools and hospitals. The government quickly and efficiently

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89. "De nuestro corresponsal," *La Prensa*, 30 October 1894.

90. "Rioja, ecos de la catástrofe," *La Prensa*, 30 October 1894.

responded to the disaster. The catastrophe provided an opportunity to expand the Chilean state.

### **The Political Opportunity of Disasters**

Elected in October 1938 with only 50.2 percent of the popular vote, President Aguirre Cerda still faced an opposition congress. The conservatives used their 67 seats in the Chamber of Deputies and 23 in the Senate—while the Popular Front held 65 and 18 respectively—to block Aguirre Cerda’s legislative program.<sup>91</sup> The January 1939 earthquake, however, provided Aguirre Cerda with the opportunity to push through his economic plan which called for greater state involvement in the economy. Only a week after the earthquake, Aguirre Cerda asked Congress for funds to reconstruct the southern provinces based on a six year economic plan. The rightist majority in congress understood the need to pay for reconstruction, but objected to the Popular Front’s proposal for a national economic development plan. The president utilized the natural catastrophe—especially through a quick and efficient initial government response and repeated visits to the disaster zone—to garner popular support and mount public pressure on the conservatives to reach an agreement.

Social scientists and historians argue that in the aftermath of disasters, the community acts in a spontaneous, less authoritarian, and more collaborative way, creating a temporary utopia.<sup>92</sup> Similarly, at the national level politicians on both the left and the right agreed to work together to ameliorate the situation in the devastated regions while

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91. Collier and Sater, *A History of Chile*, 241.

92. Rebecca Solnit, *A Paradise Built in Hell: The Extraordinary Communities That Arise in Disaster* (New York: Viking, 2009).

appealing to patriotism and national brotherhood.<sup>93</sup> This short period of good feelings quickly evaporated into an ugly political brawl over reconstruction. Politicians, however, often exploited the fleeting political disaster utopia, using the catastrophe as an opportunity to implement legislative and ideological agendas that otherwise would have been impossible to push through legislative bodies during their regular sessions.<sup>94</sup>

### **The Government's Response: A Fleeting Political Disaster Utopia**

Within hours of the disaster, the interior minister and his sub-secretaries and deputies met to assess the situation and to adopt the first rescue and relief measures, they also issued orders designed at maintaining order. *El Mercurio* noted the seismic event shook the country at 11:35 p.m. on Tuesday night and the newspaper reported that by four in the morning on Wednesday, the interior minister and his staff were meeting to determine the necessary measures. Despite a seismic shock that was felt in Santiago, the extent of the damage in the south remained unclear because telegraph and telephone lines between Talca and Puerto Mott were interrupted, and damage to electric plants interrupted radiotelephone service, making only those powered by batteries available for communication mostly owned by the government and newspapers.<sup>95</sup>

The administration quickly organized the relief effort to distribute aid. After their early morning meeting, the Interior Ministry sent medical aid, *carabineros*, and solicited the cooperation of the military's medical services.<sup>96</sup> The disaster zone was immediately

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93. Dickie, "A Patriotic Disaster," 50–71; Dickie, "Timing, Memory and Disaster," 147–66.

94. Klein, *Shock Doctrine*.

95. "Chillán y Concepción destruidos por el terremoto," *El Mercurio*, 26 January 1939.

96. "Chillán y Concepción destruidos," *El Mercurio*, 26 January 1939.

placed under martial law and the military took a leading role in organizing disaster relief and restoring services. The Interior Ministry, during its early morning meeting, decided that the military possessed the most comprehensive set of resources to deliver aid, restore services, and maintain order in the disaster zone.<sup>97</sup> In addition, the government called on the country to maintain the peace as was the custom in the aftermath of such profound tragedies. The secretary of state hoped to quell fears by accusing the media of exaggerating the information in their reports on the earthquake. The secretary of state praised the efficient and disciplined military response. According to the secretary of state, the military authorities should proceed on a case by case basis with agreement from the respective intendentes and governors. The *carabineros* moved convoys of goods and aid by land and sea to the disaster area. The secretary of state further laid out the role of the state in disasters. He promised that the cities would quickly be rebuilt and the citizens affected by the catastrophe would receive immediate aid. According to secretary of state, “the government’s action will be felt immediately.”<sup>98</sup>

In the immediate aftermath of disasters, political parties and organizations set aside philosophical differences in order to focus on the relief effort. The government, authorities, numerous institutions, and organizations across the political spectrum cooperated to alleviate the consequences of the cataclysm and also to speed up measures to “erase in part the view of this tragic and bleak picture.”<sup>99</sup>

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97. “Servicios de la zona afectada estan bajo el control militar,” *El Mercurio*, 26 January 1939.

98. “El gobierno espera que el pais conservara la calma que siempre ha observado en las desgracias,” *El Mercurio*, 26 January 1939.

99. “Chillán y Concepción destruidos por El Terremoto,” *El Mercurio*, 26 January 1939.

In the contentious political atmosphere of the 1930s, the Falange, Socialists, Communists, and Radicals pledged their support and promised cooperation with the government. On January 25, 1939, the interim president of the Conservative Party, Maximiano Errázuriz, visited the deputy ministry of foreign and interior relations to offer the conservative's assistance in disaster relief. Likewise the *Unión Socialista* communicated to deputy interior minister that the Socialists made all of its members available to the government, including those from the *Cuadros Sanitarios o Grupo de Orden*. The Communist Party directed all of its members in the construction union—engineers, architects, construction workers, carpenters, and masons—to register with the Casa América in order to receive instructions from the interior minister and to allocate them to the areas of greatest need. The Communists also organized a collection for the victims, gathering in a short time 300 pesos. Finally, three groups headed for the disaster zone. First, a group of doctors and nurses headed for southern Chile. A second delegation, including a senator and another 50 people left in an automobile caravan for Chillán. Finally, a third convoy left, consisting of communist medical practitioners. Hundreds of members of the *Vanguardia Popular Socialista* left for Valparaíso to embark on the ship *Teno* headed for Talcahuano to participate in the relief effort. The *Falange Nacional* organized aid for Concepción as soon as the government acquired the resources to ship it. The *Juventud Conservador* also arranged for various services and aid in cooperation with the government. The *Alianza Popular Libertado* organized a collection among its members and sympathizers. The central committee donated 500 pesos and began a collection of clothes for distribution to the neediest victims. The *Junta Central Radical* quickly organized technical experts in communications, electricians,

construction workers, and sanitary services. The *Asamblea Radical de Santiago*, like the *Juventud Radical*, organized and funded relief workers. The *Partido Socialista* mobilized all their members across the country to facilitate the maximum cooperation with the authorities and organized a brigade of doctors, nurses, and construction workers to help the injured and clear streets and cities of debris. In addition, the central executive committee planned to meet to draft legislation authorizing a forced loan of 500,000,000 pesos to compensate the victims and immediately begin reconstruction of the destroyed cities.<sup>100</sup>

Two days after the earthquake, the press praised the Government's reaction to the disaster. *El Mercurio* glowingly reported that "The action of the military authorities, the civilians, the politicians, and bureaucracy has received the congratulations of public opinion and all state agencies have moved to a beat, even in the hours following the disaster, when it was difficult to realize its full extent and develop an overall plan."<sup>101</sup> The press also highlighted the wave of national solidarity. One reporter noted that the disaster established "a civic and patriotic emulation even in organisms such as political parties that are not made for these purposes and more than anything else are instruments of ideological struggle and combative elements."<sup>102</sup> An editorial writer praised the political parties for contributing to the relief effort through personal sacrifice aimed at

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100. "Solidaridad nacional ante la catastrofe," *La Opinion*, 26 January 1939; "Los particulares y organizaciones responden al llamado del Gobierno," *El Mercurio*, 26 January 1939; "Brigadas de auxilios organizan diversas instituciones de Santiago," *El Mercurio*, 26 January 1939; "Todos los partidos políticos expresan deseos de cooperar al Gobierno ante la tragedia," *El Mercurio*, 26 January 1939; "Todo los sectores de la población cooperan a la labor del Gobierno," *El Mercurio*, 27 January 1939.

101. "Reacción ante la desgracia," *El Mercurio*, 27 January 1939.

102. "Reacción ante la desgracia," *El Mercurio*, 27 January 1939.



rescue efforts or other projects in support of the government's plans. He observed that "At a time when fate tests and vexes the courage of the Chileans," those who belong to political parties and organizations should overcome "their banners and party names."<sup>103</sup> The feelings of good will among the political parties and organizations across the spectrum quickly disintegrated into a contentious political struggle over the shape and size of reconstruction and the economic future of Chile.

### **A Modernist Economic Plan**

After flying over the disaster site with a group of reporters, the interior minister, when asked about what they had just seen below them, replied that it was impossible to put into words what they had just witnessed. The interior minister, however, noted the government's challenge in reconstructing the south-central region was congressional obstacles to social progress. The economic cost of the disaster would require the financial resources of almost the entire country. According to the interior minister, the government's duty was to rebuild inclusive cities, attend to the thousands and thousands of citizens that would remain without their normal means of subsistence, build houses for thousands left without shelter, and reestablish the region's sources of wealth. Otherwise, these provinces would remain economically paralyzed.<sup>104</sup>

President Aguirre Cerda spoke to a joint session of congress and proposed the Law of Reconstruction and Growth. The government, according to the president, did "not want to simply lend money to the disaster survivors, but instead wanted to implement a larger concept of national solidarity, that should attend to the orphan and the injured, that

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103. "Reacción ante la desgracia," *El Mercurio*, 27 January 1939.

104. Manuel Sanchez, "Declaraciones del Ministro Señor Alfonso," *El Mercurio*, 27 January 1939.

offered food to everyone who needs it accordingly, that facilitates roof and rain coat to those that require it, that cares for the public health of the region that has been closed to all epidemics.” The president praised the distinguished soldiers and seamen and the “unselfish” cooperation of the Chilean, army, navy, and air force, civil servants, and *carabineros* who were an integral part of the relief effort. The president declared that he personally visited the disaster zone and took actions that circumstances required. He again visited the south-central region a few weeks later to personally oversee the activities carried out by the civil and military authorities. According to Aguirre Cerda, social solidarity, one of the basic principles of the Popular Front was a central part of his reconstruction program. The proposal called for 500 million pesos to build low-income housing. The project would allow some workers and people of modest means to “at least be partially removed from the infested slum,” because workers needed a place to rest comfortably “to repair their energies.”<sup>105</sup> The president declared that rebuilding working class houses would not follow the tradition of segregating them in special neighborhoods on the outskirts of the cities, “accentuating these social differences.” Instead, Aguirre Cerda, proposed that the worker would live in the city center, where he would be able to enjoy the “benefits of civilization” including schools, libraries, electricity, potable water, sewers, and transportation. The working class, according to the president should be better integrated into society with “dignity and respect.”<sup>106</sup>

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105. Pedro Aguirre Cerda, *Mensaje de S.E. Presidente de la República en la apertura de las sesiones ordinarias del Congreso Nacional 21 de Mayo de 1939*, (Santiago: Impr. Fiscal de la Penitenciaría de Santiago, 1939), 11-12.

106. Aguirre Cerda, *Mensaje de S.E. Presidente de la República*, 11-12.

The earthquake gave the president an opportunity to implement his ambitious economic development plan and spur industrialization. Aguirre Cerda's ambitious economic development plan included the construction of power plants and steel mills, oil drilling, support for the manufacturing industry and the mechanization of agriculture. Controversially, Aguirre Cerda hoped to implement the agrarian reform program he outlined in *El problema agrario*. He argued that the state should redistribute idle land. The disaster provided him the opportunity to pass legislation to industrialize Chile, redistribute rural lands, and reshape the urban environment.<sup>107</sup>

### **Political Debates and Popular Unrest**

The government's political problems did not only come from the right of the political spectrum. The socialist newspaper *La Opinión* protested the extraordinary measures taken by the state and called for the government to take its time in constructing a plan. Although the editorial admitted that the government "absolutely" deserved the praise of the press for their attention to the injured, the removal of debris, burying the dead, and now the evacuation of the devastated cities, but the writer insisted that the government should consider the public's opinion. The catastrophe amplified the economic inequality that existed before, according to *La Opinión*. But any solution needed to be more encompassing, inclusive, and expansive than those simple proposals currently being considered. Worried about the advance of dictatorship and fascism in the 1930s, the editorial noted that democracy is a desirable form of government based on open and public discussion. The left worried about the use of extraordinary powers that invested the military with administrative and supreme legal authority in the disaster zone.

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107. Pedro Aguirre Cerda, *El problema agrario* (Paris: Imprimerie française de l'édition, 1929); Pedro Aguirre Cerda, *El problema industrial* (Santiago: Prensas de la Universidad de Chile, 1933).

Furthermore, the editorial wondered if the proposed economic and reconstruction law would always be administered by the government in power or ruled by bureaucrats outside the bounds of government supervision or authority. The editorial observed, however, the conservatives' intransigence blocked the peoples will and the public interest represented by the liberal groups, agricultural workers, and the *Partido Demócratico*.<sup>108</sup>

Congressional inaction caused furor among members of the intelligentsia and political observers. A *Zig Zag* editorial excoriated congress for blocking the president's relief plan, while the eight south-central provinces lay in ruins, unable to contribute to the national economy. The editorial noted the daily plight of the region's inhabitants, "the misery that comes to many homes, especially the middle class, who cannot beg for a plate of food with autumn already arriving in these latitudes. While in Santiago, in the seats and the halls of Congress, an *onces* atmosphere of the House and Senate, is gathering and discussions about this or that measure." The Chamber of Deputies and the Senate engaged in "useless political discussion" for 23 days. The congressional conservatives made many patriotic gestures and attempted to reach a cordial agreement with the government that showed they would settle for nothing less than a national economic plan. The magazine article then laid out a brief synopsis of February's legislative fighting, obstreperous speeches, and intractable attitudes by both congressional conservatives and the Popular Front government. The editorial lamented that "In this way you [politicians]

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108. "Hagamos obra de reconstrucción, pero dentro del régimen democrático," *El Opinión*, 28 January 1939.

have been wasting time on mere political arts, while the south of the country is growing in despair.”<sup>109</sup>

In response to the conservatives’ intransigence, massive worker protests marched through Santiago during the fall of 1939. Industrial workers, students, peasants and farmer workers gathered and marched through the streets of Santiago in support of the president’s proposals. One march reportedly drew 30,000 people into the capital’s streets. Protesters met in the Plaza Manuel Bulnes across from government house—the Moneda Palace—carrying banners from various syndicates and embossing slogans that declared “All of Chile is with the project!” or “Defend the victims from the Right’s treachery!” From the Moneda’s balcony, the president accused conservatives of being “insincere” and declared “I was elected by the people and govern for all my fellow citizens with pride and patriotism.” From the Moneda, protesters marched down Morandé until reaching the Plazuela del Congreso.<sup>110</sup> Three weeks later, 150,000 protesters filled the streets of downtown Santiago and agitated for the passage of the government’s reconstruction and development law. In addition to the Popular Front, the Chilean Workers Confederation (CTCH) and numerous delegations from the southern provinces destroyed by the earthquake also marched.<sup>111</sup>

### **Touring the Disaster Zone**

To counter the continued conservative congressional obstruction of his reconstruction and economic develop plan, President Aguirre Cerda repeatedly toured the

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109. “Veintitres días perdidos por la politiquería mientras en el sur del país hay desesperación” *Zig Zag*, 23 February 1939.

110. “Aguirre habló al pueblo desde los balcones de la Moneda,” *La Opinión*, 26 February 1939.

111. “El gobierno controla la calle,” *La Opinión*, 19 March 1939.

devastated southern provinces giving speeches to rally popular support. After visiting Parral, San Carlos, Cauquenes, Chillán, Concepción, Tomé, Coelemu, and other localities, Aguirre Cerda noted that the survivors continued to need housing and funds to begin reconstruction. The president noted that “the government had quickly presented legislation for aid to the provinces” but “any deficiency was not the government’s fault, but rather resulted from the attitude of the majority of the parliamentarians who had slowed or blocked the approval of the necessary resources.” The president appealed to lawmaker’s sense of humanity and moral obligation, urging the recalcitrant congressmen “to quickly aid our citizens in misfortune.” Finally, Aguirre Cerda outlined his vision for the reconstructed cities. “These urban areas would include all the latest health and hygiene elements, comfortable houses, amenable for living, and accessible for the entire populace. The economic development the president promised would continue to create prosperity and wealth from new sources for everyone not only the landed class.”<sup>112</sup>

Indeed, the reconstruction appropriation already enjoyed massive popular support and the president’s speaking tour pressured the rightist majority into compromise. During the president’s second visit to the disaster zone, the survivors received him warmly and demonstrated their support for the government’s proposed law of reconstruction and economic development.<sup>113</sup> Before returning to Santiago, the president was asked if he would visit the southern provinces again. The President responded that “If they [the conservative congressional majority] continued to block the ardent wishes of the

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112. “Aguirre Cerda defenderá arduamente a las provincias damnificados,” *La Opinión*, 20 February 1939.

113. “Aguirre Cerda defenderá arduamente” *La Opinión*, 20 February 1939.

government, he will return to the provinces in search of support.”<sup>114</sup> Many cabinet members also toured the disaster area bringing journalists’ attention and public pressure to bear on the conservative obstructionists.

### **Southern Support**

The 1938 national election revealed the conservative bases of political and economic power. The rightist candidate, Ross Santa María, enjoyed overwhelming support in the agricultural heartland and the central valley. The Communist and Socialist political operatives deployed across the countryside, persuading voters to support the left’s candidate, Pedro Aguirre Cerda. In the large urban areas and mining districts, the middle and working class voted for the Popular Front candidates. Lake District and Frontier province voters supported Radical Party and Demócrata candidates preventing a land slide for Ross. The Radical’s largest base of supported centered on the southern provinces that consisted of landowners, industrialists, bureaucrats, and their clients. In order to maintain the mostly conservative voters from this region, the government would have to make concessions to its populist agenda. The earthquake, however, created political space and compelled congressmen from the southern region to support the Popular Front’s ambitious reconstruction and economic development plan.<sup>115</sup>

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114. “Aguirre Cerda defenderá ardorosamente,” *La Opinión*, 20 February 1939.

115. Loveman, *Chile*, 208–09; Germán Urzúa Valenzuela, *Los partidos políticos Chilenos, las fuerzas políticas: ensayos de insurgencia política en Chile* (Santiago: Editorial Jurídica de Chile, 1968).

Table 1 The 1938 Chilean Presidential Election

Province	Aguirre Cerda	Ross Santa María
O'Higgins	7,091	11,095
Colchagua	2,542	9,789
Curicó	1,950	4,805
Talca	5,717	8,485
Maule	1,934	4,817
Linares	3,592	8,764
Ñuble	7,813	13,853
Concepción	17,417	9,734
Arauco	2,481	2,318
Bío Bío	6,054	6,797
Malleco	5,978	7,929
Cautín	13,125	12,228
Valdivia	12,982	10,811
Total	222,720	218,609

Source: Germán Uzúa Valenzuela, *Los partidos políticos Chilenos*, Editorial Jurídica, Santiago, 1986, p. 86.

Leftist congressmen from the devastated region organized commissions and meetings to pressure their colleagues to support the president's legislation. A Socialist representative from Concepción, Natalio Berman, organized a meeting of all the congressional members representing the devastated provinces. He hoped to unite all the regions' representatives behind the economic development project proposed by the president after they returned from touring the disaster zone.<sup>116</sup> Berman wanted to study the quickest and most effective way to aid their constituents. He urged his colleagues to make whatever observations they wished but in the end, acknowledge the needs and aspirations of the citizens they represented. The southern representatives agreed that the

116. "Parlamentarios de la zona devastada," *La Opinión*, 21 February 1939.



next day, they all would bring a reconstruction and economic bill to the floor of the House of Representatives.<sup>117</sup>

Representatives of provincial and municipal authorities from Concepción and Chillán traveled to Santiago to visit the president, cabinet members, and media outlets. These visits highlighted the situation in the disaster zone, noted difficulties, and brought to the public's attention ways the administration could help the region. The political and public attention these visits garnered, placed pressure on conservatives to break the congressional grid lock. At the beginning of March, provincial authorities from Concepción traveled to Santiago to speak with the interior minister, president, congressional members, and newspapers about the region's situation. They noted that while 20,000 tons of debris had been removed from the city, 20,000 people remained without shelter. Aguirre Cerda used the visit to publicly pressure his political opponents to vote on and pass his reconstruction and economic development bill.<sup>118</sup>

The earthquake helped to elect representatives that would support the President's legislative agenda. During the political debate about the reconstruction and economic development law, an election was held to replace Sebastián Melo Hérmosilla in the House of Representatives, who died during the earthquake. A week before the election, the only candidate was a member of the Popular Front, Armando Alarcón del Canto, who at the time was a Radical Regidor of Concepción and president of the provincial Popular Front Party. According to the Chilean daily, *El Mercurio*, Alarcón's election was already

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117. "Diputados de la zona devastada," *La Opinión*, 4 March 1939; "Reunión de diputados de la zona afectada," *El Mercurio*, 1 March 1939.

118. "Autoridades de Concepción hacen ver las necesidades de esa provincia," *El Mercurio*, 4 March 1939.

assured because no opponent had declared their candidacy and the Demócrata party was in disarray.<sup>119</sup>

### **Outcomes**

The public and political pressure forced congressional conservatives to accept a compromise. The President's Finance Minister, Robert Wachholtz, reformulated the package to ensure congressional passage. He split the two proposed projects into separate agencies—the Relief and Reconstruction Corporation that addressed the short-term reconstruction of the disaster zone, and the National Development Corporation (CORFO) that carried out long-term economic objectives. The new proposal also depended on foreign loans instead of internal financing. An independent board of directors was also formed to prevent the Popular Front parties from using CORFO to gain a political advantage. The board of directors would consist of representatives from the producers, government, and labor. The president's program finally passed congress by a narrow majority in March and Law 6334 was implemented in late April 1939.<sup>120</sup>

The 1939 Chillán earthquake was an economic critical juncture in Chilean history. The disaster created a political opening for legislation addressing reconstruction and national economic problems. The Chilean executive and legislative bodies created two economic programs that had lasting legacies. The Relief and Reconstruction Corporation and CORFO expanded the state's role in national economic development. Part of Latin America's move toward economies based on import-substitution industrialization, CORFO had three central objectives: "to enhance the national-energy supply, in order to

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119. "Elección diputado en Concepción," *El Mercurio*, 23 March 1939.

120. Loveman, *Chile*, 211.

power new industries and improve living conditions; to endow Chile with a steelworks, vital for any future industrial advance; and to establish new industries.”<sup>121</sup> After the 1939 earthquake, the Chilean government suspended its foreign debt payments. In the disaster’s aftermath, the Chilean government requested loans to build hydroelectric dams that threatened U.S. businesses’ investments. In addition, rumors of nationalization of industries including oil and power delayed the approval of reconstruction loans. In order to finance the reconstruction and development programs, the Chilean government was going to have to raise revenues in the form of higher taxes most likely to be levied on the copper industry and the wealthy. The compromised bill, however, shifted the finance of these programs from internal sources to external financing. U.S. businessmen and diplomats viewed this as an opportunity to protect their investments and national interests. At the end of 1940, the United States Export-Import Bank had guaranteed 17 million dollars of credit to help fund CORFO. Financial support opened up new markets for U.S. exports; private investors gained significant shares in the major companies of CORFO, and provided political leverage for the government. CORFO remained a central part of the economy until Pinochet’s neoliberal reforms sold most of the 492 firms owned by the development corporation to private financial groups.<sup>122</sup>

### **Conclusions**

Critical junctures occur at national, provincial, and municipal levels. The 1861 Mendoza earthquake left lasting legacies at the provincial and municipal level. The natural disaster marks a critical juncture in histories of the province and its capital. The

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121. Collier and Sater, *A History of Chile*, 269.

122. Loveman, *Chile*, 211–12, 217–19, 270.

physical destruction remained a visible legacy in the old city until the 1880s. Even today, some of the ruins left by earthquake remain part of the urban environment. The center of municipal activity also shifted from the old city to the Plaza de Independencia and the Alameda. The earthquake marked a transition from federal to liberal political ascendancy. On the national level, the disaster provided an opening for porteño liberals to gain a foothold in federal dominated western Argentina.

The 1868 Arica earthquake and tsunami was a critical juncture on the regional and municipal level. The Peruvian President promised to bring relief to the disaster victims. The country, however, was beset by financial problems and lacked the monetary resources to fund reconstruction. Instead, the Peruvian Government embarked on a privatized reconstruction program that relied on the exploitation of guano and nitrates by foreign merchants. In order to exploit and move larger quantities of guano and nitrates, treasury resources funded the construction of railroads that bypassed the destroyed ports. Arica was modestly rebuilt because of the lower level of commerce that passed through the southern Peruvian port city. Fourteen years after the disaster, foreign observers noted the lower level of commerce in Arica's streets compared to business activity before the catastrophe.

The 1894 San Juan and La Rioja earthquake failed to be a critical juncture on the national level but remained central to their local histories. While the death toll from the disaster was very low, the physical destruction altered the urban landscape of the two provincial capitals. Provincial treasuries lacked significant funds to rebuild the cities and the national government likewise could not financially support an ostentatious rebuilding program because of the Argentine economic depression of the 1890s. The dearth of

financial resources meant that rebuilding dragged on into the 1900s. On a national scale, the 1894 temblor left porteño newspapers' pages and minds of most Argentines shortly after the event, leaving the catastrophe to annals of provincial history.

The 1939 Chillán earthquake proved to be a national critical juncture. The catastrophe opened up political space to pass the president's agenda. The reconstruction and economic development programs produced lasting legacies in the physical and financial environment. The congressional conservatives who blocked these programs eventually compromised because of pressure from the southern region's people and representatives. The new programs funded the reconstruction of Chillán, Concepción, and villages throughout the south-central region and allowed the state a much larger role in the national economy. One of the earthquake's lasting legacies was the creation of CORFO, which remained an important economic force until the late twentieth century. The catastrophe also marked the centralization of the state's disaster response. The organization and planning of relief and reconstruction measures emanated from Santiago from the moment news of the earthquake reached the capital city.

The Argentine and Chilean states responded to natural disasters in different ways. In Argentina, the 1861 Mendoza earthquake struck at a period of political upheaval. The national state in Buenos Aires lacked the capacity and funds to focus on disaster relief. Instead, the Argentine state focused on subduing their political rivals and provinces that still challenged their authority. Thus, provincial authorities largely carried out relief and reconstruction efforts. The only real intervention by Buenos Aires was a threat to cut off reconstruction funds until a firm location for the new city was fixed in 1863. Likewise, a consolidated and more mature national state in 1894 continued to leave relief efforts in

the hands of provincial governors. Although, the state, despite the economic crisis of 1891, provided funds for rebuilding and more importantly quickly shipped via the railroad, emergency supplies to the disaster zone where the provincial governors continued to direct relief efforts. Both governors of San Juan and La Rioja after the 1894 earthquake quickly attended to the survivors needs with their available resources and requested help from the national government for additional material aid and funds. Despite the disaster causing a low death toll, it did inflict significant material damage. The governors of San Juan and La Rioja appointed commissions of engineers to inspect buildings and propose better building methods and materials. Similarly, geological studies were commissioned to study the provinces subsoil and make recommendations for reconstruction.

In contrast to the decentralized Argentine state, the Chile case offers an example of a centralized state. Chilean relief and reconstruction efforts were much more centralized. The 1868 Arica earthquake and tsunami demonstrated the reach of the Chilean state. Despite Arica and other southern Peruvian cities not being under Chilean jurisdiction, many Chilean miners worked in the region and investors had capital in railroads and mines. Thus, the Chilean government worked actively to send financial and material aid to the disaster zone for relief and reconstruction efforts. Furthermore, Santiago made sure to help Chileans trapped in the disaster zone escape the area by providing transportation. The 1939 Chillán earthquake highlighted the strength and organization of the Chilean state. Relief efforts came within hours of the news of the earthquake's destruction of the southern region. The state organized relief workers, provided transportation, and sent medical personal to the disaster zone. Engineers built

temporary shelters for the survivors and public works facilities such as schools and hospitals in the months following the disaster. The earthquake also provided an opportunity for the newly elected president to advance his political agenda. The week after the earthquake, he proposed a reconstruction and development plan that increased state control and intervention in the country's economy. Despite conservative opposition and control of the congress, the President's frequent trips to the disaster zone and efficient response to the earthquake pressured conservative congressmen into making a compromise.

## CHAPTER 3

### WEAVING THE NATION: NATIONALISM AND IDENTITY IN THE AFTERMATH OF DISASTERS

Paradoxically, disasters work both as agents capable of weaving divergent regions into a functionally unified nation or of fragmenting a fragile nation lacking shared experience. In the flood of patriotic feelings that often follows a natural disaster, citizens seek scapegoats to blame for the catastrophe. Social scientists note that disasters crack societies to release “repressed existential anxiety, triggered by a perceived betray of trust.”<sup>1</sup> In addition, natural hazards help to define the “other” in diverse societies with frontier regions. In urban areas with large immigrant or frontier communities, citizens blame minority groups for causing the disaster or for engaging in criminal behavior in the catastrophe’s aftermath. Disasters also, however, trigger patriotic waves of nationalistic sentiment harnessed through grand political speeches and presidential tours, religious ceremonies commemorating the national tragedy, or clothing drives and charitable donations collected for relief efforts. Catastrophes brought far-flung regions and communities into living rooms throughout the nation through newspaper articles and as technologies advanced, photographs and radio reports. In a country that experiences frequent natural disasters, catastrophes can help to weave the nation together by a shared and common experience capable of transcending national borders. Despite the wave of patriotic sentiments expressed in newspapers, political speeches, and relief efforts that should tightly bind the nation, divergent regions within a nation identified with other

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1. Horlick-Jones, “Modern Disasters as Outrage and Blame,” 305.



nations that shared a “disaster culture” generated by similar disaster experiences. Natural disasters, despite patriotic rhetoric and manifestations of national solidarity, only temporarily hide deep social, economic, political, or regional divisions within a nation.

### **Building the Nation**

A vast literature exists on the modern phenomena of nationalism and national identity. Scholars posit that nationalism originated in either the Americas or Europe.<sup>2</sup> For twentieth century post-colonial countries in Asia and Africa, national identity either mimicked European models or nationalists created and dominated spiritual spheres—religion, caste, and family.<sup>3</sup> The onset of modernity with its technological innovations accelerated the process of nationalism. The industrial revolution reconfigured social organization, enhanced employment fluidity, created mass media, and expanded educational systems, and universal literacy based on standardized languages that linked the nation to the state. States that include divergent regional languages and cultures feel pressure from the multiplicity of cultural nationalisms within their political and geographic boundaries.<sup>4</sup> In general, the literature focuses on language. Religious empires and divine kingship declined and were replaced by peoples united by common languages. The interaction between capitalism and print media created common and standardized

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2. Benedict Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism* (London: Verso, 1983); Eric Hobsbawm, *Nations and Nationalism Since 1780: Programme, Myth, Reality* (Cambridge: Cambridge University Press, 1990).

3. Homi K. Bhabha, ed., *Nation and Narration* (New York: Routledge, 1990); Partha Chatterjee, *The Nation and Its Fragments: Colonial and Postcolonial Histories* (Princeton: Princeton University Press, 1993).

4. Ernest Gellner, *Nations and Nationalism* (Ithaca, NY: Cornell University Press, 1983).

languages that helped to produce imagined communities.<sup>5</sup> Social psychologists argue that in late twentieth and early twenty-first century, mass media consumption and national identity is rooted in banal expressions manifested in the sports page or flying the country's flag.<sup>6</sup> During the nineteenth century, invented traditions—ritual or symbolic practices—inculcated values and norms through repetition and implied continuity with the past. These invented traditions legitimized state power and authority, created solidarity within a community, and inculcated social value systems.<sup>7</sup> Scholars often study nationalism in fleeting eruptions of patriotic manifestations in response to temporary events like war.<sup>8</sup> Natural disasters are often seen as episodic and random events. Natural hazards, however, should also be understood in terms of vulnerability and as a continual threat to a culture. Thus, manifestations of national solidarity in the aftermath of volcanoes, earthquakes, or hurricanes reveal common experiences and memories that unite a nation but also expose fault lines within society.

### **Defining the Other: Outrage and Blame in a Disaster's Aftermath**

Feelings of difference influence social interaction and are reflected in urban geographies. The feelings toward or about others are often projected onto or associated with places and result in the separation between “us” and “them.” Exclusionary discourse focuses on differences as signifiers of imperfection and inferiority. Borders help to define and identify the “other” in society. Most cultures categorize things as something or not as

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5. Anderson, *Imagined Communities*.

6. Michael Billig, *Banal Nationalism* (London: Sage Publications, 1995).

7. Eric Hobsbawm and Terence Ranger, ed., *The Invention of Tradition* (Cambridge: Cambridge University Press, 1983).

8. Tilly, *Coercion, Capital, and European State*.

something (for example, A or not A). Problems occur when it is impossible to separate things into unlike categories or the categories are mixed. The result is “liminal zones or spaces of ambiguity and discontinuity” that are a source of anxiety. The elimination of these convergence areas reduces problems but this is not always possible. Thus, the “other” must be held at a distance because it threatens the order and stability of society. The state and the media fuel and exaggerate the fear of disorder. Dominant social and spatial groups use the crisis as an opportunity to portray the “other” as a threat to the community’s core values. During tumultuous times, the dominant social groups defend their institutions and spaces. Feelings of belonging and ownership transfer onto a national territory. The threat from the “other” forms the foundation for the exclusiveness that often accompanies nationalism. In the aftermath of disasters, society blames the “other” for the catastrophe.<sup>9</sup>

Disasters in modern societies often produce outrage among citizens who blame government institutions, political or state authorities, or minority groups. With significant losses of life and property, survivors search for answers and blame. Finding a scapegoat is often facilitated by media reports that create a perception of betrayal and circulate “disaster myths.” Media accounts often propagate narratives of a loss of social order and control. As technology advanced over the course of the nineteenth and early twentieth centuries, news of disasters did not only reach faraway places but brought instant reports via the radio and vivid photographs in the morning newspapers into the nation’s living rooms. For example, during the *fin de siècle*, journalists began to use photography to document the horrors of drought and famine in India. British citizens living in the

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9. David Sibley, *Geographies of Exclusion: Society and Difference in the West* (London: Routledge, 1995), 32–46, 90–91.

metropole were horrified by these images. In the mother country, groups organized humanitarian aid for the victims and expressed their outrage at the ineptitude of the British imperial government. Disasters allow the popular masses and the political and religious authorities to target the society's excluded "others" as scapegoats for the catastrophe.<sup>10</sup>

### **The 1822 Valparaíso Earthquake**

On November 19, 1822 shortly after ten in the evening, a strong earthquake with at least three aftershocks struck Valparaíso. In the port city, the catastrophe left few buildings standing and inflicted a death toll of 76 people. The principle neighborhood of Almendral was particularly hard hit. The government house, the barracks, the jail, the customs house, the post office, general stores, military and public hospitals, and churches all were destroyed. Independence leader and Supreme Director Bernardo O'Higgins miraculously escaped the government building just before it collapsed, and returned to Santiago to recuperate from his wounds. Fearing a tsunami, the porteños fled to the hills surrounding the city and camped there for a number of days. The earthquake produced an eight- to ten-foot wave that bandied the boats about as if they had been battered against the bay's rocks. The earthquake partially destroyed the cities of Casablanca, Illapel, Melipilla, Aconcagua and La Ligua near Valparaíso. In Quillota—a short distance from Valparaíso—the city was celebrating the festival of its patron saint. People filled the plaza singing and dancing when the earthquake shook the earth leaving their homes and businesses in ruins. In Santiago, no loss of life was recorded but some citizens were injured by falling façades and tiles from buildings. The notable churches of the city—La

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10. Horlick-Jones, "Modern Disasters as Outrage and Blame," 305–16; Vernon, *Hunger*, 41–81; Davis, *Late Victorian Holocausts*.

Merced, La Compañía y San Agustín, and the cathedral—suffered considerable damage as well as numerous government buildings including the Casa de Moneda.<sup>11</sup>

The Valparaíso earthquake struck Chile during the tumultuous period of independence wars and the establishment of the republic from 1810 to 1830. Politically, these two decades can be divided into four periods: first, four years of civil war and a sputtering advance toward independence (1810-1814); second, royalist reconquest of Chile and reimposition of Spanish authority (1814-1817); third, Bernardo O’Higgins’ dictatorship (1817-1823); and fourth, a dizzying succession of governments that proclaimed liberalism, federalism, and republicanism (1823-1830).<sup>12</sup>

The earthquake added to the conflict between church and state leaders during this contentious period. After O’Higgins accepted the position of “supreme directorship” of Chile in 1817, his administration clashed with religious officials over numerous issues. A priest removed the wife of an O’Higgins supporter from church because of an inappropriate low-cut dress. For his part, O’Higgins treated ecclesiastical authorities brusquely. In the 1820s, the government confiscated property from the religious orders. Controversially, Protestant cemeteries were allowed to be established and the traditional practice of internment in churches was prohibited. Finally, Protestant teachers were employed and integrated into the educational system.<sup>13</sup>

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11. Urrutia de Hazbún and Lanza Lazcano, *Catastrofes en Chile*, 80–82.

12. Loveman, *Chile*, 101.

13. Loveman, *Chile*, 106; Simon Collier, *Ideas and Politics of Chilean Independence 1808–1833* (Cambridge: Cambridge University Press, 1967), 234; Collier and Sater, *A History of Chile*, 42–43.

Late eighteenth- and early nineteenth-century priests, politicians, and laymen often understood earthquakes as divine punishments for communal sins.<sup>14</sup> After the 1822 earthquake, Chileans from all parts of society gathered to perform public prayers, ceremonies, and processions through the streets and plazas of Santiago, asking for God's forgiveness and hoping to placate Him. Women overwhelmingly participated in these spiritual responses organized by different religious institutions. Participants in these spiritual processions marched through the streets barefoot, dressed in white, chanting litanies. When they reached the main plaza or other equally visible places, many parishioners engaged in bloody mortification rituals. These rituals portrayed God as a punisher, who required the necessary confessions and expression of individual and collective repentance to stop further catastrophes. The natural disaster also provoked Chileans to look for the responsible parties for bringing God's ire on the country because of their perceived misdeeds. In Quillota—a short distance from Valparaíso—an English widow visiting Chile noted that the citizens proclaimed that the governor was responsible because of his sins. Others blamed the government in Santiago and argued that its liberal tyranny had “awakened God's vengeance.”<sup>15</sup> Others—incited by zealous religious preaching—broadly blamed the authorities. Although the new liberal authorities were accused of causing the catastrophe, the priests and porteños also focused their outrage at

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14. Kendrick, *The Lisbon Earthquake*; Charles F. Walker, *Shaky Colonialism*; Stuart McCook, “Nature, God, and Nation in Revolutionary Venezuela: The Holy Thursday Earthquake of 1812,” in *Aftershocks: Earthquakes and Popular Politics in Latin America*, Jürgen Buchenau and Lyman L. Johnson (Albuquerque: University of New Mexico Press, 2009), 48–54.

15. Maria Dundas Graham, *Journal of a Residence in Chile, During the Year 1822 and a Voyage from Chile to Brazil in 1823* (New York: Frederick A. Praeger, 1969), 312.

the growing British merchant community for bringing God's wrath crashing down around them.<sup>16</sup>

During the wars of independence, a burgeoning British community in Valparaíso emerged consisting of mostly merchants connected to the North Atlantic market. In January 1811, foreign trade was admitted in four ports and after the wars of independence ended commercial traffic quickly increased. In addition, trans-Andean trade plummeted leaving Chile's only connection to the outside world via the sea. North Atlantic maritime nations filled the vacuum and gained importance in Chilean trade. English and French merchants replaced Spanish and Peruvian businessmen in Valparaíso after 1817. The decline of Spanish traders provided new opportunities for the quickly growing trading community in Valparaíso. While the new foreign traders did not possess the political or familial connections of Chilean businessmen, their links to the North Atlantic market gave them a significant edge over their competitors. Many British trading houses established offices in Chile, such as Anthony Gibbs & Sons.<sup>17</sup>

Foreign residents and traders living in Santiago and Valparaíso petitioned O'Higgins to allow the creation of a Protestant cemetery. The petition complained that several Protestants nearing death in Santiago and Valparaíso had rejected their religion in order to be given a Christian burial. Those who refused to convert to Catholicism had their bones disturbed and displayed in Valparaíso. Other stories circulated about the

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16. Alfredo Palacios Roa, "Cotidianeidad y religiosidad frente a la catástrofe: el terremoto de 1822," in *Historia de la Iglesia en Chile: La iglesia en tiempos de la Independencia*, vol. II, editor Rodrigo Moreno Jeria, director Marcial Sánchez Gaete, coordinador Marco León León (Santiago: Editorial Universitaria, 2010), 390–91.

17. Collier and Sater, *A History of Chile*, 43–45.

bodies of non-Catholics being thrown into the sea after short ceremonies. In 1822, Maria Graham stumbled upon a “new burying ground” outside the port city’s limits that was

assigned by Roman Catholic superstition to the heretics as a burial ground; or rather, which the heretics have been permitted to purchase. Hitherto, such as they had not permission to bury in the forts where they could be guarded, they preferred being carried out to sea, and sunk; many instances have occurred of the exhumation of heretics, buried on shore, by the bigoted natives, and the exposure of their bodies to the birds and beast of prey.<sup>18</sup>

In December 1819, O’Higgins agreed to allow the foreigner’s request to build a Protestant cemetery near Santiago and in Valparaíso. Four years later, the porteño cabildo agreed to the land sale on Cerro Panteón to the British Consulate for the creation of a non-Catholic cemetery.<sup>19</sup>

The severe November 1822 Valparaíso earthquake provided an opportunity for the Catholic clergy to denounce and blame foreign “heretics” for the catastrophe. The natural disaster from the priests’ perspective was a divine rebuke for admittance of foreign traders, teachers, and visitors that were favored by O’Higgins and his odious anti-clerical policies. A few days after the earthquake, the porteño priests drew up a petition for “the expulsion of all the English and Americans” living in Valparaíso.<sup>20</sup> The toleration and “wickedness” of such a large community of foreign North Atlantic Protestant merchants in a Catholic country—the Constitution of 1822 maintained Catholicism as the national religion—brought God’s wrath on the port city’s Chilean

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18. Graham, *Residence in Chile*, 144.

19. William Edmundson, *A History of the British Presence in Chile: From Bloody Mary to Charles Darwin and the Decline of British Influence* (New York: Palgrave MacMillan, 2009), 211–14; Alfredo Palacios, “Muerte e intolerancia religiosa: La influencia masónica en el establecimiento de los cementerios laicos,” *Revista de Historia y Geografía* 20 (2006): 115–32.

20. “Christianity,” *Niles Weekly Register*, 8 May 1823.



population. The priests brought their petition to one of the most senior judges in Valparaíso. The magistrate asked the priests for evidence that demonstrated that the Anglicans induced the catastrophe. The judge argued that the clergy could not attribute the disaster to the British merchants because all foreigners residing in Valparaíso survived the earthquake with most of their houses still standing. This proved their innocence. The judge went further: he reprimanded the priests declaring “you...who call yourselves good Catholics, with all your prayers and the assistance of patron saints could not save our churches, houses, and hundreds of Catholics from utter destruction...”<sup>21</sup> The justice dismissed the Catholic clergy’s petition. The anti-Anglo sentiment continued, largely encouraged by the city’s Catholic clergy. Other notable citizens shouted for the need to kill the “gringos” to placate God’s wrath.<sup>22</sup>

The great number and seriousness of the threats to the life and property of the North Atlantic merchant community in Valparaíso spurred O’Higgins to issue a proclamation protecting them. The supreme director declared that any person caught threatening the life or property of any foreigner would be shot on the spot. In Santiago, O’Higgins denied clemency to three men who had killed a Protestant English merchant after robbing him. Santiago residents viewed the British man’s death indifferently until the murderers were about to be executed. Then the population began to plead for a pardon from the harsh measures for the prisoners. O’Higgins, however, maintained an inflexible position and the execution was carried out. The act, carried out to protect and perhaps

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21. *Niles Weekly Register*, 8 May 1823.

22. *Niles Weekly Register*, 8 May 1823; Benjamín Vicuña Mackenna, *El ostracismo del jeneral D. Bernardo O’Higgins, escrito sobre documentos inéditos i noticias auténticas* (Valparaíso: Imprenta i Librería del Mercurio de Santos Tornero, 1860), 461.

appeal to the foreign community, garnered the supreme director the antipathy of a large section of Chilean society.<sup>23</sup> A joke told throughout the central valley noted that “O’Higgins wanted to give the country to his countrymen—the English.”<sup>24</sup> Mary Graham reported that a group of Catholic priests had again taken advantage of the tumultuous situation in hopes that the Church could regain its position in society. On November 28, an execution of a Frenchman and three Chileans was scheduled. These men had boarded a ship in Valparaíso’s harbor during the night and gravely wounded the master and the chief mate after stealing a large sum. The priests denounced the planned executions warning that “the misfortunes of the times will be redoubled if good Catholics are thus to be executed for the sake of heretics.”<sup>25</sup> The government caught wind of these threats and surrounded the place of execution with soldiers to deter the chance of rescue and the event occurred without clamor. The creole elite and popular masses perceived O’Higgins’ actions as turning the country over to their British “countrymen” instead of laying the foundations for a strong Chilean nation.

The perception that the supreme director sold out Chile to favored British friends and protected foreign merchant communities at the expense of Chileans in the earthquakes aftermath added to O’Higgins’ political problems at the end of 1822. The land-owning aristocracy of Chile demanded that the government protect its interests and be consulted on policy matters. O’Higgins, however, continually antagonized the land owning elite by passing a number of anti-aristocratic measures, in addition to creating

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23. Vicuña Mackenna, *El ostracismo del jeneral D. Bernardo O’Higgins*, 461–62; Palacios Roa, “Cotidianeidad y religiosidad,” 394.

24. Vicuña Mackenna, *El ostracismo del jeneral D. Bernardo O’Higgins*, 461.

25. Graham, *Residence in Chile*, 320.

public anxiety with his anti-clerical positions. Adding to the political pressure, the supreme director convoked a special Preparatory Convention to draft a new constitution. O'Higgins made appointments to the convention instead of allowing for popular elections. From July to October 1822, the commission created a generally moderate constitution. The supreme director miscalculated the political climate and tried to remain as the country's supreme director for the constitutionally established first period of six years, which could be extended to ten years. The public interpreted the situation as O'Higgins advancing his personal ambition instead of the country's. At the same time, the economic situation in the south—where continued battles had ravaged the region since independence—deteriorated. The Intendant of Concepción was General Ramón Freire—a trusted friend of O'Higgins. The economic problems spurred Freire to lead a revolution against the supreme director and march on Santiago. After news of the Constitution of 1822 reached the south, the southern region openly rebelled against O'Higgins. The policies toward foreigners after the November 19, 1822 earthquake only added to air of hostility and the general unpopularity of the supreme director. Faced with a growing number of provinces in open revolt and the prospect of civil war, O'Higgins resigned on January 28, 1823.<sup>26</sup>

Scholars note that in a catastrophe's aftermath, disaster utopias emerge.<sup>27</sup> Plenty of case studies demonstrate the good will and mutual aid provided among disaster survivors in the catastrophe's aftermath regardless of social class, ethnicity, or national

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26. Collier, *Ideas and Politics*, 234–35.

27. Solnit, *A Paradise Built in Hell*.

identity.<sup>28</sup> Despite the existence of “disaster utopias,” a society’s divisions remain and are not erased by a wave of good feelings, nationalistic pride, or a shared disaster experience among survivors. Although newspapers called for their fellow countrymen to respond to the needs of their fellow brothers and sisters, sharing a national identity did not automatically engender mutual aid in a time of crisis. Maria Graham rented a small cottage in Valparaíso, where she recorded daily events and happenings in Chile’s premier port city. Graham noted that the house she rented was “one of the better kinds of really Chilean cottages.”<sup>29</sup> After the earthquake, Graham’s landlord evicted her from the small cottage in Valparaíso. The reason for her eviction she noted was “because the house is let over me to some persons who, seeing how well it has stood, have bribed the landlord to let it to them.”<sup>30</sup> Graham packed her belongings and moved to Quintero—thirty miles from Valparaíso—bemoaning that the new tenants “are English!”<sup>31</sup> Graham largely avoided the British community during her stay in Chile. She unfalteringly described English society in Valparaíso as “trash,” adding that the English are “very uncivil vulgar people, with one or two exceptions.”<sup>32</sup> Similarly, the judge who rejected the Catholic priest’s petition to immediately deport all the Protestant heretics from Valparaíso for causing the earthquake decried the lack of Christian charity from Catholics for him and his family.

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28. MacDonald, *Curse of the Narrows*; Samuel J. Martland, “Social and Political Fault Lines: The Valparaíso Earthquake of 1906,” in *Aftershocks: Earthquakes and Popular Politics in Latin America*, eds Jürgen Buchenau and Lyman L. Johnson (Albuquerque: University of New Mexico Press, 2009), 70–99.

29. Graham, *Residence in Chile*, 116.

30. Graham, *Residence in Chile*, 317–18.

31. Graham, *Residence in Chile*, 318.

32. Graham, *Residence in Chile*, 156, 234.

On the night that the earthquake struck Chile's principle port city, the judge and his family were taken in "from impending ruin" by a United States citizen at "imminent risk of his life." The judge and his family accepted the foreigners' aid because "no countryman of my own would come to our assistance."<sup>33</sup>

### **The 1868 Arequipa Earthquake**

On the eve of the War of the Pacific between Chile and Peru, a major earthquake and tsunami struck the nitrate and guano rich coastal region surrounding Arica. Around five in the afternoon on August 13, 1868, a strong earthquake shook South America's Pacific coast from the island of Chiloé to Lima's port city of Callao. The earthquake destroyed Arica and many other port cities—Iquique, Pisagua, and Mejillones—along Peru's southern coast and inland trading hubs—Arequipa. The tsunami that followed, with eight-meter waves, beached the United States, British, Chilean, Peruvian, and French merchant, war, and passenger ships. The catastrophe also disrupted the region's economy. Ports and railroads were unable to ship the precious resources of guano and nitrates to North American and European markets. The economic boom before the catastrophe had attracted large numbers of Chilean workers to southern Peru. In Arequipa, Chilean survivors found themselves blamed for looting and treated poorly in the disaster's aftermath.

During the late 1860s and 1870s, the nitrate producing regions of Antofagasta and Tarapacá had the potential for generating a substantial amount of wealth. While the Chileans, Bolivians, and Peruvians struggled to define the border in the Atacama desert and, along with the Ecuadorians fend off Spanish challenges, Chilean and British

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33. *Niles Weekly Register*, 8 May 1823.

investment capital and Chilean workers migrated northward at ever increasing levels to supply the expanding mining companies. Chilean prospectors [cateadores]—José Santos Ossa and Francisco Puelma—discovered a sodium nitrate deposit near Mejillones and established the Antofagasta Nitrate and Railroad Company (ANRC). By the 1860s, Peru's richest guano deposits were depleted. The Peruvian government turned its attention to exploiting the nitrate deposits in Tarapacá. The discovery of silver deposits in an uninhabited Bolivian section of the Atacama also led to Chilean capital and laborers to pour into Caracoles. The U.S. minister to Bolivia estimated the Caracoles population at 5,000 people where only two years before in 1870 no one lived. Chileans flooded coastal port cities. A census of Antofagasta tabulated 4,530 Chileans out of 5,384 inhabitants.<sup>34</sup>

The Chilean migration reached further north to Arequipa, attracted to Peru's new railroad projects. In 1868, General Pedro Diez Canseco in Arequipa and Colonel José Balta in Lambayeque rebelled and deposed the sitting president. Balta then embarked on a expansive and expensive railroad building program. Balta funded the railroad project by revoking the oligarchy's guano contract and giving it to foreign investors. In 1868, United States industrialist Henry Meiggs received the contract to build the railway system. In order to build the railroads, Meiggs recruited 25,000 workers among the Peruvian and Bolivian Indians, Chilean rotos, and Chinese coolies.<sup>35</sup> The most important railway was the Arequipa to the sea project that meandered its way through the valley of Tambo to Molendo and Islay. This rail line cost about 12 million soles or about 3.5

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34. William E. Skuban, *Lines in the Sand: Nationalism and Identity on the Peruvian-Chilean Frontier* (Albuquerque: University of New Mexico Press, 2007), 8–12.

35. Peter F. Klarén, *Peru: Society and Nationhood in the Andes* (New York: Oxford University Press, 2000), 176–77.

million pounds sterling. The August 1868 earthquake destroyed Arequipa and its commercial and productive infrastructure—canals, bridges, roads, and ports. The quake also wiped out the first work on the Arequipa to Mollendo railroad. In addition to the earthquake, workers suffered from sicknesses such as malaria, small pox, and yellow fever that killed approximately two million laborers by December of 1870. The railroad, however, was completed by 1871 and inaugurated with a huge new year's party hosted by Mieggs in Arequipa.<sup>36</sup>

After 30 days of almost continual aftershocks, the temblors subsided and Arequipeños returned to the city. On their arrival, citizens had to think about rebuilding their abandoned homes and stores made more difficult by the elite's loss of farms and the harvest stored at haciendas throughout the valleys that surrounded the city. One newspaper correspondent estimated the cost of reconstructing the department at more than 40 million pesos and that such a project would be the “work of the century.”<sup>37</sup>

The great amount of monetary and durable goods needed for the arequipeño relief effort elicited calls to officially recognize the great generosity of the donors. The governments and people of Chile and Bolivia merited particular praise for aiding the relief effort of their sister republic. Similarly, the cities of Lima, Callao, and Puno proclaimed acts of gratitude to each one of the aid organizations in each city. Special salutations were presented to individuals such as the railroad baron Meiggs, who donated to the aid effort from his considerable personal wealth. To memorialize the event, the

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36. Rodrigo Núñez-Carvalho, “Un tesoro y una superstición: El gran terremoto peruano del siglo XIX,” in *Historia y desastres en America Latin*, vol. II, coordinadora Virginia García Acosta (Lima, Peru: LA RED; CIESAS; ITDG, 1997), 262–64, 269, 278.

37. *El Independiente*, 7 October 1868.

municipality ordered a photograph be taken of the welfare minister and the relief commission. The photograph was placed in a visible location in the city hall to “conserve the people’s living memory of the benefactors and the paternal governments who they represent.”<sup>38</sup> Despite this belying outburst of transnational solidarity there continued to be deep divisions between arequiños and the Chilean population that resided in the city.

The Peruvian prefect for the department of Arequipa harassed and treated the Chileans there in an arbitrary and indelicate manner leaving them vulnerable to arequipeño outrage and blame after the disaster. When these news reports reached Lima, a representative of the Chilean government brought the Chilean complaints to the Peruvian president. Balta quickly sent his Minister of Justice—Luciano Benjamín Cisneros—to Arequipa to sack the outlandish prefect. The President of Peru told the Chilean representative that he appreciated the humanitarian aid the Chilean congress approved and sent to the Peruvian government.<sup>39</sup>

A letter to the conservative periodical *El Independiente* in Santiago noted that the situation for Chileans living in Arequipa had improved with the new prefect. Before, Chileans had been denied entrance to the city. The letter noted that this indignity was imposed on the Chilean residents despite having provided many services to the arequipeños and being blameless for the looting after the disaster. Robbery accusations, however, dogged Chileans living in Arequipa. Many families had been looted but the only people the police had pursued and jailed for the crimes were Chileans. In the Tambo Valley, 20 Chilean workers along with the rest of the population celebrated a holiday.

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38. *El Independiente*, 7 October 1868.

39. *La República*, 22 September 1868.



The now sacked prefect without reason had them tied up and each given 100 lashes. The government official asked the prefect for an explanation of his actions but received none. Many Chileans hoped to return to their homeland. When the opportunity finally presented itself, a great number took advantage and marched to the coast where a vessel was made available. The earthquake struck the Chilean population particularly harshly with immense and costly damage to homes and business. In addition to their losses, they were also blamed for the looting in the catastrophe's aftermath.<sup>40</sup>

By December, the situation had deteriorated in Arequipa to such an extent that reports warned that a revolution or rebellion would finish the work done by the earthquake. The city had devolved into "a den of thieves without God or law."<sup>41</sup> The correspondent stated that he did not hold any ill will toward the current President of Peru. He favorably argued that the government had done everything possible for the earthquake survivors in Arequipa. The arequipeños, however, were people "who would not be satisfied with anything."<sup>42</sup> Public health deteriorated after the catastrophe. Despite the change in prefects earlier in the spring, the condition of the Chilean workers in the department had worsened because of disease and beatings. A yellow fever [terciana] outbreak spread through the valleys, daily killing ten Chilean workers in the Tambo valley. To add to their poor state, after the earthquake, Peruvian hate or fear prevented Chilean workers from finding shelter in any rancho. By summer, the disease had spread to infect the majority of the workers in the valleys. Correspondents continued to file more

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40. *El Independiente*, 8 October 1863.

41. *El Independiente*, 23 December 1868.

42. *El Independiente*, 23 December 1868.

reports of Chileans being beaten in Arequipa and in the Vitor and Tambo valleys. By summer, the arequipeño furor extended beyond arbitrary beatings and denial of shelter.<sup>43</sup>

In December, five Chilean workers died after being whipped by the lash. The Peruvians continued to target Chileans for their outrage and blame after the disaster in more threatening ways. A series of protests gathered workers in Arequipa's principle plaza chanting "Death to Chile! Death to the Chileans!" The furor quickly spread as the protesters scoured the streets looking for Chileans. The reported noted that some Chileans had been gravely injured but the majority of the foreign residents had escaped and found refuge in the homes of respectable members of society and the consulate. When the angry mob realized that many Chileans were hiding in the consulate, they surrounded the compound chanting their slogans and throwing rocks. The Chilean consul emerged from the building and asked the protesters what they wanted. The angry mob responded that they wanted all Chileans to leave or they would all be slaughtered within 24 hours. The reporter hoped that some Chilean boats would soon arrive on the coast to rescue the Chilean railroad workers. Chilean boats, however, would not guarantee survival because in the aftermath of the earthquake and tsunami, yellow fever had spread up down the coast. According to the reporter, it was better to try and leave for Chile than die here "like dogs." Although it was hoped that a boat would arrive at Islay to take the workers home, no transportation arrived because of a lack of resources.<sup>44</sup> The Chilean government

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43. *El Independiente*, 23 December 1868.

44. *El Independiente*, 23 December 1868.

official in Arica noted that all the Chileans there were eager for a boat's arrival, so they could return to their homeland.<sup>45</sup>

The Peruvians struggled to form a national identity during the nineteenth century that included the creole elite and indigenous groups. The War of the Pacific against Chile provided a test for the cohesiveness or even existence of a Peruvian nation. Heraclio Bonilla argued that Peru lost the war with Chile because Peruvian peasants did not defend the national territory, lacking a cohesive national identity or for failing to understand what that meant or even that the invading enemy was foreign.<sup>46</sup> Nelson Manrique and Florencia Mallon, however, have pointed out that the peasant community of Comas actually fought against the Chilean invaders that threatened their property and well-being rather than taking up the cause out of obedience to a landlord or patron. By contrast, Mallon and Manrique found that the indigenous peasantry in Peru's central sierra region formed the primary pockets of resistance that challenged the Chilean invaders. Instead, the landowners and merchants allied with the Chileans in order to end the war and disruptions to their businesses and mounting damage to their properties. The resistance represented the beginning of a nationalist and popular reform movement.<sup>47</sup> Sibley points

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45. *La República*, 29 August 1868.

46. Heraclio Bonilla, "The War of the Pacific and the National and Colonial Problem in Peru," *Past and Present*, no. 81 (November 1978): 92–118; Heraclio Bonilla, "The Indian Peasantry and 'Peru' During the War with Chile," in *Resistance, Rebellion, and Consciousness in the Andean Peasant World, Eighteenth to Twentieth Centuries*, ed. Steve J. Stern (Madison: University of Wisconsin Press, 1987), 219–31.

47. Florencia E. Mallon, "Nationalist and Antistate Coalitions in the War of the Pacific: Junín and Cajamarca, 1879–1902," in *Resistance, Rebellion, and Consciousness in the Andean Peasant World, Eighteenth to Twentieth Centuries*, ed. Steve J. Stern (Madison: University of Wisconsin Press, 1987), 232–79; Florencia E. Mallon, *The Defense of Community in Peru's Central Highlands: Peasant Struggle and Capitalist Transition, 1860–1940* (Princeton: Princeton University Press, 1983); Florencia Mallon, *Peasant and Nation*, 1–3, 176–219; Nelson Manrique, *Campesinado y nación: Las guerrillas indígenas en la guerra con Chile* (Lima: Ital Perú, 1981).

out that the infiltration of foreigners into the national space often crystallizes national identity. In other words the nation is defined by what it is not.<sup>48</sup> Beginning in the 1860s, Chilean capital and laborers advanced northward into the Atacama region to work in the nitrate fields and into Arequipa to work on the railroad. After the earthquake, the spread of epidemics among the railway workers and competition for scarce food and material resources triggered anti-Chilean protests that helped to define who was Peruvian, or at the very least arequipeño, and who was not.

Historians and sociologists have found numerous examples of social leveling and “utopias” in the aftermath of a disaster. Catastrophes produce a “leveling” effect. Social distinctions are quickly set aside in the face of survival. Furthermore, disasters also increase a sense of solidarity among neighbors and within communities.<sup>49</sup> After the 1906 San Francisco earthquake and fire, families salvaged what they could from their businesses and homes and camped out in the Golden Gate Park. Soon the makeshift camp created a kitchen with funds collected to buy cooking utensils from Oakland and butchers donated meat for all those survivors living in the park.<sup>50</sup> The Halifax Explosion of December 6, 1917 occurred when the, *Imo*, a Belgian relief ship carrying grain slammed into the *Mont Blanc*, a French ship carrying arms, ammunition, and TNT to the Western Front during World War I. The collision grounded the *Mont Blanc* near the busy Pier Six causing a gigantic explosion that leveled the north end of Halifax as well as the

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48. Sibley, *Geographies of Exclusion*.

49. Peacock, Morrow, and Gladwin, *Hurricane Andrew*; Jr. Provenzo, Eugene F. and Asterie Baker Provenzo, *In the Eye of Hurricane Andrew* (Gainesville: University Press of Florida, 2002).

50. Solnit, *A Paradise Built in Hell*, 13–33.

surrounding areas leaving 20,000 homeless, killing 2,000, and wounding 10,000 people. In the aftermath of the 1917 Halifax explosion, the strict religious, class, and national divide between classes in the city evaporated temporarily. English Protestant women normally could not walk into the Richmond district of Halifax home to the city's Irish Catholics. After the explosion leveled the Richmond district, English Protestant mothers now invited Irish Catholic children into their homes. Wealthy families invited into their parlors entire families of lesser status.<sup>51</sup>

Alongside these examples of social harmony and humanitarian aid, paradoxically, disasters also helped to sharpen the lines and distinctions between Chilean Catholics and British Protestants or Chilean workers and Peruvians. Catastrophes revealed the deep nationalistic divides within societies between the dominant majority and marginalized "others." Indeed, the waters of national and patriotic solidarity often drunk by countrymen after a disaster manifested themselves in two contradictory ways. First, nationalistic feelings and flag-waving engendered collections and donation drives for the survivors. Second, the wave of nationalism that swept over these nations also had a malevolent side that washes up xenophobic outrage and blame in a disaster's aftermath.

### **Transnational Cultures of Disasters**

Frequent and reoccurring natural disasters force cultures, societies, and states to adapt to these disruptions. Western natural and social sciences have neglected the relationship between disasters and culture. Often, social science research has viewed disasters as merely infrequent phenomena and confined their investigations to a few fields. The belief that disasters are rare occurrences leads to the perception of

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51. MacDonald, *Curse of the Narrows*, 89.

catastrophes as a product of nature that necessitated the implementation of technology to mitigate damage and loss of life. Thus, studies focused on how quickly a society was able to return to the pre-disaster status quo. Geographers, however, have argued that disasters should be seen as normal and ongoing parts of the environment and events that humans helped to generate. Areas with a historical frequency of disasters adapt to the possibility of natural hazards as a daily threat by creating cultures of disaster.<sup>52</sup> The shared experience of frequent natural catastrophes can help to build the nation.

Table 2 Argentine and Chilean Earthquakes by Century

Date	Chile	Argentina
1500s	4	0
1600s	6	1
1700s	4	1
1800s	16	12
1900s	27	23
Totals	57	37

Sources: Robert L. Kovach, *Early Earthquakes of the Americas* (Cambridge: Cambridge University Press, 2004), 139-140; Servicio Sismológico de la Universidad de Chile; Instituto Nacional de Prevención Sísmica.

Natural disasters threatened and devastated all of Chile's regions and occurred at an increasing frequency since Spanish arrival. Earthquakes menaced all of Chile's territory. Since 1562, 57 major earthquakes with magnitudes over 6.2 on the Richter scale have struck all Chilean regions: Norte Grande 14, Norte Chico 10, Central Valley 17,

52. Hewitt, *Interpretations of Calamity*; Kenneth Hewitt, *Regions of Risk: A Geographical Introduction to Disasters* (London: Addison Wesley Longman, Harlow, 1997); Bankoff, *Cultures of Disaster*, 3-4.

Frontier 10, Lakes District 3, Southern Continental Chile and Chiloé 3. The occurrences of major earthquakes since the Spaniards arrival have increased in part because of better technology, demographics, and more reliable records: sixteenth century 4, seventeenth century 6, eighteenth century 4, nineteenth century 16, and twentieth century 26.<sup>53</sup> The frequency and scope of disasters created a disaster culture that left an indelible mark on Chilean national identity. Social historian Rolando Mellafe tabulated 282 catastrophes that had struck Chile between 1520 and 1906: 100 earthquakes, 46 serious floods, 50 droughts, 82 epidemics, and 4 plagues of plant and tree eating insects.<sup>54</sup> More recently, Rosa Urrutia de Hazbún and Carlos Lanza Lazcano have catalogued all Chilean, recording 735 catastrophes between 1541 and 1992: 260 fires, 136 epidemics and famines, 166 earthquakes and volcanic eruptions, and 173 floods and droughts.<sup>55</sup> After the 1939 Chillán earthquake, *El Mercurio* reported that 21 percent of all temblors and earthquakes in the world that occur annually, strike Chile.<sup>56</sup> While not all the disasters were significant or critical junctures in Chilean history, the repeated threat and occurrence of catastrophes over the centuries created a disaster culture. An English observer noted that “the susceptibility of persons to the approach of earthquakes increases by a continued residence in the country; arising probably from the apprehension and a

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53. Robert L. Kovach, *Early Earthquakes of the Americas* (Cambridge: Cambridge University Press, 2004), 139–40.

54. Ronaldo Mellafe, *Historia social de Chile y América: sugerencias y aproximaciones* (Santiago: Editorial Universitaria, 1986), 279–88.

55. Urrutia de Hazbún and Lanza Lazcano, *Catastrofes en Chile*.

56. “Dolorosa repercusión ha tenido en el mundo entero el duelo de Chile,” *El Mercurio*, 27 January 1939.

more constant anticipation of their occurrence, as well as from the observation of the greater uncertainty of their extent their force, and duration.”<sup>57</sup>

Table 3 Distribution of Chilean Earthquakes since 1500

Geographic Area	Region(s)	Earthquakes
Norte Grande	I,II, and part of III	14
Norte Chico	part of III, IV, part of V	10
Central Valley	part of V and part of VIII	17
Frontier	most VIII and all of IX	10
Lakes Region	most of X, excluding Chiloé	3
Continental South and Chiloé	XI, XII, and Chiloé	3
Total		57

Sources: Robert L. Kovach, *Early Earthquakes of the Americas* (Cambridge: Cambridge University Press, 2004), 139-140; Servicio Sismológico de la Universidad de Chile.

By contrast, Argentina lacked the same frequency and geographical breadth of natural disasters in Chile. Major Earthquakes with magnitudes over 6.0 on the Richter scale mostly shook Argentina’s western provinces and often struck sparsely populated and desolate areas away from provincial capitals: Jujuy 1, Salta 10, Tucumán 3, Santiago del Estero 1, Catamarca 2, La Rioja 3, Córdoba 3, San Luis 1, San Juan 7, Mendoza 9, and Tierra del Fuego 3. Similar to Chile, the frequency of earthquakes increased since Spanish arrival in the Southern Cone: sixteenth century 0, seventeenth century 1, eighteenth century 1, nineteenth century 12, and twentieth century 25. Unlike Chile earthquakes that struck the capital and major population and economic centers like Valparaíso and Santiago, Argentine earthquakes often struck remote cities in the Andean

57. Thomas Sutcliffe, *Sixteen Years in Chile and Peru from 1822 to 1839* (London: Fisher, Son, and Company, 1841), 375.



foothills. For example, an earthquake on October 9, 1871 destroyed the small town of Orán in the north of Salta producing 20 deaths. Less than three years later—on July 6, 1874—another earthquake struck the hamlet and caused an exodus of part of the population. Most temblors, however, knocked over or damaged buildings in dusty out of the way places. The 1892 quake brought down some buildings in a town, Rocreo, located in Catamarca. A temblor shook down various walls and produced moderate cracks in structures in Tañi del Valle, Tucumán during November 1906. A destructive seismic shock in September 1930 damaged the localities of San Carlos and Angastaco in Salta and one death was recorded in the town of La Viña.<sup>58</sup>

Like Chile, the population centers affected by major seismic shocks left citizens concerned about the earth's groans. The threat of future earthquakes and the experience of previous seismic shocks created a disaster culture in western Argentina. The Ides of March always reminded the mendocinos of the 1861 earthquake. The remembrance of the earthquake continued to "inspire fear."<sup>59</sup> At the beginning of March 1869, temblors rumbled through the province. The English periodical—*The Standard*—located in Buenos Aires observed that in Mendoza "the citizens are naturally very apprehensive lest there should be precursors of another awful calamity as that of which they can never lose the remembrance."<sup>60</sup> In addition to the geographic remoteness of earthquakes and their regionalization to western Argentina, few captured the entire nation's imagination.

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58. Instituto Nacional de Prevención Sísmica, "Terremotos históricos ocurridos en la República Argentina," INPRES, <http://www.inpres.gov.ar/seismology/historicos1.php> [accessed July 8, 2010]

59. *The Weekly Standard*, 2 April 1869.

60. *The Weekly Standard*, 2 April 1869.

During the Bourbon period, the jurisdiction of San Miguel de Tucumán experienced climatic anomalies, agricultural crises and epidemics.<sup>61</sup> At the end of the nineteenth century, a cholera outbreak spread through Tucumán.<sup>62</sup> Similarly, the seemingly cursed province of La Rioja disproportionately suffered through droughts, plagues of locusts, and yellow fever epidemics during the nineteenth century.<sup>63</sup> Different neighborhoods in the city of Buenos Aires repeatedly flooded during the twentieth century.<sup>64</sup> But none of these catastrophes occurred with enough frequency or geographical breadth to leave indelible marks on the nation similar to Chile's national disaster culture.

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61. Cristina López de Albornoz, "Crisis agrícolas y crisis biológicas en la jurisdicción de San Miguel de Tucumán en la segunda mitad del siglo XVIII," in *Historia y desastres en America Latina*, vol. II, Virginia García Acosta (Lima, Peru: LA RED; CIESAS; ITDG, 1997), 163–90.

62. Marta Isabel Barbieri de Guardia and Hilda Beatriz Garrido, "Cólera, condiciones de existencia y tensiones sociales, Tucumán de fines del siglo XIX," in *Historia y desastres en America Latina*, vol. III, coordinadora Virginia García Acosta (CIESAS, 2008), 229–58.

63. Bazón, *Historia de La Rioja*, 522–23.

64. Hilda María Herzer and María Mercedes di Virgilio, "Buenos Aires inundable del siglo XIX a mediados del siglo XX," in *Historia y desastres en America Latina*, vol. I, coordinadora Virginia García Acosta (Bogotá, Colombia: LA RED; CIESAS, 1996), 97–138.

Table 4 Distribution of Argentine Earthquakes since 1500

Province	Earthquakes
Salta	10
Mendoza	9
Santiago del Estero	1
Tucumán	3
Jujuy	1
Tierra del Fuego (Patagonia)	3
Catamarca	2
San Juan	7
La Rioja	3
Córdoba	3
San Luis	1
Total	43

Source: Instituto Nacional de Prevención Sísmica.

Hobsbawm points out that historians should not “assume that for most people national identification—when it exists—excludes or is always or ever superior to” their other identifications even if national identity for them is superior to all others.<sup>65</sup> Furthermore, a common national identity develops unevenly among different social groups and especially among divergent regions.<sup>66</sup> The continued threat and experience of disasters for Chileans from the eighteenth to fifty-sixth parallel helped to create a common identity and culture. By contrast, western Argentina experienced disastrous earthquakes that the hegemonic urban center—Buenos Aires—and the rest of the country’s regions did not. The region of Cuyo—the Argentine provinces of Mendoza, San Juan, and San Luis—shared a common and transnational identity formed by the experience of disasters and reinforced by common historical experiences outside of

65. Hobsbawm, *Nations and Nationalism*, 11.

66. Hobsbawm, *Nations and Nationalism*, 12.

catastrophes. For mendocinos and sanjuaninos, the shared disaster culture produced a common identity that existed alongside their Argentine identity. With every new disaster, western Argentines and Chileans remember the aid and support provided by the other society, which reinforced the bonds of friendship and common culture.

### **The 1861 Mendoza Earthquake**

The earthquake strengthened the historical and economic ties between Chile and the region of Cuyo. Mendoza and San Juan, together with San Luis, made up the region of Cuyo. Before the Bourbon Reforms, Cuyo fell under Chilean administration. The region's geographic location at the foot of the Andes Mountains between the Atlantic and Pacific Oceans made Mendoza an important trading center. The area had strong economic ties to Chile. Cuyo produced large quantities of wheat, grapes, apricots, brandies, wine, and cattle from the pampas passed through Mendoza on their trek over the Andes to Chile. The region's capital, Mendoza, served as a commercial emporium for furniture, clothes, hardware, cotton cloth, and other goods that came by ox cart from Buenos Aires or by mule from Valparaíso.<sup>67</sup>

Chileans and their government generously donated money and provisions to the Mendoza earthquake survivors. Chilean doctors immediately crossed the Andes to provide assistance to the injured. News reached Valparaíso on March 28. Immediately, the intendent directed that all available resources be gathered for the sick and injured and sent two surgeons—Tomás Guillermo Batte and J.N. Leal—along with nurses to

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67. Ricardo Cicerchia, *Cuyo, entre el Atlántico y el Pacífico*, Historia de la Vida Privada en la Argentina, Vol. IV (Buenos Aires: Troquel, 2006), 31–42.

accompany them and the necessary medicines.<sup>68</sup> When the doctors arrived, they observed that the provincial government and the Argentine Confederation either lacked the resources or failed to adequately respond to the catastrophe. These medics filled the vacuum. One Chilean doctor—Lucas Gonzalez—noted in a letter to the Argentine Confederation President—Santiago Derqui—that “at this time nothing has been done” and the sick were being attended to by doctors sent by the Chilean government. Furthermore, Gonzalez sent a medical supply list for the sick and injured to Valparaíso to be filled instead of Paraná or Buenos Aires.<sup>69</sup>

The Society of Friends of the Enlightenment in Valparaíso highlighted the link between Chileans and mendocinos. When news reached Valparaíso, the society’s meeting notes and publication observed that “the Chilean people, of human and compassionate character, shuddered with terror and horror” at the news of the Mendoza earthquake. A number of Chileans lived in Mendoza and sent news of their status to their relatives across the mountains. In an article about the earthquake, the society’s readers were reminded of the historical linkages between the region of Cuyo and its neighboring nation. The region was discovered by Captain Pedro del Castillo in 1560 and the destroyed province received the last name of the Governor of Chile—Garcia Hurtado de Mendoza—who was sent to conquer the area. The region remained under the governance of the captaincy of Chile until 1776, when it was reassigned to the administration of the newly created Viceroyalty of the Rio de la Plata. The shared disaster experiences caused

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68. Intendencia de Valparaíso to Governor of Mendoza, 28 March 1861, documento 3, carpeta 232, sección terremoto de 1861, época independiente, Archivo Histórico de la Provincia de Mendoza (AHPM).

69. Lucas Gonzalez to Santiago Derqui, 12 April 1861 in *Revista de la Junta de Estudios Históricos de Mendoza*, vol. 10, 195.

the Chilean people to empathize with their “brothers”—the mendocinos. It was not only the feelings of humanity that linked the two Andean peoples but moreover by being subjected to the same forces of nature, familial and kinship ties, Cuyo formerly being part of Chilean territory, and San Martín lunching Chilean and South American independence movement from the province.<sup>70</sup>

### **The 1863 La Compañía Fire in Santiago**

On December 8, 1863 at around seven in the evening, a fire engulfed the church of La Compañía. Around 1,500 people were burned in the catastrophe that some scholars have deemed the “most impactful” nineteenth-century disaster. The police declared that 1,480 people died. Only 34 for of the victims were men. The majority of dead were Chileans—only eight were Argentines. The celebration of the Virgin Mary’s Immaculate Conception increased the ceremony’s attendance compared to regular Sunday masses. Despite the service beginning at quarter to eight in the evening, people began to line up at three in the afternoon waiting for the church doors to open in order to find a good seat. The aristocratic ladies and the most beautiful girls were enthusiastic and first in line because they wanted to obtain the best seats so that they could be seen. At five o’clock, the doors were opened and the capacity crowd filled the church. A number of versions circulated about the cause of the fire. Although some periodicals blamed gas, engineers refuted the charges. The most common explanation was that a candle started a canvas or linen flower on fire and a gust of wind blowing through the open doors allowed the fire to spread quickly to the wooden alter painted with oil and then to the roof becoming

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70. “El terremoto de Mendoza” *Revista de Sud-América: Anales de la Sociedad de Amigos de la Ilustración*, vol. 1, Valparaíso, 1861 in *Revista de la Junta de Estudios Históricos de Mendoza*, 417–18.

unstoppable flames that jumped between wooden rafters. The confusion within the church caused the high death toll. As people fled toward the doors, many tripped, fainted and fell to the ground blocking exits as the flames encircled them. Outside, numerous people made herculean efforts to save victims but the fire spread quickly and engulfed the trees in the small plaza in front of the church. The next day, Santiago businesses closed their doors because nearly everyone in the city had lost a loved one. Eight days after the fire, in the cathedral a solemn funeral mass attended by the President—José Joaquín Pérez—diplomats, and many citizens was said for the victims.<sup>71</sup>

A criminal investigation into the fire's causes found that no one was culpable. The Chilean Supreme Court confirmed the findings a year later. Nonetheless, something similar to the population's responses after the 1822 Valparaíso earthquake and the 1868 Arequipa earthquake occurred; the citizens of Santiago blamed foreigners and their religious differences for the catastrophe. Parishioners noted that shortly before the fire, the church had been visited by an eastern rite priest from the Middle East. Many Santiago witnessed the cleric recite a mass in Greek. After the disaster, the Arab priest was considered an impostor.<sup>72</sup>

The church fire reinforced the already shared disaster experience created by previous catastrophes. The disaster experience bonded Chilean and mendocino societies together through a common suffering brought about by tragic circumstances. Mendocino periodicals compared the church fire to the horrible experience of Mendoza's own

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71. *New York Times*, 18 January 1864; Benjamín Vicuña Mackenna, *El incendio del templo de la Compañía de Jesús*, 2nd ed. (Buenos Aires: Editorial Francisco de Aguirre, 1971); Urrutia de Hazbún and Lanza Lazcano, *Catastrofes en Chile*, 102–07.

72. Urrutia de Hazbún and Lanza Lazcano, *Catastrofes en Chile*, 102–07.

disaster in 1861. An article in *El Constitucional* noted that the shared disaster experience “today more than ever, our society feels connected to Chile by links as powerful as blood.”<sup>73</sup> Chilean historian, Benjamín Vicuña Mackenna meticulously compiled and edited newspaper accounts, government reports, notes of condolence, and the funeral sermon for the deceased. The mendocino commission in an open letter noted that Mendoza had a unique understanding and appreciation of the Chile’s situation because of the 1861 earthquake. Mendoza and Chile shared the commonalities of “misfortune and gratitude.”<sup>74</sup>

The La Compañía de Santiago fire reminded mendocinos of the aid Chileans provided in various forms to the province after the 1861 earthquake. Mendocino newspapers reminded readers that Chileans along with sanjuaninos were one of the first societies to respond to the province’s needs after the catastrophe. The Chileans sent generous amounts of aid of all kinds to alleviate the suffering. Without Chilean aid, doctors and medicine, and the clothes and provisions that crossed the Andes, many more mendocinos would have died from exposure. Chilean doctors rushed to the scene and were the first to arrive. These acts of kindness could “never be forgotten” and prompted Mendoza to want to promptly provide any aid needed and to extend its condolences to the fire victims.<sup>75</sup> Thus, a commission of various notable members of the social elite met to begin raising a subscription with two objectives: first, to help fund “sumptuous” funerals

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73. *El Constitucional*, 22 December 1863.

74. Vicuña Mackenna, *El incendio*, 150.

75. Vicuña Mackenna, *El incendio*, 151.



for the victims and second, build a monument to commemorate the catastrophe in Santiago.<sup>76</sup>

Mendoza's response sharply contrasted with official Argentine government letters of condolence. While the mendocinos cried with the Chileans because of their shared disaster experiences, the official Argentine state response noted a common culture rooted in the wars of independence. The Argentine Consulate-General to Chile—Gregorio Beéche—wrote from Valparaíso that the bond that united the two countries emanated from their “same origin and consecrated by a history of glory and common sacrifices...”<sup>77</sup> Meanwhile the intense and painful shared disaster experiences and the mutual aid that each catastrophe provoked strengthened the bond between the two countries.

### **The 1894 San Juan and La Rioja Earthquake**

All social classes in Santiago raised aid for the San Juan and La Rioja in the aftermath of the 1894 earthquake. The Intendant of Santiago appointed a commission to collect funds and material donations for the victims. Social elites organized a concert at the municipal theater to also raise money. Workers organized a large meeting in the capital city's center along the Alameda to express their solidarity with the people of San Juan and La Rioja. The gathering also included entertainment, with the funds raised destined for the earthquake survivors. In Iquique, the dailies were horrified by the news and called on citizens to support the aid effort.<sup>78</sup>

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76. *El Constitucional*, 22 December 1863.

77. Letter from Argentine General-Consul to the Chilean Foreign Relations Minister, 14 December 1863 in Vicuña Mackenna, *El incendio*, 147.

78. *La Prensa*, 11 Novemeber 1894.

On November 8, 1894, the municipality of Santiago agreed to send a note of condolence to the cities of La Rioja and San Juan. A variety of parties and social gatherings were organized to raise funds for the survivors. Similarly in Valparaíso, the mayor named a 20 man commission to collect funds for the sanjuaninos and riojaños.<sup>79</sup> The Santiago dailies covered the earthquake extensively, expressing the Chilean's shared experience with the affected populations in San Juan and La Rioja. The newspapers also highlighted the collections and donations made for the Argentine victims. One article reminded its readers of the initiative proposed by the Intendant of Santiago—Francisco Bascuñan Guerrero—who created a commission of Chileans and Argentines to provide relief to the mendocinos after the 1861 earthquake.<sup>80</sup>

### **The 1922 Vallenar and Coquimbo Earthquakes**

A few minutes after midnight on November 10, 1922, a strong earthquake struck El Chico Norte. In Copiapó, 40 percent of the houses fell, 45 percent remained standing but needed to be demolished, and only 15 percent remained in a good state or were easily repairable. The majority of streets were filled with the remains of houses and buildings. The hospital, the police station, municipal theater, the parish church, the girls school were among the public buildings destroyed by the quake. The cemetery was destroyed and the cadavers produced a nauseous odor. The railroad tracks between Copiapó and Caldera were separated in several places. Telephone, light, and telegraph poles were all downed. The estimated death toll was 880. Vallenar was one of the places that suffered the most damage. Of the 740 houses in the municipality, only 7 remained standing in a relative

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79. *La Prensa*, 9 Novemeber 1894.

80. *La Prensa*, 10 November 1894.

good state, and one in a condition to be repaired. The estimated damage in Vallenar was 30 million pesos. The city witnessed 550 deaths and more than 600 injured. In La Serena, 30 houses were in ruins. Again, the telephone, telegraph, and light poles fell down. Public buildings were either destroyed or left in a badly damaged and dangerous state. The population fled to the hills surrounding the city, scared by the nearly continuous aftershocks. In Caldera the majority of the structures were built with wood and corrugated iron that resisted the ground's oscillations. The tsunami after the quake washed ashore a number of schooners and warships. The railroad companies estimated that the damages to the trains and tracks at 10,000 pesos. The port city of Chañaral was inundated by the sea five times, one wave reaching one kilometer inland. The lower part of the city—the principle commercial district—was destroyed by the tsunami. Again, the train station, locomotives, and tracks were destroyed in addition to several public buildings. In Coquimbo the tsunami produced the majority of damage and left 400 dead. The docks and piers were destroyed along with warehouses and offices of many companies including the Coquimbo Agencies Company. The railroad tracks and trains were destroyed and boats were washed ashore. Severe damage around the Vicuña Mackenna plaza included a candle factory, the fisheries society, and a meat processing plant, a radio and telegraph station, and the arsenal. The earthquake also ignited a number of fires that burned down commercial houses. The total losses of the municipality and companies were estimated at 15 million pesos.<sup>81</sup>

After the earthquake, the daily, *Los Debates*, urged sanjuaninos to donate money and goods to the relief effort. The periodical argued that not only was it a humanitarian

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81. Urrutia de Hazbún and Lanza Lazcano, *Catastrofes en Chile*, 195–200.

effort, but also that it was a question of reciprocity. Chile had sent aid to the province after less devastating earthquakes. What united these two populations were their shared disaster experiences because of living in a geologically active zone that did not respect political borders and boundaries. Thus, Chilean and sanjuaninos needed to collaborate regardless of nationality to respond to natural catastrophes. The newspaper noted that unlike the friendly relationship between Chile and San Juan, the Argentine National Government had repeatedly bothered and upset the province with numerous federal interventions during the 1920s. Ironically, the daily noted that as a symbol of the Chilean's love for San Juan, the neighboring country gave a bust of Sarmiento to his native province. The relationship between San Juan and Chile was distinct from any other relationship in Argentina. The daily noted that "San Juan society is like no other in this country linked to Chile. Many homes are related to their sister country." Sanjuaninos were "obligated unlike anyone else" out of reciprocity and gratitude to provide for the Chilean earthquake victims because they had helped the province through monetary aid, donations, and volunteers after many seismic events that produced less damage and victims. The newspaper hoped to spur donations from sanjuaninos because in Buenos Aires, porteños had already begun to provide aid.<sup>82</sup>

### **The 1939 Chillán Earthquake**

The 1939 Chillán earthquake not only shook Mendoza, it also reminded both peoples of their shared disaster culture. Mendocinos felt the earthquake for about three and a half minutes. The "violent temblor" produced quite a panic as mendocinos rushed

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82. Betriz Mosert de Flores and Magda Lahoz, eds., *Periodismo: scoiedad sanjuanina: el imaginario cultural san juarino desde el periódico local, 1930–1944* (San Juan, Argentina: Editorial Universidad Nacional de San Juan, 2002), 73–82.

out of their houses and into the streets.<sup>83</sup> After the 1939 Chillán earthquake, Chileans were reminded of the long-standing connections to the region of Cuyo. In the wake of such a devastating earthquake, the Chileans reminded Argentines that they would never forget the shared disaster experience of 1861. Likewise Argentines could not forget what the Chileans had done for the mendocinos in a similar situation 78 years earlier. Chilean doctors and medics hurried over the Andes, even on mules, as soon as the news of the catastrophe reached Chile's central valley. The Chilean medical commission was the first to arrive days and weeks before any Argentine delegations arrived at the ruined provincial capital. In the preface to the second volume of the *Revista de la Junta de Estudios Históricos de Mendoza*, the Vicepresident of the organization—Edmundo Correas—stated that “Chile loves Cuyo” and both peoples work to mitigate the effects of each other's disasters. By August of 1861, the doctors and nurses had built a temporary hospital and the Chilean government continued to ship supplies over the Andes. The Chilean-Argentine brotherhood was born out of a common liberation from Spanish Crown and “entrenched in the hours of mutual suffering” caused by devastating catastrophes.<sup>84</sup>

After the 1939 Chillán quake, the president of the Red Cross in Mendoza visited Chilean officials to start a collection for the earthquake victims. The medical circle proposed to transport doctors and nurses and make them available to the government of

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83. “En Buenos Aires y Mendoza se sintió temblar,” *El Mercurio*, 25 January 1939.

84. “A Mendoza destruida por un terremoto en 1861: El primer auxilio le llevo de Chile,” *Zig Zag*, 26 May 1939, 95–97.

Chile.<sup>85</sup> The province of Mendoza's Central Committee for Aid to Chile raised 35,054.90 Argentine pesos for the Chilean relief effort.<sup>86</sup> At the presentation of the collection in an elaborate ceremony at the Chile's Foreign Ministry in Santiago, the Argentine Ambassador, Federico Quintana, handed over a check from the mendocino collection to Chile's foreign relations minister, Abraham Ortega. In his short remarks, the Argentine Ambassador noted the significance of the donation as a manifestation of the solidarity between mendocinos and Chileans. Quintana noted that at the first news of the disaster, the Governor of Mendoza Rodolfo Corominas Segura, organized a collection to express the sentiments of fellowship between the Chilean people and the mendocinos. Ortega's remarks noted the many links between the Chilean nation and Mendoza. Chilean's foreign minister expressed his gratitude to Mendoza's governor who "from the very moment of the catastrophe has been like a Chilean in the depth of their feelings of affection and commitment to provide effective help to the helpless victims." In addition to the funds raised, Mendoza also sent a medical brigade and material aid to southern Chile.<sup>87</sup> The mendocino departments of San Carlos and Tunuyán contributed cattle to the relief effort. Max Hilger, the president of the relief collection in the two mendocino departments brought 46 head of cattle to Santiago and presented it to the capital city's mayor. The mayor of Santiago released a statement of gratitude for the gift on behalf of

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85. "En Mendoza," *El Mercurio*, 27 January 1939.

86. "Más de 35 mil nacionales reunió la Provincia de Mendoza para los damnificados del Sur de Chile," *El Mercurio*, 4 March 1939.

87. "Continúa con igual intensidad la cordial generosidad Argentina," *El Mercurio*, 9 March 1939.

the nation that highlighted the brotherhood between the two peoples forged by generosity in difficult times.<sup>88</sup>

### **Creating a National Disaster**

Benedict Anderson's foundational work on nation-building posits that a common national identity developed and spread from the intersection of capitalism and print media that created "imagined communities." Print languages laid the foundation for the development of a national consciousness because it standardized communication using a language below Latin but above the vernacular. People from related languages or dialects could now understand each other. The convergence of capitalism and print laid the foundation and spread of imagined communities.<sup>89</sup> Anderson, however, did not address the influence of new types of media and technology and their effect on development and maintenance of his imagined communities. Technological innovations—photography and radio—provided new means of communication that intensified linkages with citizens from divergent and far away regions of a nation. In the aftermath of a natural disaster, the new media brought the suffering of the affected regions into the homes of Chileans or Argentines from across the country, strengthening and heightening the shared disaster experience.

### **Nineteenth-Century Disaster Coverage**

News of nineteenth-century disasters in distant regions reached the Chilean and Argentine population centers helping to weave these disparate and far flung areas into a nation. News of the earthquake was generally published in periodicals in the nation's

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88. "Nueva ayuda Argentina a damnificados," *El Mercurio*, 19 March 1939.

89. Anderson, *Imagined Communities*, 44–46.

capital about a week after disasters. Instead of earthquakes and tsunamis being merely local events, print media and transportation technology helped to transform these catastrophic events into national disasters. *El Mercurio de Valparaíso* first reported the February 20, 1835 Chillán earthquake, six days after the event. While information of these tragedies reached a broader audience more quickly than during the colonial period, initial reports remained sketchy and unclear. A short report of the 1835 Chillán temblor ended, stating “we wait for more details so that we can communicate them to our readers.”<sup>90</sup> Reports continued to slowly trickle into the periodical’s headquarters in Valparaíso. Finally, by the end of March, the situation in Chillán and Concepción became clearer. The relief and reconstruction effort received more coverage as the city of Chillán considered moving the city to a new location. News of the August 13, 1868 Arica earthquake and tsunami reached Santiago on August 21—seven days after the disaster. Ships that survived the great title wave brought the first news of the disaster to the northern Chilean port of Copiapó. From there, the authorities of Copiapó sent reports via telegram to the interior minister in Santiago detailing the earthquake and tsunami trail of damage up and down the southern Peruvian coast and the measures taken by the city’s officials to aid the devastated ports. A multiplicity of reports during September 1868 flooded in from Chilean officials and Santiago newspapers correspondents in Lima, who relayed information about the conditions, relief efforts, problems, and eyewitness reports.<sup>91</sup> Likewise, in Lima, rumors circulated that Peru’s southern provinces were annihilated. Three days after the disasters, news reached the capital city confirming the

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90. *El Mercurio de Valparaíso*, 26 February 1835.

91. *La República*, 21 August 1868.



rumors. Unlike news of the coastal effects of the disaster, news of the destruction of Arequipa reached Lima seven days after the catastrophe.<sup>92</sup> News of the May 9, 1877 Tarapacá earthquake and tsunami found its way into periodicals in the capital four days later.<sup>93</sup>

In Argentina, news of the March 20, 1861 Mendoza earthquake reached Buenos Aires a week and a half after the event. The Buenos Aires periodical *La Tribuna* reported the catastrophe in its April 2 edition.<sup>94</sup> The other porteño newspaper—*El Nacional*—reported that the news of the earthquake on March 30 after a survivor reached Rosario via a boat, the *Dolorcita*, the day before at 9:30 in the morning.<sup>95</sup> The periodical published more news of the earthquake gleaned from dailies received from the interior that highlighted the federal governor's response to the disaster on April 1.<sup>96</sup> By the end of the century, news of the October 27, 1894 temblor that inflicted few victims but destroyed the provincial capitals of San Juan and La Rioja appeared the next day in the Buenos Aires press.<sup>97</sup>

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92. Núñez-Carvalho, "Un tesoro y una superstición," 266–67.

93. *La República*, 13 May 1877.

94. *La Tribuna*, 2 April 1861.

95. *El Nacional*, 30 March 1868.

96. *El Nacional*, 1 April 1861.

97. *La Prensa*, 28 October 1894.

Table 5 Length of Time for News of an Earthquake to Reach the Capital City

Earthquake (Epicenter)	Published	Difference (days)	Distance (km)
2/20/1835 (Concepción/Chillán)	2/26/1835	6	434/377
3/20/1861 (Mendoza)	3/30/1861	10	980
8/13/1868 (Arica)	8/21/1868	7	1,665
5/9/1877 (Pisagua)	5/13/1877	4	1,541
10/27/1894 (San Juan/La Rioja)	10/28/1894	1	1,152/979

Sources: *El Mercurio de Valparaíso*; *El Nacional*; *La Tribuna*; *La República*; *La Prensa*; *La Nación*.

Eyewitnesses recorded catastrophic events and their devastating aftermath in travel narratives and diaries, consular telegrams, correspondent reports, subscription lists, and circulars published in newspapers helped to turn disasters into national tragedies. After the 1861 Mendoza earthquake, the porteño periodicals published circulars that helped to raise funds for the earthquake victims. In an open letter to the press in *La Tribuna*, the *Sociedad de Beneficencia de San Luis* urged the Argentine press to report on the 1861 Mendoza earthquake. The reporting, the open letter argued, should not merely focus on making known the occurrence of the earthquake to all the different Argentine provinces, but also the amounts of resources gathered and distributed and where and through which society survivors had taken refuge so friends and relatives could locate them. The letter also praised the Buenos Aires press for the many columns that helped to raise money and donations for the relief effort.<sup>98</sup>

### Modern Media

By the late nineteenth century, a new generation of journalists emerged as advocates for specific causes. They used investigative journalism as a tool to illuminate

<sup>98</sup> *La Tribuna*, 17 April 1861.

and promote their causes. In Great Britain, W.T. Stead's *Pall Mall Gazette* pioneered the "new journalism" that transformed the content and character of the news through exposés about social and political conditions in the British Isles and her colonies. The news was now presented in a more attractive form than the typical dry headlines and rudimentary reports of nineteenth-century periodicals. Beginning in the 1880s, newspapers included human-interest stories, serial narratives, catchy headlines, and visual material—graphs, maps, indexes and photographs. This "new journalism" brought the problem of hunger in London's poor neighborhoods and British neglect of starving Indians in the colonies into the homes of middle class and elite families in visually and literary graphic manner. Newspapers helped to produce outrage at the British government about conditions in the metropole and the colonies.<sup>99</sup> The "new journalism" also helped to transform disasters into national catastrophes regardless of whether or not the earthquake's rumblings physically affect the country's entire population. Radio and photography reminded citizens of their common nationality and intensified the disaster's impact through images and human interest stories. The new media helped to solidify Chile's disaster culture and national identity by bringing information directly into people's homes.

In contrast to the British media's portrayal of an uncaring imperial government, the Chilean press generally praised the country's response to the 1939 Chillán earthquake. Newspaper and magazine coverage only turned negative during the congressional political fight over reconstruction and development aid. Instead new media, radio reports, photographs, and human interest stories captured the nation's imagination and brought attention to the disaster relief effort. The new journalism and technologies

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99. Vernon, *Hunger*, 19.

helped to weave the nation more tightly by bringing news and information about the disaster in a new and moving manner into people's homes. Unlike generally dry and straight forward nineteenth-century newspaper reports that simply repeated official government reports, new journalism focused on the human side of the tragedy and helped to mobilize the nation through previously unavailable means. The new journalism entered more homes at a quicker pace than previous disaster coverage and helped to create a national catastrophe.

**Radio.** Radio reports, newspaper and magazine articles, and photographs of the catastrophe transformed the disaster from an episodic and isolated regional event into a national tragedy. The radio brought the earthquake into every Chilean home. Indeed, through the media, the event united and solidified Chile by helping to weave together historically divergent parts of the country together in the homes of everyday Chileans. The government's quick release of information made this transformation possible. *El Mercurio* praised the government for their "active diligence" in the hours after the earthquake for its coordination with the newspapers and radio stations for disseminating all their information and sources about the situation in the southern provinces. The media, then, were able to disseminate news of the disaster and the updated relief efforts across the entire country thereby helping to transform the earthquake into a nationally sensed disaster.<sup>100</sup> The radio proved to be a "marvelous" means of communication. It was the only manner by which other cities had contact with Santiago and the capital could maintain communication with regions in the disaster zone. A reporter observed that the

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100. "Chillán y Concepción destruidos por terremoto," *El Mercurio*, 26 January 1939.

radio was “the only point of union” between the nation and the “pain of the victims of the earthquake.”<sup>101</sup> The state used the radio to unify the nation. After the earthquake, the government requested that all radio stations forego playing music, while the nation mourned.<sup>102</sup> Indeed, the radio was the only means by which the periodicals received and transmitted information. While the cities of Santiago and Valparaíso remained unaware about what had happened after losing telephone and telegraph communication with the south-central region, amateur radio-telephone users immediately notified the authorities and other aficionados throughout Chile of the seismic shock that rocked the area. One radio-telephone user relayed information of the earthquake to another user in Berlin, Germany. Meanwhile, the Interior Ministry finally restored radio communications with the devastated region at four in the morning, four and half hours after the earthquake.<sup>103</sup> Nevertheless, Chileans across the country awoke to the terrible news creating a shared experience that surpassed nineteenth-century news carried by ships as they sailed up and down the coast and telegrams appearing in newspapers weeks after the catastrophe.

Radio was one of the few means for distributing nationwide information. For relatives throughout the country, the radio broadcast news about the death or disappearance of friends and relatives from the natural disaster. In Santiago, the day after the earthquake, transistor radios disseminated information to citizens of all economic classes huddled in groups throughout Santiago’s parks. Facilitated by commercial and business establishments, these public gatherings relayed the latest information to families

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101. “Utilización del servicio de radio,” *El Mercurio*, 27 January 1939.

102. “Las radiodifusoras,” *El Mercurio*, 26 January 1939.

103. “Utilización del servicio de radio,” *El Mercurio*, 27 January 1939.

in the capital about survivors found beneath the ruins of south-central region. The government distributed information from airplane radio communication, as aircraft flew to and arrived from the disaster zone. The public gathered in Santiago's Constitución Plaza to listen to the latest news that arrived at intervals ranging from minutes to hours.<sup>104</sup> The military radio network also reported news from the disaster zone, which was then published in newspapers. *El Mercurio* noted that day after the earthquake the military radio had relayed information about the condition of the armed forces buildings and fatalities after the earthquake.<sup>105</sup>

In order to quickly communicate important information, the government created the emergency information network. Under the Interior Ministry, the emergency information service supplied news about the earthquake survivors to families and relatives across the country. The service consisted of a central office and 23 corresponding offices in the cities and towns affected by the earthquake. Relatives in Santiago could go down to the office located in the Moneda and inquire about their families between eight in the morning and eight in the evening. News coming in from the recently arrived airplanes from the disaster zone was transmitted over the radio by the Interior Ministry. The Interior Ministry through these emergency information offices communicated the latest news about the disaster every three hours over the radio in addition to the print media.<sup>106</sup>

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104. "Ante la tragedia de Chile: Se movilizaron con extraordinaria rapidez el gobierno y el pueblo," *La Opinión*, 26 January 1939.

105. "Eficiente cooperación de la armada a la obra general de auxilios," *El Mercurio*, 26 January 1939.

106. "Se ha creado un servicio de informaciones de emergencia," *El Mercurio*, 27 January 1939.

In addition to radio reports, airplanes transported not only rescue workers and relief workers but also information. Panagra, a transportation business, offered free correspondence service with Chillán and Concepción after the earthquake. The company already had loaned its airplanes and pilots to the government to fly supplies and relief workers into the south-central region. Those interested in utilizing the service had only to fill out the necessary paper work at the Interior Ministry in Santiago.<sup>107</sup> Airplanes, in addition to important transportation and communication vehicles that linked divergent regions of the nation together, also provided the means to capture striking aerial photos of the disaster zone.

**Visual Media.** Carlos Dorlhiac, a Frenchman, who studied in Santiago drew Chilean landscapes and colonial buildings at the turn of the century. In Chillán his artistic career started and matured. In the old southern provincial capital, he explored a series of themes through his drawings. His drawings captured a city with aged and crumbling walls, yellow powder, crowned with colonial tiles, lonely street corners, dusty roads, dilapidated houses, and barred windows. He recorded the city's colonial vestiges and iconic city landmarks—the picturesque market place—festivals—the Feria de Chillán—the country peoples' customs, and the popular masses going about their daily work—street vendors. This old city, however, disappeared with the earthquake. Dorlhiac's famous artistic works allowed the old city to remain etched in the nation's memory. After the earthquake, Dorlhiac's paintings and drawings of the old city went on exhibition in

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107. "Servicio gratuito de correspondencia," *El Mercurio*, 26 January 1939.

the Bank of Chile's lobby and a chillanejo lawyer published a booklet of the drawings.<sup>108</sup> Dorlhac's idyllic and picturesque images contrasted with the images of Chillán in ruins distributed on the front pages of the country's dailies throughout the nation.

Two days after the earthquake, Chilean newspapers published pictures of earthquake's near total destruction of Chillán and Concepción. These images conveyed the comprehensive scope of destruction and reinforced the government's calls for aid and volunteers. Photographs also captured the nation's imagination in a way that words could not achieve. The January 26, edition of *El Mercurio* featured dramatic photo-montage on the first page titled "The Dramatic Vision of the Southern Earthquake." A photograph of a ruined street in Chillán contained the caption "a street in Chillán converted today into a footprint of desolation and death." Images also highlighted chillanejo landmarks left in ruins. The night of the quake, the city's municipal theater hosted an evening benefit. Cadavers, scattered around the collapsed cornices and underneath the fallen walls, dominated scenes of the theater in photographs in Chile's dailies. The airplane allowed for aerial pictures of Chillán that related the enormous breadth of destruction. Block after block of flattened houses and businesses demonstrated the need for a massive relief effort. These powerful images conveyed the financial costs of the disaster and also the human toll. Other images captured deserted streets with ruined buildings with a few solitary friends and relatives picking through the ruins hoping to find missing family members.<sup>109</sup> On January 27, *El Mercurio*'s front page led with photographs from smaller

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108. "Carlos Dorihac el cerro en sus dibujos: el perfil y el alma del Chillán desaparecido," *Zig Zag*, 5 May 1939.

109. *El Mercurio*, 26 January 1939.



cities. One photograph showed the collapsed tower of Paral's parish church, the rubble of former houses and children walking down a street, ignoring the tragedy that surrounded them in Cauquenes. Photographers also captured striking images of the injured being transported from the rubble to makeshift hospitals and eventually Santiago. One particularly moving image showed military men carrying injured children from an airplane at Santiago's airport in Los Cerrillos.<sup>110</sup> Chilean movie theaters also played news reels with the latest information from the disaster zone. A mere two days after the earthquake, an advertisement in *El Mercurio* publicized the first film of the ruined southern provinces. The film by Higidio Haise debuted on Saturday, January 28 throughout Santiago.<sup>111</sup>

**Human Interest Stories and Eyewitness Accounts.** Pilots' descriptions of the disaster zone from the sky added to the visual images. Carlos del Campo flew over the entire region a day after the earthquake. He relayed what he saw to *El Mercurio*. Campo noted that of Chillán's 144 square blocks, only five buildings remained standing. The survivors had begun construction of temporary shelters using tables and other pieces of debris to protect them from the cold night air. Similarly, Concepción appeared destroyed and desolated. Notable buildings, landmarks, and churches were left in ruins. The pilot's description along with the images brought the disaster into Chilean homes in real and tangible ways that nineteenth-century newspaper correspondents and government reports simply were unable. Anticipating the donation drive—a manifestation of patriotism and national solidarity—*El Mercurio* ended the article with the pilot's observations noting

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110. *El Mercurio*, 27 January 1939.

111. *El Mercurio*, 27 January 1939.

that the surrogate Intendant of Concepción had compiled a list of materials that the earthquake victims would need and turned it over to the Interior Ministry.<sup>112</sup>

Human interest stories also captured the nation's imagination relating tales of harrowing escapes, brave rescue efforts, and the death toll. Marco Pimstein, who was transported to Santiago on one of the LAN flights out of Chillán brought attention to the suffering in the provincial capital. The night of the earthquake, Pimstein, found himself waiting at the train station for passage to Santiago, along with a number of other prospective passengers. Just as the train was about to leave the station, a violent shaking for a few minutes brought those standing waiting for the train to their knees, unable to maintain their balance. The steel trusses that held the station's roof in place and the railroad's office buildings tumbled to the ground. Climbing from the ruins, Pimstein and others near the train station worked to pull other victims from the debris. When they found the train station director, he told them to summon the firefighters to put out the fires that had started. Of the five fire trucks, however, only three survived the earthquake in working condition. The fires could not be contained. The Bank of Chile building burned all night and continued through the next morning. At dawn, Pimstein observed that "out of the 154 blocks that comprised the city of Chillán only mountains of ruins" remained. The number of victims was impossible for Pimstein to estimate. He predicted that numerous bodies would be found underneath the ruins of buildings because the sudden ferocity of the earthquake did not allow people enough time to flee from their

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112 . "Aviador civil Sr. del Campo llegó ayer hasta concepción," *El Mercurio*, 26 January 1939.

houses. Furthermore, the theater was packed full of patrons attending an event leaving at least 300 people buried.<sup>113</sup>

On January 27, *El Mercurio* published four more eyewitness accounts to convey to the public the size and scope of the disaster. The newspaper's special envoys—Hugo Ericlla, Raúl Cuevas, Mauel Sánchez, and Oscar Ríos—covered nearly all of the cities devastated by the earthquake. The periodical's objective for running these first-hand descriptive stories was to convince the reader that the earthquake produced a disaster in catastrophic proportions and thus was not hyperbole to sell more newspapers.<sup>114</sup> One report headline noted that the disaster area resembled an “apocalyptic vision.”<sup>115</sup> Other titles reported that people in Chillán “cried in the streets” because the magnitude of the disaster overwhelmed them. A couple who attended the theater the night of the disaster were found dead but locked in a loving embrace. Only five or six of the theatergoers survived the quake.<sup>116</sup> Rescue efforts mostly uncovered corpses and cadavers in the ruins of the theater. One man, however, was uncovered alive from near the theater's stage.<sup>117</sup> These firsthand accounts spurred patriotic manifestations of charitable giving, volunteerism, and material donations that helped to weave the nation among Chile's divergent landscapes.

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113. “Don Marcos Pimstein, testigo ocular de la tragedia en Chillán, ha hecho un dramático relato del terremoto,” *El Mercurio*, 26 January 1939.

114. “Una idea exacta de lo que fue el terremoto en el sur,” *El Mercurio*, 27 January 1939.

115. Hugo Ericlla Olea, “Chillán, la perla de Ñuble, es hoy una ciudad muerta,” *El Mercurio*, 27 January 1939.

116. “En Chillán la gente llora en las calles al presenciar las proporciones de la catástrofe,” *El Mercurio*, 27 January 1939.

117. “Vivo aun entre los escobros del teatro,” *El Mercurio*, 27 January 1939.

## **Disasters as Agents of Nation Building**

Large scale natural disasters weave together divergent regions and consolidate and reinforce a singular national identity but also maintain other competing nationalisms or identities. For example, the 1908 Messina-Reggio and Calabria earthquake marked the culmination of the Italian nation-building project. The queen nursed survivors back to health at makeshift hospitals and children accompanied by their parents throughout the country donated funds wrapped in the tricolor. Such demonstrations of recovery aid symbolized the nation's consolidation. After the 1861 Mendoza earthquake, provincials and porteños raised money, collected provisions and material donations, and sent medical commissions to help their Argentine brothers and sisters. The catastrophe reminded porteños, cordobéses, salteños, and residents of other provinces of their common national bond. The act of giving to collections and the many editorials penned about a common Argentine identity demonstrated the existence of a common national identity that existed alongside other provincial or regional identities. The earthquake became a symbol of national unity by weaving Argentina's divergent regions together into a perceived homogenous identity. Unlike Argentina, Chile already had a disaster culture and a more cohesive identity. The 1939 earthquake, however, reminded Chileans of their common identity despite regional differences among the norte chico, central valley, and south-central regions; conflicts among the landed elite and the urban workers and rural peasants; or political divisions among rightist, centrist, and leftist parties. Labor organizations, social groups, politicians, rich and poor reaffirmed a common Chilean identity manifested by the outpouring of volunteerism, donations, and grief. Chillán and Concepción symbolized the wounded nation and the unified response that the earthquake

entailed. Despite the reification of national identities caused by these natural disasters, paradoxically, multiple nations continued to exist and divided people's identities based on politics, regionalisms, or class.

Politicians, however, often politicize disasters despite their patriotic rhetoric. For example, the Italian state fully involved itself in disaster relief after the 1908 Messina-Reggio, Calabria earthquake. Politicians—while able to agree on what should be done and despite giving many patriotic speeches calling on the nation to unite—continued to make veiled statements that politicized the disaster that reinforced national divisions. Politicians' subtle and divisive tone highlighted the differences between the Socialists and Catholics and northern and southern Italy.<sup>118</sup> In Argentina after the Mendoza earthquake, patriotic rhetoric and popular solidarity after the disaster could not overcome the deep political divide between the Argentine Confederation and Buenos Aires. The nationalistic hyperbole found in political speeches and newspaper editorials camouflaged the politicized tone of their statements that reinforced divisions between the provinces and the hegemonic port city. Similarly in Chile after the 1939 Chillán earthquake, the Popular Front saw the disasters as a political opportunity to advance their socio-economic program. The advancement of a political agenda using the catastrophe politicized the disaster and reinforced social and political divisions within the nation.

### **The 1861 Mendoza Earthquake**

On Maundy Thursday evening of Holy Week in March 1861, an earthquake struck the tranquil city of Mendoza. The quake brought down all the cities buildings tumbling adobe, brick, and lumber constructions alike. Estimates of the death toll ranged

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118. Dickie, "Timing, Memory and Disaster," 157–58; Dickie, "A Patriotic Disaster," 50–71.

from 6,000 to 16,000, despite the city only having a recorded population of 10,000 at the time of the disaster. Fire spread among the ruins and waters flowed over the irrigation canals submerging the city's west side. The survivors continued to experience horrific aftershocks for the next ten days. In addition to being surrounded by decaying human cadavers and animal corpses, survivors lacked potable water, shelter, clothing, and medicine. Doctors and rescue workers from the neighboring towns and provinces and the Chileans who had crossed the Andes to lend their support and expertise pulled survivors from the rubble and cared for the injured.<sup>119</sup>

**Buenos Aires and the Nation.** The 1861 Mendoza earthquake forced Buenos Aires to address its place in the Argentine nation. Buenos Aires had two choices—stand by and do nothing to aid the Confederation's most industrious province or acknowledge its paternalistic duty to the nation. The people of Buenos Aires could not deny “lending a loving hand to the helpless that it found in their path.”<sup>120</sup> It was Buenos Aires responsibility and duty to make every effort to “alleviate the plight of the suffering.”<sup>121</sup> The relief effort was couched in familial and biblical terms. The porteños sympathized with mendocinos and “today will do what it ought to and what brothers should do.”<sup>122</sup> Buenos Aires had a paternal obligation to care for the orphans left by the earthquake to teach them the religion of their parents out of Christian charity. Biblical metaphors were also used to communicate Buenos Aires' providential role in disaster relief and the

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119. Scobie, *Secondary Cities of Argentina*, 110–13.

120. *La Tribuna*, 3 April 1861.

121. *La Tribuna*, 6 April 1861.

122. *La Tribuna*, 3 April 1861.

nation. Pharaoh's daughter found and cared for an abandon child—Moses—she found among the reeds along the Nile. Likewise, God would use one of the great men of Buenos Aires to transform some of the orphans into great and exemplar citizens that would lead the nation in a few years.<sup>123</sup> It was the hegemonic urban center's duty as an agent of civilization to provide aid to Mendoza just as the port city and the province's institutions were a model and example for the barbaric and backward interior. One newspaper noted that Holland and Spain experienced floods that inflicted their populations with damage similar to that experienced in Mendoza. England and France raised and distributed aid to the destroyed countries. Like London and Paris, who provided aid to backward countries and peoples out of their civilizing duty, Buenos Aires with its European institutions of wealth and progress would aid their barbaric brothers.<sup>124</sup>

For some porteño observers, the earthquake served as a metaphor for the barbarism of nature and the interior that destroyed civilization found in urban areas. Domingo F. Sarmiento famously proposed the dialect between the civilized city and the barbaric countryside. From Sarmiento's perspective, Argentina's caudillos emanated from the interior's natural environment.<sup>125</sup> The previous year, 1860, witnessed bloody examples of federal caudillos and their gaucho armies' barbaric treatment of the educated class and liberal elites. In San Juan, for example, after liberals had successfully taken over the provincial legislature and then the governorship in the late 1850s, also using violent means, the Argentine Confederation installed a federal governor loyal to Paraná.

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123. *La Tribuna*, 7 May 1861.

124. *El Nacional*, 2 April 1861.

125. Domingo F. Sarmiento, *Facundo: Civilization and Barbarism*, trans. Kathleen Ross (Berkeley: University of California Press, 2004).

The new federal governor, however, fell victim to a bloody liberal coup. To obtain revenge, the newly appointed governor of San Luis—the caudillo Juan Saá—attacked San Juan at the end of January 1861. Saá and his gaucho army overthrew the liberal government, sacked the province’s capital city, and killed the governor and some of his followers.<sup>126</sup> One liberal periodical equated the earthquake with Saá’s savaged acts of barbarism on civilization: “Yesterday it was San Juan that disappeared from the map of the Republic, beheaded by the savage hands of a bandit. Today, Mendoza is perishing, struck by fortune.”<sup>127</sup> Another article disparagingly observed “Mendoza and San Juan! On the map their two names walk together in the nation’s gossip and in the heartless horror of their fates. San Juan victimized by man’s justice and Mendoza visited by the scourge of God.”<sup>128</sup> In an article concerning the Mendoza earthquake, *El Nacional*—the liberal propaganda organ located in Buenos Aires—also highlighted some of the atrocities committed by Mendoza’s federal governor and the barbarous acts and persecution of liberals by caudillos in La Rioja and Santa Fe. The earthquake, as was the case with barbarous caudillos, destroyed the civilization found in cities and their economic productivity. The newspaper hoped that the earthquake had not destroyed “the nucleus of civilization” because the majority of the civilized elites lived in tall buildings. Earthquakes destroyed one of the symbols of civilizations—buildings. The article laments the collapse of the building El Pasaje de Soto because it “was the glory of Mendoza” and hyperbolically observed that Buenos Aires did not have a structure as

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126. Rock, *State Building and Political Movements*, 14–21.

127. *El Nacional*, 14 April 1861.

128. *El Nacional*, 2 April 1861.



beautiful, gorgeous, or elegant. The buildings collapse ironically also buried the members of the Club de Progreso.<sup>129</sup> Finally, the earthquake destroyed an important economic center. *La Tribuna* lamented that Argentina's second city no longer existed and *El Nacional* noted that this bastion of civilization in the Argentine desert was one of the wealthiest and most populated in the country.<sup>130</sup> Sarmiento, however, did not view earthquakes as necessarily a manifestation of barbarism but rather an opportunity for progress and modernity. Sarmiento observed that Chilean temblors occurred during a revolutionary moment in world history. The colonial capital built with "mud and dirty tiles" could now be transformed into a modern European styled city.<sup>131</sup>

Indeed, the catastrophe provided an opportunity for Buenos Aires to demonstrate their feelings of nationality with all Argentines were pure. The provinces questioned whether Buenos Aires actions were actually in the nation's interest or only perused because it benefited the hegemonic urban center. The porteño response would test their "faith, absolute sincerity, uprightness, and heart."<sup>132</sup> In less than 24 hours, one newspaper article bragged, a subscription began that included all porteños, rich and poor alike. Everyone brought what they could, based on their own means and station in life.<sup>133</sup> The government headed the subscription list for all "those who call themselves Argentine."<sup>134</sup>

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129. *El Nacional*, 3 April 1861.

130. *La Tribuna*, 13 April 1861; *El Nacional*, 14 April 1861.

131. Domingo Faustino Sarmiento, *Obras de D.F. Sarmiento*, vol. 2, comp. and ed. Luis Montt and Augusto Berlin Sarmineto (Buenos Aires: Berlin, 1895–1909), 356–57.

132. *La Tribuna*, 6 April 1861.

133. *La Tribuna*, 6 April 1861.

134. *La Tribuna*, 2 April 1861.

*La Tribuna* praised Mitre and his government for their circular to the justices of the peace to start a donation campaign in each of their parties and districts.<sup>135</sup>

Temporarily and on the surface, the disaster united all Argentines despite their political and regional differences. One periodical argued that porteños took action to aid in the relief effort because everyone born in Argentina “lived under the shadow of the same flag.” If all Argentines shared in the country’s glories, then the nation also should partake in each other’s misfortunes. From Buenos Aires perspective, the porteños demonstrated their solidarity in the aftermath of this disaster by giving away millions of pesos as an olive branch that they extended to the provinces. *La Tribuna* noted that “today we would also like to alleviate the misfortune of our brothers, first, in the name of humanity and next in the name of community interests that bind all of the brothers of this same family.”<sup>136</sup>

**Donations and Commissions.** While the Argentine Confederation and the competing government in Buenos Aires debated what their roles and responsibilities were in the aftermath of the disaster, the porteños had already “energetically responded.”<sup>137</sup> Newspapers called on all porteños to give to the relief effort. Immediately, when news of the catastrophe reached Buenos Aires, the citizens organized donation drives. Newspapers noted that the survivors would especially need warm clothing as winter approached.<sup>138</sup> The state, however, still retained a role in the private sector’s relief effort.

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135. *La Tribuna*, 2 April 1861.

136. *La Tribuna*, 6 April 1861.

137. *La Tribuna*, 2 April 1861.

138. *La Tribuna*, 2 April 1861.

*La Tribuna* called for the organization of a government commission to “centralize, direct, and distribute the aid to all those who requested it.”<sup>139</sup>

The nation was weaved together in the domestic sphere where women and private citizens organized and raised not only funds but also clothes and other necessities for the earthquake survivors. The *Club del Plata* raised funds for the newly orphaned children, sick, and widows. The club gathered necessities and 70 ounces of gold for distribution by an appointed government official from Buenos Aires.<sup>140</sup> The *Bolsa de Comercio* in Buenos Aires donated 165 ounces of stamped gold worth 59,505 pesos for the allocation to Argentine families and foreigners living in the province of Mendoza.<sup>141</sup> The *Sociedad San Vicente de Paul* called on all citizens of the capital city to donate beds, clothes, and the like to the homes of up the society’s designated members’ homes. Cash donations were also accepted. The collection would then be directed to the appropriate areas and people in need. A commission was appointed to travel to Mendoza to distribute the aid as soon as possible.<sup>142</sup> Likewise, the *Sociedad de Beneficencia* was not to be out done by other porteño organizations. Indeed, the horrible events of March in Mendoza particularly spoke to the domestic and familial roles for women espoused by the organization. The society’s circular noted that it was an honor and duty to collect donations and raise funds to help Argentine families. The disaster demonstrated the *Sociedad de Beneficencia* generosity and piety. More importantly to the organization’s women, the Mendoza

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139. *La Tribuna*, 2 April 1861.

140. *La Tribuna*, 7 April 1861.

141. *La Tribuna*, 18 April 1861.

142. *La Tribuna*, 7 April 1861.

catastrophe provided an opportunity to fulfill their religious and patriotic duty to the nation. The society directed another circular to the Buenos Aires city's and province's school inspectors to organize collections at each school from students, teachers, and alumni.<sup>143</sup>

A philanthropic commission formed to take action on public ideas by organizing and directing them in Buenos Aires. Elite men of porteño society, including Domingo F. Sarmiento, served on the commission's board of directors. A circular entitled "aid for the destroyed Mendoza" urged members of all ranks of Buenos Aires society to give to the relief effort. The circular appealed to emotions and highlighted the urgency needed to carry out a comprehensive relief effort before winter came to the Andean foothills. It was important for the porteños to come to the mendocinos aid before they thought that God and man had abandoned them. Indeed, the 400,000 porteños were obliged to help because of their commercial prosperity, natural resources, and liberty. All sectors of society should participate especially the poor because even their "pence was enough to remedy the misery."<sup>144</sup>

**Provincial Aid.** The theme of unity and brotherhood also highlighted the provincial responses to the disaster. The political problems and military action between the Argentine Confederation and Buenos Aires pitted one "pueblo against another, brother against brother."<sup>145</sup>

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143. *La Tribuna*, 11 April 1861.

144. *El Nacional*, 4 April 1861.

145. *El Imparcial*, 4 April 1861.

The disaster, however, temporarily erased these divides and united the country in a common humanity and nationality. An article in Córdoba's *El Imparcial* rhetorical asked:

What importance are the distinct names given to nations located at diverse latitudes; what importance are these divisions that still exist between peoples in the same State, if in the face of these misfortunes they disappear and charity unites us all? What importance if one part of Argentine territory is called Córdoba, another Mendoza, or yet another San Juan, if the cry of pain rises in any of them, it moves and excites the pious feelings of the other?<sup>146</sup>

The earthquake initiated a response from all Argentines but it was not because a shared disaster experience linked all the provinces of Argentina together. Instead, the disaster reminded Argentines of their common origin, language, laws, customs, and history. A common heritage bound Buenos Aires and the provinces together, the disaster relief measures and collections manifested their shared nationality.<sup>147</sup>

The relief effort required all provinces to work together to aid the hundreds of earthquake survivors left without food or shelter. In an open letter published in the Buenos Aires' periodical *La Tribuna*, the *Sociedad de Beneficencia de San Luis* reported that hundreds of survivors had already begun to make their way to the province's capital city. While the society was honored to provide assistance, it did not, however, have sufficient amounts of money, clothing, or food. Instead, the letter observed that a disaster of this size necessitated all of the country's resources and it plead for the cooperation of all Argentines.<sup>148</sup>

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146. *El Imparcial*, 4 April 1861.

147. *El Imparcial*, 5 April 1861.

148. *La Tribuna*, 17 April 1861.

**The Problem of Politics.** The 1861 Mendoza earthquake provoked a surge in national unity manifested through disaster relief collections. All Argentines, regardless of provincial origin or class, responded to patriotic speeches and writings and donated to the relief effort. The wave of nationalism sparked by the Mendoza catastrophe, however, could not overcome the deep divides between the provinces and Buenos Aires. Underpinning the patriotic speeches and actions remained resentment and deep divisions. The clashes between liberals and federals in San Juan were not forgotten in aftermath of the earthquake. While the relief effort was underway, the rift between Buenos Aires and the provinces widened despite the calls for national unity in the aftermath of a disaster. In April, the national congress—meeting in Paraná—voted to refuse seating the representatives from Buenos Aires. In an open letter to the people of Buenos Aires, the political elite argued for the porteño representatives’ inclusion in the national congressional body. The letter noted that Buenos Aires had been “faithful to the engagements that bind them with the other members of the Argentine Union...”<sup>149</sup> The porteños overwhelming response to the Mendoza relief effort demonstrated their commitment to the nation. The provinces, however, rejected Buenos Aires representatives and their place in the nation. Furthermore, the President of the Argentine Confederation—Derquí—overthrew the liberal government in Córdoba and worked to sever Buenos Aires links with liberals in the northwestern provinces. Despite the Mendoza earthquake reinvigorating a national sentiment, politics during the fall of 1861

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149. *The Weekly Standard*, 1 May 1861.

drove the country toward civil war. The country divided into two factions—the provinces or Buenos Aires—prepared for war.<sup>150</sup>

### **The 1939 Chillán Earthquake**

The size and magnitude of the Chillán earthquake created a shared experience that reinforced Chile's culture of disaster. A large portion of the country felt the magnitude 8.3 earthquake. *El Mercurio* reported that Santiago and Valparaíso felt the temblor with particular intensity. Ground shook and rumbled causing damage as far north as the city of Talca and south as Angol. The south-central zone was the nation's agricultural and industrial center. Concepción—the third city of the country—was not only an industrial center but also an important university city in Chile and South America and tourist destination. The total destruction of the south-central region was a great blow to the nation's economy, universities, tourism.<sup>151</sup> The whole country felt the seismic shock and it produced a large panic in numerous cities.<sup>152</sup> The media relayed the events quickly up and down the shoe string country. Despite the shared disaster culture and natural catastrophes that repeatedly struck the country, the Chilean nation like the Argentine nation divided along political, social, and economic lines that were not easily erased by the earthquake.

**Patriotic Oratory and National Responsibilities.** Political leaders called for national solidarity and manifestations of patriotism in speeches and public statements and the population responded with donations of food and clothing and volunteer efforts. The

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150. Rock, *State Building and Political Movements*, 20.

151. "Alrededor de la catástrofe," *El Mercurio*, 26 January 1939.

152. "En todo el país se sintió el fenómeno sísmico de antenoche produciéndose enorme pánico," *El Mercurio*, 26 January 1939.

Foreign Minister—Abraham Ortega Aguayo—proudly reported that “the government is pleased to inform the nation that volunteers arrived from all over the country, demonstrating the full solidarity of the citizens to deal with the painful circumstances that accompany seismic events.”<sup>153</sup> President Pedro Aguirre Cerda’s cabinet believed that the nation would continue to support the rescue and relief effort because part of the Chilean identity was rooted in a culture of disaster manifested in volunteerism and generous donations of monetary aid and provisions to earthquake victims. Ortega expressed his confidence in the president to exercise and fulfill his patriotic and paternalistic duty as the nation’s father in the midst of great destruction and national tragedy. With Aguirre Cerda attending to his paternalistic duties as the nation’s leader, Ortega reminded Chileans “at this hour of grief and mourning” to remain calm and attend to the common good by aiding their brothers and sisters in the southern provinces through whatever means they were able.<sup>154</sup>

Political leaders and society had an obligation to the nation and a responsibility to participate in the relief effort. This earthquake was unparalleled in Chilean history in terms of human lives and monetary damage. The pain inflicted on the nation required citizens to work together to care for the survivors through subsidies, public health measures, repair the material damage, and restore the ruined cities. Chileans responded to this extraordinarily painful situation with overwhelming generosity and support. Chilean exceptionalism was not only demonstrated by their long history without political upheaval but also their “serenity” when confronting natural disasters. According to the an

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153. “El gobierno espera que el país conservara la calma que siempre ha observado en las desgracias,” *El Mercurio*, 26 January 1939.

154. “El gobierno espera,” *El Mercurio*, 26 January 1939.



editorial, the moment had arrived for the nation to make good on their words and demonstrate with deeds that “the Chilean nation is only one family...”<sup>155</sup> The earthquake unleashed a wave of civic engagement among political parties, unions, institutions, and elite and wealthy citizens especially professionals—particularly doctors, architects, and engineers. This social and national solidarity also manifested itself among Chileans living abroad, who made generous donations to the relief effort. The tragedy’s depth and breadth startled the whole nation persuading every citizen to reflect on what they could do to help their brothers and sisters. No one had the right to avoid helping the cause of national solidarity in the aftermath of such a transformational crisis. Civic duty was not only an obligation for the elites but Chileans of all classes. Chileans had many options besides volunteering to work in the disaster zone, they could donate to a number of different collections for the victims including, money, food and clothing, orphans, the injured, sick and invalids.<sup>156</sup> The relief effort and reconstruction required all Chileans to mobilize and sacrifice for the nation’s welfare.<sup>157</sup>

**Mobilizing the Nation.** The earthquake mobilized of all sectors of society to help with the relief and reconstruction effort brought the disaster into every home in the country. This contrasted with nineteenth-century aid collections dominated by social elite women’s groups and organizations. Businesses made employees and equipment available to the government for rescue and relief efforts. The Panagra Company provided the use of their transportation networks and vehicles which proved to be particularly helpful in

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155. “Una catástrofe nacional,” *El Mercurio*, 26 January 1939.

156. “Las responsabilidades de hoy,” *El Mercurio*, 27 January 1939.

157. “El debe ineludable,” *La Opinion*, 30 January 1939.

quickly transporting supplies and workers to the disaster area bypassing the impassable roads, tracks, and fallen bridges. La Panagra made available to the Interior Ministry the company's new trimotor Ford airplane and its crew, carrying 20 medics and was the first aid that reached Chillán and Concepción. On return trips, the company's airplanes brought back injured to Chile's capital city.<sup>158</sup> The Franke construction company donated machinery to the rescue and cleanup effort. In addition, 100 to 500 of the company's laborers and technicians volunteered to help remove rubble and clear streets.<sup>159</sup>

A variety of societies, businesses, and universities contributed to the relief effort. Each member from the National Agricultural Society donated 50 Chilean pesos to the survivors fund that totaled about 200,000 Chilean pesos. Dental associations donated money for public health needs. Members also opened their homes to fellow dentists and their families left homeless by the earthquake. The dental school in Santiago made available any material objects and personal contacts to the University of Concepción. In addition to raising funds, the Chilean Automobile Club made their transportation available to the government. Professors, administrators, and service personal from the School of Applied Arts at the University of Chile pledged to give one day a month for a year to contribute to the relief effort. The board of directors of the national theater decided to donate one day of salary to the collection for the earthquake survivors. The Association of Chilean Architects in Santiago and Valparaíso sent a commission authorized by the government to report to the state the materials necessary for relief and recovery. The bus drivers union filled a bus with provisions valued at 30,000 Chilean

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158. "La flota aerea de la Panagra cooperó ayer en la labor de socorra a Chillán y Concepción," *El Mercurio*, 26 January 1939.

159. "Una Patriótica actitud de dos organizaciones," *El Mercurio*, 26 January 1939.

pesos. The members of the September Club and the employees of Shell-Mex donated money along with many other societies and associations.<sup>160</sup>

Businesses, consumers, and workers financially support the relief effort through subscriptions and shopping. Businesses and labor unions all generously contributed financially to the relief effort. The employees of the Santiago gas company donated 9,931.71 Chilean pesos—raised in one day—to the relief effort. The gas company’s management also pledged to cooperate with the government and sent three trucks with one engineer and 50 specialists to help the rescue and relief effort.<sup>161</sup> By the end of February, the National Aid and Reconstruction Commission reported that Chileans had donated 10,743,918 pesos.<sup>162</sup> In the capital, hotels, restaurants and bars donated ten percent of their profits from the last day of February. Theaters and cinemas also donated 50 percent of their earnings from “the day of shows” to the relief effort. On “the day of commerce,” businesses small and large from banks to auction houses contributed to the subscription for the earthquake survivors. “The day of commerce” was not limited to Santiago, business from across the country raised money for the National Aid and Reconstruction Commission charged with collecting funds for the disaster victims.<sup>163</sup> In the middle of March, the interior minister sent a memo to all the country’s governors and

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160 . “Todo los sectores de la población cooperan a la labor del Gobierno,” *El Mercurio*, 27 January 1939.

161. Cia de Cons. de Gas de Santiago to Intendente de la Provincia de Santiago, in *El Mercurio*, 27 January 1939.

162. “\$10.743.918.14 suman los fondos que se han reunido hasta ayer,” *El Mercurio*, 2 March 1939.

163. “El comercio aportará su concurso para socorrer a ciudades en desgracia,” *El Mercurio*, 2 March 1939.

intendants declaring the last week of March as being dedicated to raising funds for the earthquakes victims.<sup>164</sup> In March, *El Mercurio* proudly announced that the country had continued to provide aid to Concepción and Chillán. The National Aid and Reconstruction Commission, on March 15, reported that it had raised 13,496,522.14 Chilean pesos.<sup>165</sup>

Societal elites and women's groups continued their nineteenth-century traditions of galas, concerts, and theater events to raise money for the poor disaster victims. The Acción de Mujeres Sociales and the Dadores de Sangre organized a blood drive and the women's organizations mobilized 500 of their members in less than three hours to carry out the effort.<sup>166</sup> Ads promoting blood drives, filled newspapers after the earthquake noting that blood would be needed for transfusions at hospitals to save lives of earthquake victims.<sup>167</sup> A patriotic women's group—Acción Patriótica de Mujeres de Chile—offered their services to the interior minister and the military. The women's organization included members trained as nurses, social visitors, and volunteers ready to go to the disaster zone. Their services were utilized in Santiago as they attended to the sick and injured who arrived from the southern provinces.<sup>168</sup> The municipal theater presented a children's show to collect funds for the boys and girls affected by the

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164. "Una semana dedicada a damnificados," *El Mercurio*, 14 March 1939.

165. "Desde todos los puntos del país continúan llegando los auxilios para damnificados," *El Mercurio*, 15 March 1939.

166. *La Opinión*. January 1939.

167. "¡Dar Sangre!" *El Mercurio*, 27 January 1939.

168. "Acción Patriótica de Mujeres de Chile," *El Mercurio*, 26 January 1939.

earthquake.<sup>169</sup> In Viña del Mar, a swanky gala was held at the city's finest casino to raise money for the earthquake victims. An ornate full page advertisement announced the elite event urging readers to reserve a table for the "great party."<sup>170</sup>

**Presidential Disaster Zone Tours.** In the nineteenth century, heads of state rarely visited disaster areas, especially far flung regions or areas outside the primary and capital cities. Presidents toured disaster areas after catastrophes to assess the damage and the situation, manage the relief and rescue effort, and finally to unite and comfort the nation. After the 1922 Huasco earthquake, Chilean President—Arturo Alessandri Palma—decided to visit the disaster zone five days after the catastrophe. Writing in his *Recuerdos de Gobierno*, Alessandri noted that he "Decided to personally visit the disaster zone and bring aid and technical staff to address the situation as quickly and broadly as possible."<sup>171</sup> After the 1939 earthquake, the former president expressed his willingness to help his former cabinet member and current President Aguirre Cerda in any way possible.<sup>172</sup>

President Aguirre Cerda the same day of the earthquake flew with his wife to assess the damage and bring the basic necessities to the zones most affected by the disaster. The press reported the president's every move portraying him as an effective leader and statesman. The authorities prompt response to the disaster demonstrated the President's leadership. Aguirre Cerda's visit to the disaster zone, one editorial noted,

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169. "Función a beneficio de niños damnificados por el terremoto," *El Mercurio*, 9 March 1939.

170. *El Mercurio*, 10 March 1939.

171. Quoted in Urrutia de Hazbún and Lanza Lazcano, *Catastrofes en Chile*, 196.

172. Don Arturo Alessandri Palma se pone a disposición del gobierno," *El Mercurio*, 26 January 1939.

provided “the survivors with a moral example provided by the presence of the chief executive alongside the victims.”<sup>173</sup> After arriving in Chillán, he convened a meeting with the interior minister, and the local authorities to discuss the immediate needs for the area and the actions to be carried out. Aguirre Cerda made available all means necessary to care for the injured and provisions for the survivors. Finally, he ordered measures to be taken to restore light and electricity at least to the hospital, the Plaza de Armas, and the train station. Aguirre Cerda also met with the citizens of Chillán asking them to remain calm. He promised good salaries for any one able and willing to work in the rescue and relief effort. The president promised to take all measures necessary to ensure they received aid and provisions, adding that the population would be evacuated for free to other locations to avoid the danger of an epidemic outbreak.<sup>174</sup>

After leaving Chillán, the president and the first lady flew to Concepción. Despite the plane losing its route on its way to Concepción, Aguirre Cerda arrived safely, toured the disaster zone, and gave an impromptu speech from the city’s Plaza de Armas. The reporter traveling with the president observed that he arrived to the plaza with a sad spirit because of the human scope of the disaster. Speaking without a script, the President asked for clear headedness and infused in those listening optimism. The government, Aguirre Cerda, proclaimed was working to bring aid and relief to the region. The military reported the next day that all necessary types of aid had arrived in Concepción to be distributed throughout the province. The president did not simply emphasize what the state was going to do or could promise but also expressed his faith in the Chilean people

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173. “Un catástrofe nacional,” *El Mercurio*, 26 January 1939.

174. “Chillán y Concepción visitó ayer el Señor Aguirre Cerda,” *El Mercurio*, 27 January 1939.

to respond to the government's calls for monetary and material donations and adhere to official statements. The President and his wife spent the night in Concepción at the Ritz Hotel and his entourage stayed in railroad cars before returning to Santiago the next day.<sup>175</sup>

**A Political Morass.** The reaction of the country demonstrated a national solidarity and common identity but underneath the surface of political unity and patriotism, deep fissures remained. One reporter noted that he had never seen such profound uniting for a common cause. Everyone from the president to the lowliest worker cooperated and contributed to the relief effort using whatever means that were disposable to them. The press praised the quick action taken by their armed forces, political institutions, companies, and workers. Nobody wanted to be viewed as lagging behind in these patriotic and civic displays. One editorial writer opined that “political parties were not made for these purposes; more than anything else, they are instruments of ideological struggle—combative elements.”<sup>176</sup> The outpouring of national solidarity by everyday Chileans was much more pure than that of the politicians. Contradictorily, the same editorial writer noted that the Chileans had overcome political divisions because in the face such a national tragedy parties or banners melded into a common humanity and nationality. The earthquake had for the time being quenched the ardent political passions that had divided the nation. The politicians demonstrated their patriotism by submerging their desires to excoriate their political opponents and instead work together for the good of the nation. A commentator argued that the disaster relief effort should not be tainted by

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175. “El Presidente de la República habló desde plaza de Concepción,” *El Mercurio*, 27 January 1939.

176. “Reacción ante la desgracia,” *El Mercurio*, 27 January 1939.

politicians. Instead politicians should dedicate themselves to “healing the nation’s open wounds.”<sup>177</sup>

At first, Chilean politicians and political parties united behind the patriotic rhetoric and acted to assist the rescue and relief effort. The socialist newspaper, *La Opinion*, proudly reported that “all the political organizations without exception have placed themselves at the government’s disposal and have offered their full cooperation in the relief effort for the earthquake victims.” The Conservative Party leader, Maximiano Errázuriz, visited the interior minister’s deputy and pledged his support and offered his services to the ruling center-left Popular Front coalition. Likewise, the *Vanguardia Popular Socialista*, *La Falange Nacional*, *La Alianza Popular Libertado*, *Junta Central Radical*, *Asamblea Radical de Santiago*, *Partido Socialista*, *La Juventud Democrática*, and *El Partido Comunista* organized their members and made them available to the government for the relief effort. Labor union rank and file volunteered to work on sanitary brigades, construction workers cleared streets and removed rubble, doctors provided medical care to the survivors, and pharmacists distributed drugs to the injured. Political parties and organizations also raised funds, collected clothing donations and provisions for the earthquake survivors.<sup>178</sup>

Like Argentine congressmen’s patriotic speeches after the Mendoza 1861 earthquake, Chilean politicians used soaring rhetoric to solidify the nation in the face of a large external threat. In a speech paying homage to the congressmen from Concepción who died in the earthquake, the *Unión Socialista* congressman, Juan B. Rossetti, outlined

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177. “Reacción ante la desgracia,” *El Mercurio*, 27 January 1939.

178. “Solidaridad nacional ante la catástrofe,” *La Opinion*, 26 January 1939.



the challenges facing the nation and called for solidarity and unity. Rossetti described the scope of the Chilean catastrophe using biblical metaphors. According to Rossetti, the heroism and calmness exhibited by the survivors in Chillán, Parral, Bulnes, and San Carlos faced with such great desolation and death served as an example for the Chilean people. Echoing the nation's duties to the victims of the terrible earthquake, Rossetti stated that Chileans ought to "heal the injured, bury the dead, rebuild the cities, and clear the debris." Furthermore, the disaster provided a political opportunity to "galvanize a new life, better and nobler." Since the Chilean nation responded in such a heroic manner, the Chilean Congress had the responsibility to ensure that the necessary laws would be passed to ensure the reconstruction of the disaster zone.<sup>179</sup>

Despite the nationalistic speeches and a unified political front, the catastrophe quickly became politicized. National solidarity and mobilization of Chileans of all political stripes to participate in the earthquake relief effort, however, could not erase the deep divisions that existed in Chilean politics and society. A week later, President Aguirre Cerda presented his reconstruction program that proposed significant state intervention in the country's economy to foment the reconstruction of the southern provinces and transform the nation's economy from one based on agriculture to industry. The president's proposal was met with intransigent opposition from the conservatives. The leftist press excoriated the right as betraying or sabotaging the nation.<sup>180</sup> By the end of February, the socialist newspaper, *La Opinión*, accused the conservatives of trying to

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179. "El discurso de Rossetti," *La Opinión*, 31 January 1939.

180. "Otra vez el Rossismo contra el país," *La Opinión*, 5 February 1939; "Las declaraciones de Ross: un sabotaje a la patria," *La Opinión*, 10 February 1939.

produce an economic crisis and undermine the fiscal stability of the nation.<sup>181</sup> Labor unions along with the Communist and Socialist parties organized protests across the country and a large march on Santiago at the end of February to show their support for the President's reconstruction and economic law.<sup>182</sup> The Socialists and Communists mobilizations of the urban and rural labor force threatened the fragile social order, while President Aguirre Cerda and the Congressional Conservatives argued over reconstruction. A renewed wave of rural unionization efforts frightened and threatened large landowners. By March the landowners petitioned the president to suspend the unionization of rural workers. In exchange for a compromised reconstruction and development bill that passed congress in April and the maintenance of "social peace," the president suspended rural unionization. On May Day, peasants and farm workers marched on Santiago. In August, after a winter of rumored coup attempts, General Ariosto Herrera attempted to overthrow Aguirre Cerda. The coup failed, but by the end of 1939, the president had only managed to pass two major pieces of legislation demonstrating the deep divisions within the Chilean society despite the temporary unity and solidarity produced by the one of the worst earthquakes in Chile's history.<sup>183</sup>

### **Conclusions**

In the aftermath of a natural disaster, national identity can be reified by defining the "other." Natural disasters reveal the range of human actions both good and bad.

Alongside many examples of social leveling that take place after earthquakes, floods,

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181. "La derecha intenta producir crisis economica," *La Opinion*, 24 February 1939.

182. "Todos los sectores populares movilizan en apoyo y defensa del gobierno," *La Opinion*, 26 February 1939.

183. Loveman, *Chile*, 212–14.

hurricanes, and the like, cases of competition over scarce resources arise as does finding scapegoats to blame for the catastrophes. Furthermore, national identity is often defined by what it is not or absent. The presence of the “other” in the nation’s physical space helps to define a national identity. After the 1822 Valparaíso earthquake, priests convinced their parishioners that the Protestant British merchants living in the city in increasing numbers over the past decade were to blame for the earthquake that destroyed the city. British merchants and their families became the target of outrage and violence. When O’Higgins tried to protect their businesses and properties, segments of the Chilean elite viewed these actions as placing British interests above Chilean loyalty. Catholic priests proclaimed that the toleration of Protestants in a Catholic nation brought God’s wrath down on the country. Likewise, in Arequipa after the 1868 earthquake destroyed southern Peru and the yellow fever swept through the region, local officials stoked anti-Chilean sentiments. The competition for scarce resources after disasters, the presence of a large community of Chilean railroad workers, and disease spreading through the region made the Chileans an easy scapegoat. In the run up to the War of the Pacific, the Peruvian’s outrage and poor treatment of Chileans demonstrated a national consciousness only heightened during the subsequent conflict despite Peru’s many regional, ethnic, and class divisions.

The shared experiences of earthquakes created national and transnational disaster cultures. The repeated catastrophes that struck Chile helped to create a national culture of disaster. Chilean catastrophes affected every region of the nation. By contrast, earthquakes disproportionately shook western Argentina, not the whole country, and created a regional disaster culture. Alongside their identity as Argentines, mendocinos

and sanjuaninos shared a culture of disaster with Chile. The shared experience of catastrophes was strengthened by each subsequent disaster because each community was reminded of previous earthquakes and the humanitarian aid provided by the other society, which engendered stronger ties between western Argentina and Chile. The common disaster experiences of Chile and Cuyo built on historical linkages of colonial governance, economic ties, and independence. After an earthquake, the unaffected community sent donations, provisions, and doctors to the affected region signifying, solidifying, and strengthening a brotherhood and shared identity.

Benedict Anderson's imagined communities relied on the distribution of print media to help form a common national identity. During the nineteenth century, the mechanism of print capitalism helped to weave together nations with divergent and far-flung regions. Natural disasters in Mendoza, San Juan, La Rioja, Chillán, Concepción, or Arica usually reached the capital city and population centers of Chile or Argentina within a week during the nineteenth century. Through correspondent reports and government reports published in newspapers, catastrophes entered into the national consciousness. This process intensified with the advent of photography, radio, and technological innovations such as the airplane. In addition, "new journalism" also transformed the way in which the media reported about natural disasters. These two trends helped to transform disasters into national tragedies and weave the nation together independent of distance. The "new journalism" used photography and human interest stories that intensified and yielded emotional connections among citizens, helping to mobilize the nation in ways not possible during the nineteenth century.

Augusto Placanica argued that large earthquakes are almost universally interpreted as a mechanism that causes significant changes to the state, social hierarchies, cosmology, and personal lives. Paradoxically, the expectation of great changes usually over the long term fails or falls far short.<sup>184</sup> John Dickie observes in the Italian case, that “widespread patriotism is not incompatible with the profound social disunity...”<sup>185</sup> In Argentina, the wave of patriotic sentiment washed over the nation’s deep divisions but quickly receded revealing once again cavernous political and regional fissures. The natural disaster while reminding Argentines of a shared or common national identity could not forestall or prevent an armed conflict to resolve the country’s political differences between porteño liberals and the federalist Argentine Confederation. Similarly, the 1939 natural disaster could not erase the social divisions in Chilean society between the landed elites and urban and rural workers and the political antagonism between the left and right. The 1939 Chillán earthquake, however, did have long-lasting consequences. The popular front politicized the event and pushed through economic changes that continue to this day. The outpouring of political and social solidarity and unity in the period immediately after the disaster, by contrast, quickly disintegrated into an ugly political brawl. Natural disasters temporarily reminded Argentines or Chileans of a common national identity. For there to be any lasting effect or influence on national identity, natural disasters have to continually strike the nation, otherwise the event is generally relegated to regional or local memory.

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184. Augusto Placanica, “Le conseguenze socioeconomiche dei forti terremoti: miti di capovolgimento e consolidamenti reali,” *Rivista Storica Italiana* 3 (1995): 831–39.

185. Dickie, “Timing, Memory and Disaster,” 157.

## CHAPTER 4

### THE ORDER OF DISASTER: STATE AND SOCIETY IN THE AFTERMATH OF A CATASTROPHE

Disasters often conjure up images of disorder, confusion, and lawlessness. Social scientists have found that the media portrays catastrophes as unleashing a wave of chaos that threatens society's stability. At the Cold War's height, sociologists began to study the U.S. government's assumptions that a nuclear bomb detonating in North America would produce mass panic. In stark contrast to the authorities' assumptions and the media's characterization of twentieth-century disasters, scholars found an absence of panic, crime, and general disorder. Disasters produced narratives of a loss of control. Fearing social unrest and general disorder, elites, government officials, and military leaders viewed a catastrophe as a dangerous situation. Thus, the state often imposed martial law and summary executions to prevent and deter criminal activity and ensure the sanctity of private property. Nineteenth-century newspapers, government correspondents, and traveler accounts typified elite and government fears of the popular masses by reproducing generalized images of pillaging and raiding. Similarly, observers largely failed to make a distinction between profiteers, looters, and marauders and survivors who picked through the rubble searching for water, provisions, and materials to construct temporary shelters. The perception of disorderly disasters, however, was not the case as most survivors emerged from the ruins searching for water, food, and shelter.

In nineteenth-century Argentina and Chile, the authorities warned that anyone caught looting would be shot immediately. The press reported stories and journal

accounts recorded thrilling narratives about dangerous bands of armed rural men who pillaged the ruins of Mendoza and Arica. In contrast to perceptions of disorder, mendocino criminal and judicial records reveal that fears of increased crime after a disaster were vastly overblown. Newspaper accounts and government correspondence reveal a relatively organized and orderly environment in San Juan and La Rioja after the 1894 earthquake. The reports of looting and pillaging after the 1894 catastrophe were largely mitigated because of a quick and efficient response from provincial governors. Similarly, few reports of criminal activity and lawlessness emerged from Chillán after the 1939 earthquake. The Chilean government immediately declared martial law and heavily utilized the military to help carryout rescue and relief efforts.

### **Crime and Criminality**

Crime and criminality in Latin America remain relatively under studied fields. Studies have examined vagrancy and banditry, the state and social control, gender and honor, and crime and urban space.<sup>1</sup> In Mexico, the authorities feared landless rural workers, dispossessed peasants, and the unemployed fueling an insurgency that would cause unrest and disorder. Governments linked unemployment and vagrancy with crime

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1. Eric Hobsbawm, *Bandits* (London: Weidenfeld and Nicolson, 1969); Pablo Piccato, *City of Suspects: Crime in Mexico City, 1900–1931* (Durham: Duke University Press, 2001); Ricardo Salvatore and Carlos Aguirre, eds, *The Brith of the Penitentiary in Latin America: Essays on Criminology, Prison Reform, and Social Control, 1830–1940* (Austin: University of Texas Press, 1996); Ricardo D. Salvatore, *Wandering Paysanos: State, Order, and Subaltern Experience in Buenos Aires During the Rosas Era* (Durham: Duke University Press, 2003); Ricardo D. Salvatore, Carlos A. Aguirre, and Gilbert M. Joseph, eds, *Crime and Punishment in Latin America: Law and Society Since Late Colonial Times* (Durham: Duke University Press, 2001); Donna J. Guy, *Sex and Danger in Buenos Aires: Prostitution, Family, and Nation in Argentina* (Lincoln: University of Nebraska Press, 1991); Richard W. Slatta, ed., *Bandidos: The Varieties of Latin American Banditry* (New York: Greenwood Press, 1987); Richard A. Warren, *Vagrants and Citizens: Politics and the Masses in Mexico City from Colony to Republic* (Wilmington, DE: Scholarly Resources, Inc., 2001); Brian R. Hamnett, *Roots of Insurgency: Mexican Regions, 1750–1824* (Cambridge: Cambridge University Press, 1986); Mark D. Szuchman, “Disorder and Social Control in Buenos Aires, 1810–1860,” *Journal of Interdisciplinary History* 15, no. 1 (Summer 1984): 83–110.

and banditry.<sup>2</sup> In Argentina, the state under Rosas and the liberals continued with their attempts to control rural laborers. Only a few of the executions included Rosas' associates. Judges concluded that the prevalence of terror and violence under the caudillo's rule absolved those who lived through it or at least lessened their culpability. This conclusion reinforced elite and upper class views of common Argentines as lawless savages unable to be governed by reason, laws, or live in a democratic society. Although the liberal regime tried to distinguish themselves from the Rosas dictatorship by limiting capital punishment to only the most egregious and atrocious cases, there were, however, more continuities than reforms of the penal system.<sup>3</sup> In situations of great turmoil such as the days and weeks after a catastrophe, the authorities feared that the masses would take advantage of the situation and create an atmosphere of chaos and disorder. Similarly to the authorities in Mexico and Argentina during non-disaster times, governments imposed measures to enforce order and control the popular masses.

One of the authorities' primary concerns and the media's focus after a disaster were issues of law and order. Catastrophes are interpreted through "culturally understood 'scripts' or stereotyped stories about dangers and disasters."<sup>4</sup> For most people, disasters are incorrectly understood as infrequent events and usually people receive information about earthquakes, hurricanes, volcanos, tsunamis, wildfires, and floods from the media.

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2. Hamnett, *Roots of Insurgency*, 59–67; William B. Taylor, "Banditry and Insurrection: Rural Unrest in Central Jalisco, 1790–1816," in *Riot, Rebellion, and Revolution: Rural Social Conflict in Mexico*, ed. Friedrich Katz (Princeton: Princeton University Press, 1988); Paul J. Vanderwood, *Disorder and Progress: Bandits, Police, and Mexican Development* (Wilmington, DE: SR Books, 1992).

3. Ricardo Salvatore, "Death and Liberalism: Capital Punishment after the Fall of Rosas," in *Crime and Punishment in Latin America: Law and Society Since Late Colonial Times*, eds Ricardo Salvatore, Carlos Aguirre, and Gilbert M. Joseph (Durham: Duke University Press, 2001), 308–41.

4. Horlick-Jones, "Modern Disasters as Outrage and Blame," 309.



Thus, newspapers, radio, and television reports are in a position of power to categorize events as catastrophes and spread “disaster myths.” One of the most popular assumptions is that the public will panic and behave uncontrollably during and after a catastrophe or looting and other anti-social behaviors will also occur. Social scientists have found that these “disaster myths” are pervasive in disaster reports and accounts that are often repeated and transferred uncritically into the public’s consciousness. Modern disasters are socially constructed from traditional ideas about disasters as being connected to cultural notions about fate and divine retribution. These beliefs are only reinforced by the media’s description of the event as “explosions of outrage” and a loss of social control. Furthermore, a poor institutional response to the disaster fuels this perception of disorder. The media helps to perpetuate this perception of the authorities by assigning blame and conveying a sense of betrayal and outrage after disasters.<sup>5</sup>

One of the state’s primary worries is the loss of legitimacy, political unrest, and the mobilization of the popular masses who blame the government for the disaster and its poor relief and recovery effort.<sup>6</sup> Municipal, provincial, and national governments’ also focus on maintaining order and protecting private property. For example, after the 1906 Valparaíso earthquake, newspaper reports noted wealthy property owners damage and

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5. Horlick-Jones, “Modern Disasters as Outrage and Blame,” 309–12. For an analysis of media and disasters in Italy during twentieth century, see Stefano Magistretti, “Rituals and Rhetorics of Disaster: Patterns of Catastrophe Coverage in the Italian Media: Sarno 1998,” in *Disastero! Disaster in Italy Since 1860: Culture, Politics, Society*, eds John Dickie, John Foot, and Frank M. Snowden (New York: Palgrave, 2002), 301–22. Disaster myths are reproduced in movies, television, and popular literature that portray common people as hysterical, disorderly, and dangerous. For an example, see the chapter “The Literary Destruction of Los Angeles” in Mike Davis, *The Ecology of Fear: Los Angeles and the Imagination of Disaster* (New York: Henry Holt, 1998), 273–355 and the chapter “Hobbes in Hollywood, or the Few versus the Many,” in Solnit, *A Paradise Built in Hell*, 120–32.

6. Olson and Drury, “Un-Therapeutic Communities,” 221–38; Drury and Olson, “Disasters and Political Unrest,” 153–61. For historical investigations into relationship between the government and the popular politics of earthquakes, see Jürgen Buchenau and Lyman L. Johnson, *Aftershocks*.

observed that port city's poor were potential sources of unrest and crime. Municipal officials feared that after the earthquake, inmates would escape from a destroyed prison, violent riots and strikes would submerge Valparaíso into chaos, or looting the wealthy neighbor of Almendral would occur. Intendant Enrique Larraín Alcalde responded to the crisis "as though it were a riot."<sup>7</sup> Instead of using existing official and government institutions to carry out the relief and recover effort, Larraín created a provisional military government. The authorities' primary concerns were order and security. These preoccupations were probably overblown compared to the actual threat of looting. According to patrolling soldiers, a few people did participate in looting and pillaging the ruins and the military officials promptly had them shot and their bodies displayed to deter other criminals. In general, people were not predisposed to looting and burning, contrary to the popular assumptions. The earthquake did not spark either riots or a revolution despite the Intendant's fears that the labor strikes, riots, and unrest during 1903 would be repeated. Soldiers patrolling the port city most likely used identifiers such as clothing and accents to determine between those property owners sifting through the ruins looking for their possessions or looters sorting through the rubble searching for valuables. Finally, the authorities were also concerned with arson and burning associated with violent labor riots. While arson was often part of rioting during this period, government officials worried that property owners lacking insurance would burn their ruined houses in order to collect on their fire insurance. In the end, however, as with many other disaster areas,

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7. Samuel J. Martland, "Social and Political Fault Lines," 74.

the authorities were overly concerned with looting and pillaging in comparison to actual cases of crime.<sup>8</sup>

Often, disasters produce the phenomenon of social leveling. Although catastrophes usually impact the poor and lower classes more than elites or upper classes, in the days after a disaster, humble and wealthy alike eat similar foods and set up shelters next to one another. In the immediate aftermath, a disaster often induces communities to come together as a means of survival. Some scholars take this temporary social leveling a step further arguing that in the aftermath of disasters a temporary utopian society emerges. For every instance of Catholics and Protestants putting aside their denominational and ethnic differences, for example after the Halifax harbor explosion in 1917, a counter example presents itself such as after the 1822 Valparaíso earthquake when Chilean Catholics blamed the catastrophe on British Protestants. Furthermore, disasters disproportionately impact the working class and poor. Society's elite whether from personal contacts, wealth, or status are better positioned to navigate post-disaster bureaucracies and overcome obstacles. For every example of social barriers being erased, a counter case of social divisions being reinforced in a catastrophe's aftermath can be cited.<sup>9</sup>

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8. Samuel J. Martland, "Social and Political Fault Lines," 72–77. For another example, see Solnit, *A Paradise Built in Hell*, 34–48. She studies the 1906 San Francisco earthquake and the extraordinary disaster communities that emerged in its aftermath.

9. Solnit, *A Paradise Built in Hell*, 23–33. After the 1906 San Francisco earthquake, communities worked together to provide aid and relief for rich and poor citizens. Survivors constructed temporary shelters in a park and a local butcher provided meat for community cooked meals. For a counter example from the same disaster see Andrea Rees Davies, *Saving San Francisco: Relief and Recovery After the 1906 Disaster* (Philadelphia: Temple University Press, 2012), 85–111. San Francisco's relief camps reinforced social order by organizing them by race, gender, and class. Progressive policies aimed to create a society based on order and progress. Disaster camps reflected this concern and were zoned to contain the poor and

A central issue for the authorities in a catastrophe's aftermath was protecting private property. The difference between looters and those searching for food, water, and materials to construct temporary shelters was often more unclear than the authorities believed. Rebecca Solnit observes that "many would not consider property crimes significant when lives are at stake—and the term *looting* conflates the emergency requisitioning of supplies in a crisis without a cash economy with opportunistic stealing."<sup>10</sup> Instead, the term "requisitioning" better describes "the obtaining of necessary goods by taking them where they could be found."<sup>11</sup> Nevertheless, some survivors used the situation to their advantage, gathering others' goods and possessions to selling at inflated prices, or appropriating vast amounts of liquor or alcohol to quench their thirst. In the authorities' zeal to maintain order and prevent social unrest, they enacted martial law or enforced summary executions of those found or assumed to be looting or causing disruptions. Despite the fear of social unrest and thievery found in many press and elite accounts, few records of actual delinquent acts or instances of lawlessness exist. Indeed, officials and the press overestimated looting and bedlam revealing their fear of the untamed popular masses.<sup>12</sup>

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working class survivors. Some white women and Chinatown survivors, however, ignored the progressive policies pertaining to social order.

10. Solnit, *A Paradise Built in Hell*, 37.

11. Solnit, *A Paradise Built in Hell*, 39.

12. Kathleen Tierney, the director of the University of Colorado's Natural Hazards Center labeled this fear as "elite panic" defined by a "fear of social disorder; fear of poor, minorities and immigrants; obsession with looting and property crime; willingness to resort to deadly force; and actions taken on the basis of rumor." Cited in Solnit, *A Paradise Built in Hell*, 127. See also Carl Smith, *Urban Disorder and the Shape of Belief: The Great Chicago Fire, the Haymarket Bomb, and the Model Town of Pullman* (Chicago: University of Chicago Press, 1995). In the aftermath of the Japan's 1923 Kanto earthquake, fear

## The 1861 Mendoza Earthquake

In the immediate aftermath of the catastrophe, confusion permeated the provincial capital and survivors emerged from the rubble without food, potable water or shelter. The day after the earthquake, the survivors and injured amassed in the plaza without receiving much aid. Survivors passing through the streets could still hear the cries of those trapped beneath the rubble of their houses and businesses. Two days after the earthquake, the survivors continued to lack meat, foodstuffs and potable water. The strong aftershocks continued to shake the urban center, terrorizing the population. The day after the earthquake 19 aftershocks were reported, two days later another 14 aftershocks shook the rubble, and after two terribly frightening days, on the third day 13 more aftershocks occurred and continued to persist well into April. Adding to the terror, disorder, and confusion, a fire roared through the ruined city. Two days after the earthquake, the bodies of the victims began putrefying. This added another threat to survivors' health. One witness recorded that with each passing hour and day "the desperation spread" and "the terror, the hunger, and desolation concerned the survivors."<sup>13</sup> In response, the populace picked through the city's rubble searching for provisions and materials to construct temporary shelter. The mendocino authorities, however, focused their attention on maintaining order and protecting private property. The migration of many elite survivors out of the province created problems of determining and ensuring property ownership. Provincial officials combated looting and issues of proprietorship through the threat and use of violence. Both the liberal porteño and federal provincial press published sanguine

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and rumor contributed to the massacre of Koreans. See J. Michael Allen, "The Price of Identity: The 1923 Kanto Earthquake and Its Aftermath," *Korean Studies* 20 (1996): 64–85.

13. *La Tribuna*, 30 March 1861.

reports and eyewitness accounts that highlighted the rampant lawlessness of Mendoza. In assessing blame for the perceived lack of order in the province, the liberal Buenos Aires newspapers targeted the province's federal governor. Despite the many newspaper accounts of disorder and lawlessness, criminal and judicial records show that crime decreased. Most earthquake victims, generally, were only concerned with day to day survival and not enriching themselves from goods and merchandise buried beneath Mendoza's rubble.

Survivors picked through the rubble searching for foodstuffs and aid and the governor provided what few resources could be found. Because the canals were all dry, potable water could only be found at a great distance from the provincial capital. Meat and foodstuffs were equally lacking. Three days after the violent seismic shock, Governor Nazar had three cattle slaughtered and distributed to survivors taking refuge in the plaza and in the shade of trees next to their ruined houses. Likewise, the next day, the governor had any remaining cattle slaughtered and distributed.<sup>14</sup> The lack of resources forced earthquake victims to pick through the rubble to find provisions. While the authorities often branded these actions as deviant behavior, the majority of earthquake victims, however, only acted to ensure their survival. Another survivor wrote in his correspondence that days after the earthquake, he witnessed looting and robbing but not of the injured who had taken shelter under shade trees or of the dead. While he lamented the sorry state that such humans found themselves, the eyewitness also connected the looting to the lack of meat and water in the city.<sup>15</sup>

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14. *La Tribuna*, 30 March 1861.

15. *El Imparcial*, 6 April 1861.

By contrast, accounts of marauding bands of looters who terrorized the population dominated newspapers' headlines and stories. One porteño daily noted that two days after the earthquake, bands of campesinos with tools arrived in the provincial capital. Some campesinos traveled to Mendoza to provide aid to the unfortunate, while others had malevolent motives hoping "to fill their saddle bags with booty from the city's ruins." The next day, one witness simply recorded that "the looting continues."<sup>16</sup> Eugenio Menendez, another observer, noted that shortly after the earthquake, the gauchos from the surrounding countryside invaded the city, terrorizing the population, and running off with "as much loot as their horses and mules could carry."<sup>17</sup> Another upper class survivor cited the "looting and general robbing" as the worst part of the catastrophe. He blamed the rampant crime on the "plebe," who scavenged and picked through the ruins of businesses and targeted elite houses to pilfer.<sup>18</sup> One press clipping from the Cordobese newspaper *El Imparcial* described Mendoza as "a party of vampires." In addition to the putrid scene of corpses decaying and perfuming the landscape, the reporter noted that some people had been overcome with "gold fever" and had begun pillaging the provincial capital. The looters removed everything of value they could find from the rotting corpses, "laughing at the pain that does not involve taking a bit of gold, albeit tinged with blood."<sup>19</sup> Sadly, according to the eyewitness, some of these looters were not misguided

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16. *La Tribuna*, 30 March 1861.

17. Eugenio Menendez to Jacinto Corvalan, Mendoza, 24 March 1861, in *Revista de la Junta de Estudios Históricos de Mendoza*, 195.

18. R.J.R., Mendoza, 30 March 1861, in *Revista de la Junta de Estudios Históricos de Mendoza*, 198.

19. *El Imparcial*, 5 April 1861.

young boys but men who claimed to be Christian. One newspaper story concluded that all parts of the city had fall into the hands of thieves and looters.<sup>20</sup> Another account reported that the looting and pillaging prevented the orderly collection of belongings and “left [the city] at the mercy of thieves who were like vultures circling places of plunder.”<sup>21</sup>

In the aftermath of the Mendoza earthquake, the Argentine press allocated and assigned blame for the perceived disorder and in the process created villains and heroes. The porteño press lambasted and castigated the federal Governor of Mendoza for the lack of order in province after the earthquake. Eight days after the catastrophe, Governor Nazar withdrew from the provincial capital to his hacienda at Las Tres Acequias. *El Nacional* accused Nazar of complete inaction for the first five days after the earthquake, after which, he abandoned the city to plundering and pillaging. The few decent men remaining in the city were left to restore order to the “chaos of pain and suffering.”<sup>22</sup> Nazar’s absence, left only a few remaining “hombres decentes” to manage the catastrophic situation. More troubling was the accusation that Nazar intended to summarily execute a group of survivors who requested to leave the province after the earthquake. While the accused men denied any wrong doing, according to the paper, Nazar persisted and ordered the troops to execute “all of the defenseless men.”<sup>23</sup> A hero emerged in the figure of Colonel D. Juan de Dios Videla. The military man’s timely

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20. *El Imparcial*, 5 April 1861.

21. Francisco Cires, “Mendoza despues del terremoto,” in *Revista de la Junta de Estudios Históricos de Mendoza*, 425.

22. *El Nacional*, 17 April 1861.

23. *El Nacional*, 17 April 1861.



arrival put an end to the situation, preventing the harsh judgement from being carried out. While the porteño press praised Videla's actions it excoriated Nazar for his failure to keep the peace, poor treatment of survivors, and the neglect of his gubernatorial duties.<sup>24</sup>

The provincial authorities assumed that the city remained in a state of disorder. This led them to focus on issues of law and order. Among the estimated two-thirds of the city's population that died, were prison guards, police, and infantry men. One of the first rolls of survivors and victims noted that the majority of the city's prisoners died along with 14 soldiers; in the infantry barracks 20 men died and many other soldiers were injured; and the guards' barracks revealed approximately 100 dead among prisoners and guards.<sup>25</sup> The decimated police and infantry ranks left the city vulnerable to marauders and looters. Recognizing the need for able bodies to protect private property, the Governor of San Juan on March 23 sent foodstuffs, doctors, medicine, transportation, workers, and 50 men to ensure the legitimacy of private property.<sup>26</sup> In addition, San Juan's legislature also mobilized armed men for a mission to help keep the order and protect Mendoza's interests.<sup>27</sup> Just three days after the earthquake, the provincial executive issued a directive concerned with issues of law and order. Beginning on March 23, the provincial authorities prohibited citizens—except the police—from entering the destroyed city from the Sauce de la Cañada to the Plaza Nueva and from the Zanjón to

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24. *El Nacional*, 17 April 1861.

25. "Nomina de algunas de las victimas salvados," in *Revista de la Junta de Estudios Históricos de Mendoza*, 220.

26. *La Tribuna*, 30 March 1861.

27. "Documentos oficiales: Gobierno de San Juan," in *Revista de la Junta de Estudios Históricos de Mendoza*, 378, 381.

Tajamar. People found in the prohibited area were assumed to be thieves and subject without recourse to being shot on the spot. For those residents that needed to enter the city, they could receive a pass from the police that stated the property owner's name and those who accompanied him.<sup>28</sup> In the governor's absence, leading citizens marshaled mendocinos to help protect private property. Colonel Videla organized groups of survivors who kept watch over the part city where they had taken refuge. According to press reports, the watch group proved successful in impeding looting and pillaging. In other parts of the provincial capital at the end of March, however, looting continued unabated, despite the provincial authorities decrees to shoot looters on the spot and neighboring provinces providing men to city officials to maintain order.<sup>29</sup> Other accounts of the events between March 21 and 23 noted that an infantry squad was mobilized to ensure order, protect valuables covered in dust and rubble, and protect widows and orphans.<sup>30</sup>

Survivors migrated to the neighboring provinces of San Juan and San Luis and brought what possessions they could with them, abandoning unmovable objects. The threat of disease from the decaying bodies, continuously strong aftershocks, and fear of looting caused many survivors to abandon the provincial capital.<sup>31</sup> The government of San Luis helped to protect the survivors' interests and resources by providing

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28. "Documentos oficiales: Gobierno de Mendoza," in *Revista de la Junta de Estudios Históricos de Mendoza*, 325, 327.

29. *La Tribuna*, 30 March 1861.

30. *El Nacional*, 1 April 1861.

31. *El Imparcial*, 3 April 1861.

transportation for those intending to leave Mendoza. To ensure the maintenance and security of the survivors' goods and to facilitate the relief effort, San Luis sent a wagon train of cars to transport people and property.<sup>32</sup> San Juan's provincial legislature sanctioned the sum of 10,000 pesos to ensure the protection of the mendocino migrants. On March 25, various carriages arrived from San Juan bringing aid for the injured and transporting various families back to the neighboring province. The next day, more families left from San Juan filling the available spots on the wagon trains.<sup>33</sup> The desperation to escape the sickening smell of decaying bodies and the lack of food pushed those able to pick up what few possessions they were able to dig out of the rubble and make the journey to San Juan by whatever means available.<sup>34</sup>

The mass exodus of survivors made guaranteeing the legitimacy or determining the ownership of private property a difficult task for the provincial authorities. At the beginning of April, the executive decreed that in the interest of quelling disorder and the public good that further measures would have to be taken to guarantee public property and the possessions left behind by those survivors who had migrated from Mendoza. To this end, the mayor in the name of Governor Nazar issued a law that prevented migration from the province without a passport. Those in need of a passport could obtain one from the department's police chief with a ticket from the sub-delegate of the same department that the survivors resided. The ticket noted the number of people leaving, their animals branding mark, the valuables that they were caring, and certification of whether or not the

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32. *El Imparcial*, 3 April 1861.

33. *La Tribuna*, 14 April 1861.

34. Eugenio Menendez to Jacinto Corvalan, Mendoza, 24 March 1861, in *Revista de la Junta de Estudios Históricos de Mendoza*, 195.

property they were taking with them was legitimately theirs. Those found in violation of this decree would be considered thieves and subject to the laws and punishment pertaining to this class of criminal.<sup>35</sup>

Despite these previous acts to maintain public and private property in the earthquake's aftermath, the provincial authorities issued another decree almost two months after the disaster hoping to end the confusion and ensure order. The earthquake left Mendoza in a pile of rubble mixed with decaying bodies. Either because of death or absence, individuals and families left behind property and goods in their houses' ruins. In the near total confusion of where one's property ended and another's began, those who did return to pick through the debris often ended up with their neighbor's property by mistake or personal affects that no one knew to whom they belonged. To add to the general confusion, the provincial authorities asserted that some ill willed people had taken advantage of the situation to commit acts of robbery, especially in the merchant houses. In order to correct situation and control the disorder, the provincial authorities appointed a citizen's commission to take account of the affects left behind. In addition, during the second week of May, the provincial executive declared that everyone with possessions not belonging to them should be returned to the appointed citizen commission within eight days to avoid being charged with a felony or other crimes related to the law. The dubiously owned goods or merchandise could be dropped off at the police station for public inspection. Those denounced or accused of harboring stole

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35. "Documentos oficiales: Gobierno de Mendoza," in *Revista de la Junta de Estudios Históricos de Mendoza*, 328–29.

merchandise had their houses black listed and the objects in question turned over to the commission until the legitimate owner could be determined.<sup>36</sup>

Despite the pervasive fear among press reports and provincial officials of looting and pillaging carried out by invading hoards of campesinos and gauchos from the surrounding area, few specific examples of such disorder were recorded. On March 25, the provincial authorities announced publicly that anyone caught looting among the ruins would be summarily shot. The next day, according to one survivor, four “marauders” were pulled from the rubble and executed in the provincial capital and two more looters were shot without “form or process” in the department of San Vicente.<sup>37</sup> In Córdoba, the authorities stopped a peon named Francisco Navarro from among the soldiers under the command of José Ponti. Navarro reported that he had come from Mendoza where he had participated in the looting. The authorities found in his possession a silver watch, a chain with three gold clips, a gold ring, three pesos, earrings made from French gold, a silver pigeon that adorned a mate cup and a straw, and three reals of stamped or sealed silver.<sup>38</sup>

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36. *Registro oficial de la Provincia de Mendoza: Que comprende los años 1860, 1861, 1862, 1863 i 1864* (Buenos Aires: Imprenta de Pablo E. CONI. Especial para Obras, 1877), 142–44.

37. *La Tribuna*, 14 April 1861.

38. *El Imparcial*, 5 April 1861.

Table 6 Annual Number of Criminal Acts Perpetrated

Year	No. of Criminal Acts
1858	107
1859	63
1860	116
1861	61
1862	78
1863	60
1864	118

Source: Sección Justicia y Criminal, Epoca Independiente, Archivo Historico de la Provincia de Mendoza.

Judicial and criminal records from Mendoza, however, reveal that crime decreased after the earthquake. Crime remained low for three years after the March 1861 catastrophe. Crime dropped by 47.4 percent during 1861 compared to the year before the earthquake. In 1862, criminality increased 27.8 percent from 1861 but remained 32.8 percent lower than the 1860 high water mark. The number of crimes returned to 1861 levels during 1863 or a 48.3 percent decrease from 1860 and a 23.1 percent drop from the previous year. In 1864, criminality returned to pre-1861 levels, increasing 96.7 percent from 1863.

Immediately after the March 20 disaster, few crimes were reported or recorded. All the criminal activity registered during the month of March in 1861 occurred before the seismic shock. The two prosecuted crimes during the month of April were robberies. One criminal was caught stealing a pair of stirrups, and 70 pesos and another thief was apprehended with stolen animals. Criminal activity increased over the course of the late fall and winter months. Seven crimes were registered in May and June, ballooning to twelve instances in July before falling substantially to three and two infractions in August

and September. As winter turned into spring and then into summer in 1861, crime remained relative low, the registers only recorded seven prosecutions during October, three during each month of November and December.

Table 7 Robberies Committed Annually by Category

Year	Cuatropea	Animals	Money	Possessions	General	Total
1858	7	9	0	3	16	35
1859	5	4	2	1	16	28
1860	10	17	6	18	17	68
1861	3	2	8	12	10	35
1862	3	9	3	8	14	37
1863	6	2	4	4	11	27
1864	5	13	4	11	20	53

Source: Sección Justicia y Criminal, Epoca Independiente, Archivo Historico de la Provincia de Mendoza.

In the aftermath of the earthquake, police and prosecutors were unable to record and return stolen items to their owners. In June 1861, the courts required that all stolen property be held in police custody until claimed. If the items were not claimed, then after the requisite period of waiting, the goods were considered public property and sold at auction. The authorities compiled and published a list of 315 items available for claim. Among the valuables collected were merchandise, jewelry, clothing, and home furnishings. In December 1861, four groups of unclaimed goods were to be auctioned. The first batch of goods was worth an estimated 83.89 pesos; the second lot required

82.03 pesos to purchase; the third assortment of goods was valued at 83.15 pesos; and the fourth aggregation of items was appraised at 82.50 pesos.<sup>39</sup>

Even after the authorities regained normalcy, the ruins and rubble of the old city still provided opportunities for looters but few cases of theft were recorded. In July 1861, a soldier fled Mendoza with some of the looted goods collected by the commission appointed to deal with recovered property.<sup>40</sup> Another case of looting the city's ruins occurred during the winter of 1864. A man was caught robbing the Iglesia Matriz. He confiscated a silver crown and various pieces of wood from the church's rubble.<sup>41</sup> While the number of items declared as looted and found in police custody numbered in the low hundreds, specific instances of looting and pillaging were few.

### **The 1868 Arica earthquake and Tsunami**

Reports emanating from Arica after the earthquake and tsunami focused on the alcohol fueled looting of the goods scattered on the beach. British and North American sources distrusted the locals, especially the popular masses and blamed them for the pillaging. The international port city of Arica was home to numerous North Atlantic merchants and government officials. The catastrophe washed the businessmen's goods out to sea or onto the beach making them easy targets for bands of armed men looking for a quick profit. The locals received moral disdain from the North Americans and British, but hypocritically, they also participated in questionable activities and took advantage of

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39. Documento 20, Carpeta N°2-F, Sección Judicial y Criminal, Epoca Independiente, AHPM.

40. Juan G. Martinez to President of the Depository Commission, 4 July 1861, Mendoza, Documento 20, Carpeta N°2-F, Sección Judicial y Criminal, Epoca Independiente, AHPM.

41. Documento 4, Carpeta N°1-J, Sección Justicia y Criminal, Epoca Independiente, AHPM.



the situation by also appropriating goods that washed ashore. Likewise the Chilean and Peruvian press and officials also focused on the criminal activity that followed the disaster, corroborating the North Atlantic sources' accounts. The same Chilean and Peruvian sources also blamed the lack of order on the authorities abandoning the city to armed bands from the countryside. Finally, the catastrophe also reduced, although only temporarily, foreigners and citizens, rich and poor to a similar social status.

The tsunami covered the ariqueño beach in all manner and class of goods from merchandise and luggage to the remains of boats and buildings. British accounts contended that the majority of the merchandise that washed up on the ariqueño beach was either English or foreign property. Estimates from the English navy ship, *Topaze*, noted that property damage could reach at least 500,000 pounds sterling. The majority of that monetary estimate came from English and foreign businesses destroyed by the earthquake and tsunami.<sup>42</sup> Another witness described the beach as filled with ruins and rubble, paraffin wax candles, dead fish, domestic items, boxes and crates of goods and provisions that had been opened and spread across the sand. Some of the items from these crates included boxes of English beer.<sup>43</sup> Another observer described all different categories of items that washed up on the beach. "I can't think of anything that one would not be able to find there," one British survivor wrote. All different styles of dresses and articles for both men and women including: expensive silks, satins, velvets and fabrics, manufactured goods, wine and liquor of any value, French pianos and waterspouts, railroad couches and baby carriages. Arica's customs house contained merchandise from

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42. R.A. Powell to the British Admiralty, 16 September 1868, Callao, in Fernández Canque, *Arica, 1868*, 182.

43. *The Times*, 21 October 1868.

all over the world for distribution in the interior.<sup>44</sup> A North American who observed the beach littered with goods also noted some of the items such as grand pianos, bundles of silk, barrels of brandy, furniture, manufactured clothing, and “anything imaginable could be found there.”<sup>45</sup> The washed up goods provided an easy opportunity for pillagers to despoil the beach.

The first reports from Arica focused on a lack of order and pillaging unchecked by the authorities. After the seismic shock the majority of the population fled to the surrounding hills to escape the inevitable tsunami. One eyewitness noted that the majority of catastrophe’s victims were the first wave of looters who in their greedy haste descended on the city after the first seismic shock only to be swept away by the first wave.<sup>46</sup> The authorities also left the port city, abandoning the urban center to marauders. Decaying bodies covered the beaches and streets and basic necessities such as food and potable water could not be found in any part of the port city. One witness noted that despite the lack of provisions, liquor flowed in abundance. Reportedly, the most looted item from the abandoned stores was alcohol.<sup>47</sup>

An Englishman traveling from Tacna to Arica with the objective of finding friends among the rubble happened upon a large black drunken man with a huge straw hat, a machete and two revolvers. The traveler, Frederick James Stevenson, noted that the man he meet was completely drunk and most likely a dangerous agitator. In order to

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44. Edward W. Sturdy, “El terremoto de Arica,” in Fernández Canque, *Arica, 1868*, 231.

45. Luther G. Billings, “Algunas experiencias personales de terremotos,” in Fernández Canque, *Arica, 1868*, 268.

46. Ephraim George Squier, “Los grandes terremotos de 1868 in Sudamérica,” in Fernández Canque, *Arica, 1868*, 248.

47. *La República*, 22 August 1868.

diffuse the situation, the Englishman called out to the inebriated burly armed black man to make his presence known. He innocuously asked the direction to Arica. The armed man responded that “Arica did not exist!” Furthermore, the imposing man noted that there were so many candles, glass beads, beer, cigarettes, and spades scattered on ariqueño beach that one would be unable to collect them all. While the intoxicated black man spread out his wares along the road to sell, the Englishman quickly bade farewell. As Stevenson descended from El Morro, he had difficulty eluding bands of drunk and armed men who roamed the beach in an agitated state. On his way back to Arica from Tacna, Stevenson stumbled across a group of thieves who had carried their booty and the corpses of two women back to the interior.<sup>48</sup> Edward W. Sturdy, a young Englishman, observed that the people from the surrounding valleys took advantage of the catastrophe. While the aftershocks decreased in intensity and frequency with each passing day, ariqueños lived in further fear with each seismic shock. More terrifying, however, were the bands of looters that came to Arica’s beaches to collect goods and merchandise washed ashore by the giant waves.<sup>49</sup>

The catastrophe temporarily reduced some of rich and poor, foreigners and citizens to a similar status. Those who remained, regardless of status or class from the British government official to the most humble fisherman scanned the beach for anything that could be used to meet their basic necessities: shelter, food, and clothing.<sup>50</sup> Survivors shared the provisions they found among themselves after the earthquake and tsunami.

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48. *The Times*, 21 October 1868.

49. Edward W. Sturdy, “El terremoto de Arica,” in Fernández Canque, *Arica, 1868*, 233.

50. Fernández Canque, *Arica, 1868*, 92.

The British Vice-Consul in Arica reported that after spending the night in the hills surrounding the port city, he woke up and walked toward the ruined city. He observed that one of the women gathered along his route had obtained some crackers, a packet of tea, some sugar, and a teapot to ameliorate their hunger. The British Vice-Consul and his family made their shelter among the other survivors in the hills. They fashioned a shelter like others out of the materials available, mostly from canvas strips and pieces pulled from the rubble. Distinctions between rich and poor, however, remained. A group of ariqueños collected what provisions they could and began walking toward Azapa. The wealthiest inhabitants, who could secure transportation, left the disaster zone, traveling by mule or horses. Alongside examples of social leveling and community unity, also existed examples of advantages derived from wealth and privilege.<sup>51</sup>

It was difficult to discern the difference between those picking through the ruins and things washed up on the beach to meet primary necessities and those who combed through the rubble only looking for valuables. The distinction between the two purposes was not always clear. A British man noted after the catastrophe, he worked tirelessly one afternoon bringing wood for fires, pots and pans, furniture, carpets or rugs, cans of condensed milk, and bottles of beer and wine to the hills surrounding the city where other foreigners had camped out. By contrast, Frederick Stevenson had a luxurious breakfast of bacon and champagne with the Captain of the *Waterre* after the disaster. When they were alone after eating, Stevenson confessed to stealing a map, a bottle of beer, and drinking some champagne from a bottle he found on the beach. Captain Gillis responded by asking—“where do you think we found the bottle of champagne for this breakfast?”

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51. N.M. Nugent to the Foreign Office, 25 September 1868, Bath, in Fernández Canque, *Arica, 1868*, 179.

Stevenson responded: “of course from France!” The captain shot back—“wrong, I took from this same beach.” Gillis then showed Stevenson a green cardboard box filled with fine silk stockings and garments for women all found on the beach and filled Stevenson’s pockets full of cigarettes also from the beach.<sup>52</sup> The vast amount of goods strewn across the beach was both a blessing and a curse. It was a blessing because ariqueños, who lost everything in the catastrophe and were only able to flee the port city with the clothes on their backs, were able to find garments to wear and also materials to construct shelters. One Englishman noted that he saw a beautiful ariqueño girl—“la bella de Arica”—wearing a Crimean shirt as a blouse tucked into a skirt. Temporary shelters were constructed from four wooden rollers with cotton cloth wrapped around them and the sides papered with large maps of Bolivia and the interior decorated by fine clothes. The curse, however, was the excessive availability and abuse of alcohol. An eyewitness described the days after the disaster as an orgy of drunkenness. After various days of drinking only champagne, ariqueños switched to whisky and brandy. The inhabitants’ inebriated state fueled rioting, looting, and other unpleasantness. Disorder and chaos ruled the city until the police from Tacna arrived in Arica and reestablished order. Barrels of pork and beef washed ashore and provided sustenance for some of the residents. In the end, however, many ariqueños begged for provisions from the British sailors aboard the *Waterre*.<sup>53</sup>

North American and British survivors blamed property losses on the local inhabitants looting and feared further damage. According to the captain of the *Topaze*,

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52. *The Times*, 21 October 1868.

53. Edward W. Sturdy, “El terremoto de Arica,” in Fernández Canque, *Arica, 1868*, 231.

the soldiers stationed in Arica and the surviving ariqueños looted what was left in ruins of the foreigners' businesses and merchant houses.<sup>54</sup> A North American noted that the "Savage Araucanians Indians" on llamas descended from the mountains to loot and pillage the beach. The Native Americans opened the boxes and filled their sacks with as many goods as they could carry. The North Americans fired warning shots toward the groups of Native Americans with the objective, according to the eyewitness, of stopping the pillaging. Instead, the Indians unloaded some of their loot near the North American sailors, who then promptly accumulated a large array of merchandise, more than their boat could transport.<sup>55</sup> Another Anglo eyewitness also implicated the "Indians and Mestizos" that lived in the neighboring districts for the looting on the ariqueño beaches. In Tacna, Englishman Frederick Stevenson feared that all his money and luggage would be missing when he returned to his hotel after the earthquake. His first assumption was that some unsavory characters would take advantage of the disaster situation to pillage the ruined hotel. When Stevenson returned to his room, contrary to his assumptions and despite finding the hotel empty of people, he found everything still intact and untouched. The Englishman still believed it was prudent to take his money and keep it in his pouch on his body or in his bags. In this manner, disasters tested the moral fiber of society. Other more morally upstanding citizens, however, too could fall into the temptation of looting. Ironically, however, Stevenson himself took advantage of the situation and appropriated a map of Bolivia. The Englishman coveted the object because of his

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54. R.A. Powell to the British Admiralty, 16 September 1868, Callao, in Fernández Canque, *Arica, 1868*, 182.

55. Luther G. Billings, "Algunas experiencias de terremotos," in Fernández Canque, *Arica, 1868*, 269.

previous search for a good map of the Andian republic and the dearth of quality options. Embarrassed by the action, Stevenson, coyly collected his ardently sought after object and buried it in the sand near the railroad track outside of the city for safekeeping. In the next paragraph of his account, he returned to castigating the locals for pillaging the beach. Although much to his surprise, when he approach the raiders, Stevenson noticed that they too had collected maps of Bolivia.<sup>56</sup>

In addition to blaming the popular masses, North Atlantic sources also attributed the chaos to the absence of police presence after the disaster in Arica. Police and troops from neighboring cities arrived to restore some semblance of law and order. The military forces, however, did little to prevent the looting and preserve order. The earthquake and tsunami left their barracks in rubble and they dispersed quickly after the catastrophe. On afternoon of August 15, the prefect arrived with some cavalrymen to hopefully restore order shortly.<sup>57</sup> The British Vice-Consul, George H. Nugent, however, noted that solders from the rank and file were largely to blame for the requisitioning. The solders plundered everything in the higher elevations that had not succumbed to the fire that consumed much of that section of the city. Nugent complained that all of his consular files from the interior of his house had disappeared after the catastrophe.<sup>58</sup> The *Waterre* crew returned to their boat after the catastrophe in order to protect it and its cargo from ransackers. Some of men wished to return to an encampment of foreigners that had taken refuge in El

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56. *The Times*, 21 October 1868.

57. Ernesto Arcos to Brother, 15 August 1868, Arica, in Fernández Canque, *Arica, 1868*, 172.

58. G.H. Nugent to the Minister of the Foreign Office, 16 August 1868, Arica, in Fernández Canque, *Arica, 1868*, 177.

Morro for security purposes. Similarly, business owners, merchants and some of their employees tried to protect their merchandise from marauders. They received help from some of the *Waterre*'s mariners and soldiers, who patrolled and protected merchants' goods. Furthermore, the ship's captain ordered all mules loaded with looted goods to be seized.<sup>59</sup>

The marauders profited handsomely from the booty they collected on the beach. Indeed, even those who patrolled the beach and protected the port city's businesses enriched themselves with appropriated goods. One seaman reportedly accumulated 1,500 dollars worth of goods. Rings, watches and other jewelry accounted for the large profits. One witness reported that he saw a man sell a ring for 500 dollars. The Englishman, however, lamented that the sailor undervalued the ring because the heirloom was diamond encrusted. The lowest possible value for the expensive ring, the observer estimated, was 500 dollars.<sup>60</sup>

The Chilean and Peruvian press also attributed the drunken looting on the beach to the popular masses and blamed the authorities for the disorder. The Chilean newspaper *La República* republished an article that observed "that in various places struck by the catastrophe, there had been some excesses committed by the 'jente de pueblo' that the authorities were unable to contain."<sup>61</sup> Other reports noted that the officials abandoned the city to criminals and pilferers. Furthermore, the port city lacked basic supplies and necessities but liquor could be found in abundance and helped to fuel the looting of stores

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59. *The Times*, 21 October 1868.

60. Edward W. Sturdy, "El terremoto de Arica," in Fernández Canque, *Arica, 1868*, 234.

61. *La República*, 21 August 1868.



and shops.<sup>62</sup> Another eyewitness noted that the terror of aftershocks and hunger caused the population to flee the city. The only people left were either marauders, inhabitants searching for some of their fortune beneath the rubble, or people looking for loved ones. The cause for the all the disorderly conduct, the corresponded concluded, was Arica's "plebe," "who had the sad idea to value indolence and theft."<sup>63</sup> A Chilean government official in Arica, Ignacio Rei i Riesco, noted that most of the population had fled to the neighboring valleys and heights that surrounded the urban center. The survivors found some sustenance in the valleys and from the partially destroyed businesses. A Chilean government official blamed the lawlessness on the common people who had taken advantage of the situation to enrich themselves from custom houses' and shops' goods and merchandise that washed up on the beach.<sup>64</sup> Riesco concluded the unruly popular masses ruined many elites because of their pillaging and looting.<sup>65</sup> A correspondent for the Peruvian newspaper *El Comercio*, advised the government to immediately send troops to Arica, to maintain order and prevent thefts because no one was left in the port city.<sup>66</sup> The prefect arrived in Arica on August 15, to attempt to restore order and stop the banditry. A Chilean government official noted that finally after eight days, the looting diminished as the government and military officials reasserted their authority and brought

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62. *La República*, 22 August 1868.

63. *La República*, 31 August 1868.

64. *La República*, 23 August 1868.

65. *La República*, 23 August 1868.

66. *La República*, 29 August 1868.

the city under their control.<sup>67</sup> The authorities with the exception of the captain of the port and the prefect did not cover themselves in glory or comply with their duties. Indeed, the municipal authorities received the blame for the disorder that followed. While the North American and British boats—*América*, *Wateree*, and *Fredonia*—garnered praise for their relief efforts.<sup>68</sup>

### **The 1894 San Juan and La Rioja Earthquake**

Unlike the newspaper reports and eyewitness accounts that emphasized the looting and terror inflicted by bands of armed men after the 1861 Mendoza earthquake and the 1868 Arica earthquake and tsunami, the San Juan and La Rioja earthquake of 1894 elicited no such consternation in the press or from provincial and national authorities about disorder. The possible explanations for the absence of pillaging in the press reports stemmed from a quick and efficient government response; the earthquake inflicted a low human cost, leaving more survivors free to begin rebuilding and protect their property; La Rioja's impoverished state relative to other Argentine provinces left little of value to be looted; an orderly migration of residents from the destroyed provinces; and finally, some sanjuaninos and riojanos remained on their own property.

The earthquake and its aftershocks produced great panic and terror among the sanjuaninos, rather than a fear of looting or pillaging. Governor Morón in a telegram to the interior minister noted that seismic movement and its aftershocks created “great alarm among all of the population.” Even in the open spaces of the provincial capital's streets

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67. *La República*, 23 August 1868.

68. *La República*, 31 August 1868.

and plazas where the city's inhabitants took refuge, they remained terrorized by the earth's continued shaking.<sup>69</sup>

In San Juan, the governor acted quickly to maintain order and provide basic necessities for the populace. Provincial historian Horacio Videla described governor taking swift and decisive actions with a "cool head." After installing the government in the central plaza, he issued the following most urgent orders: search and rescue efforts to find victims and injured among the rubble; procure and provide supplies and jackets to the survivors; remove and clear the ruins from the street to enable transportation; enacted sanitary measures to prevent the spread of diseases; quickly and clearly convey government acts to the populace and helped to avoid confusion; the governor sanctioned geological and technical studies for the possible foundation of a new capital city; and most importantly, he requested aid from the national government.<sup>70</sup>

The governor of San Juan in the moments after the earthquake had already directed the government to begin distributing aid in the provincial capital and throughout the province.<sup>71</sup> The government distributed meat to people who lacked access to it.<sup>72</sup> The head of the San Juan office in the interior ministry communicated to the press that the families that had not left the provincial capital had taken shelter in the city's plazas and avenues. The authorities he reported were monitoring and controlling the situation in the

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69. "Telegrama oficial," *La Prensa*, 28 October 1894.

70. Videla, *Historia de San Juan*, 518.

71. "Telegrama oficial," *La Prensa*, 28 October 1894.

72. "Rioja y San Juan," *La Prensa*, 1 November 1894.

streets.<sup>73</sup> Aid quickly arrived from Mendoza and Buenos Aires. On the evening of October 29, the express train carrying relief aid from Mendoza arrived in San Juan. Especially helpful were the large number of tents brought because many sanjuaninos lacked shelter.<sup>74</sup> The national government sent aid, medics, and 1,000 jackets to San Juan. Furthermore, the national government instructed the relief workers sent on the express train to quickly report back about the elements most needed for the relief effort. More than 200 tents were sent in both large and small sizes.<sup>75</sup>

While the authorities concerned themselves initially with issues of law and order, it quickly became clear that with the lack of disorder and lawlessness, the police should focus on more pressing matters such as building inspections. The provincial legislature quickly authorized the executive power to take any and whatever measures necessary to protect private property that the earthquake endangered. A press conference via telegraph with an engineer in San Juan revealed that the government requested the necessary aid for property owners who received damage from the disaster.<sup>76</sup> In the days after the earthquake, the threat of disorder and lawlessness was so remote that policemen focused their attention on tasks such as helping with building inspections and demolishing walls and cornices deemed to be in a poor or dangerous state.<sup>77</sup>

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73. "Terremoto en San Juan—Conferencia del Dr. Cariés con el jefe de la oficina de San Juan," *La Prensa*, 28 October 1894.

74. "Llegada del tren expreso a San Juan," *La Prensa*, 30 October 1894.

75. "Tren expreso a San Juan," *La Prensa*, 30 October 1894.

76. "Boletin del Día: San Juan," *La Prensa*, 29 October 1894.

77. "San Juan," *La Prensa*, 31 October 1894.

Unlike the disorderly and chaotic manner in which mendocinos and ariqueños fled disaster areas, sanjuaninos migrated in a relatively ordered fashion directed by the authorities. In Governor Morón's manifesto to the populace, he stated that he sent means of transportation to provincial towns—Albardón and Caucete for example—to move families affected by the earthquake. In towns and villages outside of the provincial capital, provisions and shelter were difficult to find. Thus, the governor moved many of the citizens to the provincial capital.<sup>78</sup>

Despite the destruction caused by the earthquake, large numbers of sanjuaninos remained or returned to their properties in the days after the catastrophe. An engineer in San Juan reported to the press two days after the earthquake that despite the great amount of damage to homes, many families remained on their property taking refuge in their patios or gardens. Furthermore, he predicted that slowly more and more people would leave the plazas and return to their properties to set up temporary shelters and begin rebuilding.<sup>79</sup>

Unlike the reports of plundering after the catastrophes in Mendoza and Arica, San Juan's young men participated in the relief effort or returned to work. Instead of reports noting the terror inflicted by hordes of armed men looting and pillaging ruined business and homes, correspondents noted that in San Juan gangs of laborers returned to the fields to water grape vines and prevent them from withering in the hot sun.<sup>80</sup> The "young

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78. Moron, "Manifiesto del Gobernador," 28 October 1894, folio 149, libro 491, Fondo Histórico, AHASJ.

79. "Conferencia telegráfica con San Juan: Nuevas noticias," *La Prensa*, 29 October 1894.

80. "Rioja y San Juan," *La Prensa*, 1 November 1894.

distinguished sanjuaninos,” earned praise for their efforts after the disaster. These helpful young men accompanied the national commission sent from Buenos Aires to aid the relief and recovery effort in the province. Newspapers praised the young people for their “meritorious service” that was carried out with a “unity of action.” Furthermore, they received their “orders with disciplined honor” under difficult circumstances while maintaining a “unity of action”<sup>81</sup>

Press reports and official correspondence revealed that the authorities had little fear of disorder and lawlessness but instead focused on the relief effort. In La Rioja, the provincial and national governments worked to quickly deliver aid to the inhabitants. The earthquake left nearly all the buildings in the provincial capital in ruins or rubble. The disaster reduced an already impoverished population to destitution. The provincial capital’s inhabitants had neither clothing nor roofs and took shelter in open spaces such as plazas, orchards, or gardens. Like his counterpart in San Juan, one of Governor San Román’s first requests was for aid from the national government. The minister of the interior, remitted money, and material aid including tents, beds, among other necessities for the injured and homeless. In contrast to San Juan, the first telegrams from La Rioja indicated that the population had dispersed in every direction and that confusion spread throughout the populace. Later reports, however, confirmed that the majority of the population had taken shelter in the provincial capital’s center.<sup>82</sup> Two days after the earthquake, the governor named a commission to inspect and assess the province’s

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81. *La Prensa*, 4 November 1894.

82. “La Rioja en ruinas,” *La Prensa*, 29 October 1894.

buildings. The governor distributed tents to those families that lacked shelter.<sup>83</sup> One observer noted, however, that “anything that could be done for the riojanos was very little.”<sup>84</sup> On November 2, more tents and medical supplies from Buenos Aires arrived in the provincial capital. The governor also organized another commission of leading citizens to distribute aid, spend funds, and request the necessary materials from the national government.<sup>85</sup>

The province’s poverty left prospective looters with little to confiscate from the rubble. Throughout the nineteenth century, La Rioja lacked the necessary revenue to fund basic government activities. During the 1850s, the provincial budgets were paltry. For the years 1856, 1857, and 1858 the government spent 18,986, 22,340, and 21,150 pesos, because revenue gathered from property taxes and commercial licenses were low.<sup>86</sup> The income garnered from these sources, however, did not even cover the provincial government’s basic functions and it ran nearly 50 percent deficits. By the late 1880s, the young reform minded Governor, Joaquín V. González, hoped to modernize the province by reforming the constitution, increasing primary instruction, attracting immigrants, improving transportation, and solving La Rioja’s never ending budget problems. Implementing many of these reforms required money the province had to borrow from the National Bank. With the economic crisis of 1890, however, La Rioja’s budget had to be dramatically slashed, paralyzing many of the governor’s reforms. The next Governor,

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83. “Rioja completa confirmacion de su ruina,” *La Prensa*, 30 October 1894.

84. “Rioja y San Juan,” *La Prensa*, 2 November 1894.

85. “San Juan y La Rioja, ultimas informaciones,” *La Prensa*, 3 November 1894.

86. De La Fuente, *Children of Facundo*, 17.

Guillermo San Román, continued to face budget deficits worsened by environmental factors. Locusts destroyed what few crops that could be planted and cultivated on drought stricken land during planting season of 1892 and 1893. The 1894 earthquake which leveled nearly every building in the province only worsened the fiscal outlook for La Rioja.<sup>87</sup>

A very low death toll also contributed to the lack of looting because more people survived they were able to more readily protect their property. In La Rioja, only three people died and three people were injured. The earthquake significantly damaged property as nearly all the public and religious buildings collapsed.<sup>88</sup> In San Juan, the capital witnessed ten deaths—nine Argentines and one Frenchman, and another ten in the province's other departments. The earthquake occurred on a Saturday during the afternoon siesta, preventing a higher death toll. Like La Rioja, the majority of damage inflicted was to structures.<sup>89</sup>

### **The 1939 Chillán Earthquake**

After the 1939 earthquake, the government and population feared looting and anti-social behavior. The national government urged Chileans to remain calm in the face of such a great disaster and took measures to ensure the maintenance of order should the population not act accordingly. The left leaning government instituted military rule in the southern region devastated by the catastrophe and utilized the armed forces to distribute aid and provide relief to the survivors. Despite a few sketchy reports of violence

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87. Bazón, *Historia de La Rioja*, 515–16, 519–20, 522–26.

88. Bazón, *Historia de La Rioja*, 525.

89. Videla, *Historia de San Juan*, 516–17.



immediately after the earthquake, the fear of social unrest was largely overestimated in the press, among survivors, and government ministers. Instead, the survivors of Chillán avoided impropriety and returned goods and possessions found beneath the rubble to authorities in order to determine ownership. Finally, the earthquake acted as a temporary social leveler, reducing rich and poor survivors alike to a miserable state.

The government called on the country to “maintain calm” as Chileans had always done after disasters. Indeed, the government hoped to correct radio reports that greatly exaggerated the death toll in the south that produced panic in Santiago. Furthermore, the government hoped to assuage fears by noting that the state had mobilized all its forces to quickly provide aid to the southern provinces. Finally, government noted how effectively the state and the military were prepared for disaster relief. Most importantly, however, the government reminded Chileans despite the national tragedy, they needed to remain “united” and act as “watchmen.”<sup>90</sup> After the earthquake, *El Mercurio* noted that the earthquake had created a panic throughout the country but as the government had hoped, peace had been restored.<sup>91</sup>

The state utilized the military to maintain order and provided relief and aid. The national government immediately placed administrative services for the destroyed region under military control. The government ministers agreed in a meeting after the earthquake that the military would be able to most efficiently provide aid to the earthquake stricken region. Furthermore, centralizing control of administrative services

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90. “El gobierno espera que el país conservara la calma que siempre ha observado en las desgracias,” *El Mercurio*, 26 January 1939.

91. “En todo el país se sintió el fenómeno sísmico de antenoche produciéndose enorme pánico,” *El Mercurio*, 26 January 1939.

and aid efforts under the military would avoid confusion that usually resulted from dealing with multiple bureaucracies.<sup>92</sup> A battalion of 270 men were stationed in Chillán before leaving to patrol other areas. The ninth infantry regiment, however, remained to maintain order. In Concepción, the third artillery group and seventh cavalry regiment mobilized to patrol the area.<sup>93</sup> The government declared martial law in the disaster zone. The size and scope of the disaster required a larger military force than was available in the south. Thus, the president ordered more troops to the disaster zone to help with the relief effort and maintain order.<sup>94</sup> Issues of law and order, however, were not as important as organizing search and rescue efforts, providing medical aid, and distributing provisions to the survivors. The Intendant of Ñuble, Pedro Poblete, adopted emergency measures after the earthquake. The most important issues were search and rescue efforts, providing medical aid, restoring communications, and distributing provisions and potable water. Concerns about order were rather low on the list. The police were charged with overseeing the plazas and the civil guard was directed to patrol the ruins.<sup>95</sup>

Survivors in Chillán were unwilling to leave their homes and businesses because of a perceived threat of looting. The earthquake inflicted a high death toll on the urban area and left corpses buried beneath the ruins and dispersed throughout the streets. As the bodies decayed, the authorities worried about the effects on public health, especially fearing an epidemic outbreak. To prevent a public health crisis, the government issued an

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92. "Servicios de la zona afectada estan bajo el control militar," *El Mercurio*, 26 January 1939.

93. "Las medidas adoptadas por el gobierno ante la catástrofe," *El Mercurio*, 27 January 1939.

94. "Ley marcial se decretaría en zona afectada," *El Mercurio*, 27 January 1939.

95. "Disposiciones de emergencia dictó el intendente de Ñuble," *El Mercurio*, 27 January 1939.

evacuation order for Chillán. The population of Chillán was indecisive in the face of the evacuation order. Many hoped to save what few belongings they could salvage from the rubble or they feared that if they left the city, their properties and goods would be robbed.<sup>96</sup>

Few incidences of lawlessness occurred after the disaster. The press published an unclear report of gunfire in Chillán. The night after the earthquake, shots were heard from different areas of Chillán. Reportedly, the shots were precautionary measures to deter any disorderly acts from people taking advantage of the situation. Correspondents observed a group of individuals with their hands tied behind their backs and in the custody of an armed group. No one knew anything about the armed group or whether or not they were in Chillán to protect the survivors. *El Mercurio*'s correspondent reported that in the Plaza de Armas some delinquents committed violent acts that left cadavers behind.<sup>97</sup> Another report noted that shots were fired at some individuals who had committed "excesses" but the perpetrators had fled the scene.<sup>98</sup> The military presence and the evacuation of the city resulted in few reports of violence or looting.

Some of the Chilean intelligentsia linked the slow pace of reconstruction with anti-social behavior and looting. Chilean author Antonio Acevedo Hernández wrote about a dialogue with a "stout, white man with a very sore face" in the periodical *Las Últimas Noticias* published in August 1939 that touched on the themes of social order and

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96. "La población se mantiene indecisa ante la orden de evacuar la ciudad," *El Mercurio*, 27 January 1939.

97. "Dentro de poco la ciudad de Chillán carecerá de todos los elementos," *El Mercurio*, 27 January 1939.

98. "La población se mantiene indecisa ante la orden de evacuar la ciudad," *El Mercurio*, 27 January 1939.

the relationship between Santiago and a secondary city. Hernández argued that the earthquake should have occurred in Santiago, not because it would have created a larger death toll, but rather the political wrangling surrounding the reconstruction bill would not have occurred, emergency shelters would already be constructed, and Santiago “would have already been rebuilt.” Instead, Hernández observed that while work to rebuild the south slowly continued, people lived in the open air, lacking clothing and provisions. This lack of basic necessities and the slow pace of reconstruction led to more robberies and murders in the region. Declaring himself to be a southerner, he observed that “in my town, before the earthquake no one was assaulted nor was anybody murdered.” Today, however, robbery and murder occurred “because they had nothing to eat, because despair was hanging from their necks, because the pain was a fierce bite, and because they have something that looks like anger and craving is just revenge in any form to your absurd destination.”<sup>99</sup>

Contrary to popular belief, most survivors abided by the law and maintained order. The people of Chillán acted with honor and integrity in the disaster’s aftermath. In the confusing mass of rubble, people picking through the ruins had no clear physical markers to differentiate between their property and their neighbors. If a survivor found a valuable object that was not his or her own, they returned it to the authorities. One witness observed that the rubble “could have been robbed by the handful, and yet, those that remain in Chillán pick up a valuable object and deliver it to the authorities.”<sup>100</sup>

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99. Antonio Acevedo Hernández, “El terremoto debió ser en Santiago,” in *Anales de la Universidad de Chile, Terre/Mare/Moto*, Séptima Serie N°1 (Santiago: Editorial Catalonia, 2011), 173.

100. “Todo fue arrasado por el terremoto, pero el espíritu de Chile se sobrepondrá a todo,” *Zig Zag*, 2 February 1939.

The catastrophe reduced all of Chillán's residents both rich and poor to a similar social status in both life and death. The earthquake took the lives of members from all social classes. One witness reported that regardless of class, all the dead took the same path to the cemetery without ornamentation or ceremony. Carts carried hundreds of bodies to a common place, where both rich and poor were covered by the same dirt. Likewise, the disaster also removed the living's social distinctions. Chillán severely lacked provisions and potable water in the days after the seismic shock. Rich and poor alike came to collect food from the carts sent from the surrounding countryside loaded with milk, bread, flour, among other provisions.<sup>101</sup>

### **Conclusions**

The authorities' and press' perceptions and assumptions that disasters threatened law and order influenced the manner in which they responded to and reported about disasters. These assumptions led officials in Mendoza to institute a policy of shooting any looter on the spot. Despite all of the published accounts of looting and bands of armed men pillaging the city's ruins, actual occurrences of robbery remained low compared to non-disaster years. Furthermore, according to newspaper reports, only four looters were caught and executed in the days after the catastrophe. These marauders were caught and executed outside of the province's capital city. After the 1894 San Juan and La Rioja earthquake few if any incidences of lawlessness occurred. Provincial officials, however, were sure to utilize the police to ensure order and protect public and private property. In San Juan, it quickly became evident that the police could be better used to help inspect buildings and demolish structures deemed unsafe. After the 1939 Chillán earthquake, the

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<sup>101</sup>. "Dentro de poco la ciudad de Chillán carecera de todos los elementos," *El Mercurio*, 27 January 1939.

national government immediately placed the disaster zone under martial law. Only a few reports of looting and criminal activity were recorded in the days following the quake. As a result, the armed forces focused their efforts on rescue and relief efforts.

A quick response from the authorities helped to reduce disorder. After both the 1894 and 1939 earthquakes, Argentine and Chilean officials worked to provide survivors with basic necessities. In San Juan and La Rioja, those who were unable to take refuge in their gardens, orchards, or patios pitched tents in the city's main plaza. In both western Argentine provinces, the provincial and national governments secured and provided tents and other aid for many of the survivors. In Chile's devastated southern region, the state utilized the military to provide immediate assistance to the survivors, transport the injured to hospitals, and evacuate Chillán to prevent an epidemic outbreak. The immediate relief effort helped to maintain order despite the difficult and long reconstruction process that took years to complete after the 1894 and 1939 earthquakes. By contrast, the press blamed looting on the authorities' absence after the catastrophes in Mendoza and Arica. After the 1861 Mendoza earthquake, the governor left the city making it difficult for the government to carry out any necessary actions. Instead, groups of citizens patrolled parts of the city. Similarly, in the aftermath of the Arica disaster, newspapers and government officials noted that the authorities abandoned the port to the thieves.

Often, the authorities conflated survival behavior with looting and elites hypocritically participated in pillaging of ruins after disasters. Survivors emerged from the rubble looking for potable water, food, and materials to construct temporary shelter. The lack of these basic necessities, forced disaster stricken residences to search and pick

through the rubble of homes and business for survival. Authorities often misinterpreted this action as looting. Indeed, the line between looting and survival was unclear. The lack of easily accessible drinking water resulted in ariqueños and foreigners drinking champagne and other liquors. North Atlantic merchants and government officials distrusted and impugned the locals' morality. While criticizing the scenes of looting on Arica's beaches, British mariners and officials ate and drank some of the expensive food and drink that remained after the tsunami waves reseeded. Similarly, one British bureaucrat while deploring the lawless activities that occurred on the beach helped himself to a map of Bolivia.

Finally, disasters also reduce all members of society to a similar level, although only temporarily. Rich and poor, citizens and foreigners built shelters next to one another and ate and drank what they could find or what the authorities gave them. After the Arica earthquake and tsunami, British officials and their families congregated in the hills and countryside surrounding the city next to poor ariqueños. In some circumstances, where a disaster inflicts a massive death toll and bodies must be buried quickly to prevent epidemic outbreaks, rich and poor were interred without ornamentation, ceremony, or distinction. After the 1939 Chillán earthquake, the city's dead were buried together with no distinguishing marks of social class or status. Although catastrophes temporarily leveled society, the wealth and elite were left in a better position than the poor and landless. After the 1861 Mendoza earthquake, those who owned a means of transportation fled the province with the goods and possession they could salvage from the ruins. After the 1894 earthquake, wealthy riojanos took refuge in their patios,

gardens, and orchards, while those without such amenities could only find shelter in the city's central plaza.

The order of disaster was one where elites panic, authorities worried about enforcing the law and maintaining public and private property, and the press focused on disaster myths and assigned blame. In the aftermath of a disaster, crime decreased and incidences of looting were often confused with survival. No disaster utopia emerged because some amount of violence and pillaging did occur and social distinctions quickly reemerged in the way relief was distributed. But mass panic and lawlessness failed to create social unrest or lead to bloody revolutions.



## CHAPTER 5

### RECONSTRUCTING THE CITY, REBUILDING THE NATION: ANTISEISMIC URBAN DESIGN AND PLANNING

Decisions about where and how to rebuild the city produced highly contentious debates. Reconstruction plans for devastated cities provided political leaders with an opportunity to rebuild the disaster areas according to their ideological vision for the nation. These destroyed urban areas, however, were not blank slates for the authorities to build the physical manifestation of the “new” nation. Relocating a city threatens vested interests such as existing property rights, which could upset hierarchies of wealth and power. With the advance of transportation and communication networks during the second half of the nineteenth century and first decades of the twentieth century, popular voices lent support to competing factions in reconstruction debates aired out in the press. Local elites also worked to protect and advance their economic and social standing in their cities, regions or provinces in the earthquakes aftermath.

Reconstruction opens opportunities to citizens and local leaders to re-imagine their physical surroundings, to incorporate the latest urban planning techniques and designs and building codes. Geologists and engineers from leading Argentine and Chilean universities and foreign observers studied the impact of earthquakes on urban settings. These scholars made public proposals regarding possible re-locations of cities, the layout of new cities according to the latest urban planning and design trends, and construction technology for new buildings to withstand seismic shocks. These reports and proposals applied the latest European scientific theories, urban planning modes, and

architectural and building practices to Argentine and Chilean geographies. These scientists and engineers ignored or dismissed native building practices as primitive despite many frequent observations noting that indigenous edifices withstood repeated temblors and tsunamis.

### **Creative Destruction: Envisioning a New Urban Landscape**

Earthquakes provided a destructive good in the eyes of nineteenth-century liberals. These natural disasters wiped away colonial cities that represented backwardness and provided the emerging nation-states to build modern cities that represent progress based on European models. During his residence in Chile, Domingo Faustino Sarmiento observed the creative destruction initiated by temblors and earthquakes. Sarmiento noted that Valparaíso once known as “the city of mud and dirty tiles” had been transformed into a Europeanized urban landscape that reflected the progress Latin American liberals yearned to bring to their countries. Similarly in Santiago, after the 1851 temblor an enlightened group of citizens banded together to erase the “the lethargy of three centuries” by destroying part of the city and quickly removing the ruins and replacing adobe structures with European architecture. After 1851, according to Sarmiento, Santiago became a dignified capital city manifested by its streets and plazas, palaces and temples that reminded him of the urban landscapes of great French or Italian cities. Reconstruction benefited not only the social elites but also employed the city’s many carpenters, masons, iron workers, locksmiths, unskilled laborers, and brick makers. These artisans replaced the unstable or collapsed walls of the old shacks. According to Sarmiento, the workers of Santiago should yell “long live the temblor that brings money

and gives work!” The temblor, according to Sarmiento, will allow Santiago to remove “the old decayed shell that hides the robust sap that flows through its veins.”<sup>1</sup>

### **The Liberal Project in Argentina**

Political elites planned to imprint a liberal ideology on the rebuilt urban landscape of Mendoza. After the Battle of Pavón in 1861, the new ruling elite—liberal unitarians—went beyond creating a new city based on the liberal ideal of “progress.” Reconstruction was a mechanism to blur the province’s colonial past by abandoning the old city, widening streets, changing the nomenclature, and proposing new variants on modes of construction. These included using wood to reinforce traditional structural forms resulting in buildings that were lighter and more livable. In addition, they were more economical because these new structures did not require any specialized skills to construct. Furthermore, during the height of liberalism, construction mostly stayed in private hands with the exception of public buildings. The general unspoken rule was that all property owners could build on their own land what they saw fit as long as the structures did not harm their neighbors.<sup>2</sup>

Before the 1861 earthquake, travelers and visitors characterized Mendoza as a parochial backwater rooted in colonial habits and traditions. A German geographer traveling through Mendoza in 1857 described the city as “without vegetation, without decoration, even without paving...and with a ruined fountain at its center.”<sup>3</sup> The two-story wooden and adobe cabildo building also served as the courthouse, jail, and police station.

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1. Domingo Faustino Sarmiento, *Obras*, vol. 2, 356–57.

2. Silvia A. Cirvini, “Mendoza: La Arquitectura de la reconstrucción post-terremoto (1861–1884),” *Revista de Historia de América*, no. 108 (1989): 175–76.

3. Quoted in Scobie, *Secondary Cities of Argentina*, 107.

The backside of the cabildo doubled as a market place for farmers and customers to exchange beef, squash, and potatoes. The consensus among travelers was that city's main church "lacked decoration, artistry, or even sound construction."<sup>4</sup> Indeed, many visitors after the trek over the Andes or across the Pampas arrived disillusioned with Mendoza. One traveler complained that "in a city of almost 10,000 inhabitants, one expects to find more urbanized characteristics and not merely a dusty village whose churches, despite their size and location on the main plaza, merely depressed me further with their half-finished and deteriorating aspect."<sup>5</sup> The elite families encompassed the principle plaza following the Hispanic urban tradition. The elite houses though only a single story, were large old whitewashed structures decorated with moldings and cornices. By contrast, the majority of mendocinos lived in deteriorating small sun baked abode structures. Mendocinos, however, "adopted the harmless idea that Mendoza is a great city and, from its geographical position, destined soon to astonish the world; under which belief they get along as peaceable and happily as could be desired even in Utopia."<sup>6</sup>

The earthquake provided the opportunity to sweep away colonial urban layouts and backward building practices. Mendoza, like other Hispanic cities, was known for their narrow streets. All of the proposals presented after the 1861 earthquake widened the streets at a minimum of 17 meters.<sup>7</sup> Other plans distinguished between low traffic side

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4. Quoted in Scobie, *Secondary Cities of Argentina*, 107.

5. Quoted in Scobie, *Secondary Cities of Argentina*, 107.

6. Scobie, *Secondary Cities of Argentina*, 109.

7. All measurements provided in varas have been converted to the nearest whole meter. A vara equals about one yard (=0.836 meters, =2.8 feet).

streets specified at 25 meters wide, busy main streets or alamedas defined at 45 meters wide, or lanes and transversals designated at 30 to 35 meters wide. While a number of proposals failed to regulate building heights, some proposed reconstruction laws limited the structures to no higher than seven meters or four meters and no more than four meters around the Plaza de Independencia. Finally, all the proposed reconstruction legislation or plans except one failed to address or implement antiseismic building codes. The Villa de Palmira plan or San Nicolas site suggested the implementation of building models and technology to prevent such utter destruction again.<sup>8</sup>

No uniform construction code or model was implemented or enforced during the reconstruction of “new city.” Most likely, the authorities gave instructions as suggestions about materials and building systems that were the most convenient to adopt but did not make them obligatory. The failure to impose a municipal construction code occurred for two reasons. First, the governing theory of liberalism did not look kindly on the authorities restricting individual liberty and activity. Second, the rush to populate the new city in San Nicolás, which had been slow and often delayed, caused the government to avoid any obstacle or difficulty to promote building and reconstruction.<sup>9</sup>

Some of the various proposals for the new city of Mendoza proposed a new nomenclature that would sweep away the colonial and federalist past. The 1854 plan of Mendoza sought to normalize street names. In previous plans, streets lacked names, only the urban center’s principle street—La Cañada—received demarcation. Travelers also

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8. *Registro Oficial*, 148–49, 260–62, 327–28. See also the chart labeled “Caudro comparativo de las características de los proyectos y leyes para la nueva ciudad de Mendoza (1861/1863),” in Jorge Ricardo Ponte, *Mendoza, aquella ciudad de barro. Ilustrado: historia de una ciudad andina desde el siglo XVI hasta nuestros días* (Buenos Aires: Consejo Nacional Investigaciones Científicas Técnicas, 2008), 196.

9. Silvia A. Cirvini, “Mendoza,” 181.

failed to remember much more than the primary street. The noted Chilean Benjamín Vicuña Mackena observed that the only street he could remember was the business avenue. Streets received mostly the civic and religious names of the important buildings on them. Most of the street names from the 1850s received names that denoted Argentine cities, battles during the war of independence, or colonial life such as “de la Cañada” or “Cuzco.” Despite Buenos Aires being recognized with a street name, the Confederation held a distinguished position in the city’s nomenclature with streets named after Urquiza and the Federation in addition to the principle provinces.<sup>10</sup>

The numerous plans after the 1861 earthquake emphasized a liberal nomenclature for the city’s streets and plazas. Two of the four plans that specified the names of the main plazas proposed for the new city elected to name two of three of the plazas “order,” “progress,” and “liberty.” The 1863 law, however, changed these names to honor the countries and cities that helped Mendoza after the 1861 earthquake. Plazas were named Lima, Chile, Montevideo, and Buenos Aires. Most of the plans for reconstruction did not designate street names. The 1861 law—passed, during the Confederation period—proposed that street names remain the same as prior to the 1861 natural disaster. Later, under liberal governments, two proposals gave the power to rename streets to the provincial governor.<sup>11</sup>

Reconstruction plans focused on finding a new location for the city rather than rebuild the old colonial city. Building a new city and forsaking the old city represented an

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10. Ponte, *Mendoza, Aquella Ciudad de Barro*, 151, 153–54.

11. See chart labeled “Cuadro comparativo de las características de los proyectos y leyes para la nueva ciudad de Mendoza (1861/63)” in Ponte, *Mendoza, Aquella Ciudad de Barro*, 196.

opportunity for the newly minted liberal regime to consolidate their authority through the 1863 law that located reconstruction at the San Nicolás site. A new city at a new site allowed the liberal regime to sever ties with the Iberian colonial past and instead build an urban center that reflected enlightenment and progress.

Along with or even beyond the reasons of practicality and technical systems that determined the suggestions regarding the diffusion of post-earthquake construction, we can also denote ideological motivations. These reasons permeated the entire reconstruction process. In 1864, Governor González Pinto declared before the legislature:

Of the hard school of adversity, we mendocinos flatter ourselves for having almost risen and transformed our former way of life... The aspect of the new city and the great street that separates the old population is as comforting as interesting...The old and heavy way of building that yielded such immense mourning on our families, has been succeeded by a system of construction that is more light and elegant and also more solid. By this aspect of constructions it is observed that very soon it will rival the most important populations of the country.<sup>12</sup>

Modernity advanced dramatically over the course of the late nineteenth century. The arrival of the railroad spurred immigration that reached the foot of the Andes and the development of wine industry dramatically changed the socio-economic conditions of the region. At the end of the century, the use of adobe began to be eliminated in a city where it had once reigned as the standard building material used in 90 percent of the structures. In western Argentina, scientists, architects, and engineers now began to focus on antiseismic building practices, starting in earnest after the 1894 San Juan and La Rioja

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12. Mensaje del Gobernador Carlos González Pinto to la Legislatura de la Provincia, 1 August 1864. Quoted in Silvia A. Cirvini, "Mendoza," 183.

earthquake and 1903 Mendoza temblor and were backed by political and economic powers.<sup>13</sup>

### **Popular Front Projects in Chile**

A month before the January 1939 earthquake that destroyed southern Chile, the cultural magazine, *Zig Zag*, printed a profile of this region's enchanting environment in its December issue. The city of Concepción was an important industrial and university center surrounded by the lakes and flora and imbued with legends of the heroic Araucanian Indians. The capital of the southern frontier during the colonial period, Concepción and the Bío Bío River, marked the border between Spaniards and the Indians. Alonso de Ercilla's epic poem *La Araucana* praised the heroism of brave leaders such as Caupolicán and Lautaro and became symbols of the Chilean nation. After Santiago, Concepción was the nation's most influential cultural center. The University of Concepción's curriculum, which emphasized industrial and technical expertise, sustained an intellectual and artistic tradition second only to the University of Chile. Concepción's environment disposed it to being Chile's premier industrial center. Factories produced cloth, glass, ceramics, textiles and sugar refineries dotted the landscape. The province also housed a large coal industry. The city of Concepción, a key transportation hub, distributed their industrial products throughout the rest of the country by trains and boats. The region's environment, however, did not resemble the gritty and dirty industrial centers along the Great Lakes in the United States. On the contrary, the provincial capital's numerous lakes and floral bounty exhibited the region's natural beauty. The profile presented in *Zig Zag* confidently looked toward the future with an unanimous vote

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13. Silvia A. Cirvini, "Mendoza," 183.



for progress.<sup>14</sup> The earthquake on January 29, 1939, however, ruined the region but provided its stake holders the opportunity to re-imagine their urban landscape. In the disaster's aftermath, politicians, architects, urban planners, and intellectuals argued over how to reconstruct the country's industrial center. Questions centered on whether the region should be rebuilt along the same lines as before; treat the area as a blank slate and build a new modern industrial center; or create a city based on social justice and the Popular Front's economic vision.

**Pedro Aguirre Cerda: The Constructor of a New Nation.** After the bruising 1938 presidential election, the newly elected Pedro Aguirre Cerda declared that the country was about to embark on the next great stage in Chile's history, following his vision for a new nation. Opinion writer, Juan Martín, agreed that this period represented a new cycle in Chilean history. Using construction and building materials as metaphors, Martín asserted that the Generation of 1842 led by Lastarria prepared the way for a new political era represented by the new president. Aguirre Cerda, like Sarmiento, molded "the soft clay of the nation between his hands" to create a new model that would fundamentally break with Chile's colonial past. The president had three important tools in his box, his background in pedagogical sciences, agriculture, and economics. The author declared that "it would not be difficult to predict that Aguirre Cerda will be 'the builder [constructor] of the new Chile.'"<sup>15</sup> After the earthquake, the president had the opportunity to translate his vision for the nation into brick and mortar.

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14. "Discubra el alma de su provincia: Concepción," *Zig Zag*, 1 December 1938.

15. Juan Martín, "Es el constructor del nuevo Chile," *Zig Zag*, 15 December 1938.

In a speech before the Chilean Congress, Aguirre Cerda laid out a blueprint for the destroyed cities' new urban environment that reflected his political coalition's promises for social justice. He did not want to continue the tradition of the workers living on the outskirts of the city, housed in shanties that only accentuated the differences between classes. Instead, Aguirre Cerda's progressive vision for the city reflected his political platform. The president used the disaster as a political opportunity to re-imagine society and the urban environment by giving more benefits to the working class. The worker and the employee, Aguirre Cerda argued, should live in the city's center where they also had access to "all the benefits of civilization including schools and libraries, light, potable water, sewer, transportation, etc., in this manner the working class will feel like a dignified and respected component of society."<sup>16</sup> He hoped that the benefits extended to urban workers would soon trickle down to rural labors and miners. After all, the President asserted, workers in the salitre fields in the harsh and arid deserts or the copper and gold miners of the mountains, also, deserved to partake in the benefits of civilization with yearly vacations to the coast with their families to regain their energies.<sup>17</sup>

While not an engineer or an architect, Aguirre Cerda pinpointed the cause of such widespread destruction. It was poorly built structures that mostly the urban poor inhabited. For the president, the quality of buildings was linked with the economy and society. Living in one of the most earthquake prone regions of the world required the

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16. Pedro Aguirre Cerda, *Mensaje de S.E. el Presidente de la República en la apertura de las sesiones ordinarias del Congreso Nacional* (Santiago: Impr. Fiscal de la Penitenciaría de Santiago, 1939), 12.

17. Aguirre Cerda, *Mensaje de S.E. el Presidente de la República*, 12.

nation to produce professionals and workers equipped with technical expertise, ability, and the appropriate skills. Aguirre Cerda believed that the reconstructed cities would reflect the technical knowledge of nation's professionals and workers. Technical ability was central to the execution of new buildings and public works. In order to remedy this situation, he asked the minister of education and the director of the University of Concepción to create courses to educate workers in subjects pertinent to reconstruction. Thus, the reconstruction program could solve the double problem of providing work to the unemployed and improving public infrastructure.<sup>18</sup>

The earthquake proved to be a transformative event for the region's urban environment and by extension the nation. Aguirre Cerda did not want to simply restrict rebuilding to only those buildings that had collapsed. Simply rebuilding would waste an opportunity to extend civilization or progress to areas untouched by modern infrastructure and public health reforms. It would be unacceptable, according to the president, to leave cities without sewers, potable water, or green spaces required by public health for the current population levels, never mind future demographic increase. Simply rebuilding the region to reflect the pre-disaster status quo would only exacerbate problems associated with internal migration from the countryside to the city and the lack of public services. Reducing the number of electric plants online that provided cheap energy to regional industry and sufficient light to cities also deprived agricultural villages of the necessary elements of civilization. According to Aguirre Cerda, this would provoke an even greater migration from rural to urban areas placing an increased strain on public

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18. Pedro Aguirre Cerda to Enrique Molina Garmendia, 14 February 1939, Leonidas Aguirre Silva, comp., *Epistolario de Pedro Aguirre Cerda (1938–1941)*, vol. XVI of *Fuentes para la historia de la República* (Santiago: Ediciones de la Dirección de Bibliotecas, Archivos y Museos y LOM Ediciones; Centro de Investigaciones Diego Barros Arana, 2001), 22–23.

services—army, navy, police, hospitals, firefighters, police, schools, and the like. Failing to comply with his government’s vision for reconstruction would result in a failure to raise the standard of living in the provinces and only intensify the demographic shift from the provinces to the capital city.<sup>19</sup> Finally, the president believed that a central component to improving the standard of living for all Chileans was the construction of hygienic and comfortable homes. While the vast majority of Chileans could not afford such luxury, the earthquake provided an opportunity to begin the process that would take years to accomplish. The construction of thousands of affordable housing units began after the earthquake.<sup>20</sup>

**Importing and Adopting Modernism.** Other commentators also argued that the disaster zone should not simply rebuilt as it was before and emphasized the creation of modern cities based on industry’s needs and European models. The first goal was to return life to as normal as possible like it was before the earthquake. This, however, proved difficult because the catastrophe destroyed all the urban groupings, the population migrated, and even the basic economic elemental systems ceased to exist. In sum, neither industry nor commerce existed in the country’s southern region. For Carlos Charlín Ojeda, a writer for *Zig Zag*, the earthquake left a tabula rasa on which to rebuild a better economic foundation and organized urban centers for the national economy. Charlín Ojeda agreed with Aguirre Cerda that simply rebuilding the cities would be an error. It was essential to build something new and not “artificially reproduce” the pre-disaster

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19. Pedro Aguirre Cerda to Enrique Molina Garmendia, 14 February 1939, Aguirre Silva, *Epistolario*, 22–23.

20. Pedro Aguirre Cerda to Cardenio González Sepúlveda, 29 August 1939, Aguirre Silva, *Epistolario*, 55.

situation or impose a system not suited to the region's resources. Instead, Charlín Ojeda argued that the reconstruction effort should model itself after the rebuilding of European cities after the Great War. Success stemmed from taking the appropriate socio-economic factors into consideration. This contrasted strikingly with other regions of Chile that had recently rebuilt following much less devastating natural disasters. The lack of a socio-economic vision resulted in "languid" living conditions as Charlín Ojeda described "that is to say that if you rebuild the industry, without having regard for its economic function, one would only do more damage to the future activities of the area by merely wanting to remake it." Citing a study of urbanism, a modern science concerned with studying the problems of the city, it focused on four aspects of collective life as the most important: living space, circulation, work, and leisure. The construction of houses should take into consideration the population density. To reconstruct the actual area of Chillán would be a waste of money. Instead, those landowners outside the city should not be discouraged or prevented from buying property in the new city, neither should the old propriety holds be alienated nor neglected. Rather the state, should take care to keep the interests of both in mind, this would only raise property values in the new city. Furthermore, industrial interests should be considered but the state should intervene with an economic plan so that the nation's money would not be wasted on small things or simply repair the damage from the earthquake.<sup>21</sup>

The earthquake provided an opportunity to modernize using the latest twentieth-century technologies and planning measures to update the cities' Spanish colonial

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21. Carlos Charlín Ojeda, "Debemos construir ciudades nuevas en la region devastada y no reconstruir simplemente los edificios destruidos," *Zig Zag*, 2 February 1939.

organization. Charlín Ojeda argued for the creation of a new cities organized based on the region economy and urban planning norms. He observed the characteristics of Chile's urban nucleuses and their extensions were chaotic in nature. Although the original founders of Chilean society built cities based on the Spanish plaza system, Charlín Ojeda, like Le Corbusier, would argue that when these plans were drawn up 450 years ago, a mechanized civilization did not exist. The colonial populations of these areas were not dense during imperial rule. The colonial cities were not planned with modern urban systems in place such as paved roads and streets, potable water, sewer systems, and most of all could not provide a comfortable home in modern times. Echoing Aguirre Cerda, Charlín Ojeda warned against simply rebuilding rural and urban workers' housing because they decline into "new 'ranchos' of trash for the campesinos," and "conventillos' for the urban workers." Instead, housing should be built according to the function that it was meant to be used for. Building 100,000 houses based on the old system would create a large debt for future generations to endure because, Charlín Ojeda predicted, the former inhabitants of the southern region would reject them. Instead, the state should assess the region's productive value and place urban centers in well defined areas where they would respond to the characteristics of production. For example, the state should not simply rebuild 20 or 30 windmills around various cities and towns; instead it should create a strong windmill industry with sufficient primary materials to maintain the industry.<sup>22</sup>

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22. Carlos Charlín Ojeda, "En la región afectada," *Zig Zag*, 9 February 1939.

The lack of technical expertise in Chile would require European architects and urban planners to carry out reconstruction planning. “If the technical experts are not available in Chile,” Charlín Ojeda argued,

the state should bring them in from abroad. There exists a Le Corbusier, the great creator of Urbanism, which has realized in Europe the true concept of the city of the mechanized civilization. There are men that know the economic structure of a city we need. This type of reconstruction was outside of the political and ideological realm. Instead, the situation needed to be examined by experts point by point to assess the regions needs and determine a reconstruction plan and how it should be achieved or carried out.

He summed up his argument by noting that Chile “should invite men from around the world who had experience with similar cases and not someone who was going to test or experiment with a body that is in a precarious state.” The architect or urban planner selected would play an important role in the reconstruction of the southern region because one mistake could have tragic consequences that could not be changed years down the road.<sup>23</sup>

Modernist city planning, popular during the middle of the twentieth century, created urban environments that were organized, orderly, efficient, geometric, industrial and functional. The French architect and urban planner, Le Corbusier, exemplified modernist city design even if many of his proposals were too ambitious to build. An ideal industrial city was organized and worked like a machine. Unlike the president’s proposal to bring the workers back into the city’s center, Le Corbusier’s modernist urban planning called for the segregation of the city by function and purpose. The sector of the city’s function also determined its position within the city and its hierarchical rank. For modernist urban planning, the past was not something that could be improved upon,

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23. Carlos Charlín Ojeda, “En la region afectada,” *Zig Zag*, 9 February 1939.

rather it built the city from scratch. A devastating natural disaster like the 1939 earthquake that reduced southern Chilean urban centers to rubble would make the modernist architects and urban planners' jobs easier by giving them a perceived blank slate.<sup>24</sup>

The American environment was perhaps an ideal place to implement Le Corbusier's modernist plans. Nineteenth-century Latin American intellectuals hoped to erase their colonial past and heritage. Modernist urban planning provided that opportunity for twentieth-century urban centers. Le Corbusier, while lecturing in Buenos Aires, noted that Argentina's national identity was not tied up in the colonial architectural traditions. Speaking in the Argentine capital, Le Corbusier urged his audience to explore modernity and look to the future for inspiration: "I invoke the Argentine soul, to arouse the poet who will express, in the overall planning of the country, the grandeur that is available, the grandeur that is possible in a new country, that has the good fortune not to be stifled by the past."<sup>25</sup> Although the French architect and urban planner was talking to an Argentine audience, proposals for rebuilding the southern region's urban centers did not look to the past but hoped to modernize and industrialize the disaster zone making it an engine for national economic growth and development.

For Charlín Ojeda and others who hoped to modernize the southern urban centers, modernist urban planning offered a radical break with the past, industrialize the region, and create a better engine for the economy. When Le Corbusier wrote to offer his

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24. James C. Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven, CT: Yale University Press, 1998), 103–17.

25. Tim Benton, *The Rhetoric of Modernism: Le Corbusier as a Lecturer* (Basel, Switzerland: Birkhäuser, 2009), 150.



services for free to work on planning the southern urban centers, Charlín Ojeda urged the government to accept. A few years before the earthquake, Santiago had investigated hiring the French urban planner and architect to modernize the capital city. His exorbitant service fees made him unaffordable for the municipality. Charlín Ojeda suggested that the aid commission for survivors and the Ministry of National Construction carry out a demographic and economic study of the region to determine area's and the country's future needs whether it would be agricultural or industrial. Furthermore, a reconstruction program would need to know how many people migrated out of the area after the earthquake and how many would come back with redevelopment. The state's ability to collect these statistics and potentially use them to conduct regional and urban planning represented a level of maturity. This line of modernist planning and thinking could be found in the government's proposed reconstruction and economic development program eventually passed by the conservative Chilean Congress. Finally, while Le Corbusier did realize his work for the southern region, the government did identify some of the more pressing national and regional socio-economic problems rooted in the architecture and urban design of the country.<sup>26</sup>

**Official Plans.** While Concepción dug out from underneath the rubble and buried the dead, local authorities solicited urban planning suggestions. The urban planners' designs did not radically remake the city's layout. Instead, they mostly focused on improving transportation flows and creating new streets. Far from the lofty plans proposed by the president or national commentators, at the municipal level, more practical issues were of primary concern. After the earthquake, a great number of

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26. Carlos Charlín Ojeda, "Le Corbursier viene a realizar, gratuitamente, los planes de reconstrucción de las ciudades afectados por el terremoto," *Zig Zag*, 2 February 1939.

proposed transformational projections were discussed but only a few ideas actually yielded any concrete plans. Concepción's only surviving daily, *El Sur*, published the urban planning proposals for the rebuilding the city.

The urban planners proposed adding and eliminating diagonal streets, extending and removing roads, making traffic flow more efficient and less congested, increasing safety for pedestrians. The first plan given to the municipal authorities, proposed to build for wide diagonals converging at a main central plaza the length of a city block. The authorities, however, reduced the number of diagonals to only one from the central plaza to the University of Concepción and prolonged a stretch of old road near the city cemetery. Likewise, the central plaza would be enlarged with a smaller plaza to park cars in front of the cathedral. By contrast, Architects Ernesto Loosil and Adolfo Bershenk both proposed decongesting the city's principal road by eliminating the diagonal streets that converged at the central plaza. These two urban designers also proposed a small plaza in front of the cathedral.<sup>27</sup>

All of the proposals emphasized four common characteristics or similarities. First, they all proposed to rebuild the old road to the cemetery. Second, some of the plans removed dangerous crossings, expanded some streets, and built a new bridge. Third, there was resistance to the diagonal layout that created more traffic congestion in the city's center. The proposals highlighted the problems with a number of points that formed the diamond of the diagonal layout and opposition to expanding the principle streets in the city's center (Barros Arana and O'Higgins; Caupolicán and Aníbal Pinto). Fourth, all the projects suggested extending the old cemetery road to one of the new streets. While the

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27. Arturo Junge K., "Proyecto de reconstrucción de Concepción," *Zig Zag*, 16 March 1939.

projects did address the question of transit, they did not resolve the problem of urbanization. None of the plans specified where manufacturing and commercial sectors or residential and working class neighborhoods would be located. Neither did the proposals address artistic or aesthetic features of the city or public health issues.<sup>28</sup>

Some commentators, however, hoped that the municipality would not change its urban layout and preserve any old buildings that remained standing. One writer who hoped the city would be rebuilt along the same lines as before the earthquake critique the other proposals because they required heavy spending and “occasionally new injuries to the mistreated body of our sick city.” Those buildings that remained standing, writer Arturo Junge K. hoped would not be destroyed but rather treated with love and affection and argued that it would be unthinkable to spend vast sums on completely changing the city’s layout. Reconstruction, according to Junge K., could easily and cost effectively be carried out using the old grid and street system that remained underneath the ruins. While he argued that the old urban grid system should be preserved, Junge K. argued for better antiseismic structures and building reforms that could be gradually introduced. The current projects, the writer further critiqued, “have only produced uncertainty and paralyzed any reconstruction activity much to the disinterest of our poor city of Concepción.”<sup>29</sup>

Reconstruction plans at the municipal level reproduced the urban layouts that existed before the earthquake. The authorities directed money toward improving the housing situation for their citizens. At the beginning of February, the municipal council

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28. Junge K., “Proyecto de reconstrucción,” *Zig Zag*, 16 March 1939.

29. Junge K., “Proyecto de reconstrucción,” *Zig Zag*, 16 March 1939.

of Concepción approved a reconstruction plan for the city with a budget of 650 million pesos. The first part of the plan included the construction of hygienic housing for people with few resources. The sum of 400 million pesos, interest free, was budgeted for construction projects around a large central plaza. The agreement made by the municipality of Concepción was well received by the entire city, and stimulated the construction of working class housing that would begin shortly, according to municipal officials.<sup>30</sup> The authorities continued to work toward finding solutions to the poor health conditions, reconstruction problems, and cleaning up the debris from the city.<sup>31</sup>

In Chillán, a *cabildo abierto* was convoked on March 18 to decide the location for rebuilding the city. The vast majority of the city's citizens agreed to petition the national government to rebuild the urban center in the same location based on a plan from Nicanor Poblete, Francisco Méndez Binimells and José Rossetti.<sup>32</sup> The authorities in Chillán requested that the city be rebuilt in the same location for a number of practical reasons. The necessary infrastructure for water, gas, light, electricity, and sewer already existed. Relocating the city would require a new basic public works system which was estimated at 100 million pesos. Instead of designating funds for relocation, that money could be allocated to an irrigation system. Thus, industry and commerce would not have to invest their money in building new irrigation systems and instead could employ more workers.<sup>33</sup>

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30. "Plan de reconstrucción de Concepción," *La Opinión*, 7 February 1939.

31. "Acuerdos para la construcción de la ciudad," *La Opinión*, 21 February 1939.

32. "Que se reconstruya Chillán en el mismo sitio," *La Opinión*, 20 March 1939.

33. "Autoridades y vecinos de Chillán celebraron una entrevista con el presidente y el ministro Alfonso," *El Mercurio*, 21 March 1939.

Furthermore, the inhabitants yearned to rebuild on their property. Also, the state's relief commission requested that Chillán be designated as the central location from where all reconstruction and relief measures would be carried out. Death or internal migration caused a significant decrease in the urban population and economic activity. The commission hoped that by designating Chillán as the headquarters for reconstruction, urban activity would return along with residents. Likewise, the petitioners hoped to return to the destroyed city and return it to its former state of progress and fruitful productivity.<sup>34</sup> At a *cabildo abierto* in Chillán at the end of March, the city decided to petition the government to rebuild the city on the same site according to the same plan.<sup>35</sup>

While the earthquake inflicted the most damage on Chillán, residents and the state hoped to rebuild the city in a timely manner. A number of bureaucratic and environmental obstacles, however, frustrated rebuilding efforts. A government commission, after arriving in Chillán to survey the damage, worried about the difficulties of building temporary shelters with winter quickly approaching. Furthermore, discussions in congress about the reconstruction and development package delayed any quick construction efforts on permanent housing. The commission, however, was able to begin building temporary shelters. In order to increase the pace of production of the temporary living quarters, more lumber from the southern forests was needed. Harvesting more timber was made difficult by the destruction of Chile's southern transportation network.<sup>36</sup> Citizens were upset with the pace of reconstruction. They complained in meetings that

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34. "Por la reconstrucción de Chillán," *El Mercurio*, 22 March 1939.

35. "En Cabildo abierto se trató un importante problema," *El Mercurio*, 22 March 1939.

36. "Por la reconstrucción de Chillán," *El Mercurio*, 22 March 1939.

they were still waiting for approval from the government to begin rebuilding their houses, noting that the winter rains were fast approaching.<sup>37</sup>

The progressive capital of Maule, Cauquenes, proposed a reconstruction program that was very distinct from others. While the provincial capital did not receive as much money or other resources from the government for rebuilding, its industry urgently needed low interest loans to be competitive. Similarly, commercial activities required investment that would hopefully increase the city's economic prosperity. The authorities also had difficulties obtaining the necessary resources to begin rebuilding. Their repeated petitions for wood and zinc remained unfilled, although they hoped their order would be filled before winter's first rains. Cauquenes' reconstruction plan proposed turning the municipality into a "garden city." The municipality hoped to increase its popularity with tourists and compete with ocean side destinations such as Curanipe, Pelluhe, Chanco among others that offered natural beaches. The reconstruction plans emphasized its colonial aspects, while remaking the city into an attractive urban center where climate, health, and environment combined to create an exquisite travel destination. Indeed, tradition and modernity intertwined in the rebuilding of the Maule's provincial capital. No disaster could erase the city's tradition and heritage.<sup>38</sup>

Proposed changes to urban layouts upset property owners and challenged the social hierarchy. In Tomé, a group of property owners on Manuel Montt Street protested the municipality's plan to widen the street. They argued that the proposed 21 meter expansion was not justified. The residents had many different reasons for opposing the

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37. "Que se reconstruya Chillán en el mismo sitio," *La Opinion*, 20 March 1939.

38. Roberto R. Luna L., "Cauquenes y su plan de reconstrucción," *El Mercurio*, 1 March 1939.

street expansion and nearly all the affected property owners signed a petition protesting the decision. The street widening, the residents argued, was not necessary because the traffic levels were not very great and the population would most likely not increase to such an extent that the street would need to be widened in the near future. Various property owners, including those on Portales Street, protested the plans to widen streets.<sup>39</sup>

**Housing.** Rebuilding after the 1939 Chillán earthquake brought attention to national problems such as a country wide housing shortage. A few landowners owned vast tracks of land, leaving many rural peasants landless. With the exception of the extreme northern regions, all of the country's regions experienced significant housing shortages. Furthermore, the high resale price of land—often in very questionable areas—put it out of reach for much of the working class. Rebuilding and reconstruction in the southern region after the earthquake offered an opportunity for the government to rectify the housing problem. The authorities worked tirelessly to construct housing that they hoped would be temporary for the southern region's working classes. Despite their best attempts, the authorities faced many problems constructing adequate temporary housing including a shortage of funds, workers, and lumber which delayed or made home rebuilding projects in the disaster zone difficult.

The earthquake and the subsequent reconstruction program highlighted the problem of workers' housing in Chile and the concentration of land ownership in the hands of a few wealthy elite. Working class families were forced onto marginal lands at the edge of urban areas. In all of the provinces, except in the extreme north, there was a shortage of living quarters. The Association of Architects calculated in 1931 that Chile

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39. "Vecinos de la calle M. Mott reclamen," *El Mercurio*, 22 March 1939.

lacked 300,000 homes or for every four people there was one person left homeless. In all Chilean provinces, there was a lack of small land owners. Real estate was usually bought by four or five people leading to large imbalances and many landless peasants. For example in Valdivia, only 45 percent of the population owned property and the value of the real estate was disproportionately inflated. Neither Chile's population density nor land scarcity explained the price of real estate during the 1930s. The unitary value per meter squared rose artificially thanks to speculators, intermediaries, and the buyers' ignorance. For example, land bought at four pesos per square meter was sold later that same day for between twelve and sixteen pesos per square meter. In Santiago, property in working class neighborhoods sold at over 20 pesos per square meter on average. In hilly Valparaíso, property near the hill tops—30 minutes away from the city center—sold for 20 pesos per square meter without water, light, pavement, or much hope of attaining them. In Talcahuano, for some properties, the asking price was 40 pesos per square meter for land that was covered by the sea during high tide. Similarly, in Osorno and Valdivia, marsh land below river level that during winter flooded for four or five months while the water filtered into the subterranean caverns was sold at exorbitant prices to buyers with few options. Those families who lived in the southern marshlands and in the flood plain used plank bridges to travel from house to house. Property in this area sold at 30 pesos per square meters. President Perdo Aguirre Cerda hoped to use reconstruction to reverse this situation by bring the working class into the city's center and build affordable housing.<sup>40</sup>

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40. "El problema de vivienda obrera en Chile," *Zig Zag*, 12 May 1939.



After the 1939 earthquake, the Chilean press focused on the housing and property problems bringing it to the country's attention. Outraged at their findings about the housing shortage and property values in marginal areas, an article in the magazine *Zig Zag* angrily pointed out that no civilized city in the world would permit the sale of marginal land for one cent or allow houses to be built on it. According to the author, in areas with population density and a general state of urbanization, the average price of land in working class neighborhoods per meter squared should not exceed more than 16 pesos. In Santiago, however, the average was 23.20 pesos per square meter and even reached 40 pesos per square meter in some places in Santiago and Valparaíso. Another egregious example was Linares and Coquimbo. In working class sectors surrounding these urban areas, little or no infrastructure had been built for those who lived there.<sup>41</sup>

The *Zig Zag* article pointed out some positive examples derived from the passage of housing laws during the early twentieth century. The Municipalities Law set the cost of land per square meter at a price that could not exceed 1925 levels. Furthermore, the law prohibited the development of land that had not been previously zoned in order to eliminate the settlement of marginal land. Beginning in 1906, habitation laws resulted in 386 houses being built by 3,243 individuals and 614 houses repaired. The article concluded that the laws produced many good results as it helped people who merely subsisted to find affordable housing. From 1925 to 1935 another 6,426 houses were built with an investment of 163,033,180 pesos. The state contributed 143 million and another 19 million came from the private sector. The average value of each house was 21,579 pesos and the monthly mortgage payment averaged 139 pesos. During this period, the

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41. "El problema de vivienda obrera en Chile," *Zig Zag*, 12 May 1939.

housing investment helped to develop 29 areas in Santiago and another 14 outside the city limits. In the working class neighborhood of Hornillas, in the southern city of Manuel Mott, for example, in a six block area 189 houses were built with dimensions of 10 by 25 meters and the properties included a garden. Three types of houses were available for the working class. The first and smallest type had two bedrooms, a kitchen, a porch, and a bathroom. The price was 18,166.10 pesos with 30 year mortgage payments averaging 117 pesos per month. The second option had two rooms, a hall, a kitchen, and a bathroom that was list at 19,700 pesos with a 30 year mortgage, monthly payments were about 121 pesos. The third type of house had three rooms, a hall, a kitchen, and a bathroom for 23,000 pesos or 145 pesos per month under a 30 year mortgage. Between 1935 and 1938, the law loaned money to 5,896 buyers for a total of 29,728,862 million pesos. Likewise, 739 more well financially qualified working class people were loaned 4,258,578 pesos. In total, 6,635 workers received property titles. Furthermore, each property was valued on average at 5,122 pesos and had a monthly mortgage payment of 14.90 pesos. Proponents of the law hoped it could be expanded in the earthquake's aftermath.<sup>42</sup>

Indeed, the earthquake put the housing problem on the front pages and received discussion in special editions of national newspapers. After the 1939 Chillán earthquake, the architecture section of the *El Mercurio* published an article that summarized the scale and the scope of the housing problem. The crisis was particularly acute in Santiago, where it was estimated that the capital needed 100,000 homes built to meet demand. An estimated 750,000 homes throughout the country or 70 percent required immediate repair

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42. "El problema de vivienda obrera en Chile," *Zig Zag*, 12 May 1939.

and reconstruction because of poor hygienic conditions. The article reported that a total of 8,500 houses per year would need to be built to keep up with an estimated population growth of 65,000 Chileans per year. The housing problem was not easily fixed. The government's housing funds allowed for only 4,000 houses per year to be built. This was an insufficient rate of construction to match population growth.<sup>43</sup> A special commission was appointed to study the problem and come up with solutions to the housing problem in Chile and especially Santiago.<sup>44</sup>

The earthquake created a new awareness the popular housing problem not only in Chile but also throughout Latin America. This topic proved to have significance throughout the region as thousands of workers were left without adequate housing. A pan-American conference on popular housing was scheduled for the first week of October 1939 in Buenos Aires. This was an important social question and the objective of the conference and panels were to study the working class housing problem from the perspectives of hygiene, economics and society. Despite all the attention the housing problem received because of the earthquake, building temporary housing and constructing permanent structures proved to be much more difficult.<sup>45</sup>

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43. "El problema de la vivienda en Chile," *El Mercurio*, 17 March 1939.

44. "Se espera el informe de la comision," *El Mercurio*, 17 March 1939.

45. "Primer congreso panamericano de la vivienda popular," *El Mercurio*, 24 March 1939.

Table 8 Working Class Housing Problem in Chile

City	People per Room	Properties per 100 people	Value of Property
Arica	4.8	10.0	6,700
Iquique	5.0	11.0	19,600
Antofagasta	5.2	9.0	17,300
Copiapo	5.6	13.0	7,200
La Serena	5.6	12.7	8,100
Ovalle	5.6	8.4	5,100
Valparaíso	5.2	6.9	27,300
Viña del Mar	5.2	10.3	40,400
Santaigo	5.5	6.5	28,500
Rancagua	5.9	7.3	8,600
Curico	5.9	9.8	7,100
Talca	5.2	9.5	8,500
Linares	5.8	12.3	5,100
Chillán	5.5	11.0	6,800
Concepción	5.6	8.4	16,500
Temuco	6.1	9.1	8,700
Valdivia	5.4	4.5	13,700
Osorno	6.1	9.5	7,700
Puerto Mott	6.0	9.4	7,000
Castro	5.6	6.2	14,100
Magallanes	5.3	16.6	22,400

Source: "El problema de la vivienda obrera en Chile," *Zig Zag*, 12 May 1939.

The 1939 earthquake destroyed the southern region of Chile but the reconstruction process not only required rebuilding streets, plazas, green spaces, government buildings, and churches but also homes and working class neighborhoods. The concentration of land among elites pushed urban workers to the outskirts and marginal areas of cities making them vulnerable to natural disasters. Land prices in these marginal areas, however, were very high and lacked water, sewer, light, and pavement. Furthermore, housing conditions were cramped and unsanitary. In the more immediate term, however, the authorities struggled to simply build temporary housing for those

survivors—mostly working class and rural peasants—unable to migrate to the central valley's urban centers. The authorities focused on setting up temporary housing and public structures as their first priority. Shortages of construction materials and destroyed transportation networks in the southern region slowed the pace of construction. These environmental and technological obstacles were overcome and provisional housing was erected before the winter rains arrived in south-central Chile.

On the ground, the disaster caused numerous problems and the extent of the destruction was so great that rebuilding would take at least a decade. The most significant problem for rebuilding houses and businesses after clearing the rubble was to determine property ownership. To rebuild on the same piece of land, property lines needed to be ascertained. In many cases, however, the property titles were lost because the notarial records had also been destroyed in the earthquake. To solve this problem, one observer proposed that a special law be passed that authorized rebuilding and then rewriting the property titles by the Municipal Cadastral Office. Those writers and commentators who hoped that the disaster would provide an opportunity to introduce technological advances and modern building standards and infrastructure, argued that a board of technical experts should be appointed and empowered by special laws to oversee and direct reconstruction. The planning for reconstruction in the urban areas required a detailed report by experts. The disaster destroyed a large area, prolonging the reconstruction process. The disaster zone covered an area of 47,801 square kilometers. The catastrophe destroyed 73,836 houses and affected 197,494 inhabitants. Experts recommended that rebuilding occur in stages over a longer period of time. They estimated that the reconstruction of the whole zone would take between 15 and 20 years. Reconstruction would be an inter-generational

projected that required “a unified spirit of action” to accomplish. While commentators discussed long term plans, modernizing Chile, and central planning, in the disaster zone the authorities worked on constructing housing for the homeless survivors before the winter rains and passed measures to rebuild cities along the same lines and grid systems that existed before the earthquake.<sup>46</sup>

Despite much angst, confusion, supply shortages, and transportation difficulties, the central government funded and directed construction of temporary shelters before the winter rains came. In the first weeks after the disaster, national, regional, and local officials all struggled over larger ideas such as relocating cities, modernizing public works, and creating a long term vision for building a new, modern, and beautiful southern region. The state organized the relief and reconstruction effort and by the end of June almost all the provisional housing had been completed. Using 115 million pesos provided by the government, provisional housing was completed in almost 90 days. In Chillán, the urban center that experienced the most damage, the state invested nearly 20 million pesos into the housing effort. Government funds built 70 surgical areas in Schleyer Park and 1,500 rooms had been distributed in small houses of two, three, or four rooms. In the area surrounding Chillán, ten schools, hospital rooms, and houses for the medical staff had been constructed. In total, removing and clearing debris and rubble cost seven million pesos. Then, the contractors who constructed the provisional buildings received 60 million pesos.<sup>47</sup>

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46. “La reconstrucción del sur de Chile,” *Zig Zag*, 16 February 1939.

47. “Pueblos nuevos,” *Zig Zag*, 23 June 1939.

The president and his minister of development reviewed the progress made during one of his and his cabinet's frequent visits to the disaster zone at the end of June. They were informed that those living in the temporary housing enjoyed their new homes and satisfied their needs. The head of the Department of Architecture, Carlos Cruzat, bragged that "the only drawback that these temporary constructions had was that after a few days living in them, no one would want to leave." Another official noted that the temporary constructions were model after the pavilion system the United States used for workers building the Panama Canal. He highlighted the temporary buildings quality. From schools and hospitals to jails and government buildings, these structures it was estimated would last for 25 to 30 years. The buildings wherewithal was important because estimates of complete reconstruction of the disaster zone began at ten years. The survivors, however, hoped to start building huts or wood cabins on their own properties shortly, but their lands remained filled with rubble and debris.<sup>48</sup> Despite the enormous efforts to construct short term structures, a census of disaster zone revealed that 200,000 people remained without housing. Based on the census, the authorities estimated 15,000 structures would need to be built to meet the population's needs.<sup>49</sup>

Environmental and technological obstacles slowed the pace of reconstruction as well. The Ministers of Work and Development, Antonio Poupin and Arturo Bianchi, in an interview noted that construction materials needed to be sent to the disaster zone. They emphasized the need to stop speculation that raised the prices of construction materials to outrageous levels. Cement continued to be one of the most sought after material along

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48. "Pueblos nuevos," *Zig Zag*, 23 June 1939.

49. "El ministero de fomento iniciará construcción de casas provisionarias," *La Opinion*, 22 February 1939.

with zinc, wood, iron, nails, and paint.<sup>50</sup> At the beginning of March, the minister of development in a meeting with the general director of state railroads and the administrator of public workers planned to transport construction materials to the disaster zone. Special transportation teams were organized to move materials to the disaster zone for the construction of temporary shelters.<sup>51</sup> The city of Tomé epitomized the difficulties of obtaining building materials. In the middle of March, Tomé continued to have a temporary housing problem. The situation stemmed from the materials needed to construct houses and other structures being located in the disaster zone. The solution to the problem was to ship in prefabricated buildings from outside the disaster zone.<sup>52</sup>

### **Science and Technology: The Progress of Modernity**

Independence in Latin America ushered in liberal agendas of varying shades during the first decades of the nineteenth century.<sup>53</sup> This process gave way to violent struggles with conservative elements that overwhelmingly controlled the state apparatus. The liberal project, however, re-emerged during the second half of the 1800s. Technological advancement or progress was central to the creation of liberal modern states in Latin America. The railroad became emblematic of these modernizing efforts. The *científicos* carried out a program of technological modernization under the Porfio Díaz regime hoping to pave Mexico's path to modernity. Admirers of the French

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50. "Cemento y otros materiales, declarados artículos de primera necesidad," *La Opinion*, 23 February 1939.

51. "Habitaciones para la zona del terremoto," *El Mercurio*, 2 March 1939.

52. "El problema de la habitación se hace difícil resolverlo," *El Mercurio*, 10 March 1939.

53. Thomas P. Gilk, "Science and Independence in Latin America," *Hispanic American Historical Review* 71, no. 2 (May 1991): 307–34.



philosopher Auguste Comte were the intellectual architects behind the scientific and technological projects from the mid-nineteenth century onward. Positivism in Latin America adapted to local conditions and thus yielded different results in Mexico, Argentina, and Chile.<sup>54</sup> In general, positivism prioritized science over theology or metaphysics. While Latin American countries emphasized different characteristics of positivistic thought, they all “embraced the prescription that naturalism and empiricism led the way to progress.”<sup>55</sup> The liberal slogan of “order and progress” caused Latin American nation-states to model themselves after their European counterparts. The integration of positivism into a country’s political ideology helped to fund national institutions such as archeological or natural history museums, professional, medical, and scientific organizations. These newly created research institutions were staffed by European scientists, who were given generous endowments.<sup>56</sup>

### **Albion’s Scientists and Italy’s Engineers**

After the 1861 Mendoza Earthquake the national and municipal governments commissioned European scientists to study the province’s geology to determine the best location to rebuild the provincial capital. The national government sponsored David Forbes, an English geologist, to carry out the first study of the subsoil and make recommendations for reconstruction. At the end of April 1861, Forbes submitted his

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54. Ralph Lee Woodward, ed., *Positivism in Latin America, 1850–1900: Are Order and Progress Reconcilable?* (Lexington, MA: Heath, 1971); Allen L. Woll, “Positivism and History in Nineteenth-Century Chile: José Victoriano Lastarria and Valentín Letelier,” *Journal of the History of Ideas* 37, no. 3 (1976): 493–506; Leopoldo Zea, *Positivism in Mexico*, Josephine H. Schulte (Austin: University of Texas Press, 1974); Charles A. Hale, *The Transformation of Liberalism in Late Nineteenth-Century Mexico* (Princeton: Princeton University Press, 1989).

55. María Portuondo, “Constructing a Narrative: The History of Science and Technology in Latin America,” *History Compass* 7, no. 2 (2009): 508.

56. Portuondo, “Constructing a Narrative,” 500–22.

study to the government. The three part report found that the earthquake's cause could be attributed to volcanic activity. It speculated that renewed volcanic activity would spark another round of temblors. Thus, he proposed that the city be reconstructed on the other side of the Mendoza River, in Luján, or rebuilt in the same place but that the lower part of the city should be abandoned and the Alameda extended. The government hoped that it would not have to leave the old city and looked for another geologist in Chile to give them a second opinion.<sup>57</sup>

The Mendocino government consulted Ignacio Domeyko Ancuta regarding the optimal location to rebuild the ruined city based on the region's geology. Domeyko was an exiled Polish and Lithuanian scientist that lived most of his life in Chile. He studied at the School of Mines in Paris and later the Chilean Government contracted him to teach at the College of Coquimbo and shortly there after he joined the faculty at the University of Chile. Domeyko's recommendations were to rebuild at a site located outside of the zone where the earthquake had caused structural damage. If reconstruction at a new site did not take place and the city was simply rebuilt, Domeyko warned that Mendoza would meet the same fate as Concepción. Earthquakes repeatedly destroyed the Chilean city during the eighteenth and nineteenth century, only to be rebuilt in the same location. Furthermore, experts should examine the selected location where buildings were going to be erected to check the subsoil and geological layer's thickness.<sup>58</sup>

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57. González del Solar Melitón to Don Augusto Fauvety, 30 April 1861, Mendoza, in Junta de Estudios Históricos de Mendoza, *Revista de la Junta de Estudios Históricos de Mendoza*, 240.

58. Ponte, *Mendoza, Aquella Ciudad de Barro*, 179–80; José Aníbal Verdaguer, *Historia Eclesiástica de Cuyo*, Vol. 2 (Milan: Premiata Scuola Tipografica Salesiana, 1932), 426–27.

Scientific observations entered the debate about where to rebuild the city during the winter of 1862. Carlos García Huidobro's, a Chilean engineer and disciple of Domeyko, examinations of the quality of terrain surrounding Mendoza appeared in the legislative records in October 1862. He argued that the 1861 earthquake's cause was the natural electrical currents that ran between western Argentina and Chile. The location of the new city should be located where glassy or silica substances are predominate so that they would inhibit the flow of electricity instead of plastic or clay materials that made for good energy conductors. Huidobro's report reached the legislative level because it met the political needs of Governor Franklin Villanueva and his minister Eusebio Blanco. Huidobro's report advised against building at the San Nicolás site because its canals overflowed their banks after the 1861 earthquake and the soils had clay characteristics. Instead, it favored a more distant location far removed from the old city at the current town of Maipú.<sup>59</sup>

The scope of the 1868 natural disaster and the frequency of this phenomenon around the world resulted in European scientists giving a great amount of attention to the catastrophe. The 1868 Arica earthquake sent a tsunami that reached all corners of the Pacific Rim from California, to Japan, Australia, and New Zealand. The Peruvian government named a scientific commission to investigate the cause of the natural disaster that struck the southern coast headed by the renowned Italian scientist Antonio Raimodi. At the time of the earthquake, the Chilean government had employed a French cartographer who recorded data about the catastrophe and sent a report back to the Académie des Sciences de Paris. Claude Gay, a Frenchman, who lived and traveled

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59. Ponte, *Mendoza, Aquella Ciudad de Barro*, 182.

throughout Chile also contributed a report to the Academia de Ciencias de París. The disaster also entered Austrian scientific circles. Ferdinand Von Hochstetter, a geologists and oceanographer, studied the aftermath of the natural phenomenon.<sup>60</sup>

The 1894 San Juan and La Rioja earthquake provided another opportunity for European geologists and geographers to study the phenomenon. Argentina had already been well known among European scientists as the premier destination to study geological phenomena in part because of the resources at University of Córdoba and museum of La Plata. A German geologist working at the University of Córdoba warned that even though Argentina held a distinguished place among European scientists, without sustained government support, the nation's universities would lose their position to other South American countries such as Chile or Brazil.<sup>61</sup>

After the 1894 earthquake, scientists speculated on the causes of the seismic event. Geologists built on the experience of the 1861 Mendoza earthquake to further hypothesize about the more recent geological movement. Theories ranged from earthquakes being tied to volcanic activity because of a fault opened up by the 1861 quake between San Juan and Mendoza, alluvial planes, subsoil water, the consistency or makeup of the soil, to atmospheric conditions. These scientific theories had an affect on recommendations for where to rebuild the city.<sup>62</sup> Unlike the Mendoza case, where scientists argued for building a new city on more stable ground, a geologist argued that

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60. Fernández Canque, *Arica, 1868*, 296–304.

61. Guillermo Bodenbender, “El terremoto argentino de 27 de octubre de 1894,” *Boletín de la Academia Nacional de Ciencias en Córdoba* 14 (1895): 294.

62. *La Prensa*, 28 October 1894.

moving he San Juan would not safeguard it from future earthquakes. In a report to the University of Córdoba, German geologist Guillermo Bodenbender argued that “there did not exist in the whole of the province a site free from faults, suitable for a new city.”<sup>63</sup>

After the 1939 Chillán earthquake, the Chilean press reported on the latest architectural, engineering, and scientific theories that could be adopted to the Chilean environment. Chilean reporters and professionals looked to their Italian counterparts for answers about antiseismic building standards and practices. The solution according to these technical experts was to build with modern principles that had advanced to such a degree that they could at least guarantee relative security when the earth shook. The latest antiseismic building methods employed scientific theory to better construct structures. In the 1930s, seismologists believed that earthquakes produced “seismic waves” that originated from a buildup of gas deep within the earth. This scientific theory about seismic waves produced architectural and engineering innovations in antiseismic building practices. One observation was that vaults built on a vertical axis like an apse resisted the earth’s tremors. Another conclusion made by an Italian engineer, proposed that to reduce the effects of temblors houses should be built in cylindrical form or at least the corners should be reduced to rounded edges. Likewise, another Italian scientist observed that the damage to buildings, particularly walls, were nearly always perpendicular to the radius of the seismic waves. Thus, he theorized that it was important to orientate buildings in a way that the seismic waves met the building at a diagonal. In Italy, it was discovered that the earthquakes moved in a northwest to southeast or a northeast to southwest direction. With these observations, an Italian engineer had made a seismic map of Italy that

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63. Bodenbender, “El terremoto argentino,” 327.

indicated the centers of seismic activity. Journalists and professionals urged the government and universities to carry out similar studies. Constructing a map of seismic activity in the country would be an important step to help solve a practical problem for Chile.<sup>64</sup>

After the 1939 earthquake destroyed much of the southern region's transportation infrastructure, an article in *El Mercurio* celebrated the foreign technology and engineers who built the roads, bridges and railroads. French architects and engineers greatly contributed to the construction of railroads, maritime projects, bridges such as the one that crossed the Bío Bío, and thousands of other public works that added to the industrial progress of the country during the second half of the nineteenth century. French professionals also undertook important water works such as the dry docks at Talcahuano or the floating docks at Valparaíso, and the Mapocho canal. Likewise, they trained and influenced Chilean university students, who became the country's architects and engineers. Some of these Frenchmen achieved fame for their engineering and architectural feats. For example, Alfredo Manuel Luis Leveque Blaise gained fame for his railroad that linked Paris to Lyon and the Mediterranean Sea. After the earthquake, he traveled to Chile three different times. The first time, he studied the floating docks of Valparaíso, the banks of the Maule River, and made plans for bridges over the Maule, Longaví, Ñuble, and Bío Bío River as well as the dry docks at Talcahuano. During his second trip to Chile, Leveque Blaise studied the dock project and the canal project for the Mapocho River in Santiago. He also began his most lasting and greatest achievement, the bridge across the Bío Bío River that stretched 1,884 meters. French engineers played an

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64. Francisco Rosende "El terremoto del 24 de enero: Algunas consideraciones de interes para la edificación," *El Mercurio*, 10 March 1939.

important role in the construction of the first Chilean railroads. The first railroad networks were built by French engineers such as the Santiago to the southern region line, constructed from 1855 to 1870 by Ramón Laval and Chevalier. Other Frenchmen also contributed to the industrial progress of Chile, George Tureene in 1829 introduced the first steam motors to Chile; Enrique Jiquier, a professor, taught students the intricacies of road and bridge engineering at the University of Chile in the 1860s; and already in 1849, Julio Jariez had funded the school of arts and trades. The article recognized the Frenchmen's contributions to Chile, after the earthquake forced the country to embark on massive new transportation projects to replace those designed and constructed by French engineers.<sup>65</sup>

The Chillán earthquake produced a renewed interest in seismology and also confirmed people's faith in European building standards and forms such as concrete. The January 24 earthquake produced oscillations that were not spiral or sideways or horizontal. Instead it was an abrupt bottom-up movement that threatened small buildings. This type of seismic movement was believed to be less destructive to heavy buildings and had almost no effect on buildings constructed with solid materials like reinforced concrete. For example, the towers of churches—except for one or two very old and poorly constructed ones—did not fall. Spiral or lateral oscillations were fatal for tall buildings. Scientists and engineers observed that if there was any solid construction with a wide base that fell, it did so only because one of the walls or pillars failed to maintain its support; thus, dragging down the rest of the building. For example, in Concepción a magnificent construction made of modern materials with its resistance calculations done

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65. "El ferrocarril de Santiago al Sur," *Zig Zag*, 23 June 1939.

in London collapsed because of a failure of the lower interior that dragged down the entire structure. Similarly, in the 1906 earthquake, the top of the commemorative pyramid of the old Tajamar on the banks of the Mapocho separated and spun around but did not fall. Spiral oscillations, according engineers, made it difficult for any building to remain standing. Likewise, strong lateral movements would almost always bring down tall buildings constructed on small foundations. In Chile, however, the building code prohibited skyscrapers with reduced bases. While Chile looked to foreign experts for technological answers to seismic questions, universities around the world came to Chile to study and exchange seismological data and theories. Scientists at Yale University studied the possibility that waves caused by the contraction and dilation of the earth were related to seismic movements. Other scholastic institutions contributed to the burgeoning study of earthquakes and tsunamis, especially in areas devastated by these natural phenomena, such as the universities of Tokyo, Chile, Hawaii, La Paz, and La Plata.<sup>66</sup> The infatuation with European technology and materials caused many to put their trust in foreign designs, rather than observe the native structures and building materials readily available for a wide portion of the population.

### **The Barbarity of Adobe and the Civility of Concrete**

Technological transfers from Europe to other environments were not carried out without adaptation to local conditions.<sup>67</sup> For nineteenth-century liberals, adobe structures

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66. Alfredo Vega Beza, "Los temblores y terremotos," *El Mercurio*, 5 March 1939.

67. Clancey, *Earthquake Nation*; Gregory Clancey, "Foreign Knowledge: Cultures of Western Science-Making in Meiji Japan," *Historia Scientiarum* 11, no. 3 (2002): 245–60; Bankoff, *Cultures of Disaster*; Greg Bankoff, "The Historical Geography of Disaster: 'Vulnerability' and 'Local Knowledge' in Western Discourse," in *Mapping Vulnerability: Disasters, Development and People*, ed. Greg Bankoff, George Frerks, and Dorothea Hilhorst (London: Earthscan Publications Ltd., 2004), 25–36.



represented the backwardness inherited from their colonial past. Latin American intellectuals like Sarmiento hoped that modernity and progress would overcome and erase their nation's colonial heritage. In the urban landscape, the most identifiable trait of colonial buildings was the building material of adobe. After the 1861 Mendoza earthquake, Italian architects hoped to replace adobe structures that pervaded the landscape with European fashions and styles built from wood or brick. The arid mendocino environment, however, was not receptive to the widespread use of wood for structures and European prefabricated homes were only affordable for the wealthy elites. While adobe structures did persist well into the end of nineteenth century, they eventually gave way to more modern structures of brick and reinforced concrete. More importantly, European technology transfers were not blindly adopted by the populace but instead they were adapted to the local economic and natural environments. Similarly in Chile after the 1939 Chillán earthquake, architects and technical professionals derided the use of adobe as a building material. Those who argued for reinforced concrete noted how well these structures weathered the catastrophe and attributed those structures that did fall to poor quality materials or bad execution during construction. Despite a few notable failures, the proponents of reinforced concrete remained faithful to the material as the best antiseismic construction. Other observers, however, noted that the majority of Chileans would be unable to rebuild using reinforced concrete because its cost remained prohibitive. Thus, other architects and engineers proposed using wood or reinforced brick that would not only stimulate the nation's economy but also help to solve the country's housing crisis. Like Mendoza, the choice of building standards was not merely a copy of

European technology but rather an adaptation to the Chilean economic and natural environment.

**Argentina.** From colonial times until the middle of the nineteenth century, Mendoza's buildings were virtually homogenous. Construction consisted mostly of ground level or one-floor buildings, with walls made of adobe, covered by mud or cane laid over wooden trusses. Travelers of the period noted the colonial aspects of the city's architecture and admired the city's seven churches. At the same time, buildings conformed to the environmental conditions of the arid landscape of the Andean foothills. In the 1850s, buildings based on Italian experiences began to be seen in the region; they introduced the use of wood and promoted the use of bricks in place of adobe, especially in cases of large or wide structures. Adobe, partly because of its generalized use and its flexibility during seismic movements, remained the preferred building material. By 1860, Mendoza had 1,200 structures including its monumental architecture of churches, a theater, and a shopping center of three floors.<sup>68</sup>

At the end of the nineteenth century and the beginning of the twentieth century, elites and construction professionals looked for antiseismic building solutions. Seminars and conferences by engineers, architects, and geologists in addition to industry expositions, worked toward building earthquake proof constructions. After the earthquakes of 1894, 1896, and 1903 the movement increased toward improved buildings promoted by the private sector and state institutions. Liberalism's expectation of indefinite progress and the trope of modernization spurred projects that would trickle down and permeate throughout society at large, not just the elites. Ideas of the common

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68. Silvia A. Cirvini, "Mendoza," 172.

good and general welfare became important concepts for politicians and intellectuals to advance antiseismic building practices. Beginning in 1906, public projects and private construction had to meet antiseismic requirements. In Mendoza, after the August 12, 1903 earthquake, the authorities named official commissions to inspect building damage and advise on rebuilding and study the causes of tremors and determine the means to protect against them. In June 1906, San Francisco was struck by a terrible earthquake and later that year in August, Valparaíso also experienced a strong seismic shock. The local press in Mendoza published a number of articles that explained the causes of the phenomenon. As a response to these two destructive earthquakes, a new company, Constructora Andina, emerged to build antiseismic structures. The company's objective was to develop and distribute the use of reinforced concrete and work toward unifying the country's political authorities to address the problem. Reinforced concrete, however, faced a number of obstacles in becoming a wide spread building material. The obstacles were the high cost and the need to import cement. In 1910, the province solved part of the problem by building a cement factory in Mendoza—Compañía de Cales y Cementos Argentinos Limitada.<sup>69</sup>

The 1861 earthquake significantly modified the urban space but it also accelerated a change in the culture of the province that spread across the entire country during the second half of the nineteenth century. It changed daily life, aided in bringing the concept of progress, cultural change, and innovation, and finally, it stimulated contact and

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69. Silvia Augusta Cirvini, "La edificación 'contra temblores': aportes para una historia de la construcción sismorresistente en Argentina," *Revista de Historia de América*, no. 128 (January 2001): 153–55.

interaction with the outside world.<sup>70</sup> Traditional materials such as adobe or quincha stubbornly and slowly gave way to structures of wood, brick, and eventually reinforced concrete.<sup>71</sup> Buildings continued to be limited to ground floors or one-story structures. This was not simply the limits of construction techniques employed but rather the lack of hard woods in the region. Only poplar or fruit trees were available and the cost of timber from Chile or Paraguay was very expensive for a community impoverished by the earthquake that had many other more urgent needs to satisfy. Antiseismic public buildings—the government house, the cathedral, jail, and hospital—all built between 1863 and 1880 continued to use some earthy materials or elements. By the end of the century, however, the railroad reached Mendoza and brought with it a new element for different construction. The railroad brought professionals and technical experts, foreign laborers, and imported materials in addition to serving as a mechanism for improved communication. Prefabricated constructions of wood came to Mendoza on the railway. These structures were quickly diffused throughout countryside. It also became tradition to add a wood floor over a ground level made of adobe. The mendocino climate and lack of lumber prevented ubiquitous use of wood in construction. Furthermore, wood structures were also vulnerable to fire in a region characterized by droughts and earthquakes. In fact, the 1861 earthquake sparked fires that consumed numerous city blocks. Thus, in the

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70. Silvia Augusta Cirvini, “La Edificación ‘Contra Temblores’,” 143.

71. Quincha refers to a regional building system that is common in the Andes since precolumbian times. Used by the Inca, the quincha system is a network of cracked reeds plastered with a mixture of mud and straw. The result is an enclosure that is very light that can withstand earthquakes and temblors in the seismic zones of Argentina, Chile, and Peru.

period after reconstruction, a mix of old and new practices was observed as buildings continued to use adobe or quincha mixed with new practices marked by wood.<sup>72</sup>

In nearly 80 years since the Santa Rita earthquake, mendocinos had forgotten the collective experience of a really destructive disaster, especially with the absence of small temblors. This lack of a significant disaster experience or small reminding seismic jolts impeded a certain seismic consciousness that might have spurred mendocinos to undertake better building practices or preparedness for these situations. After the 1861 Mendoza earthquake, the province received technical assistance from Chile, whose knowledge and building traditions were already antiseismic in a country frequently roiled by temblors and violent seismic shocks.<sup>73</sup>

Beginning with the 1861 earthquake, foreign professionals and technical experts advised against continuing to use native building practices such as adobe and instead replaced them with European imported materials and designs. Foreign professionals and technical experts also played an important part in the reconstruction of Mendoza. The English geologist, David Forbes, advised the province to abandon adobe and instead build structures using reinforced wood lined with reeds and plastered cracks.<sup>74</sup> The catalogs distributed to prospective prefabricated home buyers often highlighted foreign designs. One particularly new prospective house marketed was labeled as a “chalet” along with its various variants such as Swiss or North American cottages. The fashion and the new technologies used in these structures Europeanized housing for the cultural

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72. Silvia Augusta Cirvini, “La Edificación ‘Contra Temblores’,” 145, 149.

73. Silvia A. Cirvini, “Mendoza,” 144.

74. David Forbes, “Informe sobre el terremoto de Mendoza,” in *Revista de la Junta de Estudios Históricos de Mendoza*, 110–20.

elite. The use of steel at the end of the century also enabled the construction of large buildings. The importation of steel trusses from England encouraged the construction of buildings with various floors. The principal problem with steel was its cost which was high and left it as a viable building material only for the elite. Furthermore, the 1906 San Francisco earthquake demonstrated that it, too, was vulnerable to fire.<sup>75</sup>

While foreign experts, materials, and designs were imported into Mendoza after the 1861 earthquake, it quickly became apparent that buildings for the majority of the population had to conform to the financial and natural environment of the province. During the rebuilding phase in 1863, the government of Mendoza sought technical assistance from an Italian engineer, Pompeyo Moneta. His objective was to construct buildings that were both simple and economical. Moneta's projects included: the government house, the cathedral, a jail, a school, and a hospital. One of his primary concerns was making the buildings antiseismic and appropriate to the region.<sup>76</sup> While the Italian designed many of these projects, the government house and the cathedral were both constructed by the French firm Sebelin, Jouvert, and Barbier, and the jail by the Italian Andrés Clerici. Here European engineers and construction firms generally adopted their new architectural methods to the local environment. The building materials employed were much more elastic, using for example baked bricks, and they were also built economically. Technical innovations centered on the implementation of wood structures and limiting the use of adobe and quincha in walls. The different structural

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75. Silvia Augusta Cirvini, "La Edificación 'Contra Temblores'," 151.

76. Silvia A. Cirvini, "Mendoza," 178.

parts linked together, for example the walls to the roof. Structures, however, continued to be limited to ground or single level units.<sup>77</sup>

Again after the 1894 earthquake in San Juan and La Rioja, the issue of materials used in building construction came to the forefront. A German geologist, Guillermo Bodenbender, at the University of Córdoba studying the causes of the earthquake observed that adobe was one of the best antiseismic materials, especially because of its availability and cost effectiveness for the majority of the local populace. Bodenbender noted that engineers had been discussing the best building practices to resist earthquakes, but “the ideas they are emitting are in part good but not very practicable.” Instead he recommended that engineers use materials that were plentiful in the surrounding environment. This would ensure cheap building material for those unable to afford reinforced concrete or the latest European fashion, especially in the poor departments in San Juan’s northern regions. Instead of criticizing adobe constructions as backward, Bodenbender praised adobe as a good and pragmatic building material, when constructed on sound foundations and with quality craftsmanship. Adobe would serve as an excellent antiseismic building tool. Other building materials such as lumber would not work in a region without many trees or made building costs very expensive. While limestone was an abundant resource, there was not a way for the poor, the majority of the inhabitants, to include this material in their buildings’ construction. Instead, the geologists recommended that government should prohibit clearly dangerous constructions and encourage citizens to use appropriate building materials that are available to the majority of inhabitants. With this objective in mind, the Bodenbender’s final recommendation was

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77. Silvia A. Cirvini, “Mendoza,” 180–81.

the appointment of a commission of engineers in each department not to work at their desks but to show the populace the best building practices.<sup>78</sup>

**Chile.** A 104 years before the 1939 earthquake, Chillán experienced another devastating disaster that ruined the city and required a commission to assess the damage done to buildings. On February 20, 1835 in the early afternoon, a strong earthquake destroyed the city of 6,000. The city was characterized by narrow streets and adobe houses with whitewashed facades that gave the town a uniform look. Only a portion of the hospital, one room of the jail, and one house remained standing. Despite the physical damage, the quake left few victims. The municipality called a commission to assess the damage. In 1836, the commission reported that 156 walled houses and nine public buildings were damaged.<sup>79</sup> Another report by scientists Ambrosio Lozier, Simón Rodríguez, and Juan Jose Arteaga, recorded “the number of buildings ruined, the proportion of debris, and what remained standing despite the damage; the cost of removing the ruins and reconstruction of the destroyed part of the city.” Also, the scientists conducted a geological study of the terrain to propose locations for rebuilding the city in a more stable area before reconstruction began on the same site. The report yielded evidence that supported the consensus among technological professionals concluded over the next century that heavy structures, in this case made of brick, were more likely to withstand and survive an earthquake. The report found the earthquake damaged but left standing 43,916 brick, 11,104 adobe, and 24 rock structures. Similarly, walls constructed of adobe (27,270) collapsed at a greater rate than brick (22,005) or rock

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78. Bodenbender, “El terremoto argentino,” 327–28.

79. Félix Leaman de la Hoz, *Historia urbana de Chillán, 1835–1900* (Chillán: Ediciones Instituto Profesional de Chillán, 1985), 1.



(477). Heavy substances, however, also collapsed. The cathedral's tower fell, breaking into pieces in the city's central plaza. The destruction of a central feature in the urban landscape demonstrated to citizens the vulnerability of structures large and small, brick or adobe, to earthquakes.<sup>80</sup>

In order, to prevent widespread damage and decrease the number of fatalities caused by earthquakes, building codes and ordinances had to be more widely and strictly enforced. The Association of Architects of Chile carried out a study on reconstruction. The association found that in a country that experienced a significant earthquake every ten years, the nation had failed to enact or enforce building codes. Thus, each catastrophe surprised the nation. The architects' study cited the southern city of Talca as a model for other Chilean cities and towns. In Talca, repeated earthquake experiences led to the passage of construction ordinances. The architects observed that the majority of their structures that adopted the regulations remained standing and survived the 1939 earthquake. The architects recommended that the building codes implemented in Talca be generalized to the country. Simply passing construction ordinances, however, would not ensure enforcement and adherence to the regulations. Each municipality would need regulators to oversee the application of the building codes and those cities with large populations would need more bureaucrats. For example, in Concepción, there were only two municipal employees for a city that had real estate valued at 370 million pesos. Building codes were not only for the towns and cities; the architects recommended that the countryside also needed regulation and oversight. The architects association recommended that the nation's politicians study legislation from other seismic countries

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80. "Algo sobre el terremoto de 1835," *El Mercurio*, 9 March 1939.

such as Japan, Italy, and the United States and find laws and practices that could be applicable for Chile. After passing a strict building code and funding oversight, the architectural commission urged the government to carry out a public education program targeted at children and workers to bring the issue into the front of the national consciousness.<sup>81</sup>

The Chilean Association of Architects came to six general conclusions after their study of the 1939 earthquake. First, the building ordinances needed to be sufficient for ensuring structural integrity during the earthquake. Furthermore, the building codes should be implemented throughout the country including the rural areas; and enforced by regulators. The organization argued for a rigid and inflexible application of the building ordinances throughout the country. Second, the construction regulations should be applied retroactively. The architects were particularly concerned with public buildings occupied by crowds such as churches, hospitals, and theaters. Any of these structures that were not up to code because it was an old building risked the lives of many citizens. Many observers pointed to the collapse of Chillán's main theater during the 1939 earthquake that yielded a high death toll as an example. Third, the group of architects proposed that all buildings not constructed according to the ordinances or used inappropriate materials should be torn down to avert future deaths during catastrophes. Buildings that were repaired and brought up to code, however, would earn a reprieve from the wrecking ball. Fourth, a scientific investigation would study what materials and construction procedures would react the best under the stress of seismic movements. Furthermore, the building practices and materials had to be economically feasible for the

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81. "Algo mas sobre la reconstrucción de la ciudades devastadas por el terremoto," *El Mercurio*, 24 March 1939.

majority of Chileans. Fifth, a geological study should be carried out for all the southern cities before rebuilding began. By examining the subsoil, a proper foundation could be laid on solid ground leaving marginal areas aside for parks or plazas. Sixth, the organization urged politicians to create building codes and regulations that were standardized for the entire country. If these recommendations were adopted, the Chilean Association of Architects believed they would further erase the country's colonial past and heritage that Sarmiento observed was fading away in central valley cities during the mid-nineteenth century. Indeed, antiseismic building codes and regulations symbolized modernity and progress and would help municipalities move toward rational building codes.<sup>82</sup>

The nation's premier newspaper, *El Mercurio*, contributed to bringing awareness about antiseismic building constructions through a weekly architecture and engineering section during March 1939. The series objective was to provide an autopsy of the ruins and better understand the causes of the vast destruction inflicted by the earthquake and how the country could build better buildings to withstand nature's fury. One of the central themes of the series was the poor quality of building materials used in constructions before the earthquake and the certainty that wide spread use of reinforced concrete would be the best antiseismic measure.<sup>83</sup>

The principal reasons for the collapse of so many buildings in the 1939 earthquake was the antiquity of the majority of buildings, the lack of homogeneity of materials, and their poor state of construction. Only a few buildings remained standing or

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82. "Consideraciones sobre los informes presentados por los arquitectos," *El Mercurio*, 17 March 1939.

83. Bernardo Morales, "En la zona sísmica," *El Mercurio*, 3 March 1939.

only experienced light damage and these structures conformed to the building code. A particularly straight forward and pointed observation, one engineer made was that the southern cities were in general very old and of very bad quality. Because social and civil life in Hispanic urban areas concentrated around the commercial areas, cities' centers with their accumulation of wealth erected more progressive and modern buildings. Likewise, the houses near the cities' centers were also modernized. These houses, however, only gave the aesthetic illusion of modernity. If one removed the layers of stucco that covered the houses near the urban centers, styles from Le Corbusier to neo-classical and finally Louis XVI could be found. Thus, peeling back the layers of stucco revealed the antiquity of the structures that belied their modernity. Indeed, often adobe walls were covered up by brick parapets and ornate cornices. In this manner, simple ranchos were converted into "great mansions." The old buildings that pervaded the country were constructed from rocks, with adobe walls or sometimes brick and mud tiles. Despite their modern outward appearances, the earthquake reduced these buildings to piles of ruins and rubble.<sup>84</sup>

Instead, rebuilding the southern urban landscape with reinforced concrete ensured compliance with proposed building ordinances and would withstand future temblors. Reinforced concrete, engineers argued, should be the material used to build structures in a seismically active country like Chile because it was believed that these buildings could withstand violent geological movement. To make reinforced concrete structures more economical, the engineers suggested that the mezzanine be removed and replaced with wooden joints. Building ordinances in the southern region would have been more lenient for

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84. Morales, "En la zona sísmica," *El Mercurio*, 3 March 1939.

wooden structures in isolated regions but the strict application of building codes in urban areas would create quality antiseismic structures. Despite the overwhelming endorsement by architects and engineers of reinforced concrete as an unshakable material for antiseismic structures, these buildings did collapse during the 1939 earthquake. An engineer attributed the spectacular collapse of the Williamson, Balfour, and Company merchant house in Concepción and a cloth factory in Tomé not as a failure of reinforced concrete system but rather the poor quality of the concrete used in the structures. In addition, another contributing factor to the failure of these two reinforced concrete buildings was the region's sandy or muddy soil.<sup>85</sup> The Williamson, Balfour, and Company building and the factory in Tomé received much attention from technical and professional experts. The Chilean Association of Architects agreed with the analysis that the buildings collapsed because of poorly and improperly executed construction and a lack of quality cement. Similarly the Tomé factory disintegration was blamed on the use of poor quality building materials. The Chilean Association of Architects, however, continued to maintain that reinforced concrete when executed correctly with quality materials remained the best antiseismic architectural form.<sup>86</sup> A more mixed example that needed an explanation was the San Francisco Church in Chillán. It was a construction with monumental dimensions built using internal coated iron and reinforced concrete. While the walls and pillars did not show any cracks, the massive dome received large cracks and faults. The dome was made of reinforced concrete but architects again blamed the dome's

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85. Morales, "En la zona sísmica," *El Mercurio*, 3 March 1939.

86. "Consideraciones sobre los informes presentados por los arquitectos," *El Mercurio*, 17 March 1939.

troubles on the poor quality of concrete used. Thus the concrete, according to reinforced concrete defenders, bonded weakly and made it vulnerable.<sup>87</sup>

Reinforced concrete enthusiasts blame their preferred material's failures on poor quality ingredients and noted the weaknesses in competing structures. Among the observations from the destruction of Chillán, constructions of brick or adobe with mud tiles systematically failed during the quake. By contrast, reinforced concrete largely resisted the earthquake and remained intact. Furthermore, scientific theories about seismic waves and observations from Chillán revealed the strength of heavy construction. The seismic wave that struck Chillán was from an east to west direction. Chillán's blocks were distributed like a chess board with the streets orientated according to the cardinal directions. The buildings received the seismic waves at perpendicular angles that made brick and mortar buildings unable to withstand the shocks. Likewise, low-slope roofs that were weakly connected to the walls with tiles of mud also systematically collapsed. By contrast, rigid constructions and reinforced concrete structures of one or two floors survived the earthquake in perfect shape. Buildings with one floor constructed from brick with pillars of reinforced concrete resisted the seismic shocks in generally good condition. This was particularly true in a sector of Chillán where no buildings made of brick or adobe were left standing. The prescriptions for building antiseismic structures seem clear from the evidence in Chillán. Constructions of reinforced concrete and those utilizing bricks with pillars of reinforced concrete were the most likely to ensure stability. For backers of reinforced concrete, the cost of building these structures paled when it was

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87. Francisco Rosende, "El terremoto del 24 de enero: Algunas consideraciones de interés para la edificación," *El Mercurio*, 11 March 1939.

clear to them that the buildings made from that material resisted one of the most violent earthquakes in Chilean history.<sup>88</sup>

Despite an engineering consensus that favored reinforced concrete, its prohibitive cost made it unaffordable to the majority of the population. Thus, the new technology had to be adapted to the financial environment. An alternative building system used brick reinforced by iron bars. This patented system won a prize at the exposition of economic housing in 1937. Reinforced concrete was very expensive. For each floor, reinforced concrete cost 550 dollars per meter squared. This put economic housing construction out of reach for the vast majority of Chileans including survivors of the earthquake. Instead, the reinforced brick could be made in the same mold as ordinary bricks. Furthermore, the bricks could be produced in the factories in Carrascal, San Bernardo, Concepción, and Los Angeles. Before the earthquake, their factories produced bricks and could once again bake the bricks in their ovens producing an estimated 15 to 20 thousand bricks per day of superior quality. Because of the amount of capital it would take to rebuild the south and the number of years of consistent investment by the government or private manufacturers, factories needed to be located near places with good quality clay. Furthermore, factories connected with new transportation networks, especially railroads made their products easily transportable to urban centers. The reinforced brick system of architecture could provide affordable housing to workers and people with scarce

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88. Francisco Rosende, "El terremoto del 24 de enero: Algunas consideraciones de interes para la edificación," *El Mercurio*, 11 March 1939.

resources. The architect J. Joaquin Jelvez reminded readers that “the question of working class housings is the first social question.”<sup>89</sup>

Other affordable antiseismic buildings were built from light materials. Mechanical engineering standards dictated that the less the mass the lower the destructive force of violent movements. The buildings that survived the earthquake were made of wood or hollow partitions. Thankfully, buildings with hollow partitions dominated the constructions of the province of Cautín, Valdivia, Llanquihue, and Chiloé in addition to the mining zones of Vallenar and La Serena. One article in *El Merucio*'s architecture series after the earthquake bragged about the quality of Chilean lumber in the construction of wood buildings. When Chilean wood was lined with hollow partitions, it was both antiseismic and fire proof. As evidence, the article pointed out a few wooden buildings that had lasted more than 400 years. In addition to durability, these light weight constructions were 50 percent less expensive than reinforced concrete. Proponents of light construction methods and materials noted that the word “light” should not be automatically associated with fragile or weak. A light construction, they concluded, would have more resistance to violent geological movements than heavy building materials. Furthermore, light construction could spur the economy and help to solve the country's housing crisis. Lumber for these projects would come from the disaster zone, potentially putting hundreds of workers and farmers back to work. The wooden structures' durability, antiseismic construction, affordability, and the domestic production made it a perfect choice for officials trying to solve housing crisis, according to proponents. Advocates hoped that earthquake would open up new opportunities to

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89. J. Joaquin Jelvez, “Nuevo sistema económico y sísmico de albañilería de ladrillo reforzada para edificios de un piso,” *El Mercurio*, 17 March 1939.



amplify and widen the construction industry in Chile from one that focused on heavy building materials to include lighter ones.<sup>90</sup>

### **Conclusions**

Disasters allowed politicians and intellectual elites to re-imagine their urban landscapes. For Argentine liberals like Sarmiento, adobe structures and mud roof tiles represented the backward inheritance bequeathed by Spanish colonialism. Before the 1861 earthquake, Mendoza was a dusty commercial entrepôt filled with sun baked adobe buildings without much decoration or artistry. The 1861 earthquake erased the colonial past and provided an opportunity for the Buenos Aires regime to rebuild a modern city that reflected the liberal idea of progress. One way to forget the past was by renaming streets and buildings. Politicians proposed moving the city's location away from its colonial foundation. Mendocinos rebuilt their homes and business along the Alameda that connected the old city with the new city, ensuring that the two areas would be linked in the urban center much to the frustration of provincial officials. Furthermore, liberal politicians hoped to do away with adobe structures and instead begin building with heavier materials. Adobe structures, however, persisted into the late decades of the nineteenth century. Although liberal visions for the new modern city were largely frustrated, some of their goals gradually came to fruition.

Similarly, the 1939 Chillán earthquake provided an opportunity for the left of center Popular Front government to implement its political agenda. When Aguirre Cerda proposed his reconstruction and development program, the Chilean President outlined his vision for the rebuilt southern cities. He hoped that the urban workers would be

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90. Jarloff, "El terremoto del sur y las construcciones económicas," *El Mercurio*, 17 March 1939.

integrated into cities' centers rather than left out on the margins of urban areas. Other commentators hoped to modernize the southern urban centers by rebuilding them using modernist urban planning principles and economic efficiency. For all of the lofty speeches and utopian urban plans for relocating and rebuilding the southern region little changed in the cities and towns physical layout. The ruined cities were largely rebuilt using the same grid lines and infrastructure. Indeed, in some towns residents opposed widening the streets. The earthquake also brought attention to the Chilean housing problem. While politicians and journalists hoped that the shortage of affordable housing could be solved in part through the reconstruction of the southern cities, the government struggled to obtain the necessary materials to build temporary shelters for the survivors. Furthermore, officials estimated that reconstruction would last at least ten years meaning many poor and working class survivors would be stuck in temporary housing for many years to come. Despite these setbacks in re-imagining the physical layout of disaster zone's cities, the president was able to push through congress his transformative reconstruction and development program.

When deciding the location to rebuild a city, reconstruct infrastructure, and determine the type of structures and materials that should fill properties, Argentine and Chilean governments turned to foreign architects, engineers and geologists for advice. After the 1861 Mendoza earthquake, the provincial government funded geological studies of the top soil hoping to avoid future disasters. Natural catastrophes in Chile and Argentina caught the attention of European scientists and many came to the region to make observations and record data and then published their findings in European journals. Some of the European scientists stayed and taught in Argentine and Chilean

universities disseminating the latest scientific theories to a generation of students. Despite the inundation of European architects and engineers proposing new building techniques using expensive materials, a pure transfer of technology did not occur. Foreign technology had to adapt to the Southern Cone's economic and natural environment.

While adobe represented barbarism and concrete or modern European building standards civilization in Sarmiento's dialectic, in practice the economic and natural environment made the problem more complex. While some technical experts and professionals derided adobe as a poor building material in seismic nations, their proposals required importing expensive materials. In Mendoza, Italian architects tried to sell buildings based on North American and European models and fashions. These buildings, however, were economically out of reach for the vast majority of the population. Furthermore, the arid environment of Mendoza would not support structures that required large quantities of lumber. As a result, adobe structures persisted well into the last decades of the nineteenth century in Mendoza. After the 1939 earthquake, architects and engineers proposed that the disaster zone be rebuilt using reinforced concrete. Like earlier proposals in Mendoza, this construction material's prohibitive cost meant that only the elite could afford it. Instead, other architects and engineers suggested building with reinforced brick or wood, materials that the popular masses were more likely to be able to afford in 1939. Producing buildings from these materials could help to spur economic growth in the southern region. Bricks could easily be made in rebuilt factories in the disaster zone and timber was a natural resource in the region as well. Indeed, foreign

models and technology had to be adapted to the natural environment where it was applied.

## CHAPTER 6

### CONFRONTING MODERNITY: DISASTERS AND RELIGION

To make sense of catastrophic events, survivors and distant observers turned to religion to find meaning and understand natural disasters or comfort and support in the face of tragedy. While religious interpretations of natural disasters were more prevalent during the colonial era, the supernatural explanations persisted into the national period. During the Latin-American Wars for Independence, theological and political disputes erupted among the Catholic Church's hierarchy, clergy, and laity over the meaning of seismic events. Royalist priests and bishops argued that temblors during the 1810s and 1820s revealed God's wrath against anti-clerical measures that re-orientated the relationship between the newly emerging Latin American states and the Catholic Church. By contrast, liberal clergy members and public intellectuals argued that the earthquakes were merely natural events. While intellectual and religious elites argued over the causes of disasters, the popular masses understood these events as punishment for their sins. Popular piety fueled by conservative priests pushed the faithful into public squares and streets, performing penance, crying out to their patron saint, the Virgin Mary or God for protection and mercy, engaging in religious processions, or bloody mortification rituals to appease the angry deity. These public displays of religiosity reinforced Protestant observers' stereotypes of Catholic Hispanics as superstitious and backward. By the mid nineteenth-century, purely religious explanations of earthquakes lost currency among the intellectual elite and were replaced by the latest scientific theories, religious leaders

shifted their focus to the perceived moral bankruptcy of the natural sciences and the disrespect for God in scientific explanations for these natural phenomena. By the end of the nineteenth century, however, modern scientific explanations of earthquakes and geological studies of the destroyed regions regularly accompanied the first reports of natural disasters to their readers. Despite the ascendancy of scientific explanations of disasters, religious institutions during the second half of the nineteenth century and beginning of the twentieth century turned their attention to providing spiritual and material welfare for the victims and survivors of natural disasters. The Catholic Church continued to play a role in the relief efforts and bishops, priests, nuns, and monks worked with the laity to raise donations for the afflicted.

### **The Catholic Church's Antagonistic Relationship with Modernity**

After the wars of independence, the Catholic Church faced a new and changing relationship with the nascent Latin American states. Although the Catholic clergy supplied ideas and leaders for the independence movements, the relationship with the new liberal governments was antagonistic. Liberals sought to curb the pernicious influence of the Catholic Church over politics and education and to reduce its economic power and liberate the individual in order to achieve progress. The first liberal governments after independence failed to erase three centuries of colonial rule in a decade. After a period of relatively conservative rule from 1830 to 1850, a new generation of liberal intellectuals emerged in the 1840s. These new liberals were generally more militant and strident in their opposition to the Catholic Church and more successful in implementing anti-clerical measures. From 1850 through 1880, some liberals saw in the Latin-American Church a large obstacle to progress and modernity.

Thus, they believed that the Church needed to be completely rooted out by removing its wealth, privileges, and institutions in order for society to change. The Church, in turn, aligned itself with conservative political groups. Catholicism dominated conservative ideology lending support to the argument that a strong state was buttressed by the Church and imbued with religious doctrine to maintain the morality of irrational human beings. The Catholic Church in Latin America concerned itself with the new ruling elites' faithfulness to religious doctrine. The religious institution worried less about the popular masses because their piety and devotion to the Church remained steadfast.<sup>1</sup>

The relationship between the Catholic Church and the embryonic states of Chile and Argentina differed greatly. In Buenos Aires, Church and state controversies were rather few in comparison to the rest of Spanish America. Many of the Church's powers and privileges had been removed before 1835 under the first liberal regime of Rivadavia. In Chile, Bernardo O'Higgins pursued a reform program that upset the Catholic Church.<sup>2</sup> The supreme director hoped to weaken the Church's influence and power by implementing anti-clerical measures such as education and cemetery reforms, religious toleration, and restrictions on religious processions. These attempts at reform were rolled back under Portales' leadership. The 1833 constitution enshrined Catholicism as the

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1. John Lynch, "The Catholic Church in Latin America," in *Latin America: Economy and Society, 1879–1930*, vol. IV, ed. Leslie Benthell, Cambridge History of Latin America (Cambridge: Cambridge University Press, 1986), IV:301–05, 315–17. For general histories of the Catholic Church or Christianity in Latin America, see also John Lynch, *New Worlds: A Religious History of Latin America* (New Haven: Yale University Press, 2012); Enrique D. Dussel, *Historia de la Iglesia en América Latina: Coloniaje y Liberación (1492–1973)*, 3rd ed. (Barcelona: Nova Terra, 1974); Ondina E. and Justo I. González González, eds, *Christianity in Latin America, A History* (Cambridge: Cambridge University Press, 2008); *Historia general de la Iglesia en América Latina* (Salamanca: CEHILA, 1981); Lee M. Penyak and Walter J. Petry, eds, *Religion and Society in Latin America: Interpretive Essays from Conquest to Present* (Maryknoll, NY: Orbis Books, 2009).

2. Cayetano Bruno, *Historia de la Iglesia en la Argentina* (Buenos Aires: Editorial Don Bosco, 1966); Austen Ivereigh, *Catholicism and Politics in Argentina, 1810–1960* (New York: St. Martin's Press, 1995).

state's religion and forbade public exercise of all others and gave the Church control over marriage. When Manuel Montt became President in 1850, he began to reform the relationship between Church and state by placing education under state control, allowing the state to have jurisdiction over clergy, and recognizing non-Catholic marriage rights. The liberalization of the 1833 constitution continued under President José Joaquín Pérez, who secured reforms that allowed for religious toleration of non-Catholics.<sup>3</sup>

Natural disasters elicited religious interpretation and responses. The 1755 Lisbon earthquake produced great anxiety among clergymen on both sides of the Atlantic. For observers in England, the great earthquake only reinforced the Black Legend and the perception of the Iberian Peninsula as backward and superstitious.<sup>4</sup> Earthquakes also provided opportunities for religious institutions to critique the governing authorities. After the 1746 Lima earthquake, clerics argued that the catastrophe was a punishment for the colonial government's corrupt leadership and ostentatious displays of wealth.<sup>5</sup> Likewise, after the 1812 Caracas earthquake, royalist priests argued that the disaster was God's punishment for the support for betraying the Catholic Spanish Crown by supporting the liberal independence movement. Politicized interpretations of disasters promoted by religious conservatives existed alongside popular beliefs that God used

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3. Carlos Silva Cotapos, *Historia eclesiástica de Chile* (Santiago: Imprenta de San José, 1925); Marcial Sánchez Gaete, Rodrigo Moreno Jeria, and Marco Antonio León León, eds, *La Iglesia en tiempos de la Independencia*, Historia de la Iglesia en Chile (Santiago: Editorial Universitaria, 2009); Marcial Sánchez Gaete, Rodrigo Moreno Jeria, and Marco Antonio León León, eds, *Los nuevos caminos: la Iglesia y el estado*, Historia de la Iglesia en Chile (Santiago: Editorial Universitaria, 2009); Fidel Araneda Bravo, *Historia de la Iglesia en Chile* (Santiago: Ediciones Paulinas, 1986).

4. Kendrick, *The Lisbon Earthquake*; C.R. Boxer, *Some Contemporary Reactions to the Lisbon Earthquake of 1755* (Lisbon: Universidade de Lisboa, 1956); Clark, "Science"; Shute, "Earthquakes and Early American Imagination"; Rozario, *The Culture of Calamity*.

5. Charles F. Walker, *Shaky Colonialism*.



earthquakes to punish people for individual sins and for a collective breakdown of the moral order. Religious discourse throughout the eighteenth and early nineteenth century focused on discrediting modernity and scientific advances.<sup>6</sup> By the end of the nineteenth century and throughout the twentieth, the discourse on Latin American earthquakes at the popular level shifted from religious terms to secular issues concerning the state's duties to provide relief and reconstruction aid.<sup>7</sup>

### **Religion and Science**

Religion and science had an antagonistic relationship for much of the nineteenth century. During the wars for independence in Latin America, conservative clergy argued that “enlightened” priests and scholars denied God’s designs by attributing earthquakes, plagues, and droughts to natural events and not divine wrath. For conservative and royalists clergy, earthquakes were God’s punishment for betrayal of the Spanish Crown or for the anti-clerical measures implemented by new liberal regimes. Natural disasters, according to conservatives, were also punishment for individual and collective societal immorality. Some clergy worried that attributing these catastrophic events to nature would remove the motivation among the popular masses and political leaders to lead a moral life or to rule with religious consideration. By the 1850s, interpretations of

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6. McCook, “Nature, God, and Nation”; Charles F. Walker, “Great Balls of Fire.”

7. Samuel J. Martland, “Social and Political Fault Lines”; Mark Alan Healey, “The ‘Superstition of Adobe’”; Paul J. Dosal, “Natural Disaster, Political Earthquake: The 1972 Destruction of Managua and the Somoza Dynasty,” in *Aftershocks: Earthquakes and Popular Politics in Latin America*, eds Jürgen Buchenau and Lyman L. Johnson (Albuquerque: University of New Mexico Press, 2009), 129–55; Louise E. Walker, “Economic Fault Lines and Middle-Class Fears: Tlateloclo, Mexico City, 1985,” in *Aftershocks: Earthquakes and Popular Politics in Latin America*, eds Jürgen Buchenau and Lyman L. Johnson (Albuquerque: University of New Mexico Press, 2009), 184–221. Jürgen Buchenau and Lyman Johnson observe that religious explanations for twentieth-century earthquakes—Valparaíso (1906), San Juan (1944), Managua (1972), and Mexico City (1985)—decreased dramatically from the Lima (1746) and Caracas (1812) seismic movements. The only exception to this trend was the 1976 Guatemala City quake that had secular, Catholic, and evangelical Protestant explanations in the arena of public discourse and popular politics. See Jürgen Buchenau and Lyman L. Johnson, “Introduction,” 11.

disasters as divine punishments receded and scientific explanations became the ascendent explanation. Religious and political conservatives, however, continued to challenge the underpinnings of science. After a series of earthquakes on South America's west coast in 1868, the Chilean government proposed sending a scientific commission to Southern Peru and Ecuador to study the event. Conservatives objected to the commission because, in their view, science could not discover the causes of earthquakes, something that was obviously directed by God and his divine mysteries. Despite conservative protests, the Chilean congress sanctioned the proposed commission. By the end of the nineteenth century, disasters such as the 1894 earthquakes in San Juan and La Rioja compelled more scientific studies to examine the regions' geology and produce technical analyses to improve building standards. Similarly, jouranalists' stories about the latest seismological theories and religious fanaticism were absent from newspaper pages.

Struggles for Spanish American independence telescoped into the debates regarding political and divine will. The 1812 Venezuela earthquake influenced they way Spanish Americans interpreted political allegiance. Royalist authorities argued that the event was "divine punishment for Venezuela's religious and political apostasy."<sup>8</sup> In order for the population to be sanctified, the people had to repent of their political sins and renew their fealty and loyalty to church and crown. Priests in Caracas reinforced this theme in the sermons they preached. The clerics linked the earthquake to Venezuela's rebellion against Ferdinand VII. Anecdotal evidence reinforced the royalist officials'

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8. McCook, "Nature, God, and Nation," 48–49. McCook demonstrates that ordinary Venezuelans did not interpret the earthquake as a divine retribution for betraying the Spanish Crown. Rather, some survivors rectified their immoral ways by marrying women they lived with for many years or freed slaves. Others responded in a secular manner looting and pillaging the rubble. Despite not interpreting the disaster as political punishment, the individual religious responses and the failure of Venezuelans to understand the event as only a natural event demonstrated the strength of colonial cultural structures.

divine punishment thesis. In Trinidad, a story circulated about a church's collapse, which caused one of the structure's pillars to roll into the plaza and knock down the gallows used to hang royalists the previous July. For good measure, the only pillar that remained standing reportedly had the Spanish royal coat of arms engraved on it. In Guayana, the authorities issued a decree that stated the earthquake was a "punishment from Heaven sent to the infidel citizens of Caracas."<sup>9</sup> For royalists and religious conservatives, evidence of the hand of God continued to mount. The catastrophe struck on a day filled with religious and political symbolism that seemed to support the royalist interpretation. March 26, 1812 was the Thursday of Holy Week and the second anniversary of the deposing of the crown's Captain General by the Caracas cabildo. In addition, the catastrophe damaged patriot strongholds while leaving royalists areas relatively unscathed. The divine wrath was not only for political misdeeds. Archbishop Colly Prat, responding to patriot requests to write a pastoral letter supporting the natural interpretation of the earthquake, tried to take a middle road and instead argued that the catastrophe was a natural event that God used to punish the people for their vices and immorality. In days after the earthquake, Venezuelans' repentance for their sins was manifested through public displays of popular piety. While some Catholics entered the confessional, attended mass, and received the sacraments, others entered the city's plazas falling to their knees in prayer imploring God and the saints for forgiveness and deliverance from catastrophe.<sup>10</sup>

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9. Quoted in McCook, "Nature, God, and Nation," 49.

10. McCook, "Nature, God, and Nation," 50–53.

The patriots argued that the earthquake was purely a natural phenomenon. Simón Bolívar also declared the catastrophe to be a natural event rather than an act of God. The newspaper *Gazeta de Caracas* noted that these natural events “undoubtedly contribute to the beautification of nature.”<sup>11</sup> The patriot publication published reports that damage in loyalist Caracas was similar to that suffered in patriot areas. Other accounts noted that the earthquake had even destroyed the houses built by Spaniards. Indeed, the patriot press pointed out those earthquakes that had struck Caracas under colonial rule as well as Lima, Acapulco, and Guatemala. The Caracas cabildo also observed that earthquakes were natural phenomenon that occurred “in monarchies, in Christian, non-Christian, infidel, and Protestant countries.”<sup>12</sup> Those arguing for the earthquakes as natural events made a distinction between religion and superstition to support their case. Religion was not something to be attacked because it instilled “civic virtue.” By contrast superstition bred fanaticism and ignorance that attributed natural events to political acts.<sup>13</sup>

While the wars for independence in Latin America were being fought in Venezuela, the pace of reform in Chile was increasing. The October 1812 provisional constitution, however, stopped short of declaring independence and the captaincy general formally remained loyal to King Ferdinand VII. The Enlightenment ideas discussed in Chile’s first newspaper helped to create feelings of hostility toward the Spanish Crown. *La Aurora de Chile*, founded by the radical cleric Fray Camilo Henríquez, circulated revolutionary doctrines and ideas to the creole elite. In early 1813, a small armed force

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11. Quoted in McCook, “Nature, God, and Nation,” 50.

12. Quoted in McCook, “Nature, God, and Nation,” 51.

13. McCook, “Nature, God, and Nation,” 51–52.

headed south to dislodge the royalist forces in Chiloé and Valdivia. With Chile on the verge of entering into a civil war and the grudge match in Venezuela still unresolved, Henríquez put pen to paper to support the republican cause and disseminate the scientific knowledge of the Enlightenment.<sup>14</sup>

Henríquez echoed the Venezuelan patriot interpretation of the natural disaster emphasizing that the event emanated from natural forces that had afflicted all civilizations throughout history. The radical cleric viewed divine interpretation as backward versus the modern and enlightened argument that understood the catastrophe as a product of nature. This ignorant viewpoint, according to Henríquez, elicited “fanaticism” that was “so unworthy of an age of such enlightenment and philosophy...”<sup>15</sup> Earthquakes struck civilizations throughout the world at different times and places. The seismic shock that afflicted Caracas was similar to those violent earth rumblings that struck Santiago, Concepción, Quito, Lima, Lisbon and Calabria. The priest went further back in history to demonstrate the universal nature of the phenomenon. He cites an earthquake during the reign of the Roman Emperor Tiberius that destroyed thirteen Asian cities and caused innumerable deaths; in 742 CE a great cataclysmic seismic shock with its epicenter in Egypt leveled approximately 600 Asian cities and an unimaginable death toll; and the 1755 Lisbon quake and tsunami left the Portuguese capital in ruins and was felt throughout Europe; in fact, giant waves reached the shores of Africa.<sup>16</sup>

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14. Simon Collier, *Chile, The Making of a Republic, 1830–1865: Politics and Ideas* (Cambridge: Cambridge University Press, 2003), 34–35.

15. Camilo Henríquez, “Earthquakes are Nothing More Than Phenomena of Nature,” *Aurora de Chile*, 28 January 1813, in Cheryl E. Martin and Mark Wasserman, *Readings on Latin America and Its People to 1830*, Vol. 1 (Upper Saddle River, NJ: Prentice Hall, 2011), 127.

16. *La Aurora*, 28 January 1813.

The radical priest explained the latest eighteenth-century seismology in a clear and easily accessible manner to dispel superstition. Henríquez hoped to enlighten the masses by “translat[ing] information into language understandable to the people...”<sup>17</sup>

Scientists hypothesized that earthquakes were

caused by the inflammation of combustible materials in the bowels of the earth: air bottled up in its enclosures...water reduced to vapor...and finally electricity, a fertile cause of the most fearsome phenomena—lightning and thunder... In effect, the earth in so many places is full of combustible material...We know that there are subterranean passages in mines that are full of gases that easily ignite, producing violent and terrible effects; some of them catch fire spontaneously upon coming into contact with other gases or mixing with air, which causes them to expand greatly, producing an underground thunderclap. These gases result primarily from the decomposition of pyrites, which are found in abundance in all parts of the earth...<sup>18</sup>

The priest observed that despite the seemingly random destruction of buildings, earthquakes were accompanied by a pattern of movements that destroyed structures not located in the tremor’s path but instead demolishing everything in the opposite direction. Furthermore, these types of natural disasters should not be viewed as something extraordinary in the New World. The great frequency of earthquakes in the Americas could be attributed to its richness in minerals and an abundance of fire-breathing volcanoes. When one of the numerous volcanoes erupted it was accompanied by an earthquake. Henríquez cites the eruptions of Cotopaxi, Tungurahua, and Pichincha as examples of the intersection between volcanoes and earthquakes.<sup>19</sup>

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17. Henríquez, “Earthquakes,” *Aurora de Chile*, 28 January 1813, in Martin and Wasserman, *Readings on Latin America*, 127.

18. Henríquez, “Earthquakes,” *Aurora de Chile*, 28 January 1813, in Martin and Wasserman, *Readings on Latin America*, 128.

19. *La Aurora*, 28 January 1813.

On the evening of November 19, 1822, an earthquake struck Valparaíso and the surrounding area. The seismic shock destroyed nearly all the buildings in the port city and left nearly all the public and religious structures in ruins. Supreme Director Bernardo O'Higgins barely escaped from the government palace in Valparaíso with his life. The death toll for the coastal urban center totaled 76. The majority of porteños fled to the hills overlooking the harbor for refuge. The nearby inland city of Quillota was also destroyed, except for 20 houses and a church. In Santiago, no deaths were recorded but buildings suffered serious damage and roofs lost their tiles. Religious centers and important government structures received considerable damage. At the time of the natural disaster, Chile—like Venezuela in 1812—was muddling through the wars of independence. In the aftermath of the disaster, religious clerics argued over whether or not the earthquake was caused by nature or an angry God punishing Chileans for their sins.<sup>20</sup>

Despite the lack of major destruction in Santiago, terror spread through the city. Various priests had predicted that the earthquake had been a sign from God against the Chilean people. A heated exchange of publications and opinion pieces in the Santiago press ensued between Camilo Henríquez and Tadeo Silva. The Argentine poet Bernardo Vera and the Argentine writer Juan Crisóstomo Lafinur supported the enlightened Henríquez. His columns drew on the writings of the French philosophers Voltaire, Rousseau, and Montesquieu. For his part, Fray Tadeo Silva questioned Henríquez's religious beliefs in published folletos such as *Aviso del Filósofo Rancio*, *Apóstoles del*

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20. Urrutia de Hazbún and Lanza Lazcano, *Catastrofes en Chile*, 80–83.

*Diablo*, and *El Observador Eclesiástico*. Henríquez published *El Nuevo Corresponsal* in response to Silva.<sup>21</sup>

After the 1822 Valparaíso earthquake, Camilo Henríquez reiterated his arguments about the natural origins of natural disasters. Disturbed by public displays of penance, the priest published articles in the *Mercurio de Chile* in an attempt to demonstrate that earthquakes were not divine punishments. Lamenting the population's widespread ignorance, the cleric noted that "It is painful that in the twenty-second year of the nineteenth century, you can look in the South American newspapers and find discussions about these types of subjects, when the public papers are the barometer of enlightenment or ignorance of the people."<sup>22</sup> To strengthen his argument and refresh his readers' memories about previous Chilean earthquakes, Henríquez quoted fray Gaspar de Villarroel who concluded after the 1647 earthquake that "the temblors of this land do not necessarily have a connection with our sins, what is evident is that they proceed from natural causes."<sup>23</sup> The learned cleric questioned anyone's right to interpret God's actions and claim to administer divine justice and mercy. According to Henríquez, Chile's priests retarded the country's progress toward modernity by goading the population into pleading for forgiveness through bloody public rituals that left the Chileans submissive and ignorant of a scientific culture.<sup>24</sup>

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21. Urrutia de Hazbún and Lanza Lazcano, *Catastrofes en Chile*, 80–83.

22. *Mercurio de Chile*, 16 December 1822. Quoted in Palacios Roa, "Cotidianeidad y religiosidad," 397.

23. *Mercurio de Chile*, 16 December 1822. Quoted in Palacios Roa, "Cotidianeidad y religiosidad," 397–98.

24. Palacios Roa, "Cotidianeidad y religiosidad," 396.



The traditional line continued to be articulated by the conservative priest, Tadeo Silva, who claimed that God directed natural disasters against those civilizations that disobeyed divine commandments. The cleric admitted that plagues, droughts, floods, and destructive earthquakes were natural events. God, however, directed and used these disasters to punish the unrighteous. Silva meticulously and repeatedly employed Biblical texts from the Old Testament and, for good measure, included historical examples drawn from the Roman Empire.<sup>25</sup> These Old Testament examples reflected present events. Neither the God of the Old Testament had changed nor had the reasons for natural disasters, according to Tadeo Silva.

The 1822 earthquake, then, resulted from Chileans loose morals and social vices. Chilean immorality had incurred God's wrath in the same way the ancients in the Old Testament had committed serious vices that had resulted in plagues, earthquakes, droughts, and other natural punishments. Silva listed the Chilean people's sins: irreligious books, rampant anti-clericalism, excessive luxury, arrogant elites, and mockery of religious practices. Furthermore, in the earthquake's aftermath, the public accosted and blasphemed clerics who had interceded for them through exhortations to put away their vices. Instead, the Chileans "called every cleric a fanatic and every friar a demon."<sup>26</sup> He noted also blasphemous social practices, such as the abundant number of gambling houses and brothels, the scandalous dancing popular among the youth, the prevalence of theft, women who spent too much money on vanities and the latest fashions, hordes of

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25. Tadeo Silva, *Aviso que da al pueblo de Chile un filósofo rancio* (Santiago: Imprenta Nacional, 1823), 2–3, 26.

26. Silva, *Aviso*, 9.

prostitutes, the abdication of family education, the large number of broken marital unions, and the prevalence of mistresses, among other social ills.<sup>27</sup>

In the religious-minded view, since God directed natural disasters against populations because of their moral shortcomings, scientific study of these events would be fruitless. Mocking French Enlightenment thinkers, Silva noted that these philosophers “rack their brains in the investigation of these phenomena and casually advise the population that if they are so many feet above sea level then they will be liberated from desolating earthquakes.”<sup>28</sup> Silva dismissed scientific study and inquiry based on reason because those who carry out these investigations “know nothing in the area.” All scientific investigation of natural disasters causes would be worthless because “reason could not discover the designs that Divine Providence prefixed in His everlasting ideas.”<sup>29</sup> What science and reason failed to account for was morality in their investigations. Silva argued that “they [the scientists] can already guess the material causes and forms that they generate, but they cannot find in their investigations the moral causes that obliged God to inflict them or allow them to occur.”<sup>30</sup> Instead, the basis for all knowledge was not found in applying the scientific method or employing reason: all answers to these questions could be found in the Bible. The moral causes of natural disasters, according to Silva “could only be known through the Holy Scriptures, where

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27. Silva, *Aviso*, 9, 27, 29.

28. Silva, *Aviso*, 16.

29. Silva, *Aviso*, 16.

30. Silva, *Aviso*, 16.

the Almighty has given us the means to discover his designs.”<sup>31</sup> Those who opposed scientific inquiry of natural disasters perceived such researchers as elevating themselves to the same level as God.

The belief that natural disasters continued to be divine punishments for misdeeds persisted into the middle of the nineteenth century among the masses. The date in which Mendoza’s provincial capital shook provided support for the interpretation of the catastrophe as divine punishment. The seismic shock occurred at the height of the Lenten season during the evening of Maunday Thursday. Lent represents a period of contemplation, confession, and repentance of a Christian’s sins. On the night of the catastrophe, “the pious people attended the temples, to hear the sublime doctrine of redemption, to prostrate themselves before the tribunal of penance, to pray and ask forgiveness of the committed.”<sup>32</sup> A Chilean doctor present in Mendoza, at the time the earthquake struck, noted that mendocinos cried out to the heavens asking for mercy.<sup>33</sup> After the 1861 earthquake, the Buenos Aires press reported that more than 5,000 women met in the public plaza with torn dresses, kneeling, and crying out to God to have mercy on Mendoza.<sup>34</sup>

Buenos Aires newspapers and political liberals, not the clergy, pondered if the 1861 Mendoza earthquake was cosmic justice for previous federal atrocities. Months earlier in November 1860, thugs sponsored by Liberals attacked and killed the federal

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31. Silva, *Aviso*, 16–17.

32. A. Clereaux, “El terremoto de Mendoza,” in *Revista de la Junta de Estudios Históricos de Mendoza*, 159.

33. Verdaguer, *Historia Eclesiástica*, 409.

34. *La Tribuna*, 2 April 1861.

governor of San Juan. In response, the Argentine Confederation sent the Governor of San Luis, Juan Saá, to San Juan to investigate the crime. In late January 1861, however, Saá led a large cavalry force into San Juan and massacred the few militiamen stationed there by the interim governor of San Juan. Men from Mendoza accompanied Saá's expedition to San Juan. After the March 1861 earthquake, observers noted the irony of mendocinos traveling to San Juan in search of assistance, when scarcely three months earlier some of them rampaged to the neighboring provincial capital.<sup>35</sup> The porteño press sympathetically pointed out that while the women who participated in the procession believed that the earthquake was God's punishment, they should not be held accountable for the atrocities that had occurred in San Juan.<sup>36</sup> Other newspapers and earthquake survivors, however, connected the massacre in San Juan with the Mendoza catastrophe. Indeed, one journalist observed that merely 100 days before the sons of San Juan had been killed and now in cruel irony, mendocinos crossed the border to ask for bread, water, and shelter. Some of the women refugees yelled out that "this is God's punishment!" The journalists, however, warned that while the preoccupations with God's divine will was something healthy, the "moral excesses" carried out among the popular masses should be stopped.<sup>37</sup> One observer asked a sanjuanio, why the earthquake had struck Mendoza and not his province. The sanjuanio cited Providence and declared that it was God's "righteousness

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35. Rock, *State Building and Political Movements*, 17–20, 32.

36. *La Tribuna*, 2 April 1861.

37. *El Nacional*, 3 April 1861.

that is revealed to the world for the innocent victims of the town of Rinconada and the men recently killed on January 12!”<sup>38</sup>

A more common view of the earthquake recognized the natural origins of the event but also looked to religion to understand the event and give it meaning. After the 1861 Mendoza earthquake, the Archbishop of Santiago viewed the event as a test for the faithful and as an opportunity for Christians to express their compassion and charity to the survivors. In addition, the earthquake and the damage it caused, according to the cleric, “require us to recognize” God’s omnipotence.<sup>39</sup> A reporter for the cordobés newspaper *El Imparcial* observed that the mendocinos were “victims of the laws of nature, whose effects only Divine Providence can calculate and stop.”<sup>40</sup> Natural disasters and the miracles that stemmed from them allowed God to demonstrate his omnipotence and confound rational scientific thought, according to contemporary observers. Resurrections had symbolic significance and demonstrated God’s control of the universe to the faithful. For some eyewitness, the survivors being pulled from the rubble days and weeks after the earthquake were understood in terms of being raised from the dead and demonstrated God’s authority over nature. One witness noted the following extraordinary events: an 80 year old nun after five days emerged alive from the rubble; ten days after the catastrophe a man was found breathing amid the ruins; eleven days after the terrible and terrifying March night, a woman who had fainted from hunger was discovered in the debris; finally, after 17 days, a man was excavated from collapsed buildings and homes.

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38. *El Imparcial*, 6 April 1861.

39. Rafael Valdivieso, “Pastoral,” in *Revista de la Junta de Estudios Históricos de Mendoza*, 419.

40. *El Imparcial*, 2 April 1861.

Divine acts of intervention, however, were also accompanied by utilization of scientific and medical knowledge. The writer who attributed these miraculous events to God's omnipotence also highlighted the important role science played in saving the man's life. He observed that "the physicians with zeal worthy of the highest praise intended to save the man and they saved him!"<sup>41</sup>

The natural disasters that struck South America's Pacific coast during the late winter and spring of 1868 sparked debate in the Chilean congress and the press about the utility of funding scientific investigations into this unpredictable and mysterious phenomenon. On August 13, 1868, an earthquake struck near southern Peru and produced a subsequent tsunami that destroyed the coastal port cities of Arica, Iquique, Pisagua, and also devastated the inland cities of Arequipa and Tacna. Over the next three days, two more earthquakes struck Ecuador causing widespread destruction and damage. In Chile, congress proposed sending a scientific delegation to Southern Peru and Ecuador to study the natural phenomenon. While the Chilean Congress clashed over how much money should be budgeted and the personnel, the conservative newspaper *El Independiente* and its liberal counterpart *La Republica* acrimoniously debated the subject on religious and scientific grounds.

Those who favored the project argued that the scientific investigation would benefit humanity, advance science's understanding of earthquakes, derive practical applications, and place Chile among the most advanced nations in South America, and on a par with European nations that had long funded scientific investigations. Chile's environment provided ample opportunities to study these natural phenomena. Indeed,

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41. A. Clereaux, "El terremoto de Mendoza," in *Revista de la Junta de Estudios Históricos de Mendoza*, 162.

observing these phenomena could lead to scientific advances that could reduce or even prevent some of the most devastating effects. The scientific commission to Southern Peru and Ecuador, it was argued, could further explore the connections among meteorological phenomena, oceanic life, and natural disasters. The commission's study became a matter of national pride.<sup>42</sup> During the debates, one senator noted that state-funded pursuit of scientific endeavors was a requirement of "all civilized nations" and "an obligation of humanity."<sup>43</sup>

By contrast, conservatives argued that scientific investigations into the causes of natural disasters were largely futile. An *El Independiente* editorial writer noted that no matter how much money or the distinctions of the scientists, they would never find an adequate or satisfactory explanation for the cause of earthquakes. Despite all of the fancy scientific hypotheses proposed, the only clear conclusion was that only God could understand and explain such mysteries. As a result, funds could be better spent to help the relief effort, hire more school teachers, and pursue more productive uses of the state's funds. The editorial insisted that in all of Chile, no scientists could be found with the appropriate credentials to study this phenomenon.<sup>44</sup>

The debate over the composition of the scientific commission highlighted the contexted religious and scientific world views. For conservative congressmen and Catholics, the assumed choice of José Ignacio Vergara Urzúa—the representative from Talca and director of Santiago's Astronomical Observatory—represented the triumph of

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42. *La República*, 1 October 1868.

43. *El Independiente*, 10 October 1868.

44. *El Independiente*, 30 September 1868.

reason over faith. Commentators from the right excoriated Vergara for believing himself to be on the same intellectual plane as God. Instead, the conservatives proposed that someone such as García Moreno, the president of Ecuador, a Jesuit, and scientist who studied the natural world from a perspective that Man was not smarter than God and reason could not comprehend the divinely created and mysterious phenomena such as earthquakes should lead the commission.<sup>45</sup> Furthermore, Vergara, according to the conservative editorial, arrogantly believed himself to be not only greater than God but so smart as to “dominate nature.” The editorial conceded that if the creation of a scientific commission was a foregone conclusion, the state should at least spend its money hiring a humble man of science and faith—García Moreno. Another “unfortunate” goal of the commission, lamented *El Independiente*, was to combat superstition. The conservative paper viewed popular expressions of piety after earthquakes not as superstition but as important penitential and religious acts.<sup>46</sup> The derision of Vergara by the conservative press was relentless. Another editorial noted that the director of the Astronomical Observatory, who supposedly, was the greatest scientist in Chile, was in fact only the eleventh individual invited to the ten-man commission. This editorial sounded familiar a theme, urging Talca’s representative to learn from García Moreno when his measurements and scientific hypotheses would turn out not to reveal earthquakes’ origins or causes. By contrast, García Moreno understood the natural order of things and could see God’s invisible hand directing natural disasters. The Ecuadorian “admired the power

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45. For a study of the religious conservative statesmen see Peter V.N. Henderson, *Gabriel García Moreno and Conservative State Formation in the Andes* (Austin: University of Texas Press, 2008).

46. *El Independiente*, 7 October 1868.



of God, who punishes us with the movement of His will.” The editorial was convinced that the Jesuit scientist would confirm to Vergara that “God is the ultimate cause of everything that happens in creation.” Instead of studying the primary causes of the problem, the heart of the scientific phenomenon, Vergara’s approach would only allow him to see and understand secondary effects.<sup>47</sup>

At the same time that the debates about the scientific commission produced heated arguments in the Chilean Congress and press, Catholic priests and scholars presented lectures on the relationship between science and faith. Central to these talks were that education must be based in the Christian faith, that impartiality was impossible to maintain, and that valid science could not deny Christian values nor be anti-Christian. This conservative Catholic cosmology understood the world through a Christian lens that interpreted science as either being for or against religious faith.<sup>48</sup> Indeed, these religious conservatives revived or continued to understand natural disasters as God’s punishment for poor behavior and good circumstances as a reward for faithfully serving the deity. An editorial in *El Independiente* observed that for

true Catholics, would see for the second time water falling from the sky in the same place, the manna that provided nourishment to the people that was hidden, and believed that God through these measures and phenomena, shows His mercy and love to the people that loved and recognized Him as their God. But when they see that instead of manna, God sends them earthquakes, plagues, wars, droughts, etc., they know that He punished the people that cursed Him and did not recognize His power.<sup>49</sup>

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47. *El Independiente*, 9 October 1868.

48. *El Independiente*, 2 October 1868.

49. *El Independiente*, 9 October 1868.

The article drew examples from ancient Greco-Roman history cited by Tadeo Silva and more contemporary events to support its position.<sup>50</sup>

By the end of the nineteenth century, scientific explanations of earthquakes had gained wide acceptance and displaced accounts founded on religiousity and fanaticism in public squares and streets. The day after the 1894 earthquake that struck San Juan and La Rioja, *La Prensa* published an article on the geology of San Juan. The article republished an earlier study of the regions geological makeup and discussed some of the observations made from previous earthquakes such as the 1861 Mendoza seismic shock.<sup>51</sup>

Observations and measurements of the previous day's seismic activity from Córdoba were quickly reported in the press.<sup>52</sup> An interview with Francisco P. Moreno, a scientist and director of the Museo de La Plata, discussed the scientific theories of seismology and some of the data recorded at the museum's observatory.<sup>53</sup> As had been the case with the 1861 Mendoza earthquake, the 1894 San Juan and La Rioja temblors produced geological studies about the ground beneath urban centers and assessed their vulnerability to future seismic shocks.<sup>54</sup>

### **Church and State**

A nascent Chilean state at the beginning of the 1820s attempted to renegotiate its relationship with the Church and recalibrate the balance of power. The liberal leaders of

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50. *El Independiente*, 9 October 1868.

51. "Geologia de San Juan," *La Prensa*, 28 October 1894.

52. "Del director del observaatorio de Córdoba," *La Prensa*, 28 October 1894.

53. "Opinion cientifica del Dr. Moreno," *La Prensa*, 28 October 1894.

54. Bodenbender, "El terremoto argentino."

the independence movement had hoped to free themselves of their colonial heritage. A large part of this inheritance was based on religious institutions and popular traditions. In Chile, anti-clerical laws were passed that the state hoped would weaken the Catholic Church's economic power and political influence. The opening to diverse religious burial practices, religious tolerance, public education, and the introduction of Protestant teachers, among other liberal measures infuriated the Church's rank-and-file and leadership. And then, the response to phenomena involving natural disasters brought into sharp relief the struggle between the Catholic Church and the Chilean state in the early 1820s. After the 1822 earthquake, the wave of popular and public displays of religiosity threatened public order and represented the legacies of colonial Catholicism.

Conservative clergy had argued that public processions and mortification rituals were important means of atoning for individual and collective sins. The enlightened Crown, however, viewed them as backward, ancient colonial relics, disruptive, and tried to suppress them by enforcing Bourbon era laws.

Then revolutionary patriots linked religious and superstitious responses to disasters with the "Black Legend." Echoing the Venezuelan patriots' argument that they were not attacking religion but superstition, Chilean intellectual Henríquez published a short article on the subject in early 1813 in the *Aurora de Chile*. There, he argued that the Crown utilized religious superstition to maintain control of the Americas and exploit its people and natural resources. The liberal priest noted that

Superstition, that scourge of peoples, worse than the most terrible meteors, this ancient plague of the human species, always the handmaiden of tyranny and the companion of ignorance, proclaims this most natural and frequent phenomenon to be an infallible message that Heaven wants 16 million people to return to the

status of beasts and continue living in slavery to the most cruel, backward, and immoral nation of the world...<sup>55</sup>

Beginning with Columbus's men and the conquistadores, Spaniards "have always used similar duplicity to convince the sons of America that they are arbiters of the will of the Divine Being."<sup>56</sup> Henríquez recycled the "Black Legend" originated with Bartolomé de Las Casas for his purposes. The Chilean repeated a story that after "a fortuitous eclipse" appeared in the Caribbean, Columbus convinced 600,000 Indians to submit to the authority of the Catholic Kings. This loyalty, however, only brought exploitation and death. Now loyalists used earthquakes as signs of divine will to gain submission to the Crown.<sup>57</sup>

After the 1822 Valparaíso earthquake, Chileans hoped to assuage divine wrath through public expressions of penitence. Numerous religious institutions organized public manifestations of repentance and all social classes, especially women, participated. Women dressed in white, barefoot and with loose hair walked through the streets of Santiago chanting litanies. Others were assigned more expiatory roles such as mortification rituals in public spaces.<sup>58</sup> María Juana de Eyzaguirre observed the rogation processions with an image of the Virgin Mary through the streets. After praying the rosary and hearing a sermon, all of the city's social classes joined the Franciscans and

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55. Camilo Henríquez, "Superstition is a Plague," *Aurora de Chile*, 11 February 1813, in Martin and Wasserman, *Readings on Latin America*, 128.

56. Henríquez, "Superstition," *Aurora de Chile*, 11 February 1813, in Martin and Wasserman, *Readings on Latin America*, 128.

57. Henríquez, "Superstition," *Aurora de Chile*, 11 February 1813, in Martin and Wasserman, *Readings on Latin America*, 128.

58. Palacios Roa, "Cotidianeidad y religiosidad," 390.

other orders praying the stations of the cross in the streets.<sup>59</sup> Mary Graham recorded in her journal that “since the 19th, the young women of Santiago, dressed in white, bare-footed, and bare-headed, with their hair unbraided, and bearing black crucifixes, have been going about the streets singing hymns and litanies, in processions, with all the religious orders at their head.”<sup>60</sup> Some Christians believed that to stop the earth from the shaking directed by God, they had to express their repentance through individual and collective suffering. In order to placate the divine anger, men in public would confess their sins in a loud voice, while whipping their bare backs with bunches of thorns until blood flowed from their lacerated flesh. In Renca, one man died while performing these blood rituals from a punctured lung. Indeed, with each passing aftershock, more and more Chileans participated in public religious rituals. Foreign observers noted that one temblor could at a moment’s notice drive a city’s population into the countryside praying and suffering through some public religious ritual.<sup>61</sup>

During the Bourbon period, Charles III hoped to regulate and mute the more bloody aspects of these religious processions. In Spain and throughout the Americas, empalados and penitents accompanied these religious parades. Their presence, however, only led to disorder and abuses. In response, Charles III issued a royal decree in February 1777 that prohibited “penitents, empalados, or other similar events that serve sacrilege and disorder in the processions..., prayers, or other religious acts; instead, those who have

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59. María Juana de Eyzaguirre to José Alejo de Eyzaguirre, Santiago, 28 November 1822, in Sergio Vergara Quiros, comp., *Cartas de mujeres en Chile, 1630–1885* (Santiago: Editorial Andrés Bello, 1987), 125.

60. Graham, *Residence in Chile*, 311.

61. Urrutia de Hazbún and Lanza Lazcano, *Catastrofes en Chile*, 80–83.

the true spirit of contrition and penance should do so in a more rational, secret and less displayed manner...”<sup>62</sup> This law, however, was largely ignored. The decree was reissued in 1799 and circulated again in 1802 throughout Madrid with more severe punishments for noncompliance. For those accompanying the religious processions without adhering to the proper decorum, the law proscribed a penalty of ten years at the penitentiary or garrison and a fine of 500 ducats. For the poor and commoners, they were sentenced to 200 lashes and two years in the penitentiary or garrison.<sup>63</sup>

The embryonic Chilean state worried that these public displays of religiosity only heightened panic among the populace and sought to regulate them. Chilean religious processions were often accompanied by penitents and others who hoped to take advantage of the situation. Often, criminals dressed in religious garb waited in lonely streets to rob and assault unsuspecting victims. As a result, the authorities rigorously enforced the Bourbon era laws despite the governor being labeled “irreligious” by the citizens. The press noted that the actions of a few criminals could not compare to the salvation of the Supreme Director. O’Higgins was still recovering after a wall in the government house in Valparaíso fell on him. He barely escaped with his life. Adding to the central valley Chilean’s panic was the outbreak of erysipelas after the November disaster. The epidemic only added to the terror and provoked further public displays of religiosity. Before withdrawing from Valparaíso, the Supreme Director ordered the local authorities to cease penitential and mortification processions. According to O’Higgins,

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62. Libro I, Título I, Ley XI, *Novísima recopilación de las leyes de España*. Quoted in Palacios Roa, “Cotidianidad y religiosidad,” 396.

63. Palacios Roa, “Cotidianidad y religiosidad,” 397.

public demonstrations of fanaticism only increased panic and terror.<sup>64</sup> Furthermore, the government, worried about cracks compromising the structural integrity of the capital city's many churches and cathedrals closed them. One observer noted that the parishioners filled the urban center's churches after the earthquake and that bells tolled continuously. When the government closed the churches to prevent any buildings from collapsing on top of the gathered crowds, more faithful entered the capital city's streets to perform their acts of devotion. At the same time, the authorities were trying to quell the processions in the streets, the dangerous state of the city's religious buildings pushed more people into the streets.<sup>65</sup>

Debates centered on the proper place for religious expression in the public sphere and the new state's role as moral authority figure and regulator. Camilo Henríquez again put pen to paper after the Valparaíso earthquake to urge the civil and ecclesiastical authorities to prohibit the bloody and brutal penitential mortification rituals and processions. Writing in the *Mercurio de Chile*, Henríquez lamented the backwardness of these religious expressions. The cleric assumed that the authorities could not have sanctioned or allowed these repugnant public acts if they had been aware or notified of them. Other clerics, however, disagreed with Henríquez, arguing that these manifestations of public penitence had a basis in scripture—Old Testament, church tradition, and collective morality. According to Tadeo Silva, these bloody processions cleansed the individual and collective body of citizens from the sins that caused the

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64. Palacios Roa, "Cotidianeidad y religiosidad," 395–96.

65. Graham, *Residence in Chile*, 311.

earthquake. The role of the state in regulating these public ceremonies of penitence was central to nineteenth-century disputes over the relationship between church and state.

The understanding of catastrophes as representing divine punitive responses to immorality challenged the view emerging from nineteenth-century modernity. At the heart of this competition of ideas, was the state position vis-à-vis bloody public penance after natural disasters. Religious Chileans expressed contrition in the streets and public plazas and priests preached the divine origins of the natural disaster. Political authorities who stopped such displays betrayed the *patria*. Silva accused these irreligious authorities and intellectuals of having been “converted into emissaries of the devil...”<sup>66</sup> The intellectual was outraged at the state’s sanctions to end public displays of penitence because it prevented Chileans from fulfilling their Christian duties. Still, Silva agreed that some forms of penitence should be banned, as Charles III’s cedula decreed, and he admitted that criminals took advantage of the processions to commit robbery and other disorders. In times of great turmoil, such as after natural disasters, these measures ought to be suspended despite the potential for a few crimes. Indeed, public displays of contrition, according to Silva, were the only way to induce God to end plagues, wars, droughts, famines, and earthquakes. Drawing on previous earthquakes in Chilean history, Silva used the example of Bishop Villarroel. While Henríquez used the cleric’s writings after the 1647 catastrophe to support his argument for the natural origins of the phenomena, Silva points out that the seventeenth-century cleric permitted public acts of repentance that his intellectual adversary deemed “brutal.”<sup>67</sup> For conservative clergy, to

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66. Silva, *Aviso*, 7.

67. Silva, *Aviso*, 46.



deny the divine origins and punishment that natural disasters represented imperiled the state's continued viability, the nation's morality, and individual souls.

Conservative ecclesiastical officials argued against the real and perceived Chilean state's anti-clericalism. Some priests blamed earthquakes on the anti-clericalism that accompanied independence and the formation of a liberal state. Clerics preached that the 1822 earthquakes were a punishment for public sins derived from the implementation of political and civil reforms that reduced the Catholic Church's authority and influence. Reforms to education, religious tolerance, liberalization of cemetery regulations, and the increasing presence of Anglo Protestants in the central valley threatened the Catholic Church's unchallenged position in society and control of the state. Among the reasons for God's wrath against the Chileans and His reasons for visiting such awful disasters on a Christian nation was the state and society's rampant anti-clericalism. Irreligious books were readily available and corrupted the nation's morals, the priesthood was held in esteem and religious practices were mocked, according to Silva.<sup>68</sup> In Chile, the patria and Catholicism were inextricably linked.<sup>69</sup> For those foreigners who read Henríquez's columns in the *Mercurio de Chile*, they would related to their countrymen a picture of Chile's clergy as "fanatic, brutal, and ignorant..."<sup>70</sup> Indeed, to Protestant witnesses, the Valparaíso earthquake reinforced and transmitted the images of Catholic clergy and parishioners as superstitious and fanatical.

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68. Silva, *Aviso*, 29.

69. Silva, *Aviso*, 41.

70. Silva, *Aviso*, 42.

## Protestants and Catholics

The relationship between Protestants and Catholics in the aftermath of the 1822 Valparaíso earthquake reflected the antagonism between the Church and state. The porteño clergy fueled xenophobic anxiety among the faithful by blaming the toleration of North Atlantic Protestants for God's wrath. Priests petitioned judges and stirred up protests for the immediate expulsion of all non-Catholics from Chile. Indeed, the nascent Chilean state had to protect and guarantee Protestant life and property to the displeasure of Catholic activists. Meanwhile, Protestant reactions toward Catholic expression of public piety only reinforced their stereotypes and reinforced their feelings of superiority. Finally, conservative clergy accused their liberal counterparts espousing Protestant theology to justify their support of the state's suppression of religious processions.

No one was indifferent to the burgeoning size of Valparaíso's Protestant community. British Protestants angered Chilean Catholics three years earlier by petitioning the state for the creation of a cemetery for non-Catholic Christians. Much to the Catholic hierarchy and clergy's dismay, Bernard O'Higgins sanctioned the creation of a Protestant cemetery. After the November 1822 earthquake, priests in the central valley used major disasters as an opportunity to denounce and expel foreign "heretics."<sup>71</sup> Only a few days after the earthquake, porteño priests filed legal documents to have all English and American residents forcibly removed from the country. The court, however, determined the petition to lack any firm standing. The presiding judge rejected the priests' claims that the disaster was linked to the presence of Anglicans in Valparaíso. The justice noted that the majority of the Protestants homes remained standing in stark

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71. Palacios Roa, "Cotidianeidad y religiosidad," 392–94.

contrast to the massive destruction that struck Catholic households. Furthermore, the judge chastised the clerics for their accusations. He noted that “all your prayers and the assistance of patron saints could not save our churches, houses, and hundreds of Catholics from utter destruction.”<sup>72</sup> An English woman living in Chile noted that eight days after the earthquake, an execution for a Frenchman and three Chileans was scheduled to take place. The condemned had raided a ship, seriously wounded the two seamen and stole a large sum. The priests, according to the English widow, “have been stirring up the people, declaring that the misfortunes of the times will be redoubled if good Catholics are thus to be executed for the sake of heretics.”<sup>73</sup> Another Protestant observer noted that in the minds of Chilean Catholics, the nexus of geological and meteorological phenomena further demonstrated Protestant responsibility. An abnormally rainy November was recorded and along with the seemingly continual aftershocks, only reinforced “the bigoted and ignorant Chilenos, as a mark of the divine vengeance for their own sinful lives, the conduct of the people in power, and the crime of permitting the English heretics to contaminate the country.”<sup>74</sup>

Valparaíso’s clergy continued to flame anti-Protestant sentiment and notable porteños shouted in the streets that the “gringos” must be killed in order to placate God.<sup>75</sup> According to a Protestant witness, the clergy’s attempts to foment the “lower orders” into

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72. *Niles Weekly Register*, 8 May 1823.

73. Graham, *Residence in Chile*, 320.

74. John Miers, *Travels in Chile and La Plata Including Accounts Respecting the Geography, Geology, Statistics, Government, Finances, Agriculture, Manners and Customs, and the Mining Operations in Chile*, Vol. 1 (New York: AMS Press, 1970), 394.

75. Vicuña Mackenna, *El ostracismo del jeneral D. Bernardo O’Higgins*, 461.

a frenzy largely failed, “either because they [the popular masses] are really indifferent, or because they do not recognize in the humane and courteous strangers among them, the horrible features and manners which it had pleased the priests to decorate the poor heretics with in their imaginary pictures.”<sup>76</sup> While Catholics viewed Protestants as one of the reasons for the earthquake, Protestants living in Chile condescendingly viewed Catholics as superstitious and backward.

Protestant observers blamed Catholic priests for perpetuating a backward culture. Mary Graham observed that “[Chileans] are ignorant, oppressed, and, perhaps, naturally indolent and timid.”<sup>77</sup> At the heart of the problem, according to Protestants such as John Miers, were the Catholic priests which terrorized the population and exercised a tyrannical influence over their parishioners’s world view. The Church hierarchy and clergy taught Chileans

implicit obedience, intolerable deception, and absurd fanaticism; every good and moral feeling is stifled in the bud; human industry and ingenuity are destroyed, by the belief that a confidence in the Virgin is of more effect in the assisting the progress of nature, or averting the evils and miseries attendant upon our earthly career, than a more rational and manly reliance upon our own muscular and mental exertions over the elements of the material world which has been placed under our immediate control.<sup>78</sup>

Furthermore, attributing natural disasters to political and social circumstances characterized “superstitious Chilenos, who” according to Miers, “attributed all their political misfortunes to divine pleasure, which was more especially and portentiously

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76. Graham, *Residence in Chile*, 320–21.

77. Graham, *Residence in Chile*, 326.

78. John Miers, *Travels in Chile and La Plata Including Accounts Respecting the Geography, Geology, Statistics, Government; Finances, Agriculture, Manners and Customs, and the Mining Operations in Chile.*, Vol. 2 (New York: AMS Press, 1970), 223.

manifested by the great earthquake...”<sup>79</sup> The 1822 Valparaíso earthquake only reinforced Protestant stereotypes of Catholic beliefs and practices.

Protestants continually understood Catholic responses to the earthquake as superstitious. Mary Graham noted that reports of the ocean receding four feet had reached Quintero, north of Valparaíso, and caused the population to abandon their homes and business for higher ground. When the tsunami failed to make an appearance, the town’s inhabitants “attributed it to the interposition of Our Lady of Quintero.” Graham dismissively records the scene of popular piety in her journal:

This same Lady of Quintero has a chapel at the old house, and her image there has long been an object of peculiar veneration. Thither, on the first dreadful night, flocked all the women of the neighborhood, and with shrieks and cries entreated her to come to their assistance; tearing their hair, and calling her by all the endearing names which the Church of Rome permits to the objects of its worship. She came not forth, however; and in the morning, when the priests were able to force the doors obstructed by the fallen rubbish, they found her prostrate, with her head off, and several fingers broken. It was not long, however, before she was restored to her pristine state, dressed in clean clothes, and placed in the attitude of benediction before the door of her shattered fane.<sup>80</sup>

The fishermen in the area reported that during the night when the earthquake struck, they saw a light out at sea that moved toward the shore before separating into two parts and disappearing. According to the English widow living in Chile, “The priests have converted this into the Virgin with lights to save the country.”<sup>81</sup> Reports from Santiago noted that a *beata* prophesied the event. The capital city prayed and was spared. News of the prophesy was dispatched to Valparaíso but failed to reach the port before the

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79. Miers, *Travels in Chile and La Plata*, vol. 2, 221.

80. Graham, *Residence in Chile*, 310.

81. Graham, *Residence in Chile*, 311.

catastrophe struck.<sup>82</sup> In Quillota, the faithful were celebrating the feast of its patron saint, Saint Martin, when the earthquake struck. The scene of merriment quickly turned into cries of “‘Misericordia! Misericordia!’ and beating of the breast, and prostration of the body; and the thorns were plaited into crowns, which the sufferers pressed on their heads till the blood streamed down their faces, the roses being now trampled underfoot.”<sup>83</sup> The clergy, according to Graham’s contact, “wrung their hands over their fallen altars.” The morning after the calamity, the turmoil in Quillota turned violent and political as the public blamed the governor, who was forced to flee, for his sins which caused such a horrible event. Others attributed the catastrophe to the government in Santiago that “its tyranny had awakened God’s vengeance.”<sup>84</sup> When Graham returned to her residence in Valparaíso, she thankfully observed that it was undamaged. “The priests resolved to make a miracle of it; and accordingly, by daylight on the 20th, *Nuestra Señora del Pilar* was found, in her satin gown, standing close to my stove, and received numerous offerings for having protected the premises, and I suppose carried off a silver pocket-compass and a smelling bottle...”<sup>85</sup> Graham characterized the Chileans religious response to the earthquake and the nearly continuous aftershocks as “superstition has been busy during this calamitous period...”<sup>86</sup> The religious superstition stoked by the Catholic clergy contrasted with Protestant responses to disasters.

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82. Graham, *Residence in Chile*, 311.

83. Graham, *Residence in Chile*, 312.

84. Graham, *Residence in Chile*, 312.

85. Graham, *Residence in Chile*, 316.

86. Graham, *Residence in Chile*, 320.

In nineteenth-century Protestant English accounts, rational responses to earthquakes contrasted sharply with the Catholic Chilean dogmatic and sometimes fanatical reactions. John Miers an Englishman living at the mouth of the Quillota or the Concon River, to the north of Valparaíso, owned a number of mills. When the 1822 Valparaíso earthquake struck his residence, he first quickly rushed to gather his two sons and then set off to find their mother and aunt and ensure their safety. Then, he concerned himself with assessing the state of his mills. On his way toward the mills, he was met by one of his English workmen who told his employer the horrible news that his structures had collapsed. Together they returned to the site of the collapsed mills and found the recently arrived English miller who escaped without injury. These men continued to assess the damage the earthquake afflicted on their units of production, while strong aftershocks repeatedly shook the ground and structures around them. The Englishmen's utilitarian responses contrasted with Mary Graham's accounts of Chileans popular acts of piety. In Miers' narrative of the post-seismic shock, he sharply contrasts his and his workmen's response with the emotional and religious expressions exhibited by his servants. Miers observed that "our Creole servants walked about their enclosure almost in a state of despair, thumping their breasts, and repeating their Ave Marias."<sup>87</sup> Indeed, Miers observed that this irrational and fanatical behavior characterized Chilean responses at the first sign of an earthquake: "the natives rush out of their houses, fall upon their knees, beat their breasts violently, and cry aloud *misericordia! misericordia!*"<sup>88</sup>

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87. Miers, *Travels in Chile and La Plata*, vol. 1, 389.

88. Miers, *Travels in Chile and La Plata*, vol. 1, 386.

Theologians who asserted that natural disasters were a consequence of divine punishment painted other Catholic scholars who argued that they were nothing more than natural events as deviating from orthodoxy and falling into Protestant heresy. In his debate with Tadeo Silva, Camilo Henríquez argued that the mortification rituals and processions did nothing but exacerbate the passions of the moment. Such feelings were served as obstacles to rational solutions. Silva countered that this line of thinking undermined the foundations of Catholic belief. It could only result in the logical conclusion that it was not humanly possible to reach God and that if natural disasters were not punishments for sins, then the population would be freed from responsibility for their sins. It would make it unnecessary for Christians to make amends for their sins. By taking Henríquez's argument to the extreme, Silva accused the enlightened cleric of espousing Lutheran heresy. In Silva's opinion, simply receiving forgiveness without having to endure some type of suffering, whether through natural disasters or purgatory, left humanity morally depraved. Protestants would respond by working to understand the natural world and using the knowledge they discovered to achieve progress rather than responding fearfully to every natural disaster. For Silva, however, abandoning the truth would only yield more natural disasters and misery for Chile.<sup>89</sup>

Similarly, after the 1868 Arica earthquake and tsunami, English observers noted the public displays directed toward patron saints and the Virgin Mary with critiques that normally accompanied such Protestant observations. Frederick Stevenson saw women crying and wailing uncontrollably, men embracing in the street, and the sick and injured being transported clutching their crucifixes. The survivors placed "gaudily dressed"

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89. Silva, *Aviso*, 48–49.



images of saints next to or on top of the central canal. People crowded around pushing and shoving to take their turn at prayer to the saint for protection. Around the central canal in Tacna, crucifixes rose from the ground and striking portraits of the Virgin Mary were erected. The people also thronged to these images in hopes of finding protection. People of all different social levels reacted differently when faced with a catastrophe. Some, “comported themselves in strange ways; others would scream in terror, others laugh hysterically, still others fainted and lay in the street apparently without life, but the great majority, repeatedly prayed offering prayer on top of prayer imploring in vain that their saints protect them.” Whenever an aftershock struck, all of the people would instantly drop to their knees, the men would remove their hats, and everyone would forcefully cry out “¡*Misericordia Señora! ¡Misericordia María Santísima! ¡Misericordia Señor!*”<sup>90</sup> Other Protestant visitors observed that “the great majority were in such a state of ignorance that they believed that the day of judgement had arrived.”<sup>91</sup>

Others, however, were more understanding. Explorer and writer Ephraim G. Squier wrote that for many years, the general belief of the Andean people, both among the upper and popular classes, was that a sign from the sky and pestilences were precursors to earthquakes. The 1868 earthquake and tsunami fit these requirements exactly. During the six months leading up to the catastrophe, Peru experienced a dramatic yellow fever epidemic. The religious rituals observed by the North American adventurer found their way into his writings. Squier observed the seemingly endless processions that filled the streets of Arica and Tacna with participants somberly marching and lamenting

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90. “The Earthquake in Peru,” *The Times*, 21 October 1868.

91. “The Earthquake in Peru,” *The Times*, 21 October 1868.

their agony. Incense that burned at the numerous altars throughout the cities obscured church buildings. Candles burned day and night as the lamentations of parishioners mixed with the sounds of priests saying mass for the dead. Squier believed that “it is not unnatural that there have been deep-rooted superstitions relating to earthquakes in a country so exposed to such phenomena such as Peru and a pseudoscience with an age of half-a-century could have found in this country an appropriate component for display and profit.”<sup>92</sup>

### **Charity and Meaning**

By the middle of the nineteenth century, the clergy and church hierarchy had shifted their focus from assessing blame and encouraging public penance to helping survivors navigate the aftermath spiritually and materially. After the disastrous 1861 Mendoza earthquake, clergy and bishops in addition to Protestant pastors joined together to raise material and financial collections for the survivors. Christian charity united the Catholics living in the River Plate, Argentina’s interior provinces, and those inhabitants on the other side of the Andes through a common cause. As survivors emerged from the rubble and struggled to adjust to the deaths of relatives and their reduced state, religion could provide comfort and solace for many. Especially after the 1939 Chillán earthquake, the many funeral masses said for victims’ souls gave comfort to the living. Indeed, as the state’s role in disaster relief increased, the Church’s sphere of influence was reduced to the spiritual realm and to providing charity to the survivors.

The Catholic Church also participated in the relief efforts by collecting and distributing food, clothing, and donated funds. At the beginning of April, the Bishop of

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92. “Testimonio de Ephraim G. Squier,” in Fernández Canque, *Arica, 1868*, 239.

Buenos Aires called on the province's clergy to collect relief aid and money from their dioceses for the earthquake survivors. Furthermore, the bishop expressed special concern for the orphaned and homeless children. Collections would be sent to the Bishop of Cuyo for distribution.<sup>93</sup> The different religious groups in Buenos Aires cooperated with the philanthropic commission to raise aid for the survivors. The press noted that porteño priests had expressed their good will toward the commission. They hoped to use their pulpits to increase contributions to the relief effort. Likewise, German, English, and North American pastors helped to raise goods and money donations for the survivors.<sup>94</sup>

By the mid-nineteenth century, religious institutions focused on comforting the afflicted in the face of tragedy rather than extolling the catastrophe as divine punishment. Funeral masses were said throughout the country for the earthquake victims. The community of Flores, advertised a funeral mass on April 11, 1861 that was opened to religious and non-believers alike to ask God for the eternal rest of the victims' souls.<sup>95</sup> Others observed that "only religion and philosophy had the capacity to seek consolation in the face of such a great catastrophe, and provide the balm to heal the deep wound that the disaster caused in the human heart." Humankind should implore God to cast His eyes on the unfortunate earthquake survivors. Furthermore, the earthquake was not a manifestation of God's divine wrath and punishment but only the product of nature and something only the divine could understand.<sup>96</sup> The disaster also demonstrated a common

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93. *La Tribuna*, 7 April 1861.

94. *El Nacional*, 4 April 1861.

95. *La Tribuna*, 9 April 1861.

96. *El Imparcial*, 2 April 1861.

humanity and an opportunity to provide for those in need, a moderating salve on human egotism. People possessing a good moral grounding demonstrated it through charitable acts.<sup>97</sup> Religion offered “immense consolation.” Furthermore, religion reinforced the survivors’ will to confront their bleak circumstances. Of the 20 nuns who survived 1861 earthquake, they immediately constructed a temporary altar and elevated a bell over two posts. Invalids took refuge around the interim chancel table and only sounds of the bell, “like a prayer” broke the silence that enveloped the ruins.<sup>98</sup> Finally, religious institutions provided material aid in addition to spiritual welfare.<sup>99</sup>

The Mendoza earthquake unified Uruguayan, Chilean, porteño, and interior Christians. Funeral masses were said in Buenos Aires province and Uruguay. In addition to the relief collection organized by the bishop of Buenos Aires, the Catholic Church in the Banda Oriental also offered aid to the surviving mendocinos. The rector of the Church of Matriz in Montevideo observed that in the face of natural disasters, the church’s role was to help “strengthen the people.” Catholics should act with “Christian piety, honor, and virtue” and offer their services to their fellow neighbors in whatever manner was appropriate to their station.<sup>100</sup> The Governor of Córdoba requested that the bishop appoint someone to accompany the commission going to Mendoza to “provide religious aid.” The bishop, who promised his cooperation, noted that the survivors would need more resources than the Catholic Church could raise and that more priests would be

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97. *El Imparcial*, 3 April 1861.

98. *La Tribuna*, 14 April 1861.

99. *El Imparcial*, 5 April 1861.

100. *El Imparcial*, 5 April 1861.

needed to adequately meet mendocinos' spiritual needs. The minister of government believed that the commission's objective was to "wipe away the tears of the unfortunate survivors of the horrible catastrophe."<sup>101</sup> A cordobés priest known for his oratory skills delivered an impassioned homily that spurred the parishioners to contribute enthusiastically to the collection.<sup>102</sup> The Archbishop of Santiago, Rafael Valdivieso, distributed a pastoral letter urging his flock to demonstrate Christian charity and compassion to the earthquake survivors. The archbishop emphasized that the populations on both side of the Andes shared more than faith but also an ancestry and heritage, and, indeed, for many years the region of Cuyo had formed part of the same dioceses. A shared Christian faith, however, remained the cornerstone of the relationship between the two peoples. From Chileans' Christianity flowed charity shown to the mendocino earthquake survivors. Archbishop Rafael Valentín urged the faithful to give alms according to their wealth. Furthermore, he directed parish priests to excite and rouse their parishioners into energetically supporting Mendoza's relief effort.<sup>103</sup>

Similarly, after the 1939 Chillán earthquake, the Catholic Church provided comfort and solace to the survivors as they coped with the tragedy. In great contrast to early nineteenth-century Church's harsh responses, the Archbishop of Santiago implored the faithful to pray for the eternal rest of the dead. He recognized the great pain the tragedy caused for so many people throughout the country. The earthquake, according to

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101. *El Imparcial*, 5 April 1861.

102. *El Imparcial*, 4 April 1861.

103. Rafael Valdivieso, "Pastoral," in *Revista de la Junta de Estudios Históricos de Mendoza*, 419–20.

the archbishop, has left “many crying inconsolably over the deaths of their loved ones, prostrated in the bed of pain, and in absolute abandonment and misery.”<sup>104</sup> The Church was in mourning with the country. In such difficult and painful circumstances, the archbishop encouraged everyone to unite with one heart. The Church would help to care for both the spiritual and material needs of the population afflicted by the earthquake. One of the ways the Church provided spiritual aid and brought the community of believers together was through mass. The Saturday after the earthquake, the Archbishop of Santiago scheduled a solemn funeral mass for the disaster victims in the Church Cathedral.<sup>105</sup> Churches throughout Santiago, also offered masses for those who perished in Chillán and Concepción. The Church of the Two Holy Hearts advertised special services in the wake of the disasters and made special invitations to people who had lost relatives or survived the catastrophe. A special collective prayer for the nation was also said.<sup>106</sup>

As before, the Catholic Church also participated in relief activities for the survivors. The Archbishop of Santiago directed parishioners to contribute to an extraordinary collection during Sunday services in all the churches and chapels under his direction. Donations were received at the archbishop’s palace and in the Catholic Action office during regular business hours. In addition, Church officials encouraged the capital city’s Catholics not only to pray for the victims and survivors but also to contribute

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104. “La iglesia pide eterno descanso para los muertos y que se mitigue el dolor de los que tanto sufren,” *El Mercurio*, 27 January 1939.

105. “La iglesia pide eterno descanso,” *El Mercurio*, 27 January 1939.

106. “Culto religioso,” *El Mercurio*, 2 March 1939.

materially. Catholic Action co-organized the metropolitan church's relief effort. Finally, the Church's retreat houses were made available to women injured by the earthquake.<sup>107</sup>

### **Conclusions**

The turn of the eighteenth to nineteenth centuries brought the Enlightenment's challenges to traditional religious ideas and institutions. Scientific thought and theology proposed competing explanations of early nineteenth-century earthquakes in Latin America. Conservative Catholic clergy asserted that earthquakes, droughts, plagues, and similar great disasters were God's punishment for Man's immorality and states' misdeeds. These arguments proved to be particularly forceful and persuasive during the wars of independence in Spanish America, especially after the 1812 Caracas and 1822 Valparaíso earthquakes. To support their traditional theological arguments, these ecclesiastical scholars cited numerous Biblical texts mostly drawn from the Old Testament. But the clergy was divided; those who adopted scientific methods asserted that these phenomena were nothing more than natural events. By reducing catastrophes to merely natural events, the conservative clergy worried that the faithful would have no incentive to lead a moral life and the authorities would implement secular reforms. As religious explanations of natural disasters receded during the nineteenth century, religious conservatives continued to doubt the necessity of studying the causes of natural disasters from scientific perspectives. After the series of earthquakes that struck the Pacific coast of South America in 1868, the Chilean Congress funded a scientific commission to study the causes of the phenomena. Religious conservatives argued that such a commission was useless because science could not discover the causes of earthquakes that only God

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107. "La iglesia pide eterno descanso," *El Mercurio*, 27 January 1939.

directed. By the end of the nineteenth century, however, religious explanations of these catastrophes had virtually disappeared and scientific studies funded by universities and museums dominated press reports about earthquakes. After the 1894 San Juan and La Rioja earthquake, the Buenos Aires press interviewed leading scientists about the events and published articles about the region's geology. Scientific study pushed religious explanations to the margins of society.

Liberals and Catholics attempted to politicize the 1822 Valparaíso disaster in the contest between Church and state. The clergy blamed the earthquake on the government's anti-clerical measures and reforms that threatened to weaken the Church's political influence and economic power. Fanatical clergy encouraged religious processions and bloody rituals as atonement for individual and collective sins. These processions threatened public order and challenged the state's ability to maintain control and represented superstitious behavior that liberals hoped to end. The Chilean state tried to suppress religious processions and public acts of mortification after the 1822 Valparaíso earthquake, noting that thugs used the parades as cover to commit all types of crimes and violent acts. In an illustration of the hybrid nature of change, Chile's liberal governments intended to eradicate their colonial traditions and employed Bourbon-era laws to prevent these religious processions.

The 1822 Valparaíso earthquake also heightened Catholic antagonism toward Protestants and reinforced North Atlantic stereotypes of Iberian and Latin American religious beliefs. Catholic clergy stirred up xenophobia among porteño earthquake survivors. Catholics blamed North-Atlantic Protestants for the earthquake because the heretics' presence in Chile invited God's wrath. Furthermore, the state moved to protect



and guarantee Protestant life and property. The results of these actions often placed Chilean Catholics on the wrong side of the law. This angered Catholics who disapproved of their coreligionists application of punishment—sometimes capital—for crimes against Protestants. Conservative Catholic clergy charged Catholics who disagreed with their interpretations of earthquakes as espousing heretical Protestant doctrine. For their part, Protestants who witnessed acts of popular piety and fanaticism after the earthquake felt reinforced in their smug superiority over superstitious and ignorant Catholic masses. In their personal journals, we can read that Protestants were more preoccupied with their business interests and with assessing damage to their property in a stoic and reserved manner. In stark contrast, Protestants represented Catholics as incessantly fixated with patron saints and the Virgin Mary.

Beginning in the mid-nineteenth century, religious responses in Argentina turned toward spiritual comfort and consolation and to raising material aid for relief efforts. Indeed, the 1861 Mendoza earthquake united the River Plate and Southern Cone through Christian charity and a common faith. Similarly, often after survivors emerged from the rubble, religion was the only means by which many could understand such overwhelming tragedies. After the 1939 Chillán earthquake, the Chilean Church hierarchy emphasized their role as spiritual comforters during the national tragedy. In addition to spiritual aid, the Catholic Church also organized financial and material donations for the survivors. In time, the religion's role in the aftermath of catastrophes receded as the state increased its functions across multiple dimensions of disaster relief.

## CHAPTER 7

### CONCLUSION: COMPARATIVE WORLD CASES

What can historians gain from studying disasters? The field of sociology has dominated disaster studies since the 1960s. A historical approach adds to the social sciences' approaches and perspectives of disasters. Hazards weave a complex web of triggers that lead to political, economic, social, and cultural changes. Longitudinal studies of disasters reveal the intricate contexts and historical conditions that come into sharp focus during disasters that otherwise remain hidden and difficult to tease out.<sup>1</sup>

Mass emergencies in a world historical context bring into sharper focus the disaster processes experienced by Argentina and Chile during the nineteenth and early twentieth centuries. Italy's regionalized and divergent nation came together to support relief efforts led by the monarchy in the aftermath of the Messina-Reggio Calabria earthquake (1908). Nonetheless, political and media discourses continued to paint southern Italians as backward and natural disasters as part of the "southern problem." In Japan, the Great Nōbi Earthquake (1891) brought down many of the state-sponsored modern structures that had been built based on western technology, while leaving many traditional native buildings standing. Political and cultural discourse now focused on rebuilding by utilizing traditional Japanese architecture. The Canterbury quake (1888) that destroyed Christchurch, New Zealand led to a re-examination of building practices and urban planning techniques based on the latest London architectural fashions. The San

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1. For a critique and analysis of disaster studies from a historical perspective, see John Dickie and John Foot, "Introduction: Studying Disasters: The Italian Experience of Disaster," in *Disastro! Disasters in Italy Since 1860: Culture, Politics, Society*, eds John Dickie, John Foot, and Frank M. Snowden (New York: Palgrave, 2002), 3–60.

Francisco earthquake (1908) revealed the strength of civil society as an extraordinary community that provided mutual aid among survivors. Catastrophes in the North American national consciousness have been viewed as opportunities to reevaluate belief-systems and social institutions. Furthermore, rebuilding and reconstruction have proven to be a boon to capitalism and the notion of progress.

### **Italy**

Including war as a disaster, the Italian experience follows four patterns. First, a weak state and its lack of legitimacy help explain military defeats and terrorism. Second, disasters caused the population to question the state's ability to rule. Third, the state habitually misused relief and reconstruction funds. The best examples of such misappropriations took place during the 1884 Naples cholera epidemic and the 1980 Irpinia earthquake. Fourth, catastrophes enter a society's memory and represent a metaphor for social conflict and regional diversity.<sup>2</sup>

The December 1908 Messina-Reggio Calabria earthquake marked the maturation of the nation-building process. In a country bitterly divided between north and south, the quake presented a test of national unity and helped to define a common national identity as Italian. The disaster turned the people of Italy into a single organic nation, making it a victim. Victimization, then, had three outcomes that helped to weave together heretofore divergent regions. First, the earthquake forced Italians to contextualize major disasters in national terms. Second, the loss of life and property eulogized in public speeches turned grief into a nationally public spectacle. Third, insofar as the disaster was politicized it evoked representation of the *patria*. The catastrophe also struck a chord of fear among

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2. Dickie and Foot, "Introduction: Studying Disasters," 3–4.

Italians that threaded through political divisions among much of the population. Finally, the earthquake collapsed the psychic boundaries between public and private spheres. Things like family, food, and grief, usually private matters now entered the public realm. In sum, the disaster was cast as a national problem and offered a test that would reveal the state of the nation.<sup>3</sup>

The earthquake sparked an outpouring of “patriotic sympathy and solidarity” unparalleled in Italian history. Volunteers from throughout the country flocked to Calabria to help with reconstruction and relief efforts. Other Italians took in orphans and civic committees formed to collect and distribute funds to the survivors. The rescue effort not only transcended regional differences between the northern and the southern regions but also political differences between Catholics and socialists. Italians understood the relief efforts in patriotic terms, not only as humanitarian acts. Children placed contributions to the recovery effort in tri-colored boxes. Queen Elena became the most identifiable patriotic image. The queen took on a prominent role in the relief effort by nursing the injured earthquake survivors at the temporary hospital set up on the ship *Regina Elena*. John Dickie concluded that “For some contemporaries the movement of patriotic solidarity with the stricken zones was unprecedented, and proof that an Italian nation had been made.”<sup>4</sup>

The political right and left each tried to politicize the disaster by appropriating national and patriotic images. Newspapers projected images of national solidarity and patriotic unanimity. Alongside these displays of national unity, political parties attempted

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3. Dickie, “A Patriotic Disaster,” 56.

4. Dickie, “A Patriotic Disaster,” 51.

to bring different patriotic and national demonstrations into their camp to use them against their respective opponents. And indeed, as invoked by the various political parties' visions of the nation became very different from one another.<sup>5</sup>

The Mendoza 1861 and the Chillán 1939 earthquakes reflect similar paradoxes in the nature of nationalism following disasters as had occurred in the Italian case. After the March 1861 earthquake that struck the western Argentine province of Mendoza, the Buenos Aires press published articles, editorials, and official communications that encouraged porteños to aid their fellow Argentines. Political and public figures filled their speeches with platitudes and lofty words that highlighted the shared values and identity that defined everyone as Argentine despite their differences. In practice, however, the rivalry between the interior provinces and the hegemonic urban center hardly diminished. Alongside articles declaring national unity and urging Argentines to fulfill their patriotic duty by contributing money and goods to the survivors, the porteño press also politicized the event. The Buenos Aires press understood the relief effort in paternalistic terms as helping their weaker brother. Other porteño observers wondered if the earthquake was some type of cosmic justice for the federal atrocities committed earlier in 1861 by the Unitarian party in San Juan, which was aligned with Buenos Aires.

Similarly in Chile after the 1939 Chillán earthquake, newspapers and political parties promised solidarity and patriotic words in response but the *détente* quickly evaporated into partisan bickering. At the time of the January earthquake, the open wounds remained deep from the hotly contested 1938 election that saw the center-left Popular Front led by Perdo Cerda Aguirre secure the presidency while conservatives

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5. Dickie, "Timing, Memory and Disaster," 148–51.

dominated congress. Despite the bitter divide between the two political sides, socialists, communists, and conservatives all pledged support and volunteered to participate in the relief effort. By the beginning of February, the disaster became highly politicized with each side claiming to represent the nation's best interests in the debate regarding the reconstruction and development bill proposed by the president. Indeed, Aguirre seized the catastrophe as an opportunity to implement the Popular Front's political agenda. The conservative congress fought the economic reforms packaged in legislation and brought them to a standstill until a compromise could be reached in April. To garner support for his proposed measures, the president and his ministers frequently toured the disaster area listening to residents' needs and concerns and garnering support for his bill. The leftist and conservative newspapers splashed hyperbolic headlines accusing each other of betraying the nation on their front pages and assumed that each side represented the majority of the nation's citizens.

### **Japan**

In Japan, earthquakes provided opportunities to re-imagine the man-made environment. The 1891 Great Nōbi earthquake caused a reassessment of western technology and architecture in Japan. During the 1870s, professors came from abroad to Meiji Japan to teach in the universities, bringing Western science and architecture. The Anglo professors brought with them, an architecture of masonry. They taught students to rebuild their landscape with brick and iron. In contrast, Japanese architecture was characterized by wood. Japan's landscape included temples, houses, and bridges built using timber. These objects received the scorn of foreign teachers and pupils, who hoped to remake the Japanese architectural landscape into something that resembled the streets

of London or Manchester. Indeed, the western technology represented strength in stark contrast to the perceived fragility of wooden structures. Then, when one of the most destructive and powerful earthquakes in Japanese history struck the Nōbi Plain in October 1891 and shook Honshu, the principal island from Tokyo to Osaka, the iron bridges and brick walls constructed in the westernized style collapsed. By contrast, temples, pagodas, and architectural monuments built with traditional technologies remained standing and largely unscathed. In the earthquake's aftermath, Japanese architects and engineers along with foreign professors reconsidered the role played by western building practices in this seismic land. The generation of Japanese students who lived through the disaster, recalibrated the nation's architecture. After the earthquake, the new architecture adapted western knowledge but only to a Japanese context and environment. The catastrophe coincided with a period of Japanese nationalism during the 1890s.<sup>6</sup>

A similar tension appeared in Argentina between traditional and modern design and construction. The Buenos Aires led consolidation of the Argentina state was accompanied by the ideological slogans of progress and modernity. After the 1861 Mendoza earthquake, Argentina commissioned European scientists, architects, and engineers to study the region's geology and propose where to rebuild the city and new building materials and systems. In addition, European architects and engineers envisaged building with new materials such as bricks and iron. Like the western professors and teachers who rebuilt the Japanese urban landscape to resemble England only to be

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6. Clancey, *Earthquake Nation*, 1–4. See also Gregory Clancey, “The Meiji Earthquake: Nature, Nation, and the Ambiguities of Catastrophe,” *Modern Asian Studies* 40, no. 4 (2006): 909–52 and Clancey, “Foreign Knowledge,” 245–60.

stymied by nature, European architects and engineers who arrived in Mendoza hoping to build in brick and iron faced an unfriendly economic and natural environment to carry out their technology transfer. The vast majority of mendocinos could not afford the prohibitive costs of imported European building materials. Furthermore, the province's dry and arid environment was not conducive to proposed European building materials. Thus, architects and engineers had to rethink their projects and adapt them to the province's conditions. Indeed, cost effective mixed materials helped to rebuild the city in adobe and wood until the end of the nineteenth-century, when better building materials and construction methods appeared.

Similarly, the 1923 Great Kantō earthquake provided the opportunity for politicians to implement long planned but never before materialized urban modernization of Tokyo. As mayor of Tokyo, Gotō Shinpei proposed large scale and expensive modernization projects for the imperial capital. These proposals fell on deaf ears both in the national parliament and the capital's municipal government. As Home Minister, Gotō viewed the earthquake as a “golden opportunity” to remake Tokyo into a modern urban center. The Home Minister's primary objectives were to reflect the state's power with grand government buildings and the creation of social welfare institutions to reduce urban social problems. To achieve these goals, Gotō proposed that the state purchase all the land in areas left in ruins by the earthquake or burned out sections by the fires that spread across the city's east side after the disaster. The blueprints called for large and imposing government buildings, grand boulevards, bountiful green spaces, modern mass transit, and water systems. The price tag for Gotō's re-imaged capital city was estimated at 4 billion yen, a number that was three times larger than the national budget for 1923.



Gotô's urban dream, however, never came to fruition. When the reconstruction plan was submitted to parliament in December 1923, the parliamentarians reduced the budget first to 597 million yen and then again after a fierce debate to 468 million yen. The reconstruction proposal met strong opposition within the parliament and sparked intense debate within the prime minister's cabinet. Hoping to counter and outmaneuver his critics and salvage his grand plans, Gotô argued that rebuilding Tokyo was not merely the reconstruction of the capital city but rather the nation. He hoped the nation would unite behind a national reconstruction project that a new modern Tokyo would serve as the example or model for other cities. The opposition argued that a quick and simple rebuilding of the imperial capital was the best solution because the survivors needed to return to a normal life as soon as possible and the state's finances could not sustain Gotô's reconstruction plan. Furthermore, rural parliamentarians viewed the grand reconstruction program as a threat to funding for rural public works projects and opposed Gotô's proposals. Lacking political options in the face of overwhelming opposition to a grand Tokyo rebuilding proposal, the prime minister accepted the greatly reduced reconstruction budget and scaled back reconstruction of the imperial capital. Political divisions and vested interests rather than uniting after the earthquake, sank any grandiose reconstruction of Tokyo.<sup>7</sup>

Like Gotô's vision for rebuilding Tokyo as a grand and modern capital city, Chilean President Pedro Aguirre Cerda envisioned reconstructing the destroyed southern Chilean cities using the latest architectural and urban planning fashions. He also hoped to implement his political program for the nation into brick and mortar. His ambitious plan

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7. Schencking, "Catastrophe, Opportunism, Contestation," 833–74.

to bring workers from the city's margins into the urban center did not come to fruition. Instead, most southern cities rebuilt using the same grid lines and layouts that had endured since the colonial period or at least since the last major earthquake. The president's economic development and reconstruction plans also faced fierce opposition from the conservative controlled congress. Only after presidential tours of the disaster zone and pressure from southern constituents and congressmen, was a compromise reached.<sup>8</sup>

Earthquakes in Japan involved a religious or spiritual discourse that blamed political leaders or the Japanese people for upsetting the cosmic balance of nature and causing the natural disaster. In 1855, a strong earthquake with an estimated magnitude between 6.9 and 7.1 struck the city of Edo (present day Tokyo). After the earthquake, over 400 different varieties of catfish prints appeared that critiqued the political establishment and social elite. Japanese folk explanations of earthquakes blamed the movements of giant catfish for causing seismic shocks. By the nineteenth century, many of Edo's inhabitants believed cosmic forces used natural disaster to re-balance or correct human society that had deviated from its natural state. Borrowing from the Chinese Heaven's Mandate, governments addicted to luxurious living eroded the universe's fundamental moral principles and failed to heed the warnings that natural disasters—droughts, epidemics, unique atmospheric events, earthquakes, tsunamis—would present internal and external challenges to their authority and legitimacy.<sup>9</sup>

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8. For another comparative case, see Mark Healey, *The Ruins of the New Argentina*. Perón hoped to rebuild San Juan after the 1944 earthquake to reflect his Peronist program for the nation. His well laid plans, however, were met by local opposition and ultimately failed to be implemented.

9. Smits, "Shaking Up Japan," 1045–78.

Catfish pictures highlight themes of wealth redistribution and political malfeasance. Some of these paintings critiqued the wealthy for hoarding money and portrayed the earthquake as restoring the circulation of money by forcing society's elites to spend money on reconstruction. The earthquake also revealed the precarious state of the dominant political regime. The earthquake's timing unsettled the residents of Edo. Early in 1855, United States ships commanded by Matthew C. Perry docked in the port and forced the insular regime to sign a treaty. This event revealed how much military preparedness had deteriorated. In addition, the earthquake seemed to attack the economic and military foundations of the bakufu government. The quake destroyed elite neighborhoods built on untenable ground next to commoner residences built on sturdier soils. Furthermore, the earthquake destroyed Edo's defenses and left the city open to intimidation from foreign navy ships. To many of the commoners who viewed the artisans' catfish paintings, it was clear that the deities had made a strong statement against the leadership.<sup>10</sup>

Politicians, intellectuals, and commentators interpreted the 1923 Great Kantō earthquake that destroyed Tokyo and Yokohama as divine punishment for Japan's materialistic and immoral culture.<sup>11</sup> This interpretation cut across all classes of Japanese society and political identification. The Japanese people, according to the social commentators and political elites, traded their traditional values for the material benefits of western industrial capitalism that produced immoral, egotistical, and ostentatious

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10. Smits, "Shaking Up Japan," 1045–78.

11. For English language general histories and narrative accounts of the 1923 Great Kantō earthquake see Noel Busch, *Two Minutes to Noon* (New York: Simon and Schuster, 1962); Edward Seidensticker, *Low City, High City: Tokyo from Edo to the Earthquake* (New York: Knopf, 1983).

lifestyles. The calamity, however, provided an opportunity for moral reform and national regeneration. The state, some commentators argued should direct the Japanese people away from materialism and extravagant living by implementing policies that would emphasize ideals of sacrifice, frugality, and hard work.<sup>12</sup> The conservative post-earthquake government used the calamity as an opportunity inculcate moral values through primary school curriculum. The Ministry of Education directed the Japanese Boy Scouts to interview and collect stories from the natural disaster's survivors. The ministry's bureaucrats then edited and embellished the stories to emphasize moral values that would reinvigorate the nation. The narratives highlighted six values: "loyalty to the Emperor, filial piety, benevolence and charity, sacrifice, courage and bravery, and obedience, respect and advancing public good."<sup>13</sup> The perceived chaos and disorder in the earthquake's aftermath signaled to the conservative Japanese government the importance of social control and maintaining order. The morality tales exemplified in the Ministry of Education's supplementary materials helped to regulate and manage citizen's behavior and ideological feelings and create loyal subjects of the emperor.<sup>14</sup>

Earthquakes throughout the nineteenth century presented opportunities to critique the authorities in religious terms. The best example of a religious critique came after the 1822 Valparaíso earthquake. Catholic clergy and the faithful believed the disaster was

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12. J. Charles Schencking, "The Great Kanto Earthquake and the Culture of Catastrophe and Reconstruction in 1920s Japan," *Journal of Japanese Studies* 34, no. 2 (2008): 295–331.

13. Janet Borland, "Capitalising on Catastrophe: Reinvigorating the Japanese State with Moral Values Through Education Following the 1923 Great Kantō Earthquake," *Modern Asian Studies* 40, no. 4 (2006): 895.

14. Borland, "Capitalising on Catastrophe," 875–907 See also Minami Orihara and Gregory Clancey, "The Nature of Emergency: The Great Kanto Earthquake and the Crisis of Reason in Late Imperial Japan," *Science in Context* 25, no. 1 (March 2012): 103–26.

divine retribution for the government's anti-clerical measures. Furthermore, the presence of North Atlantic Protestants, according to some Catholics, also enticed divine wrath. The state's suppression of religious processions and protection of Protestant life and property continued to infuriate conservative Catholics. Unlike the 1923 Great Kantō earthquake, the seismic shock that struck Chile's chief port did not lead to a sense of national renewal or to regeneration. Instead, it marked the beginning of a century-long confrontation between the state and the Catholic Church.

The 1923 Great Kantō earthquake also provided the opportunity or excuse for Japanese vigilante bands to massacre Koreans. Right wing politicians and military officials used the disaster to persecute leftist politicians, intellectuals, and sympathizers. In the disaster's aftermath, rumors circulated that Koreans started fires, attacked and robbed Japanese survivors, poisoned wells, carried and planted bombs in public spaces, disguised themselves as policemen, and had begun organizing large groups of countrymen in order to attack Japanese citizens. For many Japanese, these stories and accusations only reinforced negative stereotypes, racial prejudice, and ethnic animosity of and toward Koreans. The rumors led to the massacre of Koreans with estimates ranging from hundreds to thousands. In addition, right wing government and military officials committed violent acts against leftists and socialists. Sometimes the attacks on leftists and Koreans coincided as Koreans generally sympathized with left leaning groups. In order to protect themselves from the perceived Korean threat, Japanese citizens formed vigilante bands. Some police and military officials encouraged their bloody activities but they remained a large obstacle to maintaining order. Common explanations for the massacre revolve around demographic, economic, and ethnic issues. Koreans living in

Japan quickly increased in number from about 30,000 in 1920 to more than 80,000 in 1923. Japanese feared Koreans would take away jobs from the archipelago's citizens during an economically difficult period for many workers. Finally, the Japanese based their discriminatory attitude toward Koreans on their perceived technological superiority and their colonization of Korea. It would be difficult, however, to attribute the massacre to Japanese scorn for the other. The Japanese did not target Chinese expatriates or any other non-Korean ethnic groups. Indeed, some vigilantes and other authorities killed Chinese immigrants because they were mistaken for Korean. Instead, the Japanese made Koreans the scapegoats for the disaster.<sup>15</sup>

Similarly, Chileans became scapegoats after the 1868 tsunami and earthquake that struck southern Peruvian ports and Ariquepa. Unlike the Japanese, Peruvians did not massacre Chileans in the earthquake's aftermath. Ariquepeños, however, accused and blamed Chileans for any and all looting after the disaster. Chilean workers found themselves subjected to arbitrary beatings. The situation deteriorated further with a yellow fever outbreak. Chilean workers were denied shelter. Ariquepeños expressed their anger about the disaster and epidemic by gathering in the city's main plaza and threatening Chileans with death if they did not leave within the next few days. Many Chileans escaped the disaster by boarding boats sent by the Chilean government to Peru's southern ports to return them to their homeland. The ariquepeños reaction to the Chileans in the natural disaster's aftermath helped to form a national identity by identifying the "other."

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15. Allen, "The Price of Identity," 64–93. For an alternative view, see Sonia Ryang, "The Great Kanto Earthquake and the Massacre of Koreans in 1923: Notes on Japan's Modern National Sovereignty," *Anthropological Quarterly* 76, no. 4 (Autumn 2003): 731–48.

## New Zealand

The frequency of natural disasters shaped the construction of culture and the mind set of a people. The amount of time between disaster events influences a person's or community's perception of vulnerability.<sup>16</sup> The Canterbury earthquake of 1888 struck New Zealand's southern island on the first day of September. Few deaths occurred but the earthquake damaged a large majority of the buildings in Christchurch and caused the cathedral's spire to collapse. Eleven days later, the Wellington Philosophical Society met to discuss Wellington's earthquake preparedness. W. M. Maskell presented a paper noting that the city's building codes were only designed to prevent fires despite Wellington's reputation as "the city of wind and earthquakes."<sup>17</sup> Brick buildings were common in the city. Maskell observed that earthquakes often destroyed brick buildings but that wood allowed for greater flexibility during a tremor. Other members of the philosophical society argued that poorly built buildings were not the fault of architects but of the owners who wanted brick and architectural styles that met certain class and cultural standards. At the next meeting, T. Turnbull argued that Wellington's building codes were prepared for any earthquake and that citizens should focus on fire hazards. Turnbull challenged the notion of flexibility. He argued that wrought iron buildings with iron connections between the floor and the roof as well as between the floor and walls was a better option. After all, Turnbull mused, wrought iron buildings had been adopted

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16. For an analysis of the reception and interaction of western technology and science with native practices, see Bankoff, *Cultures of Disaster*.

17. W.M. Maskell, "The Late Earthquake (1st September, 1888), and its Bearing on the Architecture of Wellington," *Proceedings of the Wellington Philosophical Society*, Fifth Meeting, 12 September 1888 in *Transactions and Proceedings of the Royal Society of New Zealand 1868-1961* vol. 21, (1888), 494.

in San Francisco and worked marvelously in every European nation. Furthermore, a drop in the frequency of earthquakes in New Zealand led to a certain amnesia about their consequences. The last major earthquake to strike the two islands before the 1888 tremor had taken place 33 years earlier. Turnbull concluded his presentation by quoting a New Zealand architect who declared in local newspapers that “we [New Zealanders] were not likely to again experience destructive earthquakes.”<sup>18</sup>

The frequency of earthquakes in Argentina and Chile too, affected the manner in which each country prepared for the phenomenon. The 1861 Mendoza earthquake caught the province by surprise since no temblor had struck the region since the Santa Rita quake in 1784. While mendocinos began to be concerned with antiseismic building after the 1861 catastrophe, little was done to create or enforce a building code. After the 1894 San Juan and La Rioja earthquakes, Argentine engineers and architects became more focused on creating a building code. Conferences on the subject during the first decade of the 1900s examined the subject. Similar to the architects and engineers in New Zealand, in nineteenth-century Chile, builders were more concerned with fire as a hazard than earthquakes despite the great frequency with which they occurred in the South American country. After the 1939 earthquake, *El Mercurio* ran articles about the latest antiseismic buildings, architectural styles, and engineers’ theories. By then, anti-seismic building had long entered the nation’s consciousness.

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18. T. Turnbull “On Earthquakes and Architecture,” *Proceedings of the Wellington Philosophical Society*, Sixth Meeting, 3 October 1888, in *Transactions and Proceedings of the Royal Society of New Zealand 1868-1961* vol. 21, (1888), 497.



## The United States

The United States has developed an understanding of disasters that sees them as vehicles to reform society, whether of social practices, approaches to the built environment or opportunities. Seventeenth-century Puritans understood calamities as punishments from God but also as opportunities for moral reform. Indeed, the Puritan community passed on its cosmology of disasters as vehicles of progress to future generations. More recently, reconstruction and rebuilding after disasters deepened the United States ties to capitalism and mass consumer culture. For example, the 1906 San Francisco earthquake and fire destroyed 28,000 buildings and left 200,000 inhabitants homeless. The disasters, at least theoretically, left a clean slate to begin anew for capitalists, in addition to the economic boom from rebuilding housing. Beginning with the San Francisco catastrophe, North Americans began to develop a fascination for disasters reflected in twentieth-century consumer culture. The 1906 earthquake provided excitement and drama for newspaper readers, film clips for cinema audiences, and theatrical reproduction for patrons of the arts. As the century progressed, disasters moved further into the United States consciousness through movies, science fiction novels, and comic books.<sup>19</sup>

Disasters also created situations where the authorities feared and assumed the popular masses would descend into disorder. After the San Francisco earthquake, officials called in the National Guard and police to control the perceived threat of disorder and to protect private property. Indeed, the man in charge of the military—Brigadier General Frederick Funston—viewed his objective as protecting the propertied

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19. Rozario, *The Culture of Calamity*, 50–57, 67–133.

interests, not providing relief or saving survivors from burning buildings. Yet, the catastrophe also produced solidarity and empathy among survivors, who gathered in public parks; local businesses donated food, clothing, and materials to build shelters. The social utopia experienced in some places is not easily found in other locations and in any event, tends to dissipate very quickly. While disasters impose some social leveling by reducing wealthy and poor alike to standing in bread lines, class distinctions and wealth bring advantages even in a catastrophe's aftermath. Thus, relief efforts after the San Francisco catastrophe reinforced and emphasized the social differences that existed before the earthquake. Policy makers based housing relief and funding on metrics that favored traditional social hierarchies, in particular property owners. These officials and their policies failed to support Chinese survivors, and assessed relief distribution for the poor and working class by middle-class or bourgeois standards.<sup>20</sup>

We find similar patterns in Argentina and Chile where officials concerned themselves with maintaining order in disasters' aftermaths. After the Valparaíso (1822), Mendoza (1861), Arica (1868), San Juan and La Rioja (1894), and Chillán (1939) earthquakes, municipal, provincial, and national authorities worried about maintaining order and protecting private property. The press stoked such fears by publishing eyewitness accounts that described the disaster zones as chaotic and dangerous places filled with looters pillaging for valuable items. Mendoza's criminal and judicial records after the 1861 quake, however, show that crime decreased. Only a handful of looters were actually rounded up and shot in a town outside of the provincial capital. After the 1939 Chillán earthquake, the state placed the southern region of Chile under martial law and

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20. Davies, *Saving San Francisco*.

relied heavily on the military to help carry out relief efforts. While catastrophes initially leveled some of the social difference between rich and poor, the wealthy were often able to either leave the disaster zone or take refuge in their patios and gardens while the poor suffered in public spaces.

### **Natural Disasters as Critical Junctures**

A critical juncture in the political, economic, administrative or military sphere leaves a lasting legacy or subsequent trend that produces critical change. Argentine and Chilean disasters provided different examples of critical junctures at the national, provincial or regional, and municipal levels. In general, Chilean earthquakes transformed all three levels of analysis. The centralized nature of the Chilean state meant that a response from Santiago was necessary for the relief and reconstruction effort to go forward. In contrast, Argentine earthquakes were less frequently transformative events at the national level. Instead, these Argentine disasters were mostly regional and local in nature. The federalized Argentine state left the provinces with control over the recovery and reconstruction process during the nineteenth century. In Buenos Aires, details of these catastrophic events were splashed on the front pages of porteño newspapers in the weeks after the disaster but quickly faded from the consciousness of the hegemonic urban center. Instead, these disasters left indelible marks on provincial and municipal histories and landscapes.

The 1861 Mendoza earthquake left lasting legacies at the provincial and municipal levels. Histories of the province view the earthquake as a dividing point between federal and liberal regimes. On a national scale, the natural disaster provided an opening in the federal stronghold of western Argentina for liberal Buenos Aires to begin

to consolidate the state. The failure of the federal regime to adequately respond to the 1861 Mendoza earthquake positively disposed the population toward a new liberal provincial government. The new regime took over the reconstruction of a new liberal city. Their hopes of rebuilding Mendoza on a blank slate were quickly dashed by legislative gridlock and differing elite interests. Instead the reconstructed Mendoza incorporated the old city and affirmed what many mendocinos had already begun doing, namely rebuilding their homes and businesses along the Alameda. The new Mendoza centered around a central plaza and four smaller plazas departing from the city's previous incarnation. The 1861 Mendoza earthquake marked an important critical juncture in national and regional politics and on the urban environment.

The 1894 San Juan and La Rioja earthquake had little influence at the national level but changed the urban environment in both provincial capitals. Although the national government provided some funds and relief supplies for the disaster victims, it lacked the financial resources to support rebuilding because of the economic depression in the 1890s. The disaster briefly made headlines in Buenos Aires' newspapers but quickly was forgotten. The low death toll left many survivors looking for food and shelter. The provincial authorities carried out relief measures to assist the populations with their daily needs. The earthquake destroyed most of the provincial capitals' buildings, leaving those still standing to teams of engineers, construction workers, and policemen to tear down. The disaster brought together architects, engineers, and geologists to begin to study better building practices and pushing for the implementation of a building code. The 1894 earthquake was largely consigned to provincial and local history.

By contrast, the 1944 San Juan earthquake quickly entered the national consciousness. The earthquake provided an opportunity for the Argentine military regime to deliver on its promise of social justice. As secretary of labor, Juan Perón led the relief efforts and initial reconstruction plans. Perón viewed the earthquake as giving him a blank slate to eliminate liberalism from the provincial capital city and create political unity. The reconstruction of San Juan, according to Perón, would be a model for the nation. The western provincial capital would demonstrate the military's technological superiority and their social vision for the Argentine nation. The military regime hired modernist architects that created designs that demonstrated the nation-state's centralized power. Perón's main constituency, workers, approved of urban planners proposals that called for an industrial city. Despite grand designs for a model city, San Juan failed to meet these expectations. Local elites' resistance, political conflicts, and design disputes frustrated Perón's plans for a democratic industrial city. Instead, San Juan became a symbol of intractable conflict.<sup>21</sup>

Earthquakes did not strike Argentina with the same frequency or broad geographical distribution as Chile. Temblors mostly shook the sparsely populated western provinces of Argentina and desolate areas away from provincial capitals. These natural disasters failed to register as critical junctures because few Argentines noticed these events in Buenos Aires or provincial capitals. For example, on October 9, 1871, an earthquake destroyed the small town of Orán in the north of Salta. Only twenty deaths were recorded. A scant three years later, on July 6, 1874, another temblor struck the

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21. Mark Healey, *The Ruins of the New Argentina*.

hamlet and caused the population to abandon the city. Most temblors, however, merely toppled a few dusty buildings in provincial backwards like the 1892 earthquake that struck the village of Rocreo in Catamarca. Other temblors, like the November 1906 event that shook Tafi del Valle in the province of Tucumán, merely knocked down walls and produced moderate structural damage. None of these events, however, proved to be a critical juncture at the provincial or national level.<sup>22</sup>

Although Chilean earthquakes destroyed villages and cities in all of the country's regions, many of them failed to produce critical junctures. Social Historian Rolando Mellafe counted 282 disasters that struck Chile between 1520 and 1906. Similarly, Rosa Urrutia de Hazbún and Carlos Lanza Lazcano catalogued all Chilean disasters recording 735 catastrophes between 1541 and 1992. The increased frequency of disasters along with their wide geographical distribution created a national disaster culture. As a result, more earthquakes proved to critical junctures on a national level in Chile than Argentina.<sup>23</sup>

The 1868 Arica earthquake and tsunami proved to be a critical juncture at the regional and international level. Peru, hampered by persistent political and financial problems, lacked the financial resources to fund reconstruction. Instead, the Peruvian government relied on private enterprise largely for recovery. Railroads that transported nitrates and guano bypassed Arica and instead carried goods and commerce to northern ports. Arica was modestly rebuilt because of the lower level of goods and primary

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22. For a complete list of Argentine earthquakes, see the Instituto Nacional de Prevención Sísmic, "Terremotos históricos ocurridos en la República Argentina," INPRES, <http://www.inpres.gov.ar/seismology/historicos1.php> [accessed July 8, 2010].

23. Mellafe, *Historia social*, 279–88; Urrutia de Hazbún and Lanza Lazcano, *Catastrofes en Chile*.

products that passed through its docks and warehouses. On the international level, Chilean municipalities and the national government responded to the catastrophe. The municipalities along the coast received the first news of the earthquake and tsunami and immediately organized and sent relief aid to the disaster zone. From Santiago, the Chilean state sent the Peruvian Government financial aid. Furthermore, the Chilean government worked to protect its citizens who lived, worked, and had business investments in southern Peru.

The 1939 Chillán earthquake fomented great national change. The catastrophe provided the newly elected Chilean president with an opportunity to pass his legislative agenda. President Aguirre Cerda passed reconstruction and economic development programs that produced lasting legacies in the economic and physical environment. The new National Development Corporation (CORFO) greatly increased the state's role and intervention in the economy. The urban environment was rebuilt with gleaming new structures in Concepción and Chillán. Similar to Perón's plan for San Juan, Aguirre Cerda viewed the earthquake as providing his government with a blank slate to rebuild "new" cities. These reconstructed urban centers would be more inclusive and reflect the president's social justice policies. Despite plans for bringing workers into the city center so they would have access to transportation networks, electricity, schools, and libraries, Chile's south-central region was largely rebuilt using the same grid system as before the earthquake that reinforced the previous social-economic hierarchy.

### **Conclusions from the Southern Cone**

Natural disasters provided opportunities for nascent Latin American states to consolidate their power in interior regions, to expand and increase the functions the state

carried out, and increased control of more resources. In nineteenth-century Argentina, the national state remained a peripheral presence in disaster relief efforts. Instead provincial authorities took the initial measures after earthquakes. The 1861 Mendoza earthquake struck at a fluid point in Argentine political history. The ongoing civil war between the Argentine Confederation and Buenos Aires complicated the relief effort. In the aftermath of the earthquake, the cash-strapped Argentine Confederation promised financial and material support to help rebuild the provincial capital. While neighboring provinces contributed to the relief effort, the Battle of Pavón—not far from Buenos Aires and won by troops from the port-city—in the months after the disaster marked the collapse of the rival state and porteño ascendancy. In addition, the governor of Mendoza abandoned the city for his country estate, leaving the leading citizens to attend to the relief effort. Indeed, even after Buenos Aires installed a liberal regime in Mendoza, reconstruction decisions remained in the purview of the provincial government. The state only threatened to cut off reconstruction funds after two years of vacillating over the location of a newly rebuilt city. The provincial legislature and governor agreed on a site to appease the state's request. With the federalization of Buenos Aires province in the 1880s, political consolidation of the Argentina state was achieved. Despite a newly empowered state, provincial authorities retained some autonomy. The 1894 San Juan and La Rioja catastrophe illustrate Argentine provincial autonomy. After the disasters, both provincial governors immediately undertook the lead in rescue and relief measures. The provincial governments ensured as best they could given their paltry resources the basic necessities for their citizens such shelter, food, and potable water. Furthermore, the police along with engineers and volunteers inspected buildings and partially standing structures



to determine their soundness. An important component of the relief and reconstruction programs for each province was reflected in their effective lobbying efforts in Buenos Aires for state funds.

By contrast, Chilean relief and reconstruction efforts remained centralized. After the 1822 Valparaíso earthquake, the embryonic state regulated religious processions and protected North Atlantic Protestant property, despite much dissent from conservative Catholic priests and parishioners. While Arica, Iquique, and Antofagasta were part of Peru at the time of the 1868 earthquake and tsunami, Chile's significant interests translated into participation in relief and re-investment efforts. Many Chilean workers migrated to the area to work in the mines and ports. Chilean capital funded and invested in many of the nitrate mining operations. The state maintained representatives in Arica to protect Chilean interests. After the earthquake, the Chilean government sent large sums to Peru to help relief and reconstruction. In addition, municipalities along the coast usually responded first to disasters by sending ships filled with supplies for the survivors. The Chilean state also sent boats to the various ports in southern Peru to evacuate its citizens. The 1891 Civil War only temporarily weakened presidential powers when functions were delegated to congress. After the 1906 Valparaíso earthquake, however, the president slowly began reasserting his authority over municipalities and legislative bodies.<sup>24</sup> The 1939 Chillán earthquake marked the maturation of the state. In the early morning hours after the January 26 disaster, government ministers and the president were already planning relief efforts. The state organized public and private resources from planes to volunteers and medical personnel. Indeed, the government viewed disasters as political

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24. Samuel Martland, "Reconstructing the City," 221–54.

opportunities to implement its agenda. For example, a legislative program for reconstruction and national development proposed by the president vastly expanded the state's involvement in the economy through the creation of a national development body. Furthermore, in order to overcome conservative legislative intransigence, the president placed public pressure on congress by touring the disaster zone and touting the relief efforts. In this way, the executive helped to mobilize the southern region to support his measures of state expansion.

Major disasters are capable of presenting opportunities for weaving together divergent regions in the formative stages of nation-building. They are also useful for uncovering competing notions of the nations attempting to appropriate the patriotic images that stem from catastrophes. The 1861 Mendoza earthquake, for example, occurred at a crossroads in Argentine political development. The long and bitter divide between liberal unitarians and conservative federals had split the country into two states and pitted the interior against Buenos Aires. After the catastrophe, the porteño press ran editorials and published circulars that declared that Argentines were obligated to help their fellow countrymen and put aside political differences. Organizations from Buenos Aires and throughout the provinces raised funds and gathered supplies for the relief effort. Many and varied philanthropic efforts took place, which only helped to illustrate—through articles in the press—the unequal relationship and superiority of Buenos Aires' economic prowess. Editorials highlighted and emphasized the paternalistic duty the port-city had on behalf of its less fortunate brothers in the interior. In addition to the patronizing discourse, the porteño press was also quick to point out the cosmic justice the earthquake administered to the mendocinos who had participated in the federal atrocities

committed against unitarians a few months earlier. Through very different political pathways, Chile with its greater frequency of earthquakes created and forged a national consciousness or a disaster culture. After the 1822 Valparaíso earthquake, anti-North Atlantic Protestant sentiment revealed a burgeoning Chilean nationalism. The 1939 earthquake elicited not xenophobic sentiments but patriotic outpourings of grief, relief collections, and volunteers from all sectors of society. But such immediate responses yielded only ephemeral solidarities: despite the editorials praising the collective patriotic response to the disaster, political divisions resurfaced with each side claiming its solidarity with the nation. Indeed, the ensuing political battle about the reconstruction and development program created divisive headlines. For example, a leftist newspaper described a conservative congressman's objections to the proposed legislation as a betrayal of the nation.

Shared experiences with disasters also create trans-national cultures of disasters. In addition to the historical ties between Chile and the Argentine region of Cuyo—the Argentine provinces of Mendoza, San Juan, and San Luis—the reciprocal aid each society provided to the other after natural and technological catastrophes linked the two communities. After the Mendoza earthquake of 1861, Chilean medics were some of the first relief workers on site to help the medocinos in addition to the relief supplies that made their way across the Andes. In 1863, the La Compañía church fire devastated society in Santiago. Mendocinos raised money for funerals and aid for destitute families. Mendocino newspapers noted the shared suffering in recent years and how that experience connected the two Andean societies. After the 1894 San Juan and La Rioja earthquake, virtually all sectors of Chilean society participated in collections destined for

their Argentine counterparts. After the 1922 Vallenar and Coquimbo earthquake in Chile, sanjuanio periodicals urged the population to donate to the relief effort: it was not simply a humanitarian effort but an issue of reciprocity. After the 1939 Chillán earthquake, periodicals on both sides of the Andes ran articles that pointed to aid provided by the other after natural and technological catastrophes, starting with the 1861 Mendoza earthquake. Indeed, the shared experiences linked Chilean and cuyano societies in a trans-national disaster culture.

In a catastrophe's aftermath, the officials and media often characterize the social environment as devolving into disorder and chaos. At the root of such fears was a distrust of the popular masses. Elites assumed that property would be overrun with looters and the government feared social unrest leading to rebellion or revolution. Nineteenth-century press reports published general and hyperbolic stories of armed bands raiding and pillaging, whether among the ruins of Mendoza after the 1861 earthquake or the beach in Arica after the 1868 earthquake and tsunami. Yet evidence from periods of catastrophes does not yield great spikes in crime and disorder, despite the authorities concern with order and the protection of private property. Despite the decrees ordering all looters to be shot on the spot in Mendoza, only four raiders were executed and even they did not commit crimes in the provincial capital but outside of it. Furthermore, court and criminal records show that crime did not increase in the months after the disaster but dropped in comparison to the years before 1861. The 1894 San Juan and La Rioja earthquake lacked reports of looting and pillaging because the provincial governments' quick and efficient responses to the situations. Similarly, the 1939 Chillán earthquake failed to yield many recorded acts of violence. The government placed the disaster zone under martial law and

the military carried out the state's relief effort with meticulous efficiency. Finally, the term "looting" was imprecise in describing the acts of survivors in a catastrophe's aftermath. This category does not distinguish between efforts at finding food and constructing shelter in the direst circumstances and those who picked through the rubble only searching for valuable objects to sell. Indeed, catch all terms and disaster myths have helped to create images of disasters as social chaos.

Catastrophes encouraged politicians to re-imagine urban centers as blank slates on which to implement their political or ideological visions as representations of their new nations. The cities destroyed by earthquakes, however, were not blank slates; the authorities would not simply start anew. Rather, propositions to relocate urban centers met the opposition of landed elites and the business community. Building a new city upset established structures of wealth and power. Disasters also highlighted urban problems that afflicted wide segments of the country's population. For example, the 1939 Chillán earthquake raised the endemic challenge of affordable and sanitary housing that Chileans lacked not only in the destroyed southern region but also in the northern deserts and metropolitan areas within the central valley. During the second half of the nineteenth century, liberal governments aimed to modernize their countries by looking to Western Europe as the source for progressive civilization. After the 1861 Mendoza earthquake European scientists were funded to study the region's geological makeup and submit proposals for the location of the new provincial capital. Likewise foreign engineers and architects were hired to design antiseismic buildings. These structures, however, used materials not easily found in the region's environment and proved too expensive for general use. Instead, new buildings incorporated elements that were readily available in

the surrounding area and were cost-effective for the greatest portion of the population resulting in the persistence of adobe structures and few modern concrete and iron buildings. After the 1939 Chillán earthquake, observers noted the sparse number of the structures that had incorporated the latest European technology had collapsed or suffered serious damage. The architectural review sections in the national press continued nonetheless to promote the latest fads and fashions from Europe but in the end European-based modernity had to conform to American conditions.

Over the course of the nineteenth century, disasters prolonged and added to the confrontation between religion and secular modernity. With independence, Chile undertook anti-clerical measures and tolerated a significant North Atlantic Protestant community in Valparaíso, the country's chief port city. When the 1822 earthquake struck, the Catholic clergy and the faithful interpreted the event as divine punishment for individual immorality, the government's anti-clerical program, and tolerance of the Protestants. The government's response to the bloody mortification rituals and massive religious processions that followed natural disasters through Santiago's streets was to outlaw them. A few "enlightened" priests argued that such acts of public penance were excessive, superstitious and reflected a backward set of Christian values. In addition to the state's attempts to weaken the Catholic Church's economic power and political influence, the advance of science also threatened the religion's position in society. Chilean Catholics and conservatives continued their struggle against modernity into mid-century. After the Arica catastrophe in 1868, the Chilean Congress decided to fund a scientific commission to study the causes of the earthquakes. Religious conservatives scoffed at the idea of such a mission because the only being who could answer these

questions was God himself. Despite their opposition to the scientific study of geology funded by the state, the commission was granted funding. In contrast to Chile, Argentine religious institutions responded to the 1861 Mendoza earthquake and 1894 San Juan and La Rioja seismic shocks in a less antagonistic way. Church leaders urged the faithful to help the relief efforts out of Christian charity. Priests were concerned with providing for their parishioners' spiritual health and bringing comfort and solace to the survivors.

At the time of their occurrence, disasters are often viewed as creating great change and upheaval but in the end, few have had long term effects on states and societies. Historians have noted that disasters reveal the fabric of society and the concentration of power that is often hidden from view during non-disaster periods. While focusing on single disasters may make it difficult to distinguish long-term changes from short-term anomalies, a longer historical view of catastrophes brings change and continuity more clearly into focus. In countries with frequent natural disasters, the development, consolidation, and expansion of the state can be explored; the continuity of religious explanations revealed; the transfer of technologies and their adaptation to different environments studied; the relationship between the state and society examined; and the creation of the nation and its different representations can be teased out over time and in a comparative context.

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## APPENDIX

### NOTABLE EARTHQUAKES IN ARGENTINE AND CHILEAN HISTORY

#### Argentina

Salta            September 13, 1692

The temblor destroyed the small town of Talavera del Esteco and produced considerable damage to Salta's provincial capital. This earthquake is remembered as El Milagro. According to legend, an image of Christ and the Virgin Mary were found off the coast of Peru in 1592—a century after Columbus discovered the New World. These relics were enshrined in Salta's cathedral. A century later, on September 13, 1692, a number of tremors shook Salta. A priest's vision prophesied that if the images of Christ and Mary were paraded through the streets for nine days, the provincial capital would be spared from future earthquakes. Since 1692, the Fiesta del Milagro has remained a significant religious and civic event in Salta's seasonal calendar.

Mendoza        May 22, 1784

This was the first significant earthquake to strike the city of Mendoza. Religious structures such as churches and monasteries were damaged or destroyed. No victims were recorded.

Mendoza      March 20, 1861

This earthquake was one of the most destructive natural disasters in Argentine history. It destroyed the city and left about 6,000 dead out of a population of approximately 18,000. Public officials responded to the disaster with a disorganized approach. The governor absented himself from the city after the disaster and spent much of his time at his hacienda. Decisions were left to a public health commission—comprised of local landowners and merchants—that made many of the crucial decisions about relief efforts. Buenos Aires' victory over the Argentine Confederation at the Battle of Pavón gave the port city control over the country. To pacify the interior, national troops occupied Mendoza and replaced the provincial government at the end of 1861. After a new reconstruction commission was unable to reach a consensus about where to rebuild the city, the governor appealed to the national authorities to intervene and impose a decision. In order to thwart the outside action and the loss of reconstruction funds and subsidies, the provincial legislature quickly agreed on a location to rebuild the city. After a year of inaction and squabbling between legislators and the governor over the location of the new city, the national government again threatened to withhold reconstruction funds. In 1863, the legislature finally approved—what the mendocinos had already started doing—rebuilding the city along the Alameda.

San Juan and La Rioja      October 27, 1894

The 1894 earthquake destroyed the Argentine provincial capitals of San Juan and La Rioja but produced few deaths. The quick and efficient response of San Juan's governor, Domingo Morón, yielded him a senate seat eight months after the disaster. The

provincial government commissioned studies by engineers to create antiseismic building practices and standards. None of these proposals were adopted. Geologists—supported by Governor Morón—proposed that the provincial capital be moved to a new location and rebuilt on more stable ground. The land owning elite blocked the proposal because of the plans considerable expense.

The earthquake exacerbated La Rioja's financial problems worsened by recent droughts, plagues of locusts, and a small pox outbreak. Recommendations from a technical commission—headed by an engineer—proposed better building practices, modernized urban design, and health services in the new city. These proposals, however, were largely ignored during reconstruction.

San Juan      January 15, 1944

This earthquake destroyed the provincial capital of San Juan, its suburbs, and neighboring towns. Approximately 10,000 people died from a population of 90,000. The military junta and suburban poor blamed the collapse of buildings on the old order and the elite. Juan D. Perón responded quickly to the situation with the military filling the role of philanthropic organizations. The earthquake, from Perón's perspective, left him with a blank slate to eliminate all vestiges of liberalism and rebuild the city as a model for the military's social vision of the "new" Argentina. The modernizing and centralizing national state commissioned modernist architects to design the "new" San Juan to reflect the value of social justice and industrialize the province. The urban poor supported the national government's plans for the model city. The model city ultimately failed because of design disputes, political rivalries, and local elite resistance. Instead of becoming a

symbol of national renewal, the reconstruction of San Juan ran into provincial political obstacles.

## Chile

Concepción February 8, 1570

An earthquake destroyed the frontier city of Concepción at a time when the Araucanians continually inflicted military defeats on the Spanish. As a result, King Philip II, abolished the Chilean audiencia in 1573, and appointed Rodrigo de Quiroga, a veteran conquistador, as governor of the territory.

Valdivia December 16, 1575

The southern most Spanish settlements were mining, agricultural, and pastoral centers under the constant threat of Araucanian attacks during the sixteenth century. Despite Spanish settlements south of the Bío Bío being rebuilt after the 1575 earthquake, the Araucanians destroyed them between 1598 and 1604.

Valparaíso and Concepción July 8, 1730

When the 1730 earthquake and tsunami struck the city, it was still recovering from military and natural disasters. The bishop noted in a letter to the king that Concepción's granaries, storehouses, and shops had been destroyed. Santiago quickly sent military and relief supplies in order to avoid another defeat by the Araucanians, while the city recovered from the disaster. The viceroy also advanced 50 percent of the

next year's subsidy and the government officials from Santiago donated 10,000 pesos to the Church and Concepción's residents for recovery and reconstruction.

Concepción May 25, 1751

Unfortunately, Concepción suffered a worse earthquake a mere 21 years later. This catastrophe destroyed the entire city, yet again. After a protracted dispute between the bishop and those who wanted to rebuild the city on a new foundation, Concepción was finally rebuilt in 1764. The location of the city moved to the Valley of Macha between the Andalién and Bío Bío Rivers.

Concepción February 20, 1835

Already disrupted by the wars of independence, the 1835 earthquake further delayed the agricultural region's recovery. A short time later, a small pox epidemic spread throughout south-central Chile. In the 1840s the interior minister observed that recovery in Concepción and the south-central region was still slow.

Arica (Peru) August 13, 1868

The 1868 earthquake and subsequent tsunami destroyed the port city. British and U.S. ships loaded with nitrates from Peru, Bolivia, and Chile anchored in Arica's harbor. The prevalence of adobe structures and the population's quick retreat to the hills surrounding the city helped to reduce the death toll. Despite Arica's economic significance as an important port city, it never regained its favored position or status after the natural disaster.

Iquique (Peru)                      May 9, 1877

The 1877 earthquake destroyed many coastal loading platforms causing a 25 to 30 percent drop in nitrate exports. With guano deposits declining between 1830 and 1870, the Peruvian Government nationalized the nitrate sector but the bonds they issued to buy the plants (oficinas) were devalued or unable to be sold. Thus, the Peruvian Government was unable to pay off nitrate plant owners after two years as they had promised. The disaster further reduced the government's ability to repay Peruvian certificate holders. On the eve of the War of the Pacific (1879-1883) nitrate and guano creditors pushed for and pressured the Chilean government to annex Tarapacá.

Valparaíso                              August 17, 1906

The earthquake struck just months after the newly elected president, Pedro Mott, had taken office. The financial burden facing the city for rebuilding its infrastructure was too great. The national government actively participated in relief and reconstruction efforts by deploying newly trained military men to the disaster zone, funding large public works projects, and undertaking regulation and zoning measures. A new national law created a reconstruction commission that the president packed with his appointees. Valparaíso's municipal government's efforts during the nineteenth century to enact and enforce regulations paved the way for greater acceptance of the national government's intervention in citizens' lives and businesses during the twentieth century. Valparaíso, however, never fully rebuilt or recovered, losing its status as the second great Pacific port in the Americas, after San Francisco. Eight years after the earthquake, the Panama Canal opened, further accelerating the port's decline.

Chillán and Concepción      January 24, 1939

Newly elected Chilean President, Pedro Aguirre Cerda, reacted quickly to the earthquake by declaring martial law in the disaster zone and organizing relief efforts. International aid from Europe, the U.S., and neighboring countries helped to quickly restore transportation networks. Only a week after the earthquake, Aguirre Cerda used the earthquake as an opportunity to pass legislation that rebuilt the south-central region and provided for national economic development. The conservative majority in congress rejected the president's proposals. Aguirre Cerda and his ministers repeatedly toured the disaster zone gaining more support for their reconstruction and development plans. The congressional conservatives reached a compromise with the president. The agreement created the Relief and Reconstruction Corporation to address the immediate needs of reconstruction and the Chilean Development Corporation (COFRO). Aguirre Cerda's legislative victory increased the state's role and intervention in economy.

Valdivia      May 22, 1960

The 1960 earthquake produced damage from Concepción to the south, a tsunami devastated the coast destroying Valdivia, and at least five volcanoes erupted, including Osorno. The damage done by the temblor and the tidal wave was similar to the 1906 and 1939 earthquakes and at least 700 people died. The economic disruption and inflation caused in part by the 1960 earthquake had by 1961 eroded President Jorge Alessandri's political support and popular approval.



Santiago      April 9, 1985

The 1985 earthquake complicated Chile's economic recovery but also justified investment in new building projects and loan programs by international banks to rebuild infrastructure. The new spending on housing, business structures, and transportation projects relieved growing social and economic pressures. In addition, General Augusto Pinochet's disaster response bolstered the international banking community's confidence in his regime and helped him to maintain his control of state institutions.

# MAPS

Figure 1 Western Argentina



Figure 2 Chile's Central Valley and South-Central Region





Figure 4 Tectonic Plates



Figure 5 Notable Earthquakes in Argentina and Chile

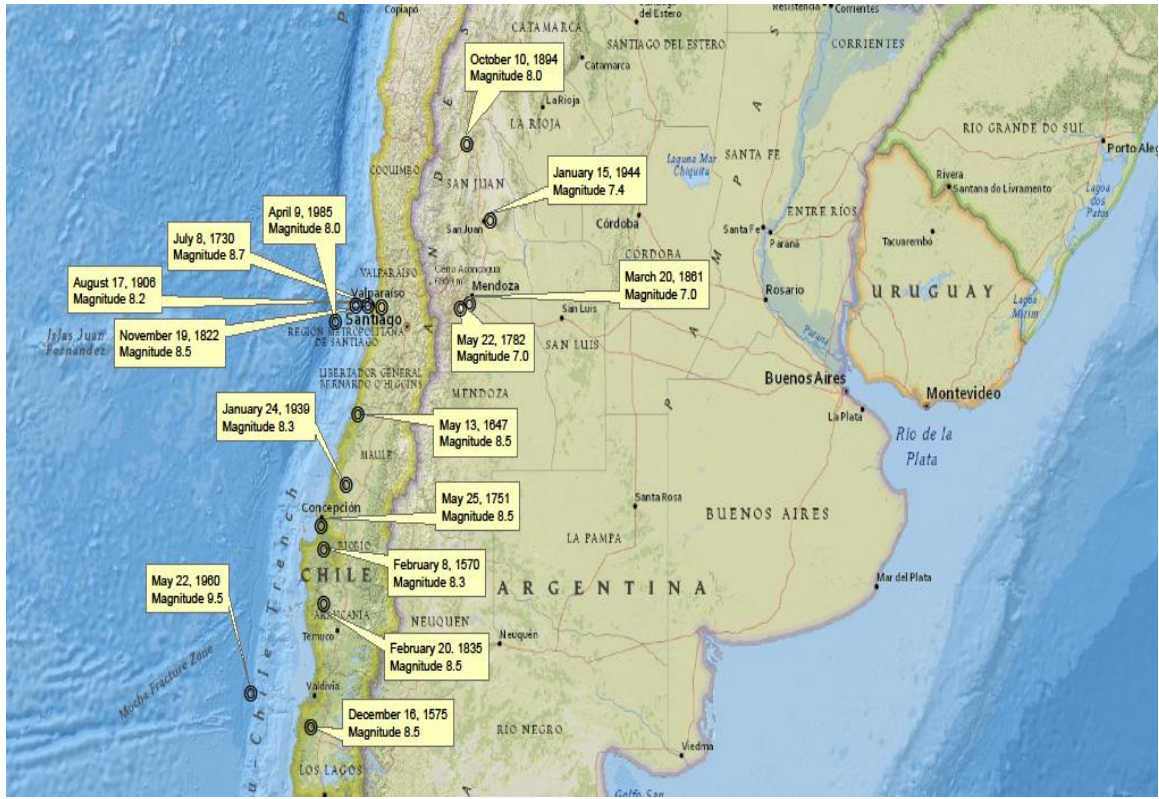


Figure 6 Notable Earthquakes in Present Day Northern Chile

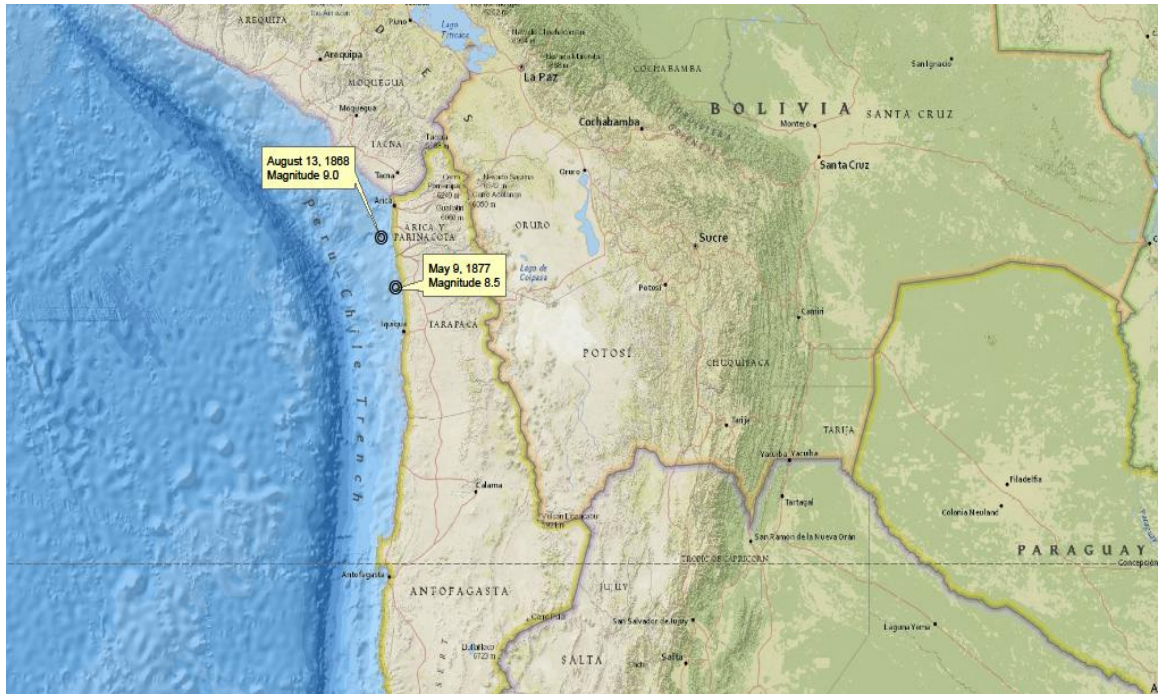
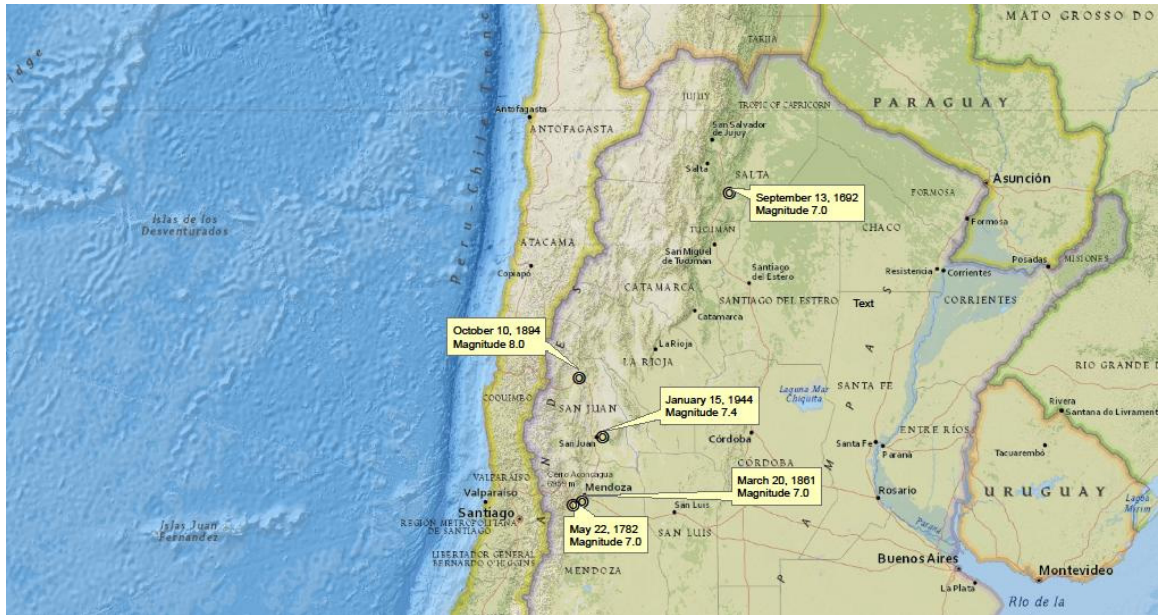


Figure 7 Notable Earthquakes in Western Argentina





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