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The Presence of Coups d'État within Revolutions: Effects on Population Health

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THE PRESENCE OF COUPS D'ÉTAT WITHIN REVOLUTIONS: EFFECTS ON POPULATION HEALTH

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List of Abbreviations

Latin American Organizations		
AMLAE	*Asociación de Mujeres Nicaragüenses Luisa Amanda Espinoza*	Luisa Amanda Espinoza Association of Nicaragua
API	*Acción Popular Independiente*	Independent Popular Action Party
APROFA	*Asociación Chilena de Proteción de la Familia*	Chilean Family Protection Association
ATC	*Asociación de Trabajadores del Campo*	Association of Rural Workers
CDS	*Comités de Defensa Sandinista*	Sandinista Defense Committees
INSS	*Instituto Nicaragüense de Seguridad Social*	Nicaraguan Social Security Institute
ISAPREs	*Instituciones de Salud Previsional*	Institutes for the Provision of Health
FDN	*Fuerza Democrática Nicaragüense*	Nicaragua Democratic Force
FSLN	*Frente Sandinista de Liberación*	Sandinista National Liberation Front
MAPU	*Movimiento de Acción Popular Unitario*	Popular Unitary Action Movement
MIR	*Movimiento de Izquerida Revolucionaria*	The Revolutionary Left Movement
PLI	*Partido Liberal Independiente*	Independent Liberal Party
PSCN	*Partido Social Christiano Nicaragüense*	Social Christian Party of Nicaragua
PSD	*Partido Social Democracia de Chile*	Social Democratic Party
PSN	*Partido Socialista Nicaragüense*	Nicaraguan Socialist Party
SNS	*Servicio Nacional de Salud*	National Health Service
SNUS	*Sistema Nacional Unico de Salud*	National Unified Health System
UDEL	*Union Democrática de Liberación*	Democratic Union of Liberation
Medical Terms and Organizations		
DALE	Disability Adjusted Life Expectancy	
IMR	Infant Mortality Rate	
LE	Life Expectancy	
WHO	World Health Organization	
YPLL	Years of Potential Life Lost	

Abstract

The present study is a comparative approach to revolutions and their effect on population health during the post-conflict period. Specifically, it attempts to determine whether revolutions that are accompanied by a coup d'état have a significant negative impact on post-revolution population health. Degree of revolutionary violence, governmental structures, and pre-revolution health systems is of particular interest as relevant variables. The study focuses on the Latin American countries of Nicaragua and Chile due to their similar region and timeframe. The revolutions and accompanying coup d'état in both of these countries do not demonstrate different patterns on public health in the post-conflict period; rather, governmental structure and regime type were found to be more influential on a nation's post-revolution health status than the occurrence of a coup d'état. It has also been found that the implementation of effective programs, community participation, and population expectation are the primary factors that influence post-revolution health status.

We all want to change the world
But when you talk about destruction
Don't you know that you can count me out?
- John Lennon

Section I: Introduction and Background

Introduction

The traditional scholarly consensus repudiated the use of regime characteristics as a legitimate method for comparative policy, particularly for healthcare. Since they based their claim using dichotomies, however, this consensus gradually changed as the body of literature evolved;[1] indeed, a dichotomous categorization of revolutions does not always aptly account for the complexity of the socioeconomic situation. A combination of regime characteristics, revolution types, the presence of coups d'état, and relevant health determinants is necessary to comprehensively analyze the efficacy of healthcare reforms and the health status of post-revolution countries.

Despite the contending definitions of revolution and coup d'état, a general foundation may be derived from common criteria and processes, which may then be tailored to a country- or region-specific analysis. The success and severity of revolutionary impact are determined by the presence of several interactive elements, of which violence is a potentially superfluous attribute, as well as the degree of resultant sociocultural change. The most acute of scenarios results in a military dictatorship or authoritarian regime, but a more mild change would simply be the replacement of governmental personnel. Understanding the severity of revolutionary processes and tactics will determine its impact on society and thus public health.

[1] Thomas John Bossert, "Can We Return to the Regime for Comparative Policy Analysis? Or, The State and Health Policy in Central America," *Comparative Politics* 15 (July 1983), 419.

"Revolution" Terminology and Parameters

Purpose

Understanding revolutionary nature and theory will help to determine the change and impact on post-revolution public health and health status. However, scholars have described the study of revolutions to be somewhat nebulous and the study of coups d'état even more nebulous still. Such an amorphous sociopolitical phenomenon as a revolution cannot be explained with a rigid and fixed definition; this is not to say that all parameters should be eliminated, but rather that it should not be the primary debate. What constitutes "revolution" and its impact on social systems and regimes should be sufficient to at least distinguish between revolutionary occurrences according to the levels of government, nation, and region.

Although a specific understanding of each revolution will be analyzed in its own right to determine the specific changes unique to the nation, as "it is the original aspects of a particular revolution which determine its success or failure,"[2] a general theoretical approach illuminates the shared commonalities among revolutions. The following list of contending definitions, albeit not exhaustive, provides an interrelated account of revolutionary theory, process, and outcome.

Contending Definitions, Theories, and Varieties of Revolutions

Defining the "Fever" of Society

Chalmers Johnson defines a revolution as a form of social change, which often "involves the intrusion of violence into civil social relations," including "peasant jacqueries, urban insurrections, military coups d'etat, conspiracies plotted by revolutionary associations, and

[2] Lawrence Kaplan, introduction to *Revolutions: A Comparative Study*, ed. Lawrence Kaplan (New York: Vintage Books, 1973), xv.

domestically supported counterrevolutions" as either a rebellion or revolution.[3] These processes are intended forms of violent action, organized and planned to initiate societal change, for a "true revolution is neither lunacy nor crime. It is the acceptance of violence to cause the system to change when all else has failed, and the very idea of revolution is contingent on this perception of societal failure."[4] As the purpose of society is to eliminate violence and foster cooperation among its citizens, violence in the form of revolution indicates a collapse of the social system.[5]

Based on his set parameters, some societies thus have revolutionary potential and/or proclivity. Indeed, Socrates asks of Adeimantus in the *Republic*, "Now, the best things are least liable to alteration or change, aren't they? For example, a body is altered by food, drink, and labors, and all plants by sun, winds, and other similar affections – but the healthiest and strongest is least altered, isn't that so?" (*Republic*, Book II, 381e).[6] "Unhealthy" or unstable societies are those in which revolutions are more likely to occur, and Johnson believes that the comparative method "must be devoted to comparing potentially revolutionary societies."[7]

Although Johnson does not consider rebellions and revolutions as dichotomies, he does differentiate between the two along a continuum and further divides them into (1) "simple" rebellions, (2) "simple revolutions," (3) "total" rebellions, and (4) "total" revolutions. While a simple rebellion does not have an accompanying ideology and is exemplified by such occurrences as a jacquerie, a total revolution aims at a total restructure of the society. This spectrum of varieties corresponds to the various levels of society; for example, "institutionalized changes" within the government may result in simple rebellions, "fundamental changes" within

[3] Chalmers Johnson, *Revolutionary Change* (Boston: Little, Brown, and Company, 1966), 1; 6-7.
[4] Johnson, 12-14.
[5] Johnson, 8-12.
[6] Quote translated in Michael L. Morgan, ed., *Classics of Moral and Political Theory* (Indianapolis: Hackett Publishing Company, Inc., 2005).
[7] Johnson, 7.

the regime may lead to ideological rebellions or simple revolutions, and a "change in basic political consciousness" may lead to total revolutions.[8] Earl Conteh-Morgan expands Johnson's spectrum to include the (1) Jacquerie (mass or peasant rebellion), (2) Millenarian rebellion (religious and idealist rebellion), (3) anarchistic rebellion (antinationalistic or Utopian rebellion), (4) Jacobin communist revolution ("classic revolution"), (5) conspirational coup d'état (an elitist revolution), and (6) militarized mass insurrection (elitist and nationalistic). He further differentiates between the rural targets of "traditional monarchies" such as seen in France, Russia, and China and the urban targets of "modern dictatorships" as seen in Mexico, Cuba, Nicaragua, Iran, and the Philippines.[9]

A classification of revolution by their various tactics rather than ideologies is a type of reductionism and can lead to "widespread confusion over the very meaning of revolution," because not all tactics are revolutionary. Johnson warns that the "sources of change" do not necessarily predict the type of revolution that will occur, and further states that an obsessive pursuit of such stipulation may result in "excessive abstraction and superficiality;" thus, he would consider a coup d'état as a tactic that could lead to a revolution rather than a form of revolution.

Johnson insists that a comparative study of revolutions must also include a comparison of social systems; otherwise the analysis will lack theoretical consistency.[10] In her work concerning the social revolutions of France, Russia, and China, Theda Skocpol contrasts each country with (1) "instances of non-social revolutionary modernization" and (2) "instances of abortive social revolutions." She controls for variation and compares the cases for phenomena which may be

[8] Johnson, 122-127.
[9] Conteh-Morgan, *Collective Political Violence: An Introduction to the Theories and Cases of Violent Conflicts* (New York: Routledge, 2003): 163-165.
[10] Johnson, 129; 136.

present in one and not the other. In all three cases, she found that there was a tendency for peasant insurrection and military disorganization.[11] Her methods effectively evaluate each case both in their own context and comparatively to determine any commonalities or differences.

Although "revolution" can be a loose term, Crane Brinton states that the common "core" definition for revolution in the field of politics is a "drastic, sudden substitution of one group in charge of the running of a territorial political entity by another group hitherto not running that government."[12] Similar to Johnson, Brinton abhors absolute precision of definition, for "he [the scientist] is interested less in beauty and neatness of definition than in having his definitions fit not his sentiments and aspirations, but the facts."[13] He also distinguishes between the healthy and unhealthy society, or rather societal equilibrium and disequilibrium. Societies in equilibrium are stable and have members who respond "predictably to given stimuli;" "as new desires arise, or as old desires grow stronger in various groups, or as environmental conditions change, and as institutions fail to change, a relative disequilibrium may arise, and what we call a revolution break out."[14] Disorder is certainly a universal tendency of all societies at one time or another, for discontent is an inherent proclivity, but a healthy and generally stable society is one in which tensions and criticism exist in a tolerable amount.[15]

The analogy between revolution and disease is deepened, symbolically representing revolutions as fevers; the old regime preceding the revolution perceives discontent through "prodromal signs" such as societal restlessness that is not quite the presence of revolution.[16] The disease only becomes present when symptoms arise, indicating that the revolution has begun.

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[11] Theda Skocpol, "France, Russia, China: A Structural Analysis of Social Revolutions," *Comparative Studies in Society and History* 18 (April 1976): 177; 209.
[12] Crane Brinton, *The Anatomy of Revolution* (New York: Vintage Books), 4.
[13] Brinton, 11.
[14] Brinton, 15-16.
[15] Brinton, 27-28.
[16] Brinton, 65.

Eventually a crisis takes place, which is followed by a period of "convalescence" and perhaps several relapses. The society, represented as the body, may become stronger from the revolution or illness in the form of a more effective government.[17]

Revolutionary Process and Criteria

Peter C. Sederberg provides a repetitive yet necessary account of thirteen contending definitions of revolution, including those of notable scholars such as Charles Tilly and Samuel P. Huntington. Despite this range of perspectives, Sederberg states that revolutions share the four main characteristics of process, duration, direction, and outcome of which process and duration are the two most disputed elements, and outcome includes the degree of change within regime personnel, institutional structure, socioeconomic structures, and basic culture.

Each of these elements are weighted differently; Sederberg argues that "no lower-scale alteration of personnel, structure, or culture is really revolutionary. A shake-up of the class structure or basic cultural values, in contrast, clearly satisfies the expectation of significant change."[18] Criteria for a revolutionary process differ among scholars, as some consider outcome more important or violence as a superfluous trait.[19] Some scholars argue that revolutions are sudden or have a short time span, while others argue that they can be more prolonged; Sederberg does not discount either perspective, and rather elucidates the possibility that attributing the quality of suddenness may be due to the revolutionaries' intention for sudden change, whether it is realized in actuality or not. Sederberg also states that revolutions are naturally distinguished

[17] Brinton, 17. It must be noted that he defines society merely to indicate the collective individual for behavior, and he is careful to mention that there is a distinction between metaphysics and science in light of the "soul" of revolution and the body politic.
[18] Peter C. Sederberg, *Fires Within: Political Violence and Revolutionary Change* (New York: HarperCollins College Publishers, 1984), 54-57.
[19] Sederberg, 57-58. The author also recognizes that nonviolent regimes are of particular interest when considering revolutionary process. Gene Sharp recognizes that the regime's method of control or coercion can be ineffective against the populace who refuses to accept their authority and cease to respond.

from other social transformations depending on the guided direction and social movements behind them.[20]

He concludes with his own definition that a "revolution is a significant change deliberately wrought over a relatively short time through a strategy involving considerable coercion," in which the change brings a revolutionary outcome, the coercion is the revolutionary strategy, and the strategy is implemented by revolutionaries.[21] He states that coercive violence is an intentional harm that attempts to achieve political significance with "mutual interaction" among the population. Stable societies tolerate "acceptable force" such as strikes to achieve predictable control of this interaction, whereas unstable societies harbor "unacceptable violence" such as revolutions.[22]

Much like Johnson, Jack A. Goldstone states that "many of the characteristics of revolutions reflect the conditions of revolutionary struggle per se;" therefore, despite their different ideologies and backgrounds, revolutions usually follow a general process.[23] State breakdown is caused by a seemingly delicate process and combination of fiscal distress, elite alienation, and mass mobilization. A drain in the state resources strains the societal balance and decreases state authority, leading to a potential neopatrimonial state through "borrowing, new taxes of dubious legality, and simple corruption." Elite loyalty is tenuous without state bribery and both the military and bureaucracy become ineffective. If the elite are alienated, then a crisis in the form of "a war, a collapse of state credit, or superpower pressure" will likely lead to revolution, for "revolutionary struggles arise only when elites are severely divided – a united

[20] Sederberg, 58-61.
[21] Sederberg, 61-62. It must be noted here that the author believes it to be a rare occurrence to have all three factors of outcome, strategy, and revolutionaries.
[22] Sederberg, 38-45. Sederberg's typologies of violence are organized according to degree, and will be discussed in more detail under "Revolutionary Spectrum."
[23] Jack A. Goldstone, "An Analytical Framework," in *Revolutions of the Late Twentieth Century*, ed. Jack A. Goldstone, Ted Robert Gurr, and Farrokh Moshiri (Boulder: Westview Press, 1991), 47.

elite, opposed to a government that is weak in resources, can simply stage a coup d'etat and then alter government policies."[24] According to Goldstone's "interactive model," a revolution will only occur when these two elements are combined with mass mobilization in the form of demonstrations or riots. This "revolutionary conjuncture" of the three main factors can be exacerbated by several elements such as rapid price inflation, population growth, nationalism, the emergence of "professional groups," corruption, power concentration, and economic shifts.[25]

Similar to the other scholars, Goldstone explains that the revolutionary process is accompanied by a gradual ideological change, which usually begins conservatively. As the state continues to lose its authority, conservative ideologies transform into radical ideologies, rendering counterpropaganda ineffective. An ideology must be widely accepted to gain popular support and radical enough to contend with other competing radical ideologies.[26] A highly organized and conservative coalition successfully forms in order to solve the unavoidable problems of the state that persist into the post-revolutionary period. They gain the interest and support of essential groups through the strategies of rectification to address "formal grievances," redistribution of private property to address "material grievances," and nationalism to villainize enemies in order to unite the population. "Thus, a nationalist policy, involving strong leadership and action against external 'enemies,' is often the key to restoring national unity and order." [27] Thus, military dictatorships and authoritarian regimes are often welcomed, as they "embod[y] the fervent nationalism that is the common denominator to which most revolutions are eventually reduced."[28]

[24] Goldstone, 38.
[25] Goldstone, 40-42. Johnson also alludes to this theory of "conjunction."
[26] Goldstone, 44.
[27] Goldstone, 46-7.
[28] Goldstone, 47.

Similar to Sederberg's distinctions, James DeFronzo differentiates a reform movement, which "attempts to change limited aspects of a society but does not aim at drastically altering or replacing major social, economic, or political institutions," and a revolutionary movement, "in which participants are organized to alter drastically or replace totally existing social, economic, or political institutions."[29] Similar to several scholars preceding him, DeFronzo considers violence as a likely attribute of revolutionary movements and differentiates between the two types of "people's war" and "guerrilla warfare."[30]

He presents his own "conjunction" approach to understanding revolutions and states that there are five particular factors necessary for success. "Mass frustration," which creates popular uprisings among the population, is a result of "relative deprivation" (or Goldstone's "injustice") caused by increased expectations with decreased standard of living and governmental capabilities. Also similar to Goldstone are "dissident elite political movements" and "unifying motivations" such as nationalism. Aligned with Sederberg's theory, a "severe political crisis" that impedes the "coercive capabilities of the state" and takes advantage of "a permissive or tolerant world context" creates the opportunity for a successful revolution. Revolutions are unsuccessful if the concurrence of all of these five factors does not take place, particularly that which unifies a population. Indeed, "nationalism, as a spur to unified action, and economic redistribution, as an antidote to mass frustration, join together with the other major revolutionary factors…to explain many sociopolitical upheavals of the past and, perhaps, those of the centuries to come."[31] DeFronzo states that most revolutionary theories share the commonalities of mass frustration and the inability of the state to deal with rising mass expectations. International

[29] James DeFronzo, *Revolutions and Revolutionary Movements*, 3rd ed. (Boulder: Westview Press, 2007), 8.
[30] DeFronzo, 8-9.
[31] DeFronzo, 10-11; 18-22; 27.

permissiveness is an additional, albeit less acknowledged, factor that creates an amenable environment for revolutions.[32]

Drawing from his scholarly predecessors of revolutionary theory, DeFronzo created an original revolutionary sequence which begins as an intellectual opposition to the old regime. The old regime then attempts reforms, but internal conflicts arise from a "revolutionary alliance." The moderate post-revolution government that is established soon collapses and gives way to a wave of radicalism. Radicalism is in turn taken over by extremism and coercion in order to fulfill the revolution's goals, and "more pragmatic moderate revolutionaries" eventually replace them.[33] This revolutionary process can also be seen with Brinton's "accession of the extremists," where the legal government, led by the moderates who have established prestige, financial resources, and institutions, is challenged by their "rival" illegal government run by the extremists. The moderates prove to be weak and inadequate due to their liabilities and "virtuous" responsibility to rights, and unwillingly concede to the extremists.[34]

As with DeFronzo, Conteh-Morgan differentiates between (1) revolutions which attempt to alter the status quo and (2) riots, violent demonstrations, and civil wars which affect state integrity. He claims that only "profound" alterations to society truly constitute a revolution, since they alter the values, structure, institutions, and elite leadership of the society in which it occurs, whereas coups d'état do not have a lasting effect on the societal structure. Unlike the previous scholars, Conteh-Morgan is more concerned with a stipulated definition of revolution, and considers the "perfect revolution" to have the specific attributes of (1) "an overthrow of the government by its own subjects, carried out from within the state," (2) "the old ruling power elite replaced by a new one from within the state," (3) "mass insurrection, involving violence or the

[32] DeFronzo, 25-26.
[33] DeFronzo, 22-23.
[34] Brinton, 134.

threat thereof," and (4) "a transformation of the old social system."[35] Of course, this is not very different from the "conjunction" theories of Goldstone and DeFronzo.

Revolutionary Spectrum

Degrees of Revolution, Political Change, and Violence

In his work *Fires Within: Political Violence and Revolutionary Change*, Sederberg has included several tables that clearly display the various and complex dimensions of a revolution and the potential violence that accompanies it. Indeed, "the notions of violence as a means and revolution as an end of political struggle receive special attention."[36] His compilations are particularly useful in determining the degree or severity of revolution and revolutionary violence, which allows for adequate categorization and thus a better foundation for comparative methods of analysis.

Based on Goldstone's theories of revolution, Sederberg has composed a comprehensive table that displays the degree of revolution from stability to total "great revolution," corresponding to eight different attributes; the lack of all attributes indicates political stability, while the presence of all eight attributes indicates a total revolution and political instability. In line with several of the aforementioned theorists of revolution, the two particular attributes only present in a total revolution are a change in both the "status systems of traditional elites" and the "economic organization" of a society, indicating the clear severity and impact of such an occurrence.[37] The author states that "no lower-scale alteration of personnel, structure, or culture is truly revolutionary. A shake-up of the class structure or basic cultural values, in contrast,

[35] Conteh-Morgan, 156-157.
[36] Sederberg, 8.
[37] Sederberg, 60-61.

clearly satisfies the expectation of significant change."[38] For Sederberg and several of the aforementioned scholars, the degree of change is a significant aspect, and determines the degree of revolution. Somewhat more controversial than degree and severity of revolutionary change is the presence and degree of violence. Accepting scholarly vacillation concerning violence as a necessary characteristic, Sederberg does not discount it as a possible significant factor within some revolutionary occurrences.[39]

[38] Sederberg, 55-56.
[39] Sederberg, 47-53.

Table 1-1: "Crisis, Breakdown, and Revolution: An Inventory of Attributes"[40]

(1=Attribute present; 0 = Attribute absent)

Type	Attribute							
	Widespread elite/popular alienation from state	Elite revolts against state	Popular revolts against state or elites	Widespread violence or civil war	Change in political institutions	Change in status system of traditional elites	Change in economic organization	Change in legitimizing symbols and beliefs
Stability	0	0	0	0	0	0	0	0
Successful repression	1	0	0	0	0	0	0	0
Normal coup d'état	1	1	0	0	0	0	0	0
Conservative political reform	1	0	0	0	1	0	0	0
Dynastic civil war	0	1	0	1	0	0	0	0
Secessionist civil war	1	1	0	1	1	0	0	1
Political revolution	1	1	1	1	1	0	0	1
"Great" revolution	1	1	1	1	1	1	1	1

[40] Sederberg, 60.

Table 1-2: "Forms of Domestic Violence"[41]

Type	Variable					
	Location	**Political Significance**	**Direction of Change**	**Mass Participation**	**Elite Participation**	**Destructiveness**
1. Violent Crime	Urban and rural	Low	0	Low/Medium	Low	Low
2. Social banditry	Rural	Low/Medium	~0	Low/Medium	Low	Low/Medium
3. Gangsterism	Urban	Low/Medium	~0	Low/Medium	Low	Low/Medium
4. Peasant uprisings	Rural	Medium	-1 to 0	High	Low	Medium/High
5. Urban riots	Urban	Medium	-1 to 0	High	Low	Medium/High
6. Guerrilla raids	Rural	Low/Medium	-1 to +1	Low/Medium	Low	Low/Medium
7. Revolutionary warfare	Rural	High	-1 to +1	High	Low/Medium	High
8. Urban revolution	Urban	High	+1	High	Low/Medium	Medium/High
9. Assassination	Urban and rural	Medium	-1 to +1	None	Low	Low/Medium
10. Vigilante violence	Urban and rural	Low/Medium	-1 to 0	Low/Medium	Low/Medium	Low/Medium
11. Coup d'état	Urban	High	-1 to +1	None to low	Medium/High	Medium
12. Regime terror	Urban and rural	High	0 to +1	Low	Medium/High	High

[41] Sederberg, 48.

The Coup d'État

Placement on the Spectrum

There is considerable debate whether a coup d'état is a type of revolution or distinct from it. Most tend to agree that a coup is "a stroke of force at the particular rulers of an established system of government, usually executed by members of the ruling group, but not aimed at changing the system."[42] For other scholars such as David C. Rapoport, the debate on whether a coup is a revolution type is not as significant as recognizing its unpredictability and "extra-legal" political meaning.[43] The general consensus seems to consider a coup as a potentially revolutionary tactic if successful, but not a revolution in itself; coups that do not lead to revolutions are merely considered "acts of traitors or as instances of international subversion." Johnson states that a coup is theoretically welcomed if the system is in need of change, and revolution may break out if the elite resist this change.[44] As can be seen with Goldstone's and Sederberg's representation of revolutionary change, a coup is not an isolated incident.[45] Coups differ in concept to the greater development to which they contribute; therefore, "the mere fact of a coup does not imply any change in the social structure of society."[46]

Bruce W. Farcau provided quite a profound and concentrated study on the coup d'état, evaluating its nature as well as its form of execution. He describes a coup to be a nebulous phenomenon to analyze due to its secretive nature, as it gains attention only toward the end or after its occurrence and the documentation surrounding it is often unreliable. In his study, he

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[42] Carl J. Friedrich, "An Introductory Note on Revolution," in *Revolution: Nomos VIII*, ed. Carl J. Friedrich (New York: Atherton Press, 1966), 5.
[43] David C. Rapoport, "Coup d'Etat: The View of the Men Firing Pistols," in *Revolution: Nomos VIII*, ed. Carl J. Friedrich (New York: Atherton Press, 1966), 54.
[44] Johnson, 137-138.
[45] Sederberg, 60-61; Bruce W. Farcau, *The Coup: Tactics in the Seizure of Power* (Westport, Connecticut: Praeger Publishers, 1994), 2.
[46] Farcau, 3.

considers the coup to be internal in nature, much like a "heart attack or a paralyzing stroke from within the body politic," and favors a more vague definition proposed by Edward Luttwak, in which a coup is described as "the infiltration of a small but critical segment of the state apparatus, which is then used to displace the government from its control of the remainder."[47]

Despite all of its planning and organization, the physical act of a coup is "a short, sharp action aimed at the seizure of the key functions of a state's ruling system, usually coming to fruition or failure within the space of twenty-four hours from the first overt act to the collapse of either the target government or of the plot."[48] Farcau believes that due to its brief and specified nature, coups are likely to be nonviolent in nature or do not need violence to be considered a coup.[49] Indeed, according to Sederberg's degrees of violence and attributes, a coup has neither widespread violence nor a high level of destruction and is also relatively low on its degree of change and revolution type.[50]

Farcau provides the general process despite its uniqueness among different countries, and divides it into the preparatory phase (or "control") and the active phase (or "neutralization"); the presence of violence depends on the success of the preparatory phase.[51] A coup generally begins with the formation of plotters who agree on a commitment to their plan. After they attempt their first trial rebellion, they publicly declare the coup and seize the central governmental power. If successful, they announce the newly created government and formally name its new members. The first two constitute the preparatory stages, which determine the success and amount of bloodshed that will likely take place. Although these stages are often ignored by the literature,

[47] Farcau, ix-xiii; 1-2.
[48] Farcau, 7.
[49] Farcau, 7.
[50] Sederberg, 48; 56; 60.
[51] Farcau, 8.

Farcau states that they can provide clues as to what kind of regime will take over and the degree of change that may follow.[52]

Frequency as a Possible Characteristic

Latin America has an unusually high proclivity for coups d'état; Carl J. Friedrich states that coups d'état are "frequent in unstable monocratic systems, especially dictatorships and tyrannies."[53] Rapoport states, although somewhat jaundiced, that violence is an inherent facet of the governmental structure in this part of the world, and Huntington similarly likens a Latin American revolution and coup to a type of election.[54] "The Latin American military has brought the coup d'état to the state of an art form which is only poorly copied in other societies."[55] Such frequency can even create a certain psychological conditioning among the population, removing the stress that would usually accompany such an event. Although only one coup accompanied the revolutions of Nicaragua and Chile, unlike the several coups in such countries as Argentina and Honduras, the mentality may yet seep into their cultures.

"Health" Terminology and Parameters

It seems, given the revolutionary spectrum, that revolutions and coups are likely to have a significant impact on the health status and infrastructure in the post-revolution period. Understanding public health and healthcare systems in general will help to understand its connection with revolutions and the causal relationship they may embody. Although Bernard J. Turnock focuses on the American public health system to derive his conclusions, his work is useful to establish the basic concepts of public health from which a more country- or region-

[52] Farcau, 14-15.
[53] Friedrich, 5.
[54] Rapoport, 54-55.
[55] Farcau, ix.

specific understanding may draw upon. He provides a list of contending definitions and explains the complex inter- and multi-disciplinary nature of public health.

Defining Health and Public Health

Health and wellness are difficult terms to define;[56] however, several scholars agree that health is not mutually exclusive with disease, and that the concept of health has evolved from a negative definition to a more positive one. The negative perspective, which developed during a period of continuous epidemics, focuses on health as the absence of disease, indicating that health and disease are of the same spectrum or continuum.[57] Conversely, the positive perspective developed as knowledge in public health increased and placed health and disease on different spectrums, "with wellness and illness in one dimension and the presence or absence of disease or injury in another."[58] The positive perspective defines health as the ability for people to meet their normal roles and duties within society, creating a higher, albeit more subjective and socially oriented, standard for the wellness of a population.[59]

These perspectives have revealed that disease is objective and wellness and illness are subjective, and has further obfuscated the determination of a society's health status. Thus, four possible health conditions exist where wellness and illness can be either with or without disease or injury, creating a greater difficulty in determining what constitutes health or wellness.[60] Despite its subjectivity, this "social account," namely the "ability to live and plan one's life

[56] Bernard J. Turnock, *Public Health: What It Is and How It Works* (Gaithersburg, MD: Aspen Publishers, Inc., 1997), 35.
[57] Turnock, 34; Ernst Schroeder, "Concepts of Health and Illness," in *Health Indicators: An International Study for the European Science Foundation*, ed. A. J. Culyer (Oxford: Martin Robertson & Company Ltd., 1983), 33; A. J. Culyer, introduction to *Health Indicators: An International Study for the European Science Foundation*, ed. A. J. Culyer (Oxford: Martin Robertson & Company Ltd., 1983), 5.
[58] Turnock, 35.
[59] Turnock, 35; Mogens Nord-Larsen, "What Kind of Health Measure for What Kind of Purpose?" in *Health Indicators: An International Study for the European Science Foundation*, ed. A. J. Culyer (Oxford: Martin Robertson & Company Ltd., 1983), 102; Culyer, 3 and 7.
[60] Turnock, 35.

satisfactorily," has surpassed the traditional indicators[61] that do not fully indicate "health trends" within a society.[62]

Sociocultural and Governmental Effects on Public Health

Society has a great influence on determining the definition of health; paraphrasing Hans Schaefer's findings from 1976, Ernst Schroeder writes that "definitions of health and illness are therefore part and parcel of societies, cultures and epochs."[63] This is not to deny the possibility of some universal aspects of health definitions, however. For example, the World Health Organization's (WHO) "definition of health as a state of complete physical, mental, and social well-being" can be an applicable guide to all societies; illness is generally perceived as a state that deviates from the norm and "is more socially than naturally determined."[64] Therefore, public health must have an inherently broad definition that means something different to different peoples;[65] indeed, the definition of health in terms of an individual's characteristics, which includes "functional capacity…, pain, [and] emotional state," relates to the societal perspective of health and illness.[66]

In an attempt to address this issue, Turnock includes a partial list that defines public health as (1) a "broad social enterprise or system," (2) "professionals and work force whose job it is to solve certain important health problems," (3) "body of knowledge and techniques that can be applied to health-related problems," (4) "activities ascribed to governmental public health agencies," and (5) "literally the health of the public as measured in terms of health and illness in a population." Despite these contending or misconstrued views, Turnock states that one of the

[61] I.e., mortality, life expectation, and morbidity.
[62] Culyer, 2-3.
[63] Shroeder, 24-5.
[64] Shroeder, 24.
[65] Turnock, 7; Culyer, 1.
[66] Culyer, 7-8.

primary aspects of public health is that the health of an individual affects the health of society.[67] Schroeder similarly links the individual and society and states that according to the "medical-scientific concept," illness is perceived as that which creates problems for the individual and/or community.[68] Certain diseases or ailments can sometimes be deemed as an acceptable norm within a culture or society; "an extreme example of clinical disease that was not regarded as 'being ill' in the relevant community is pinto (dichromic spirochetosis), a skin disease that is so prevalent among some South American tribes that the few single men *not* suffering from it were regarded as pathological to the point of being excluded from marriage (Ackerknecht 1947)."[69]

Turnock considers public health as a "movement" that constantly evolves to handle the health problems of a population. The system begins with inputs in the form of "human, organizational, informational, fiscal, and other resources" that are carried out through processes or "practices." These practices result in outputs such as programs or interventions, which then create "*health* or *quality-of-life* outcomes," or "desired results."[70] Public health is thus inherently political in nature and inevitably linked with the government's influence on public policies and health-related programs; "history, culture, the structure of the government in question, and current social circumstances" influence the evolution of the society's public health that can either improve or degrade according to governmental performance.[71] Another implication of public health's political nature is that the values of health indicators, which are simply factors that indicate a state of health, can change according to the change in a society's dominant ideology.[72] It is then a logical assumption that the analysis of health indicators during a revolutionary period

[67] Turnock, 7-8. He admits that some of these descriptions are components or functions of public health rather than the actual nature of public health.
[68] Shroeder, 30.
[69] Culyer, 6.
[70] Turnock, 14. Inherent emphasis.
[71] Turnock, 16-8.
[72] Culyer, 20.

may be problematic, but can still provide an indication of general health status when analyzed among correct cultural and historical context.

Section II: Literature Review

Introduction

Some argue that revolutions help to engender a need for societal improvement and public awareness, particularly of health policy, while others argue that health status was usually the same if not better in the pre-revolution period. Healthcare in both Nicaragua and Chile improved after the revolution, most effectively at the community level with organizations such as the *Comités de Defensa Sandinista* (Sandinista Defense Committees, CDS) and the *Asociación de Mujeres Nicaraguenses Luisa Amanda Espinoza* (Nicaraguan Women's Association, AMNLAE) of Nicaragua, as well as the *Asociación Chilena de Proteción de la Familia* (Chilean Family Protection Association, APROFA) of Chile.[73] However, as will be made clear in the coming sections, regime types differed between these two countries. This apparent inconsistency leads to confusion as to what regime types or how regime change can significantly influence healthcare.

Classifying Regimes and Regime Change

To determine at least a general effect of revolutions on health status and public health policies, be they positive or negative, it is first necessary to classify regimes to understand the nature of the change. Understanding the nature of revolutionary regime change can also determine the significance of coups d'état on post-revolution health status. Unlike defining revolution, regime types require a more precise definition and classification, as "regime labels are essential for analyzing comparative historical processes, for describing regimes, and for

[73] It must be noted that APROFA was first implemented in the early 1960s, but was more significantly utilized after Chile's revolution in 1973.
It is also interesting to note that although Cuba demonstrated considerable healthcare policies after the revolution as well, the health status of Cuba demonstrated even steeper declines in mortality and a larger increase in life expectancy before its revolution. Thomas John Bossert, "Health Care in Revolutionary Nicaragua" in *Nicaragua in Revolution*, ed. Thomas W. Walker (New York: Praeger Publishers, 1982), 260; Nelson P. Valdés "Health and Revolution in Cuba," *Science & Society* 35 (Fall 1971): 334; James W. McGuire and Laura B. Frankel, "Mortality Decline in Cuba, 1900-1959: Patterns, Comparisons, and Causes," *Latin American Research Review* 40 (2005): 83.

studying regime breakdowns and transitions."[74] To overlook the complex diversity of regime types and their changes would be both simplistic and inaccurate, but it must be understood that "no nation's political system is likely to be a pure regime type… Regimes are not only mixed but can change over time."[75] Naturally, this sentiment has created contending definitions and classifications within the literature, concerning not only the criteria for designation but also the number of categories and how countries should be classified.

Focusing on Latin American countries, Scott Mainwaring, Daniel Brinks, and Aníbal Pérez-Liñán have organized regime types according to their "trichotomous ordinal scale" which labels regimes as democratic, semidemocratic, or authoritarian. In their study, they recognize the inherent subjectivity in organizing regime typologies and claim that their ordinal scale eliminates the more rigid dichotomies, the latter of which "better captures the significant variations in regimes."[76] Other studies of particular interest to Latin America, such as those by John W. Sloan, Guillermo O'Donnell, or Karen L. Remmer and Gilbert W. Merkx, acknowledge the many variations among regimes but still characterize them as either democratic or a type of authoritarianism.[77] Both groups of scholars, proponents of either the dichotomous or the trichotomous classification, are able to delve deep into Latin American politics; however, they have distinct advantages and disadvantages that create differences between them. The former, for instance, has the ability to compare the changes in policy performance on a more general scale, whereas the latter accounts for specific regime change that can be used to determine possible patterns concerning coups d'état. Although the present study will mainly draw upon the

[74] Scott Mainwaring, Daniel Brinks, and Aníbal Pérez-Liñán, "Classifying Political Regimes in Latin America, 1945-1999," (Kellogg Institute: The Helen Kellogg Institute for International Studies Working Paper No. 280, 2000), 14.
[75] John W. Sloan, "The Policy Capabilities of Democratic Regimes in Latin America," *Latin American Research Review* 24 (1989): 117.
[76] Mainwaring, Brinks, and Pérez-Liñán, 1-2.
[77] Karen L. Remmer and Gilbert W. Merkx, "Bureaucratic-Authoritarianism Revisited," *Latin American Research Review* 17 (1982): 3-5; Sloan, 113.

more progressive trichotomous scale to analyze data, the dichotomous organization will also prove useful in understanding some key differences in regime type and change.

Regime Types

The Trichotomous Classification

The trichotomous ordinal scale clearly stipulates opposing characteristics for regime type, namely democratic and authoritarian, but still allows flexibility in its classification by including the intermediary regime "semidemocratic." For Mainwaring, Brinks, and Pérez-Liñán, a democracy is a regime in which four necessary criteria must exist *in conjunction*, namely (1) "free and fair competitive elections for the legislature and executive," (2) "inclusive adult citizenship," (3) "protect[ion of] civil liberties and political rights," and (4) the election of governments that "really govern and the military is under civilian control."[78] A truly democratic state exhibits all four of these criteria, while a semidemocratic states falters in up to three criteria. Another fundamental differentiating factor is that change in a democratic government is achieved by elections rather than coups.[79]

The advantage of trichotomous classification can be exemplified with El Salvador and Guatemala during the 1980s when "free and fair elections with a broad suffrage" yet had the "absence of an effective guarantee of civil liberties," or with Argentina, Honduras, and Guatemala in which the military guardianship as a constraining factor for civilian control; the authors label these states as semidemocratic, as some "elements of democracy are impaired in some fundamental way."[80] They state that to simply label these faltering democracies as

[78] Mainwaring, Brinks, and Pérez-Liñán, 1; 3-4.
[79] Sloan, 117.
[80] Mainwaring, Brinks, and Pérez-Liñán, 7; 8; 13.

authoritarian is "misleading," especially when considering the complexity of post-1978 Latin American regimes.[81]

Dichotomy and Bureaucratic-Authoritarianism

It seems that the majority of other scholars are not as sympathetic to an intermediary regime type between democracy and authoritarianism; a regime is either a democracy with democratic characteristics or it is authoritarian with the absence of these characteristics. Other scholars, however, incorporate the more particularized characteristics of Latin American regimes and have labeled the nondemocratic regime type as the more indicative "bureaucratic-authoritarian" or "modernizing authoritarian." Nonetheless, they argue that democracy is an "authentic and persistent motif," but one that is intermittent.[82]

Bureaucratic-authoritarianism, a term most notably identified with Guillermo O'Donnell, is "likely to occur in nations that have undergone relatively substantial bureaucratization, industrialization, and mass mobilization," and is "an elite response to the alleged policy failure of a democratic regime."[83] O'Donnell states that the rise of bureaucratic-authoritarianism especially in Brazil and Argentina can be attributed to three fundamental elements, including (1) "the growing political weight of lower middle- and working-class groups," (2) "the appearance of economic 'bottlenecks,'" and (3) "the increased significance of technocratic roles."[84] Various political crises play key roles in the emergence of a bureaucratic-authoritarian regime in advanced societies (i.e., Brazil 1964, Argentina 1966 and 1976, and Chile and Uruguay in 1973),

[81] Mainwaring, Brinks, and Pérez-Liñán, 17.
[82] Sloan, 114.
[83] Sloan, 117. It must be noted here that as seen in Table 1-1, there is considerable elite participation in a coup d'état.
[84] Remmer and Merkx, 4.

as well as the formation and execution of a coup coalition.[85] With a key component of the regime being modernization, it "is a type of military rule often interpreted as novel in relation to the early history of Latin America. It was generally led by the military as an institution, in contrast to the personalistic rule of individual officers," and is often "accompanied by intense repression" as well as coercion.[86]

Some scholarly proponents of bureaucratic-authoritarianism compare the advantages of this regime with those of democracy and state that it promotes economic growth "by freeing the technocrats from democratic accountability" in order to "pursue economic strategies that aid elites at the expense of most of the population."[87] It has been argued, however, that economic growth and restoration in these regime types have a higher probability of success if the level of "crisis and threat" is low in the pre-revolution period.[88] Remmer and Merkx describe O'Donnell's concept of threat as that which affects the socioeconomic stability, the consequences of which are repression and "political deactivation." The presence of the latter factor in particular progresses the bureaucratic-authoritarian state from its "first stage" of attracting foreign capital to its "second stage" in which a nationalist bourgeoisie class is instituted into the ruling class.[89] Despite these findings, Remmer and Merkx admit that threat levels before the coup only partially explain changes in economic performance.[90]

Nonetheless, from a democratic perspective, this economic superiority is only a short-term advantage as these regimes "inevitably become rigid, self-serving, corrupt, and incapable of

[85] David Collier, "Bureaucratic Authoritarianism," in *The Oxford Companion to Politics of the World*, 2nd ed., ed. Joel Krieger (Oxford: Oxford University Press, 2001), 28.
[86] Collier, 93; Remmer and Merkx, 6.
[87] Sloan, 114-115.
[88] Remmer and Merkx, 16.
[89] Remmer and Merkx, 8-14.
[90] Remmer and Merkx, 18.

adjusting policy priorities to changing conditions."[91] It seems that only "democratic regimes have the policy capabilities to achieve a variety of developmental goals without suffering the high levels of repression that often accompany bureaucratic-authoritarian rule;"[92] in other words, although democracies may be laden with time-consuming procedures that can slow economic progress, they do not advocate repression as a means to this economic end. The trichotomous scale would find the combination of these democratic and nondemocratic characteristics as semidemocratic, as it is not outright authoritarianism; however, it is nevertheless difficult to gloss over the illegitimate means of repression.

Indeed, O'Donnell recognizes the inability for bureaucratic-authoritarian regimes to achieve legitimacy. Remmer and Merkx succinctly summarize his defining characteristics of this regime and state that "its dependence on international capital weakens its claims to represent the nation; it is self-imposed rather than based on the consent of its citizenry; and it transparently serves the interests of the upper bourgeoisie, rather than the people."[93] Fundamental changes in the political system and economic structure with a regime change to bureaucratic-authoritarianism.[94]

Latin American Cases

The revolutions in neither Nicaragua nor Chile could be classified among the "grand" or "total" revolutions of Russia, China, or France; these Latin American revolutions were of a different essence, without a version of Trotsky to accompany their political upheaval in history. However, as seen in the previous section, the classification of "revolution" has evolved throughout the years, becoming more inclusive. Although the events in these two Latin

[91] Sloan, 115-116.
[92] Sloan, 125.
[93] Remmer and Merkx, 6.
[94] Remmer and Merkx, 7.

American countries may not be quite as grand as the revolutions preceding them, they are nevertheless counted as revolutions by several notable scholars of worthy academic standing. A brief definition of their revolution, coup, and regime change would benefit this discussion.

Gurr and Goldstone state that Nicaragua had state crises, elite alienation, mass mobilization, revolutionary struggle, and the successful outcome of the revolutionaries over the old regime;[95] based upon the aforementioned trichotomous scale, its regime changed from authoritarian (under the Somoza family) to semidemocratic (under the revolutionary Sandinistas). Chile, on the other hand, experienced a somewhat different change, but there was no doubt that its revolution was a similarly significant polity change, from democratic (with a long history of electoral competition), to bureaucratic-authoritarian (under General Pinochet). The revolution in Chile was slightly more complicated and subtle than that of Nicaragua, as it was mired by conspiratory tactics masked by the democratic process.

Despite the slight differences between the two revolutions, both Nicaragua and Chile changed their political leadership through a coup d'état. There is some debate whether these can be classified as coups; the Coup Data Codebook disqualifies Chile's 1973 coup, Farcau similarly disqualifies Nicaragua's 1979 coup. However, the present study disagrees with these disqualifications since the leaders Somoza and Allende were forcibly ousted, albeit by means of formal resignation (considered *autogolpes*, or self-coups). The level of violence or number of coup conspirators should not be the sole determining factors in classifying these coups; both coups were a revolutionary tactic, as each played a part in changing the political or social system of the country.

[95] Ted Robert Gurr and Jack A. Goldstone, "Comparisons and Policy Implications," in *Revolutions of the Late Twentieth Century*, ed. Jack A. Goldstone, Ted Robert Gurr, and Farrokh Moshiri (Boulder: Westview Press, 1991), 326; Stephen K. Sanderson, *Revolutions: A Worldwide Introduction to Political and Social Change* (Boulder: Paradigm Publishers, 2005), 86.

Powell and Thyne consider coup attempts to be "illegal and overt attempts by the military or other elites within the state apparatus to unseat the sitting executive," and is successful if "the perpetrators seize and hole power for at least seven days."[96] Some scholars would not consider an *autogolpe*, or self-coup, to be considered a true coup d'état;[97] indeed, Farcau does not consider the overthrow of Anatasio Somoza during the Nicaraguan Revolution to be a coup d'état, because it is a conflict of longer duration.[98] However, both Nicaragua and Chile exhibited sufficient political pressure on the leader as to indicate an indirect overthrow that would have otherwise led to eventual assassination. In addition, Nicaragua's revolution had elements of both rural against urban (urban revolution) and urban against the center (revolutionary warfare).[99] These coups were also used as revolutionary tactics to dramatically change either the polity (Chile) or social structure (Nicaragua) of the country.

Ted Robert Gurr states that "a coup d'état in the pre-revolution situation can forestall massive violence, for example, by removing hated symbols of political repression and offering hopes for the alleviation of deprivation."[100] Contrary to the predictions of O'Donnell, Chile's 1973 coup gave rise to extreme violence despite its "high threat."[101] However, Chile's high level of threat in its pre-revolution period did indeed hinder economic growth, but this is only a partial explanation. Although there is a difference between the two countries concerning violence and the probability of economic recovery in the post-revolution period, it has been made clear that neither economic decay nor the level of violence accompanying the coup d'état necessarily affects healthcare or health status.

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[96] Jonathan M. Powell and Clayton L. Thyne, "Global Instances of Coups from 1950 to 2010: A New Dataset," *Journal of Peace Research* 48 (March 2011): 253.
[97] Powell and Thyne, 253.
[98] Farcau, 7.
[99] Sederberg, 52.
[100] Ted Robert Gurr, *Why Men Rebel* (Princeton: Princeton University Press, 1970), 293.
[101] Remmer and Merkx, 12.

Coup d'État and the Latin American Military

The presence of a coup indicates a government's institutional limits and capabilities, and a "coup-prone society, a praetorian society," has a small portion of the population engaged in politics while the rest are apathetic.[102] Huntington explains that a coup d'état can occur from the struggle for power among the classes; since the creation of the more modern society, the officers involved are often from the middle classes, and it is this middle class military that represses the lower masses that demand redistribution of resources. This is a neo-Marxist view in that the military has a similar interest with the bourgeoisie to politically expel these masses from participation, a situation that can create the bureaucratic-authoritarian regime as exemplified by 1960s Brazil and Argentina and 1970s Chile and Uruguay.[103]

Modernizationists such as Huntington believe that this middle class military can help develop society, whereas Determinists believe that the development of Latin America contrasts the interests of both the military and bourgeoisie. "It is the military, however, that is especially sensitive to the need for modernization in order to augment the military power of the state."[104] However, Farcau disagrees with the Determinist argument and states that class origin should not make a considerable difference in military sentiment; furthermore, the officer is physically and socially isolated from civilian society by immersion, losing the once shared commonality and engendering hostility toward civilians. He also argues that the military is usually at odds with the interests of the bourgeoisie, as they tend to favor laissez-faire economics and comparative advantage. Therefore, the military enacts a coup d'état regardless of middle class interests.[105]

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[102] Farcau, 36.
[103] Farcau, 18-19.
[104] Thomas H. Greene, *Comparative Revolutionary Movements: Search for Theory and Justice*, 2nd ed. (Edgewood Cliffs, NJ: Prentice-Hall Inc., 1984), 142.
[105] Farcau, 19-22.

Coups d'état seem to be a normal method of governmental change in Latin America, and at times have had a hand in revolution, considered by some to be a "revolutionary coup d'état." However, some scholars distinguish between varying degrees of coups d'état such as a palace revolution (sovereign replacement from within), *cuartelazo* (military uprising, democratic), *putsch* (military uprising, conspiracy), *golpe de estado* (military uprising); Farcau describes the former two as successful coups while a putsch is an instance of limited military mobilization. He also states that coups take on a more traumatic definition within democratic regimes than in others, while the perpetual normalcy with which coups are mostly viewed in Latin American societies may contribute to underdevelopment and instability.[106]

There is a limitation to the significance of a coup d'état within revolutionary situations. Coups are not linked to high revolutionary potential and do not have high ideological involvement.[107] Nor do they necessarily ensure that the change in government will solve the problems. "Once the military seizes the reins of government and finds itself confronted by the same intractable problems that overwhelmed its predecessors, the stage is set for factional conflict within the military, and a succession of apparently unending coups d'état."[108] A coup depends on motive and opportunity, and either succeeds when both elements are present, does not occur when both elements are low or nonexistent, or will fail if there is strong motivation but weak opportunity. Farcau characterizes Latin American coups with opportunity but inadequate motivation. "Chile was viewed as a rock of stability in Latin America, not having had a coup for more than a generation, but the military was always standing in the wings and had merely not chosen to intervene prior to its bloody assumption of power in 1973."[109] Apart from this

[106] Farcau, 3-4; 6.
[107] Greene, 141; 144.
[108] Greene, 143.
[109] Farcau, 34.

exception in Chile, the military in Latin America almost always finds a need to intervene, since it is "likely to be especially intolerant of the factionalism of civilian politicians and the high incidence of corruption typical of government bureaucracies."[110] Apart from Cuba and Nicaragua, Latin America in general has an abysmally small military force without proper equipment. It is nevertheless well suited for coups d'état despite its general inefficiency.[111]

State Characteristics

Thomas John Bossert accounts for socioeconomic differences among regime types by listing four main characteristics of (1) state power, (2) stability, (3) ideological orientation, and (4) "degree of democratic participation in policymaking." State power, he explains, is "its capacity to control the lower classes and at the same time pursue policies;" this power gives the state a technocratic bureaucracy (which is particularly indicative of a bureaucratic-authoritarian regime), a form of autonomy from the "dominant class factions," and the ability to extract resources from its population. Strong states successfully implement health care policies, while orienting the health system toward preventative care and a focus on the rural poor.[112] Bossert explains that bureaucratic-authoritarian regimes are relatively stable, with a certain longevity (Pinochet's regime lasted over a decade) and the "absence of significant competing elites who violently challenge the legitimacy of the regime." This seems to fit Chile quite well, but the third factor of "regularity of legally scheduled leadership changes" is absent.[113] As for reformism, or the "ideological characteristics of the state," he argues that bureaucratic-authoritarian regimes tend to pursue "progressive social policies" and "inclusionary policies"

[110] Farcau, 35; Greene, 142.
[111] Farcau, 13-14.
[112] Bossert, "Can We Return to the Regime for Comparative Policy Analysis?," 427-428.
[113] Bossert, "Can We Return to the Regime for Comparative Policy Analysis?," 430.

which are beneficial for new health policies;[114] as will be demonstrated in the upcoming Data Analysis, Chile and its revolutionary health policies fit the descriptions that Bossert attributes to a bureaucratic-authoritarian polity. It must be noted here that Chile can easily be considered unstable in its pre-revolution period, based upon the factionalism reference in the Polity IV project; however, this can be debated, as Chile had regular electoral competition and a relatively high health status prior to the revolution.

Table 2-1: State Characteristics of Nicaragua and Chile, Pre- and Post-Revolution[115]

	Nicaragua		**Chile**	
	Pre-revolution	**Post-revolution**	**Pre-Revolution**	**Post-revolution**
Leader	**Somoza**	**Sandinistas**	**Allende**	**Pinochet**
Strength	Weak	Strong	Weak	Strong
Stability	Stable	Unstable	Unstable	Stable
Ideology	Status Quo	Reformist	Reformist	Status Quo
Polity	Authoritarian	Semidemocracy	Democracy	Bureaucratic-Authoritarian

Similar to the supporting logic for the trichotomous ordinal scale of regime types, Bossert argues that "these four dimensions give us a richer means of categorizing the state than the earlier simple dichotomies without ignoring the intuitive clarity of these dichotomies;" he further adds that this method can detect any present relationship between regime and health care policy.[116] He suggests that democratic states that exhibit strength and stability along with progressive ideology are ideal for effective healthcare policies. These factors are also

[114] Bossert, "Can We Return to the Regime for Comparative Policy Analysis?," 432.
[115] Adaptation from Bossert, "Can We Return to the Regime for Comparative Policy Analysis?," 435. "Democracy" was replaced with "Polity" and changed to include "semi-democracy" as mentioned by Mainwaring, Brinks, and Pérez-Liñán. Bossert accounted for Nicaragua, but the table has also been expanded to include Chile based upon his patterns.
[116] Bossert, "Can We Return to the Regime for Comparative Policy Analysis?," 425.

codependent; "for instance, weak progressive regimes would be more successful in adopting and implementing primary care than would weak regimes that were not progressive."[117]

Implications for Policy Analysis

Bossert's findings indicate that healthcare policy adoption is not sufficiently affected by any one of the above four factors. Although instability in a "status quo ideology" regime may lead to reforms, instability or ideology alone do not account for the adoption of healthcare policies. Rather, Bossert suggests that the combination of the two creates a greater likelihood of adopting healthcare policies. Although there was only case study (Costa Rica) to support this hypothesis, the results indicated that weak and unstable regimes such as Guatemala and Honduras were unable to have centralized and integrated healthcare policies. As predicted, these two weak regimes also heavily relied on foreign aid to support their programs, whereas the strong state of Costa Rica was able to fund its policies from within.[118]

The methodological shift from the 1960s and 1970s to the 1980s has highlighted the importance on analyzing regime change in order to determine the efficacy of national policies such as those in healthcare. Understanding the "broader political process" can provide context for policy implementation and outcome, as well as determining the regime's economic structure; the latter of which is particularly beneficial when analyzing bureaucratic-authoritarian regimes.[119] Determining the nature of a regime not only indicates the significance of its transformation but also allows for a deeper contextual analysis to determine the degree of significance.

[117] Bossert, "Can We Return to the Regime for Comparative Policy Analysis?," 427.
[118] Bossert, "Can We Return to the Regime for Comparative Policy Analysis?," 435-438.
[119] Bossert, "Can We Return to the Regime for Comparative Policy Analysis?," 419-420.

Bossert argues that differences and changes in regime type can elucidate the differences among national programs for primary care, and includes (1) integration, (2) centralization, (3) participation, (4) funding level, and (5) foreign funding as fundamental indices. Integration of these programs effectively reduces "inefficient duplication of effort, conflict over responsibilities, and projects working at cross-purposes."[120] As with other health programs, integration improves the overall practical efficacy and cost-effectiveness of the programs to ensure it achieves its potential, and can even improve the nation's own capacity-building.[121] The benefit of centralization over that of decentralization is debatable; Bossert argues, however, that when combined with integration, centralization proves to be beneficial to national policy. Community participation has proven to be a key determinant in implementing successful national policies, particularly with healthcare, as it more effectively reaches the more marginalized rural areas of a nation. The funding level and the amount of foreign funding indicate respectively the nation's ability to sufficiently allocate resources according to priority and its level of foreign dependence to implement its national programs.[122]

[120] Bossert, "Can We Return to the Regime for Comparative Policy Analysis?," 423.
[121] Rose E. Facchini, "Humanitarian and Civic Assistance Healthcare Training and Cultural Awareness: Promoting Healthcare Pluralism," *Military Medicine* 178 (forthcoming).
[122] Bossert, "Can We Return to the Regime for Comparative Policy Analysis?," 423-425.

Table 2-2: Policy Adoption and Implementation Processes[123]

	Costa Rica	Honduras	Guatemala	Nicaragua
Adoption	Yes	Yes	Yes	No
Integration	Integrated	Integrated	Fragmented	NA
Centralization	Centralized	Decentralized	Centralized	NA
Participation	Low	High	Moderate	NA
Funding Level	High	Low	Low	NA
Foreign Funding	Low	High	High	NA

Bossert concludes that not one of his hypotheses "relating policy adoption to single dimensions of the regime typology is supported," but rather a particular combination of several regime dimensions and typology; "the regime characteristics that appear to be most explanatory are not the single dimension dichotomies of the earlier aggregate data studies but rather a complex relationship in which several dimensions are contingent on each other."[124] Neither weak regimes nor those lacking in democratic participation will necessarily shy away from policy adoption, particularly if they have a centralized and integrated program for appropriate administration. However, Bossert has found that weak states demonstrate the proclivity to adopt health policies without the threatening combination of centralization and integration, but they will also depend heavily on foreign aid.[125]

Although Bossert excludes Nicaragua's health policy adoption, the present study argues that Nicaragua did indeed adopt healthcare policies mostly during the post-revolution period. Fragmentation, decentralization, and participation increased during the post-revolution period in both Nicaragua and Chile, but as seen with Table 2-1, both countries changed from a weak to a strong state; perhaps it is this combination, rather than regime type, that allowed for the

[123] Bossert, "Can We Return to the Regime for Comparative Policy Analysis?," 423.
[124] Bossert, "Can We Return to the Regime for Comparative Policy Analysis?," 436; 438.
[125] Bossert, "Can We Return to the Regime for Comparative Policy Analysis?," 437.

implementation of an integrated healthcare policy regardless of severely reduced foreign funding and the differing percentages of GDP dedicated to health expenditures.

Table 2-3: Change in Health Policy in Nicaragua and Chile[126]

	Nicaragua		**Chile**	
	Pre-revolution	**Post-revolution**	**Pre-Revolution**	**Post-revolution**
Polity	**Authoritarian**	**Semidemocracy**	**Democracy**	**Authoritarian**
Integration	Fragmented	Integrated	Integrated	Fragmented
Centralization	Centralized	Decentralized	Centralized	Decentralized
Participation	Low	High	Moderate	High
Funding Level	Moderate (2.3%)	High (5.8%)	Low (1.1%)	Low (1.7%)
Foreign Funding	High	Moderate	High	Low/Moderate

Regimes are not entirely related to health policy adoption. As will be seen with supporting evidence in the coming sections, Nicaragua implemented successful health policies without depending on foreign aid. Although its health status was initially lower than that of Chile from the start, it made significant progress throughout its post-revolution period. Its improvement

[126] This table is based upon Bossert's organization in Table 2-2, except to include the present study's chosen countries in detail. Funding level percentage is in GDP. Approximations are given in this table based upon the works of several authors. Data on Nicaragua was provided by John M. Donahue, *The Nicaraguan Revolution in Health: From Somoza to the Sandinistas* (South Hadley, MA: Bergin and Garvey Publishers, Inc., 1986), 2; Garfield and Williams, *Health Care in Nicaragua* (New York: Oxford University Press, 1992), 15-18; Ruben M. Suarez, "Health Sector Financing in Nicaragua: Challenges for the Nineties," USAID/Nicaragua under LAC Health and Nutrition Sustainability, International Science and Technology Institute, Inc., Arlington, MA, Contract No. LAC-0657-C-00-0051-00, June 1991, http://www.phrplus.org/Pubs/LAC4.PDF (accessed March 2013), 1; Michael E. Conroy, "External Dependence, External Assistance, and 'Economic Aggression' against Nicaragua," (Kellogg Institute: The Helen Kellogg Institute for International Studies Working Paper No. 27, 1984). Data on Chile was provided by Francisco Mardones-Restat and Antonio Carlos de Azevedo, "The Essential Health Reform in Chile; A Reflection on the 1952 Process," *Salud Pública de México* 48 (November/December 2006): 509; Thomas John Bossert, "Decentralization of Health Systems in Latin America: A Comparative Analysis of Chile, Colombia, and Bolivia," Data for Decision Making Project, Harvard School of Public Health, June 2000, http://www.hsph.harvard.edu/ihsg/publications/pdf/lac/Decentralization45.PDF (accessed April 2013); Alain de Janvry and Elisabeth Sadoulet, "Rural Development in Latin America: Relinking Poverty Reduction to Growth," in *Including the Poor: Proceedings of a Symposium Organized by the World Bank and the International Food Policy Research Institute,* ed. Michael Lipton and Jacques van der Gaag (Washington D.C.: World Bank Publications, 1993), 259; Alejandro Ortega, "International Effects on the Democratic Onset in Chile," *Stanford Journal of International Relations* 11 (Spring 2010): 30.

cannot be adequately attributed to its change to democracy. Although Chile began with a higher status than Nicaragua, it still witnessed improvement in healthcare and health status despite its change to bureaucratic-authoritarianism.

"Healthcare" and "Improvement"

What is meant by "improvement" must be made clear. Improvement will constitute the overall progression of health status within the country, indicated by such factors as the decrease of infant mortality rate (IMR), increase of life expectancy (LE), and adoption of inclusive policies. This will be significantly expanded to include other factors in Data Analysis. Human rights abuses will be acknowledged, but the analysis of health status improvement will focus on the abovementioned factors.

It is difficult to ascertain which new health policy is truly a result of the revolution, since revolutionary countries approach healthcare changes differently. "It is extremely difficult to isolate the impact of health care systems from the impact of other variables, not the least being socioeconomic change."[127] During the coup- and revolution-prone decades of 1960 to 1980, many countries demonstrated impressive progress in health status and healthcare policies; Latin America as a whole showed significant IMR reduction from 107 per 1,000 in 1955-1960 to 61 per 1,000 in 1980-1985.[128] Thus, it is argued that the emphasis on better public health can be a more ubiquitous occurrence, and need not depend on revolution.[129]

Bossert states that this "primary care approach" can be the focus of revolutionary efforts, however, but this assumption must include the factors of (1) "greater equality of access to health services, both by increasing services to lower classes, and most important, by providing access in

[127] Bossert, "Can We Return to the Regime for Comparative Policy Analysis?," 422.
[128] Sloan, 122.
[129] Bossert, "Health Care in Revolutionary Nicaragua," 260.

the rural areas where large populations previously had no access at all," (2) "improved preventative measures such as provision of clean water, sanitation, nutrition, immunizations, maternal and child health – activities which are more likely to improve health than are physician-oriented curative services," (3) "considerable participation of communities in establishing local health priorities and implementing local health programs," and (4) "equity, prevention, and participation" within the allocated national budget.[130] Thus, a focus on rural access, preventative medicine and community-based programs to increase health literacy are fundamental factors in healthcare improvement.

Latin American Tendencies

Sloan found that both democratic and authoritarian regimes have demonstrated improved capabilities in education and health. Democratic regimes have shown considerable improvement from 1960-1980, such as a general increase in LE from sixty to sixty-nine years. Although Latin American authoritarian regimes mostly outperformed their democratic counterparts in education and literacy as seen in Argentina and Chile, health policies were overall less impressive. It must be noted that literacy rates in these particular countries were already impressive prior to the regime change, however; "in the 1980s, Argentina, Chile, and Mexico had over 95 percent of their children between the ages of six and eleven in school."[131] Health and education systems must be inherently strong to withstand any regime changes, for Sloan notes that democratic regimes are more flexible and thus able to successfully adapt. High adaptability depends on a high level of institutionalization, and "success in adapting to one environmental challenge paves the way for successful adaptation to subsequent environmental challenges."[132]

[130] Bossert, "Health Care in Revolutionary Nicaragua," 260.
[131] Sloan, 122; 124.
[132] Samuel P. Huntington, *Political Order in Changing Societies* (New Haven: Yale University Press, 2006), 13.

In general, healthcare policies that focus on maternal and child health and basic sanitation in conjunction with adequate education will improve the health status of a country.[133] Two particular studies on healthcare policy and revolutionary regime change have listed four relevant factors that indicate the level of policy performance, including (1) urbanization, (2) the economy, (3) income inequality, and (4) rural access. Both agree that the economy does not have a significant impact on health policy performance while income inequality is the primary negative element, "including when controls are inserted for overall affluence and even for absolute poverty."[134]

Although a lower GDP per capita disallows for resources such as food and shelter, it is not necessarily an inhibiting factor for improving health status. Cuba and Venezuela are prime examples in which health status improved greatly despite their slow economic growth, thus rendering the "healthier is wealthier" sentiment inaccurate.[135] Furthermore, one study found that "improvements in earlier years had occurred in Chile during a period marked by several recessions, hyperinflation, and unemployment. In fact, the evolution of improved infant and child health proved to be independent of economic cycles."[136] A high IMR generally occurs in countries with low GDP per capita, but mostly when it is compounded by low administrative capacity; programs and educational interventions as forms of preventative medicine will help to improve such mortality rates.[137] Indeed, as seen in Chile, environmental factors such as safe water and basic sanitation affected the neonatal IMR more than that of postneonatal, but this reversed as healthcare became more organized and available.[138]

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[133] Jorge Jiménez and María Inés Romero, "Reducing Infant Mortality in Chile: Success in Two Phases," *Health Affairs* 26 (March/April 2007): 458.
[134] Jiménez and Romero; McGuire and Frankel, 96-97.
[135] McGuire and Frankel, 83; Sloan, 124.
[136] Jiménez and Romero, 461.
[137] McGuire and Frankel, 86.
[138] Jiménez and Romero, 459.

The level of a country's development is also a tenuous link to revolutionary change in healthcare; a study on Chile's success in healthcare theorized that "the country, although still only at a middle level of development, has reached levels of attainment comparable with those of higher-income countries."[139] Nevertheless, access to the rural population is fundamental for improving the health status of a nation, as well as the somewhat counterintuitive increase in urbanization as seen in Chile.[140] James W. McGuire and Laura B. Frankel argued that Cuba's pre-revolution government was even more successful than its post-revolution government. After the revolution, however, it was the combination of the "expansion of health care, family planning, education, sanitation, and water provisioning among the poor, together with its redistribution of income in favor of the poor" that continued its success in health status.[141] One study noted, however, that the disparity between urban and rural communities has been diluted, as rural housing, doctor to patient ratio, and the lack of hospital beds were inequitable. However, the number of medical personnel was greatly expanded and available service was a priority, albeit at the cost of quality.[142]

Summary

It has been suggested in this limited literature review that the level of development, economic status, and wealth do not affect healthcare policies as much as urbanization, income inequality, rural access, and a focus on preventative (rather than curative) medicine. Furthermore, public health policies may or may not be affected by regime change itself. Although healthcare becomes a focus in the post-revolution period, the "permanence of primary care policies" in the post-revolution period depends on the strength of the healthcare system in

[139] Jiménez and Romero, 459.
[140] Jiménez and Romero, 464.
[141] McGuire and Frankel, 84.
[142] Valdés, 319-326; 328.

the pre-revolution period.[143] Military coups d'état can nevertheless inhibit democratic development, and modernization affects health determinants more than "government provisioning of social services."[144] The adoption and success of healthcare policy also depends on (1) the success of healthcare policy in various regimes, and (2) determining the health status and polity after the occurrence of a coup d'état and revolution.

[143] Jiménez and Romero, 462.
[144] Kenneth Rochel de Camargo, Jr., "'It Was Twenty Years Ago Today': The Beginning of the Brazilian National Health Care System," *Journal of Epidemiology & Community Health* 62 (September 2008): 763; McGuire and Frankel, 95

Section III: Methodology and Theoretical Framework

Introduction

The health status of a population can be determined by a numerous and sometimes complex set of determinants.[145] This complexity is especially true during times of crisis such as revolutions and coups d'état when data may be skewed or lost, or even exaggerated. Culture also plays an additionally complicating role in determining the perspective of health performance.

Methodology for Data Analysis

Longitudinal and cross-cultural studies are made difficult to pursue since determinants constantly change. Additionally, "the more varied the conditions to which the measure is going to be applied, the more universal and the less specific the measure will have to be."[146] Thus, the case studies in the present analysis focuses on the two Latin American countries of Nicaragua and Chile in order to include more specific health indicators and thus gain a more precise understanding of how revolutions affect health status and if coups d'état are indeed a compounding factor.

Section IV first briefly introduces each of the selected countries with pre- and post-revolution historical context, from which their respective revolutions can be classified according to the trichotomous ordinal scale as defined by Mainwaring, Brinks, and Pérez-Liñán. This history also provides relevant context to elucidate any other factors that may influence post-revolution healthcare efforts and health status, as well as provide a timeline for referencing data. Health status and the efficacy of health programs can be partially determined through indicators

[145] Turnock, 49.
[146] Nord-Larsen, 103.

such as IMR, LE, and crude death rates. The IMR tables are colored according to polity changes to display the association between regime and health. Health indicators are further cross-referenced with indicators such as GDP figures, the GINI Index, and education levels to determine the influence of a revolution and coup d'état on social and economic aspects, or lack thereof. Some comparative remarks are then made to elucidate any similarities or differences between the two countries. Determinants are supported by official data provided by such databases as Polity IV and the World Bank, as well as the data presented in the previous section such as Sederberg's degrees of violence and revolution.

Defining Health Indicators

Health status should be thought of in terms of outcome, which is the "improved health status in the population" as the "desired results" of outputs.[147] The efficacy of health interventions is determined by examining the outputs of health policies, programs, and services with such variables as the number of physicians and the level of community involvement; health programs are also useful in that they "detect early and presymptomatic stages of certain diseases" through preventative care.[148] Health status can be determined by indicators such as IMR and LE. Thus, both health status and the efficacy of health interventions provide useful indications of post-revolution performance.

Quite simply, a health indicator indicates a state of health and the changes in that state. As stated in the previous section, health is commonly seen as the absence of disease, but illness is not necessarily the presence of disease.[149] It was also stated that measures of function are best used with the sociomedical definition because it indicates the quality of life. The measure of

[147] Turnock, 10; 33.
[148] Schroeder, 31-32.
[149] Culyer, 5.

disability and the "diagnostic conditions giving rise to the disability" are necessary to truly understand health status.[150] Dominant ideology can change the values of indicators, but it must be understood that ideology can change as well as within revolutionary change.[151]

Types of Health Indicators

Disease and mortality are often used as measures for health status rather than actual health; although "mortality as a proxy for health" has inherent problems, Turnock argues, it can be used to gain a general understanding of population health status.[152] Turnock has divided mortality-based indicators into four types. The first is the fundamental crude mortality in which the "deaths within the entire population…are not sensitive to differences in age distribution of different populations." The second measure creates more specificity of the first and is labeled age-specific and age-adjusted mortality, which measures the "number of deaths to the number of persons in a specific age group;" IMR is included in this measure. Third is LE, a commonly used indicator for comparative purposes and is a "computation of the number of years between any given age…and the average age of death for that population." Finally, the years of potential life lost (YPLL) "places greater weight on deaths that occur at younger ages," where an arbitrary age is used to "measure the relative impact on society of different causes of deaths."[153]

WHO defines child mortality rate as the probability of death before the age of five while IMR is the probability of death before the first year; the latter thus includes neonatal (birth to one month) and postneonatal (one month to the first year). Child and infant mortality rates are relevant indicators to determine the nation's child health status as the name implies and the

[150] Nord-Larsen, 106; Donald Patrick and Sally Guttmacher, "Socio-Political Issues in the Use of Health Indicators," in *Health Indicators: An International Study for the European Science Foundation*, ed. Paul M. Sweezy and Harry Magdoff (New York: Monthly Review Press, 1974), 168.
[151] Culyer, 19; 20.
[152] Turnock, 50.
[153] Turnock, 51-53. Due to the incomplete data for Nicaragua, YPLL has been omitted from this study.

overall development of the nation; IMR is a particularly useful indicator of population health in underdeveloped countries with incomplete data.[154] It has been argued that these indicators can also be used to determine the level of equity, which is of fundamental value to compare health status and performance;[155] along with the GINI Index, income disparities can be quite thoroughly determined. A complicating factor that must be noted is the possible omission of abortions and low-birthweight infants from birth and death records, which naturally "complicate infant mortality comparisons, even among rich countries."[156] Further adding to this margin of error is disqualifying malnutrition as a cause of death, despite its usually high prevalence in rural areas.[157] Of course, the lack of records makes it difficult if not impossible to determine the number of infants who fall into this category, and compel the researcher to accept that factors such as high abortion rates can skew mortality rates.

Income inequality within a country can be a valuable indicator. In a study comparing healthcare in post-revolution Mexico with that of Cuba, Chile, and Nicaragua four main variables were used to determine population health, including morbidity, mortality, incidence and prevalence of disease, and age and cause of death.[158] Due to the extreme disparity between urban and rural areas, James J. Horn found that most of the mortality in Mexico was due to preventable diseases; it "is characterized by high rates of nutritional, infectious, and parasitic

[154] D. D. Reidpath and P. Allotey, "Infant Mortality Rate as an Indicator of Population Health," *Journal of Epidemiology and Community Health* 57 (2003): 346. These authors also argue that the indicator disability adjusted life expectancy (DALE) is an effective correlating indicator in determining population health.
[155] Jiménez and Romero, 458.
[156] McGuire and Frankel, 93. These authors found that Cuba had a high rate of abortions, any number of which could have added to the low-birthrate and death records. It must be noted that abortions could also be considered perinatal mortality, which includes the death of a fetus up to five months before birth; this determinant will not be included in this study, however.
[157] James J. Horn, "The Mexican Revolution and Health Care, or the Health of the Mexican Revolution," *Latin American Perspectives* 10 (Autumn 1983): 26.
[158] Horn, 24.

diseases which are largely an outcome of poverty and its environmental cognates."[159] He also argues that malnutrition was the leading cause of "excessive mortality" and infectious diseases while the lack of potable water and adequate sanitation (together with education about sanitation) were cause of preventable parasitic and diarrheal diseases.[160] Additionally, Turnock agrees that population growth compounds health problems, particularly for the poor.[161] Accounting for income inequality demonstrates the prevalence of either preventable or chronic diseases, which in turn affects the need for preventative medicine (opposed to curative), rural access to health services, and the level of education and literacy.

Other noteworthy determinants are education and literacy especially among women, the physical environment and the presence of threats, urbanization, and community involvement in health services and promotions. Health system factors such as doctors per region and the doctor-population ratio are also highly influential in determining health status.[162]

Risk Factors

Social and cultural influences focus on "socioeconomic status and poverty," but Turnock states that they are largely imprecise. Nevertheless, mortality rates differ among the different social classes, even in the modern era and particularly among developing countries; "differences in mortality appear to relate primarily to inequalities in material resources, although the use of educational status as a proxy for social standing" may also be related.[163] Nonetheless, such indicators as LE are better determined among developing countries by understanding disparities

[159] Horn, 25.
[160] Horn, 25-26.
[161] Horn, 27; Turnock, 46. Turnock also adds pollution to the "3 P's of global health."
[162] Schroeder, 29.
[163] Turnock, 39-41.

in income rather than simply GDP or GNP statistics. "Societies create and shape the diseases they experience," and thus "health should be viewed as a social phenomenon."[164]

[164] Turnock, 45.

Section IV: Data analysis

Introduction

Nicaragua and Chile have been chosen for comparative study on their healthcare systems and health status, as they have similar revolutionary processes and time parameters. Historical context for each country will first be given, followed by context and data for each country's health sector. While cross-referenced with the Economic Commission for Latin America (ECLAC) and the Socio-Economic Database for Latin America and the Caribbean (SEDLAC), statistics will be drawn primarily from the World Bank, and the works of scholars Garfield and Williams for Nicaragua and James W. McGuire for Chile. Regime change and categorization is measured according to the polity classification of Mainwaring, Brinks, and Pérez-Liñán. They provide a comprehensive trichotomous and longitudinal scale that is adequate for this study. Polity IV will also be used to identify any periods of interregnum and factionalism that may create disruptions for health. Coups d'état will be categorized according to Powell and Thyne and other categorizations from Section I.

Contextual Background

Nicaragua

Pre-revolution History

Prior to the revolution, Nicaragua was an oligarchic society that monopolized land distribution and excluded the majority of the population. When the nation became involved with coffee production, it brought about a "decline in Liberal-Conservative conflict, greater stability,

and the consolidation of state power," which was achieved by foreign intervention.[165] Nicaragua is "one of the most highly urbanized countries in Latin America," and each of its three regions has distinct economies. The Pacific area in particular is linked with the United States and was controlled and monopolized by the Somoza to export cotton and sugar. Inherent income disparities were created when the small-scale farmers were forced to work on estates.[166]

The United States' occupation in Nicaragua between 1912 and 1933 weakened the "development of autonomous political institutions;"[167] the necessary infrastructure was not in place to successfully withstand socioeconomic crises, which would be particularly detrimental with the eventual downfall of the Somoza. During the occupation and with the help of the United States Marines, Anastasio Somoza Garcia was elected as the commander of the National Guard by Juan Bautista Sacasa (whom Somoza would later oust to become president himself in 1936). Dévora Grynspan states that Somoza's relationship with the National Guard was neopatrimonial and corrupt and "with the U.S. help, Somoza was able to maintain control of the National Guard, undermine the Liberal party, co-opt the Conservative party, and repress labor union and the left," as well as barred the formation of a consolidated elite leadership.[168] Although Cesar Augusto Sandino and his supporters attempted to oppose Somoza's control of the National Guard, both he and his supporters were assassinated by Somoza's command. After Somoza was assassinated in 1956, the power remained in the family as his two sons Luis Somoza Debayle and Anastasio "Tachito" Somoza Debayle assumed leadership, the latter of whom was especially repressive in his methods.[169]

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[165] Dévora Grynspan, "Nicaragua: A New Model for Popular Revolution in Latin America," in *Revolution of the Late Twentieth Century*, ed. Jack A. Goldstone, Ted Robert Gurr, and Farrokh Moshiri (Boulder: Westview Press, 1991), 90.
[166] Garfield and Williams, 8-9.
[167] Grynspan, 91.
[168] Grynspan, 92.
[169] Grynspan, 92.

Infrastructural investments during the 1950s and 1960s expanded Managua's financial and commercial capabilities and improved GDP and literacy rates. Together, the Somoza family, Liberal, and Conservative oligarchic factions monopolized the economy in tandem. The Somoza family took advantage of their piece of monopoly and placed themselves at an advantageous position with land and infrastructure, this resulted in greater landholding for the Somoza and dispossession for peasants, therefore increasing the urban population from 19% in 1950 to 47% in 1970 (which would continue to rise to 54% in 1980).

The "favorable international conditions and high growth rates" that helped the Somoza family began to decline in the 1960s with the emergence of state crises, and Nicaragua could not keep up with the high rate of urbanization. By the 1970s, 41% of the urban population and 80% of the rural population were poor, and 42.4% and 55.4% respectively were in extreme poverty.[170] Extreme inequality, uneven land distribution, low literacy levels (25%), a small working class, and a poor majority were dangerous elements to compound on a society.[171] The economic crisis and 1972 earthquake merely exacerbated the brazen corruption of the Somoza regime, and broke the tenuous coexistence of the Somoza, Liberal, and Conservative parties, inciting elite opposition. The earthquake enticed the Somoza family to siphon international aid, which brought to light the true level of their corruption; indeed, "the 1972 earthquake was the main catalyst for popular mobilization and upper-class defection."[172]

[170] Grynspan, 93-94.
[171] Sanderson, 49.
[172] Garfield and Williams, 3; Grynspan, 95-96.

Figure 4-1: Nicaragua: GDP per capita growth (annual percentage)[173]

It was at this time of economic and natural crises that the Frente Sandinista de Liberación Nacional (FSLN)[174] was established and gained influence, and in turn granted the worker and student groups significant oppositional power upon joining forces. In 1974, the editor of *La Prensa* Pedro Joaquin Chamorro established the *Union Democrática de Liberación* (Democratic Union of Liberation, UDEL), accompanied by other similar groups began to form and involved students and the working class, namely the *Partido Liberal Independiente* (Independent Liberal Party, PLI), *Partido Socialista Nicaragüense* (Nicaraguan Socialist Party, PSN), and the *Partido Social Cristiano Nicaragüense* (Social Christian Party of Nicaragua, PSCN); the Group of Twelve, or Los Doce, formed in 1977 and "was to be the basis of the future revolutionary government."[175]

[173] The data presented in this figure is derived from the World Development Indicators in World DataBank, "Explore. Create. Share: Development Data," *The World Bank*, 2013, http://databank.worldbank.org/data/home.aspx (accessed February 2013).
[174] The term "Sandinista" was derived from Sandino's name.
[175] Grynspan, 96-97.

These organizational efforts of the opposition were met with extremely violent repression, which increased instability and crisis within Nicaragua.[176] It was heavily suspected that the Somoza family ordered the assassination of Chamorro due to his reports on the plasmaferesis pharmaceutical company run in partnership between the Somozas and Arnoldo "Vampire" Ramos; blood plasma, which was mostly donated by the poor due to the economic crisis, was sold to the United States. The assassination of Chamorro in January of 1978 led to a massive protest to raze Somoza businesses, particularly targeting the plasmaferesis.[177] It must be noted here that there is some slight disagreement as to whether this assassination was a positive or negative influence on the *antisomocista* (anti-Somoza) movement. Garfield and Williams argue that the death of Chamorro led to an insurrection led by the FSLN with a positive effect, whereas Grynspan believes that his death adversely affected the burgeoning movement.[178] Considering the subsequent insurrection and collapse of the Somoza regime at the hand of the Sandinistas, it seems that the assassination only exacerbated rebellious sentiment. Nonetheless, the true impact of these *antisomocista* actions and the Somoza retaliation on the healthcare system will be described in more detail in the following subsection devoted to Nicaraguan health.

Revolution and Post-revolution History

The mid-1970s witnessed an increase of repression and torture against the opposition as well as increased siphoning and corruption of international funds. Grynspan argues that the key moment that elucidated the National Guard's "impotence" and the "military capabilities" of the FSLN was the incident at the National Palace, where the FSLN held over 1,500 hostages until

[176] Grynspan, 96.
[177] Garfield and Williams, 4-5.
[178] Grynspan, 97; Garfield and Williams, 4-6.

their demands to release some of their members were realized.[179] Additionally, the aforementioned strikes and protests in 1978 resulted in the death of over 5,000 of Somoza's National Guard, and it was then that the other Latin American countries began to help the opposition.[180] When Somoza guardsmen murdered ABC reporter Bill Stewart and his Nicaraguan interpreter Juan Francisco Espino for attempting a recorded interview, the Somoza dictatorship became an international concern and "the Carter administration essentially ordered Somoza to leave Nicaragua."[181] By withholding foreign aid and supporting the Sandinistas, "a maximally permissive international environment existed with regard to the revolution" and Somoza fled to Miami, Florida.[182] After the resignation of Somoza, the National Guard dissolved and the post-revolution junta took over Managua on July 19.[183]

As with many post-revolution governments, the Sandinistas inherited a nation in physical, economic, social, and political disrepair.[184] Nonetheless, "the great accomplishment of the Nicaraguan Revolution was the destruction of the horrendous neopatrimonial dictatorship of Somoza and its replacement by regimes generally committed to democracy and pluralism."[185] Indeed, the new government attempted to address the relevant issues and began to officially organize and created a five-person junta comprised of two private-sector representatives, an official FSLN representative, and two other FSLN members. Its general characteristics can be considered a "mix of Marxism, Christian defense of the poor, and nationalism."[186]

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[179] Grynspan, 99.
[180] Sanderson, 50-51.
[181] "ABC Reporter is Shot Dead in Nicaragua," *Pittsburgh Post-Gazette*, June 21, 1979, http://news.google.com/newspapers?nid=1129&dat=19790621&id=yYJIAAAAIBAJ&sjid=ym0DAAAAIBAJ&pg=4949,2680245; DeFronzo, 246.
[182] DeFronzo, 246.
[183] Sanderson, 51.
[184] Farcau, 25; Grynspan, 100.
[185] Sanderson, 154.
[186] Garfield and Williams, 6.

Ultimately, the new Nicaraguan government would not be able to implement its original intended policies and ideologies; instead these idealistic and somewhat impractical desires changed to address more pressing and pragmatic concerns for post-revolution reconstruction.[187] After creating an alliance with the bourgeoisie, albeit a tenuous one, the first action of the post-revolution government was a major economic reform that nationalized private property. The bourgeoisie were not given real power, however, and harbored beliefs that "the ultimate goal of the FSLN was a transition to socialism and thus an eventual nationalization of private enterprise."[188] Indeed, these reforms were eventually met with opposition when the banking system and other property became nationalized, despite its original popular support.[189] The new economic policies generally led to disheartening results. Producers of all economic sizes were "hurt by higher wages, government prices, and currency overvaluation as well as by low international prices;" the FSLN attempted to compensate the producers for this loss by offering land and credit reductions for landlords and peasants, but it had diminutive effect since these efforts did not coincide with "technical assistance" and the urban sector.[190]

Similarly frustrating yet successful were the attempts of sociopolitical transformation. Similar to Chile in 1973, the FSLN took control of the army "to protect the revolution from an alliance between the bourgeoisie and the military."[191] It must be noted here that this act was viewed suspiciously, for

[187] Grynspan, 100; 102.
[188] Grynspan, 102.
[189] Sanderson, 151; Grynspan, 103.
[190] Grynspan, 105.
[191] Grynspan, 102.

> Sandinista domination of the postrevolution military, ostensibly to ensure the implementation of the goal of socioeconomic transformation to benefit the poor, was to be continually criticized by many outside the FSLN on the grounds that one political party's control over the armed forces interfered with the realization of the fully democratic political system also promised by the revolution.[192]

To boost support for the revolution, the FSLN engaged in policies to increase literacy and education, similar to the Cuban "literacy crusade," and strengthened mass organizations such as the AMNLAE, *Asociación de Trabajadores del Campo* (Association of Rural Workers, ATC), and the Sandinista Youth-Nineteenth of July. However supportive these organizations were of the revolution, they would nevertheless often disagree about policy with the FSLN.[193] Despite the occasional methodological disagreement, official support for these groups created a sense of "political competency" among the people, eliminating the previous view that the wealthy controlled all political influence.[194] Community participation was essential to uniting the people in a common purpose, which would later dictate the success of the healthcare system and subsequently Nicaragua's health status.

The Nicaraguan economy experienced growth from 1980 to 1983, but declined again in 1984. Although the decline can be attributed to similar problems in other Latin American countries such as "declining terms of trade [and] a growing foreign debt," it can also be attributed to revolution-specific factors such as "the disruption of production caused by nationalization and conflict between the private sector and the government."[195] With the help of the United States under the Reagan Administration, opposition to the Sandinista government developed into a significant counterrevolution into the *contra* war. The United States' support for the *contras* can be traced when understanding that the Somoza regime was "the most

[192] DeFronzo, 247.
[193] Grynspan, 105.
[194] DeFronzo, 247.
[195] Grynspan, 105-106.

dependable ally of the United States in Latin America" and that the Sandinista government was socialist in nature.[196] In 1984, the *contras* became a formidable influence as the *Fuerza Democrática Nicaragüense* (Nicaraguan Democratic Force, FDN), led by many from the original Somoza National Guard;[197] this democratic initiative backed by "white propaganda" caused a relapse into sociopolitical instability for Nicaragua yet again.

The counterrevolution was socially, politically, and economically detrimental to the development of Nicaragua, for it undermined the revolution as (1) support for the FSLN waned in light of a draft, (2) the physical and economic state of Nicaragua was further hampered, and (3) resources were reallocated from social policies to the military.[198] Much of the population became displaced, "peasant cooperatives" became targets for the *contras,* and many peasants were recruited by the army which resulted in a declining labor force. The counterrevolution greatly affected the already declining economy, with food shortages and lack of private investment, while U.S. sanctions only exacerbated these problems. Despite increased land distribution, there was still opposition between the Sandinista government and the bourgeoisie; the 1984 elections were the final break between these two.[199] In short, the instability caused by the *contra* war hindered progress in healthcare and impeded sociopolitical development in Nicaragua.

Nicaraguan Healthcare

The pre-revolution health system in Nicaragua was controlled from the top, highly fragmented, and was marked by high IMR, low nutrition levels, and preventable diseases such as

[196] Grynspan, 88; 106. Cuba was the only other successful Latin American revolution against a U.S. sponsored regime.
[197] Grynspan, 108.
[198] Grynspan, 108.
[199] Grynspan, 105-107.

diarrhea.[200] The chaotic administration of the *Instituto Nicaragüense de Seguridad Social* (Nicaraguan Social Security Institute, INSS) further demonstrated the inadequacy of the Somoza healthcare system. Duplication, fragmentation, corruption, and personal involvement of leadership shaped its inefficiency.[201]

Healthcare was inequitable, favoring the upper middle class in urban areas while only 28% of the population had "effective access to modern health service;"[202] such disparity between the rural and urban sectors for healthcare was more extreme in Nicaragua than in other Central American countries, but relatively similar to Chile.[203] Although the GINI index is largely unavailable for Nicaragua before 1990, the disparity between the rural and urban areas can be measured with area-specific IMR and percent of the population with access to piped water. The percentage of Nicaragua's population that was poor or very poor is also indicative at 62%.[204]

Table 4-1: Nicaragua: Estimated Infant Mortality Rate (per 1,000), Urban and Rural[205]

	1975	**1979**	**1980**	**1985**	**1990**
Rural	103	92	89	76	70
Urban	81	76	75	66	58
Difference	22	16	14	10	12

Table 4-2: "Nicaragua: Percent of population with access to piped water"[206]

	1974	**1979**	**1985**	**1987**
Rural	6	6	11	15
Urban	72	63	76	76

[200] Donahue, xv. Diarrhea was the leading cause of death among children.
[201] Garfield and Williams, 15.
[202] Garfield and Williams, 13.
[203] Garfield and Williams, 12.
[204] Garfield and Williams, 262.
[205] Figures derived from Garfield and Williams, 257.
[206] Table derived from Garfield and Williams, 258.

This combination of variables demonstrates the large gap of deaths caused by preventable diseases and subsequently the difference in healthcare access for both groups. It can also be seen that the gap in both IMR and access to water steadily narrowed, although the latter was at a significantly slower pace.[207]

Unlike Guatemala, Honduras, and Costa Rica, *somocista* Nicaragua did not bother to attempt improving these public health inequities.[208] Quite the contrary; the National Guard responded to insurrection by bombing health facilities and siphoning valuable resources that would have otherwise maintained these buildings. Despite their elite social status, not all physicians supported the Somoza regime. However, those who joined the opposition did not escape the influence and repression of the Somoza government, particularly Oscar Danilo Rosales and Alejandro Davila Bolanos; the former was murdered in an aerial napalm attack, while the latter was arrested and tortured by the National Guard in 1978. Bolanos survived this treatment and continued to work at the Esteli hospital to treat those injured by the Somoza, but when the National Guard stormed the building during a later raid, they seized him and publicly burned his body as a political statement.[209] These types of insurrections following the assassination of Chamorro "marked a period of brutal destruction of hospitals, raised the need for curative and rehabilitative services for those wounded in the war, weakened the capacity of the Somoza government to maintain even the inadequate services that existed, and inhibited small reform initiatives."[210]

Despite the disheartening obstacles for sociopolitical and economic transformations after the revolution in 1979, Nicaraguan health did not take a drastic turn for the worse; in fact, it

[207] This disparity is aptly demonstrated with the INSS, which provided 40% of medical care yet served only 10% of the total population; Bossert, "Health Care in Revolutionary Nicaragua," 261-263.
[208] Bossert, "Health Care in Revolutionary Nicaragua," 263.
[209] Garfield and Williams, 10-12.
[210] Bossert, "Health Care in Revolutionary Nicaragua," 263.

seemed to have improved.[211] Bossert theoretically argues that a post-revolution regime would strive to achieve a dedicated primary care approach because of their committed proclivity to improve society; however, he does admit that some regimes would not devote the costly resources toward greater public health if it does nothing to legitimize the regime. Regardless of motivation, post-revolution Nicaragua attempted to restructure its healthcare system "in such a way as to achieve equity, prevention, and participation within a relatively restricted budget."[212]

The primary indication of such positive changes is clearly reflected in the consistent and steep decline of IMR. One can see from Figure 4-2 and Table 4-3 that the steepest decline in infant mortality began in the five-year period of 1975-1980, but stagnated in the next five-year period of 1980-1985 due to the *contra* struggles. Despite the revolution and coup, or even *in* spite of it, IMR declined with admirable speed. Even the period of 1970-1975 that lead up to the revolution witnessed a more favorable decline. It must also be noted that these steep declines occurred during an authoritarian polity, indicated in red.

[211] Garfield and Williams, 3.
[212] Bossert, "Health Care in Revolutionary Nicaragua," 260-261.

Figure 4-2: Nicaragua's Infant Mortality Rate, per 1,000 live births[213]

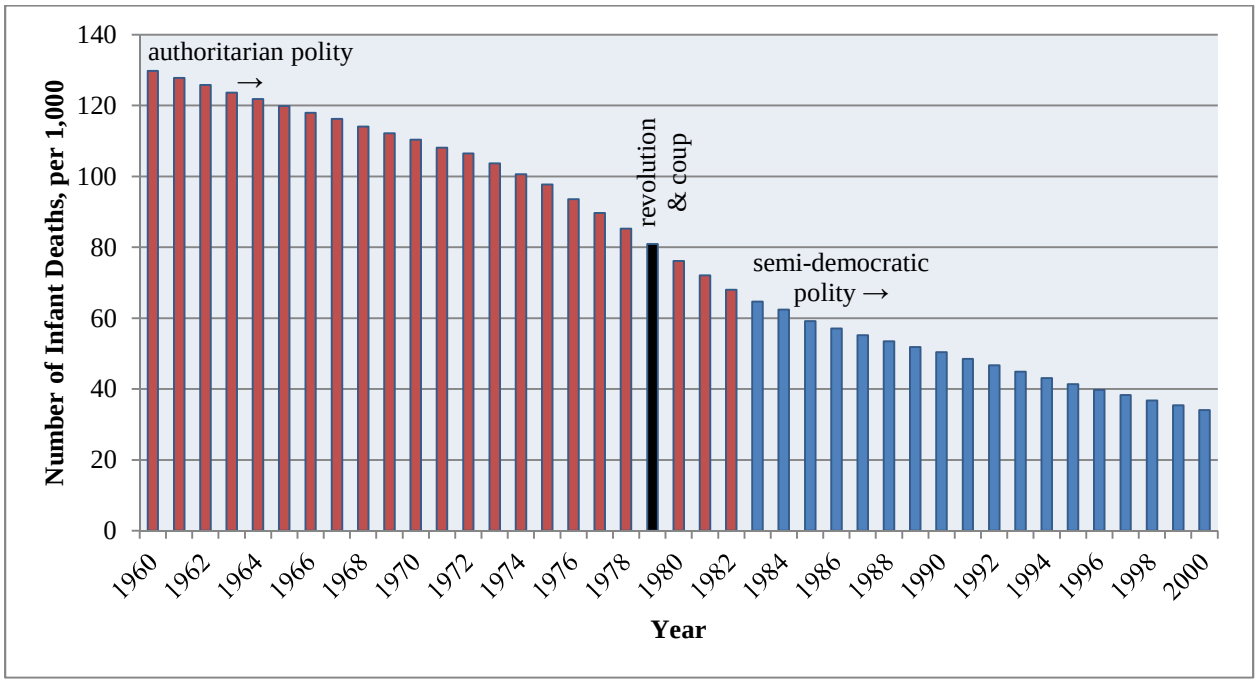


Table 4-3: Declining Trend of Nicaragua's Infant Mortality Rate (in percentage)

Year	**1960-1965**	**1965-1970**	**1970-1975**	**1975-1980**	**1980-1985**	**1985-1990**	**1990-1995**	**1995-2000**
Percent *Decline*	7.70	7.85	11.50	22.11	22.21	14.86	17.86	17.63

Nicaragua's primary focus in the health system after the revolution was the right to healthcare for all. Although there were inherent complications to such an ambitious goal, the right to healthcare was a mentality that was soon spread, and the previously neglected population finally received care.[214] This mentality and awareness is crucial to maintaining good health standing in any country, especially when considering a country like Chile in which a drastic regime change occurred. The post-revolution Nicaraguan government attempted a pluralistic public health system for all in favor of accessing rural areas, "emphasiz[ing] preventative health

[213] The data presented in this table is derived from Health Nutrition and Population Statistics, World DataBank. Polity changes are colored according to Mainwaring, Brinks, and Pérez-Liñán, 15, where authoritarianism is represented in red, semi-democracy in blue, and democracy in green.
[214] Garfield and Williams, 25-26.

care, health education, and community participation."[215] Among the overall efforts to improve the system, the three most noteworthy were creating national health organizations, launching health campaigns and programs to improve health awareness and literacy, and quite significantly "dealing with the issue of professional versus popular control of the health system and with tensions between rural and urban areas."[216]

Figure 4-3: Nicaragua: Percentage of population completed primary and secondary (age 15+)[217]

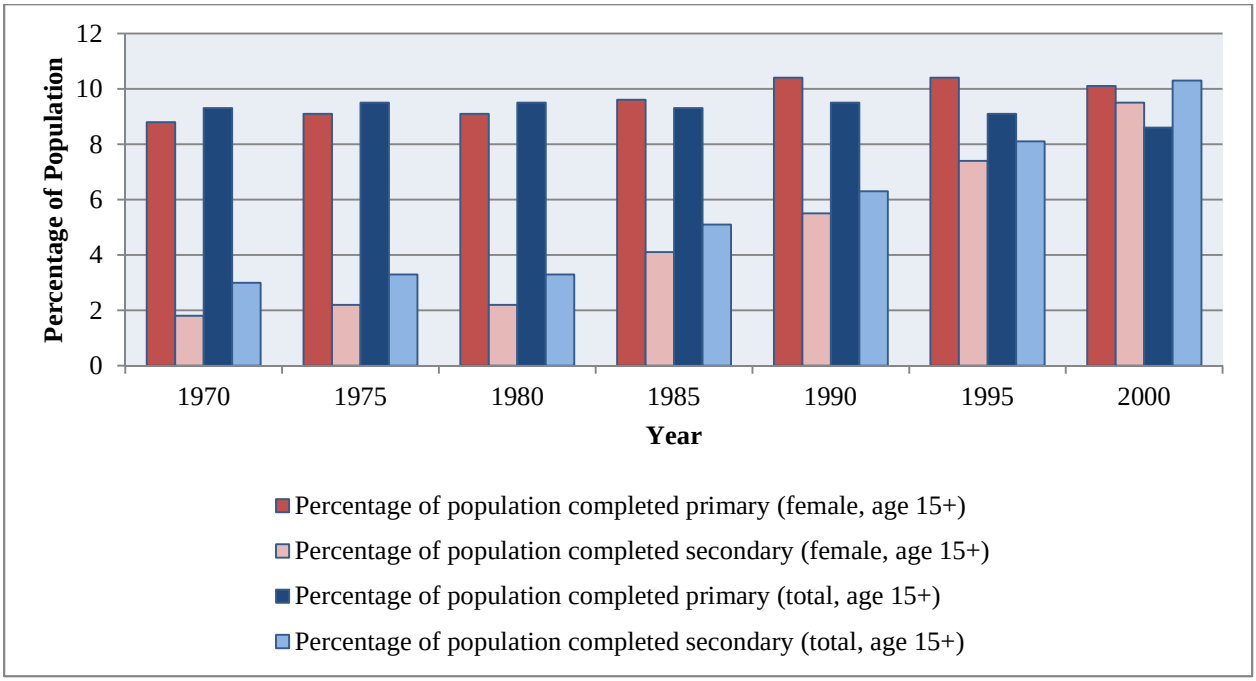


Table 4-4: "Infant deaths per 1000 live births by mother's education" in Nicaragua[218]

	No School	Primary	Secondary
1966/67	136	108	57
1973/74	112	91	47

According to Figure 4-3, Nicaragua's literacy rates changed little immediately before and after the revolution; in fact, there is absolute stagnation across all figures during the period of

[215] Garfield and Williams, 24.
[216] Donahue, xv.
[217] The data presented in this table is derived from Education Statistics, World DataBank.
[218] Garfield and Williams, 259.

1975-1980. During the period of 1980-1985, however, secondary education increased dramatically (54.55%), particularly among women (86.36%), and it can be seen with Table 4-4 above that the application of these literacy rates is what truly changed with the revolution.

The organization of healthcare drastically differed from the Somoza period, morphing into a three-tier system composed of hospitals, health centers, and health posts. The nationally- and foreign-run hospitals provided a wide breadth of care including long-term illnesses, while each of the several regions established ten to twenty "health areas" that provided primary care; health centers cared for more highly populated areas and offered more technical capabilities whereas health posts were offered to lower populations and concerned common illnesses and oral rehydration.[219] A truly significant change that accompanied the reorganization, however, was the assignment of trained staff to rural areas, which effectively reduced inequality particularly within curative care.[220] As seen in Table 4-5 below, the general number of physicians and available hospitals beds improved dramatically during 1980-1985, with nearly 1,000 more doctors and 400 more hospital beds. Notice the reduction of hospitals after the revolution, which (1) correlates well with either the focus on preventative rather than curative healthcare, (2) indicates the level of destructions caused by Somoza's National Guard raids, and (3) indicates the replacement with community centers and health posts.

Table 4-5: Nicaragua: Additional Health figures[221]

	1975	**1979**	**1980**	**1985**	**1990**
Doctors	911	1345	1212	2142	2417
Nurses	395	640	808	1152	1589
Beds in public hospitals	4115	4000	4677	5083	4720
Hospitals	34	34	31	31	30

[219] Garfield and Williams, 29-30.
[220] Garfield and Williams, 31.
[221] Figures are derived from Appendix A in Garfield and Williams.

Community participation became the fundamental ingredient for a successful healthcare system to rise from the revolution's ashes, as the lack of participation in the 1970s was due to low regime support.[222] Widespread participation occurred after the revolution and the establishment of the *Sistema Nacional Unico de Salud* (National Unified Health System, SNUS), and demands and expectations from the masses grew rapidly as healthcare became an obtainable reality.[223] The period between 1979 and 1981 marked massive construction of health buildings, most of which were constructed by the community rather than the government.[224] Health education was promoted with such initiatives as "public health days" and literacy campaigns, in which community members were trained and spread the word in areas that would have been otherwise inaccessible. Such direct participation in health reforms after the revolution was a non-political method of involvement to rebuild the nation.[225]

Some authors note that despite the achievements of "equity, prevention, and participation" within the national budget, the post-revolution health system still favored the urban areas, emphasized curative care, and lacked skilled administration; all factors inhibited the true commitment to prevention and equity.[226] Although community participation in public health picked up where the government health facilities left off during the 1979 revolution, this participation was itself halted with the *contra* war and United States involvement.[227] Indeed, in

[222] Garfield and Williams, 35.
[223] Richard Garfield, "Revolution and the Nicaraguan Health System," *Medical Anthropology Quarterly* 15 (May 1984): 69.
[224] Garfield and Williams, 26.
[225] Garfield and Williams, 36-42. It must be noted that these initiatives threatened conservatives and the status quo of doctors' middle class patients.
[226] Bossert, "Health Care in Revolutionary Nicaragua," 268-269.
[227] Harvey Williams, "An Uncertain Prognosis: Some Factors That May Limit Future Progress in the Nicaragua Health Care System," *Medical Anthropology Quarterly* 15 (May 1984): 72.

1981, at the time the U.S. began funding the *contras*, the Reagan Administration stopped funding for USAID-funded hospitals, and subsequently created significant delays.[228]

However, as can be seen with the above figures and tables, the healthcare system in Nicaragua endured even with the complications of the *contra* war. "Public health campaigns involving the general population have involved immunizations, improved sanitation, mosquito control, and prophylactic antimalarial treatment," which have been accomplished at an "impressive" speed even during the *contra* attacks of 1983;[229] although the *contra* war greatly deterred participation when *contra* rebels began attacking civilians in 1983, the trained health volunteers (*brigadistas*) were able to provide first aid to victims and prevent disease outbreaks with vaccinations.[230]

Timeline

The following timeline plots relevant events in Nicaragua beginning from its independence in 1838 and ending in 2000; it will also incorporate significant events relating to health in addition to sociopolitical occurrences.[231]

Table 4-6: Nicaraguan Political and Medical Timeline

Independence	
1838	Nicaragua becomes fully independent.
1893	General Jose Santos Zelaya, a Liberal, seizes power and establishes dictatorship.
1909	US troops help depose Zelaya.
1912-25	US establishes military bases.

[228] Garfield and Williams, 17-18; 30; 45.
[229] Garfield, 69-70.
[230] Garfield and Williams, 45.
[231] The listed events are compiled from several sources, most notably: DeFronzo 227-268; BBC, "Nicaragua Timeline," *bbc.co.uk*, September 9, 2009, www.bbc.co.uk/2/hi/americas/country_profiles/1225283.stm (accessed March 25, 2013); Garfield and Williams, 10-19. The last of which provides a very detailed timeline of 1979 and important dates relating to health reform. The contributions of the BBC as well as Garfield and Williams are directly quoted. Some events from their extensive records have been omitted.

1915	Hookworm control program by the Rockefeller Foundation begins.
1922	Malaria control program begins.
1925	General Health Administration and "initial public health" are established.
1927-33	Guerrillas led by Augusto Cesar Sandino campaign against US military presence.
1930s	The United States' help leads to the development of the Ministry of Health.
1934	Sandino assassinated on the orders of the National Guard commander, General Anastasio Somoza Garcia.
Somoza dictatorship	
1937	General Somoza elected president, heralding the start of a 44-year-long dictatorship by his family.
1956	General Somoza assassinated, but is succeeded as president by his son, Luis Somoza Debayle.
1958	Programs concerning national eradication of malaria are initiated.
1961	Sandinista National Liberation Front (FSLN) founded. The FSLN was originally led by Carlos Fonseca Amador, Tomás Borge, and Silvio Mayorga, all of whom were from middle- and upper-class families with the exception of Carlos Fonseca, the "prime mover."
1967	Luis Somoza dies and is succeeded as president by his brother, Anastasio Somoza.
1972	Managua is devastated by an earthquake that kills between 5,000 and 10,000 people.
1974	December 27: Thirteen Sandinistas hold "politically prominent" hostages in response to Somoza's reelection. Somoza declares martial law under the "state of siege."
1976	Carlos Fonseca dies in combat against the National Guard.
1977	Somoza ends the "state of siege" due to negative publicity and the Carter administration, unintentionally allowing the FSLN to organize more effectively.
1978	International aid began aiding the Sandinista cause, notably from Venezuela, Panama, Costa Rica, and Cuba. January 10: Assassination of Pedro Joaquin Chamorro, the editor of *La Prensa* and the leader of the opposition Democratic Liberation Union. August 22: FSLN seize the National Palace and hold over 1,500 people hostage. September: Somoza reinstates the "state of siege" in response to the politically motivated fervor among the youth because of August 22. More than 5,000 people were killed.
Sandinista Revolution (1979)	
May 29	Sandinistas launch their "final offensive."
June 20	ABC reporter Bill Stewart is murdered by the National Guard.
June 23	The Organization of American States (OAS) voted to demand Somoza's resignation.
July 17	Somoza flees Nicaragua for Miami.
July 17-18	Somoza's military (National Guard) disintegrates.
July 18	A provisional "government of national reconstruction" is established in the city of León. In their

	proclamation, they announce plans to form a "unified national health service."
July 19	The Sandinistas and the Government of National Reconstruction takes control of Managua.
July 26	The first Cuban medical brigade arrives.
August 1	The newly appointed Minister of Health asks, via *La Prensa* newspaper, that hospital directors send information on employees and their salaries. Health workers have not paid for three to six months. The health ministry announces that vaccination campaigns will be started in a few days with the help of equipment donated by the West German government.
August 2	The Interamerican Development Bank and the Organization of American States pledge, respectively, $20 million and $500,000 in emergency food relief.
August 5	Headline in the new *Barricada* newspaper: "The Job in Health Will Be Gigantic!"
August 6	The health ministry announces that medical brigades have arrived from Mexico, Cuba, Germany, Panama, Costa Rica, Argentina, and Honduras.
August 10	The new Ministry of Health (MINSA) is inaugurated.
August 17	MINSA announcement in *La Prensa*: "The permits given to exhume cadavers of those fallen in the insurrection are suspended immediately as a hygiene measure."
August 20	The Government of Reconstruction proclaims that all INSS hospitals and clinics will be opened to the public. Private rooms in public hospitals are similarly abolished.
August 27	The vice-minister of health announces: "Damage to the health system has been great, but we still don't know how great." USAID announces a further increase in aid as 2,000 tons of food arrive.
August 31	Health is proclaimed to be a right of the entire population. It is announced that there will no longer be a fee to fill prescriptions.
Post-revolution	
1979-81	Massive construction of health buildings takes place, mostly by the community.
1980	Somoza assassinated in Paraguay; FSLN government led by Daniel Ortega nationalizes and turns into cooperatives lands held by the Somoza family. National Literacy Crusade begins.
1981	The Reagan Administration stops funding for USAID-funded hospitals.
1982	US-sponsored attacks by Contra rebels based in Honduras begin; state of emergency declared.
1983	*Contra* rebels attack civilians. Concerning public health, maternal education takes priority.
1984	Daniel Ortega elected president; US mines Nicaraguan harbors and is condemned by the World Court for doing so. Healthcare gains political significance.
1987-88	Nicaraguan leadership signs peace agreement and subsequently holds talks with the *contras*; hurricane leaves 180,000 people homeless.
1988	MINSA campaign begins to reduce infant mortality rates.

	October: Hurricane Joan-Mirriam results in significantly more deaths and damage than other Latin American countries.
Post-Sandinista era	
1990	US-backed centre-right National Opposition Union defeats FSLN in elections; Violeta Chamorro becomes president.
1992	Earthquake renders 16,000 people homeless.
1996	Arnoldo Aleman elected president.
1998	Hurrican Mitch causes massive devastation. Some 3,000 people are killed and hundreds of thousands are left homeless.
2000	FSLN win Managua municipal elections.

Chile

Pre-Revolution History

Unlike Nicaragua, Chile's history is much more focused on economic conditions, democratic traditions, and foreign influence. Thus, the historical context that addresses these factors will create a better understanding of how the coup d'état in 1973 and Salvador Allende's dictatorship affected healthcare thereafter.

Spanish colonialism, British and French involvement, and American influence and intervention all contributed to Chile's economic dependence and maintained this situational precedent throughout the twentieth century. Unlike other countries in which wars of independence took place, Chile had a strong central authority and loyal armed forces; thus, the class structure remained. After its independence in 1818, Chile's export boomed especially between 1845 and 1860-1875 with wheat and copper, resulting in increased urbanization and power for the bourgeoisie. Liberal reforms began to take place in the 1850s in favor of

decentralization and "democratic suffrage," which were truly implemented when the authoritarian state began to wane in power during the 1870s and 1880s.[232]

Chile's dependent economy was created by Spanish colonialism, while uneven competition and lessened demand in free trade resulted in socioeconomic crises. Reforms (and even political restructuring) would be the original method to deal with these crises, but the alternative that was pursued during the 1870s was to declare war on Bolivia and Peru and annex the Atacama Desert in order to monopolize the nitrate supplies. Although foreigners would later take over the nitrate mining, Chile's monopoly expanded state expenditure, increased urbanization, and created a substantial middle class. The market in nitrates dissolved after the invention of synthetic nitrate in World War II, however, which collapsed Chile's parliamentary regime and increased middle class demand for reform. The military intervened from 1924 in order to quell the demands, but only lasted until 1932.[233]

Chile's industrial sector developed late, compounded with diminutive interest from the bourgeoisie. Copper exports soon replaced those of nitrates, though American companies controlled them in light of Chilean apathy toward nationalizing it. Although the period of 1924-1940 witnessed a return to national industry particularly under the dictatorship of Carlos Ibáñez del Campo, it again fell along with his dictatorship in 1932. There was economic growth during the 1930s and 1940s under the Popular Front governments, but copper prices fell in the early 1970s despite governmental efforts. It became clear at this point that Chile's economy would become dependent on foreign revenue.[234]

[232] Ian Roxborough, Philip O'Brien, and Jackie Roddick, *Chile: The State and Revolution* (New York: Holmes and Meier Publishers, Inc., 1977), 6-7.
[233] Roxborough, O'Brien, and Roddick, 4; 7-8; 10.
[234] Roxborough, O'Brien, and Roddick, 4; 10-11.

Before its collapse in the early twentieth century, the nitrate economy created quite a substantial working class. Even prior to the nitrate industry, Chilean miners have a historical tendency dating back to 1834 to initiate uprisings and demonstrations, particularly when they became more organized as time passed. During the 19th century, this working class was ruled by the bourgeoisie and was barred from unionizing; indeed, "union organization was difficult and often illegal; organizers were persecuted, and the army was regularly brought in to suppress strikers."[235] Once established, however, Chile's working class struggle for autonomy against the bourgeoisie and their ideologies became more realistic.[236]

Revolution and Post-Revolution History

Since the workers in Chile "have a history of economic militancy and political struggle" that began with the nitrate era, a working class (or proletariat Marxist) revolution seemed bound to happen.[237] It must be noted that although the ruling class partook in violent and repressive tactics from the 1920s until 1973, there have also been more "political solutions" adopted by the bourgeoisie aside from massacres and military intervention. Nonetheless, the bourgeoisie was largely unified against potential threats and were able to make concessions to the working and middle classes, albeit with repressive sentimentality. Their strategy was consistently "of a reformist alternative to Communism, the promise of fundamental change without a real revolution, coupled with periodic suppression of political parties or workers who would not submit."[238] This strategy was strengthened by the division of the workers, a large middle class whose beliefs tend to lie with the bourgeoisie than revolutionaries, and the promise that reformist policies create state employment. Therefore, there was a choice in 1973 between revolution and

[235] Roxborough, O'Brien, and Roddick, 12; 13.
[236] Roxborough, O'Brien, and Roddick, 13.
[237] Roxborough, O'Brien, and Roddick, 1.
[238] Roxborough, O'Brien, and Roddick, 14; 15.

restoration, "the outcome decided by a military coup with a violence and degree of bloodshed for which there has been little precedence in Chilean history."[239]

Eduardo Frei, a Christian Democrat, was elected in 1964 to reform Chile's structures. His progressive Revolution in Liberty reforms which differed from Marxism and thus gained U.S. support would cost the landowners money and some of their socioeconomic power; thus, the Christian Democrats were at odds with the "older and more established" national party. Economic conditions continued to worsen in 1966-1967, with "inflation, stagnation, high unemployment and underemployment, balance of payments crises and very unequal income distribution and access to education, health and welfare."[240] Effective changes were mainly concerned with the economic dependency of Chile and the "oligopolistic structure" of its economy. The latter of the two was particularly problematic for Frei; there was a stunning amount of land monopoly (1.3% of farmers owned 72.7% of the land) and a highly skewed income distribution in the *latifundio* system that remained until 1970.[241] His reforms exacerbated the already "combative" nature of the working class, including that of the military and the peasantry, resulting in numerous strikes throughout the 1960s and dramatically increasing political mobilization. The Christian Democrats met these responses with more repression as both the U.S. military and the *grupo móvil*, a police riot squad, became the force for counterinsurgency and riot control.[242]

In the 1960s, the Left began to suspect that it would not gain power through electoral votes. The *Movimiento de Izquierda Revolucionaria* (The Revolutionary Left Movement, MIR) was created by socialist students as a split from the Socialist Party, and harbored a pessimistic

[239] Roxborough, O'Brien, and Roddick, 14-16.
[240] Roxborough, O'Brien, and Roddick, 49-50.
[241] Roxborough, O'Brien, and Roddick, 51; 55.
[242] Roxborough, O'Brien, and Roddick, 60-62.

viewpoint concerning the electoral path to power. The *Unidad Popular* (Popular Unity) coalition was formed in 1969 as a multi-party government and policy advisor that would select a candidate; it was diametrically opposed between the Socialist Party, Communist Party, and *Movimiento de Acción Popular Unitario* (Popular Unitary Action Movement, MAPU) all of which supported Salvador Allende against the *Acción Popular Independiente* (Independent Popular Action Party, API), *Partido Social Democracia de Chile* (Social Democratic Party, PSD), and Radical Party which supported Rafael Tarud. Allende, a Marxist, won the 1970 presidential election.[243]

Several authors agree that Salvador Allende's "road to socialism" was not a peaceful one.[244] During his presidency, Chile witnessed "the gradual suppression of the opposition press and an attempt to crush the bourgeoisie economically, while at the same time favoring the working groups which supported him."[245] Thus, the "national conditions" that characterized the government under Allende in 1970-1973 were a strong working class, a bourgeois democracy, and a dependent economy; Chile was industrial at this time, with 70% of the population considered urbanized and with an entrenched bourgeoisie and democratic tradition unique to developing countries. External economic changes in Chile reflect its dependent economy, especially when a dictatorship arose in the 1920s because of the collapse of nitrate exports to reconstruct the whole political sphere in order to accommodate this shift. The "national frustration" felt in 1970 exemplified the fact that foreign interests took precedence over those of the nation.[246]

[243] Roxborough, O'Brien, and Roddick, 64; 66.
[244] Paul M. Sweezy, "Chile: The Question of Power," in *Revolution and Counter-Revolution in Chile*, ed. Paul M. Sweezy and Harry Magdoff (New York: Monthly Review Press, 1974), 11; Roxborough, O'Brien, and Roddick, 14.
[245] Farcau, 35.
[246] Roxborough, O'Brien, and Roddick, 1-3.

Allende's transition to socialism created "transitional costs" which focused on the nationalization of copper companies, a raise in minimum wage, land reform, and increased social spending; by 1973, the nation's deficit of 25% was compounded by international economic pressures and inflation, resulting in more frequent strikes.[247] These policies of nationalization weakened Allende's relations with the other governmental branches, and created favorable conditions to carry out a coup d'état.

James Petras provides an interesting account of Frei's naivety concerning the military's motivations and the role reversal that occurred leading up to the 1973 coup. Allende's government was attacked by both the Christian Democrats under Frei as well as the Chilean military, for "Frei and his supporters sought means to prevent Allende from taking power, and to undermine the economy to prevent his development policies from succeeding."[248] Frei's original intention, according to Petras, was to initiate economic disaster which would call for Allende's impeachment, while the Right would take over with a dictatorship. Frei wrongly believed that the military's role would be brief and that he would restore democracy after eliminating the Leftist parties.[249] After the coup, the military gave the factories, banks, and corporations to the technocrats (hence becoming a bureaucratic-authoritarian government), directly controlled the universities and the media, and put professionals and businessmen in charge of government policy. Clearly, Frei underestimated the "military's lack of vocation for political office."[250] Paul M. Sweezy accounts for another source of ignorance and states that the *Unidad Popular* was not prepared for the armed confrontation on September 11, 1973. He argues that the *Unidad*

[247] James W. McGuire, *Wealth, Health, and Democracy in East Asia and Latin America* (New York: Cambridge University Press, 2010), 96.
[248] James Petras, "Chile after Allende: A Tale of Two Coups," in *Revolution and Counter-Revolution in Chile*, ed. Paul M. Sweezy and Harry Magdoff (New York: Monthly Review Press, 1974), 161.
[249] Petras, 162; 164.
[250] Petras, 164-165.

Popular did not push its advantage to entrench its political influence; it simply believed that the military would not intervene despite suspicion of coup d'état plots, and was contented with the economic successes soon after Allende's presidential victory.[251]

The military junta exerted their influence by means of terror and obtained legitimacy with international loans that further established their power; they entrenched their "political rulership" by "physically exterminating the opposition, eliminating deliberative bodies, silencing critics, intervening in the universities, and burning books."[252] They used Frei to obtain their power and became more permanent with the help of economic resources from the U.S.[253] General Augusto Pinochet assumed commander of the military regime that was established in 1973, which disrupted nearly half a century of democratic elections.

Healthcare

Pinochet's military dictatorship was "one of the harshest in modern Latin American history;"[254] however, amidst massacres, arbitrary arrests, censored media, stifled expression, declining GDP per capita, and growing poverty and income inequality, his regime continued the trend of improving health status and maintaining a health budget in Chile. Focusing on particular programs or targeting specific at-risk groups such as mothers or the indigent, his regime made the most efficient use of public social service spending.[255] "Chile underscores that a country can make good progress at reducing infant mortality even when social spending

[251] Sweezy, 12; -15. Indeed, it also disregarded the attempted coup d'état in 1970 under Roberto Viaux. Viaux headed a revolt in Santiago and claimed it was a "purely internal military affair; Frei, on the other hand, knew that Viaux had made several attempts to contact civilian political groups, and interpreted the action as a possible precursor of a coup d'etat" (Roxborough, O'Brien, and Roddick, 67).
[252] Petras, 167.
[253] Petras, 168.
[254] McGuire, 97.
[255] Stephen Reichard, "Ideology Drives Health Care Reforms in Chile," *Journal of Public Health Policy* 17 (1996), 86.

absorbs a fairly small proportion of GDP" and by focusing on "inexpensive but well designed" programs.[256]

Despite these successes, the reorganization of the healthcare system into several subsystems in 1981 was ultimately detrimental, and may have created the stagnation of IMR during period of 1983-1986.[257] Another contributing factor to this could be the development of the *Instituciones de Salud Previsional* (Institutes for the Provision of Health, ISAPREs), as they "have been accused of pandering to the young, the healthy and the rich" while discriminating against women and consuming the majority of healthcare funds for a small fraction of the population. After the ISAPREs were established, much of the population gradually shifted from the public *Servicio Nacional de Salud* (National Health Service, SNS) to private healthcare in general.[258]

[256] McGuire, 100; 103. A similar sentiment is also noted in Jiménez and Romero, 462.
[257] Reichard, 89; 91.
[258] Reichard, 88; 90; McGuire, 110.

Figure 4-4: Infant Mortality Rate, per 1,000 live births[259]

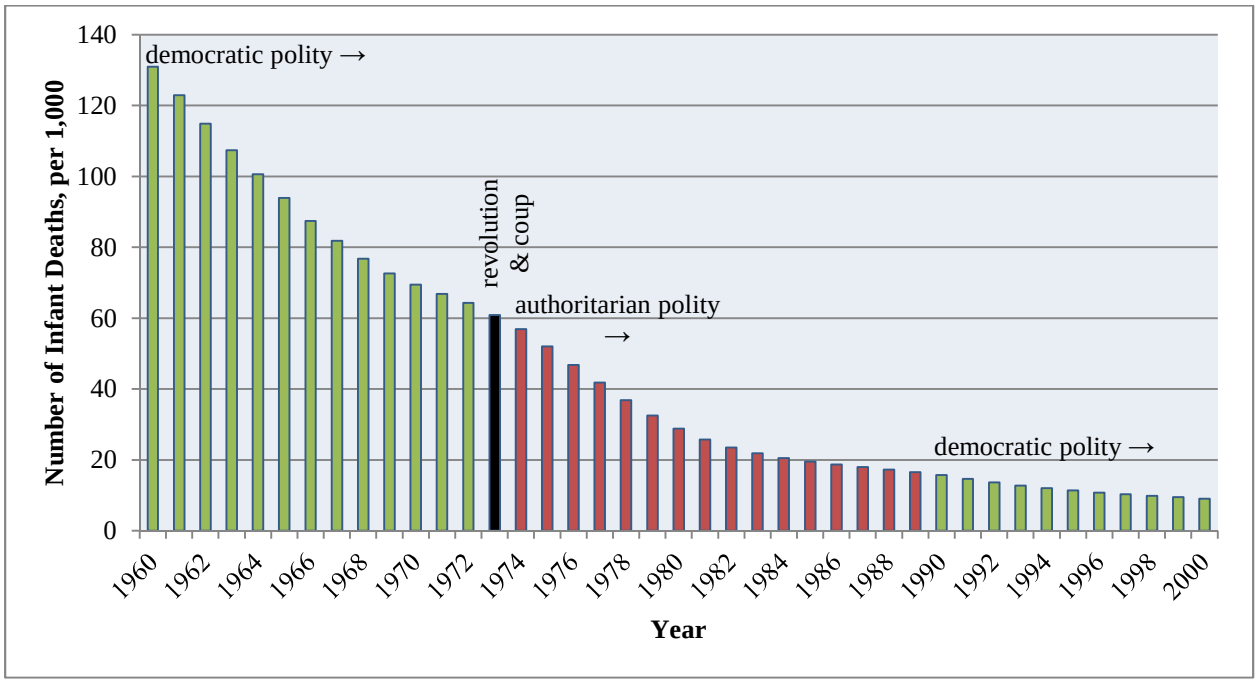


Table 4-7: Declining Trend of Chile's Infant Mortality Rate (in percentage)

Year	**1960-1965**	**1965-1970**	**1970-1975**	**1975-1980**	**1980-1985**	**1985-1990**	**1990-1995**	**1995-2000**
Percent *Decline*	28.27	25.99	25.18	44.62	32.29	19.49	27.39	20.18

Although IMR had already begun to decline after 1960, its steepest decline was during this period of militarism. This boast can largely be attributed to the "public provision of basic health services to the poor," as well as improving access to rural areas, both of which had previously been lacking.[260] As seen in Table 4-7 above, there is a 45% decline in the five-year period of 1975-1980 alone, whereas the five-year periods between 1960 and 1975 witnessed a consistent decline of about 25% each; a similar trend can be seen during the later years of Pinochet's regime (1980-1985), but still not quite as drastic.

[259] The data presented in this table is derived from Health Nutrition and Population Statistics, World DataBank. Polity changes are colored according to Mainwaring, Brinks, and Pérez-Liñán, 15, where authoritarianism is represented in red, semi-democracy in blue, and democracy in green.
[260] McGuire, 94-95.

Figure 4-5: Chile: GDP per capita growth (annual percentage)[261]

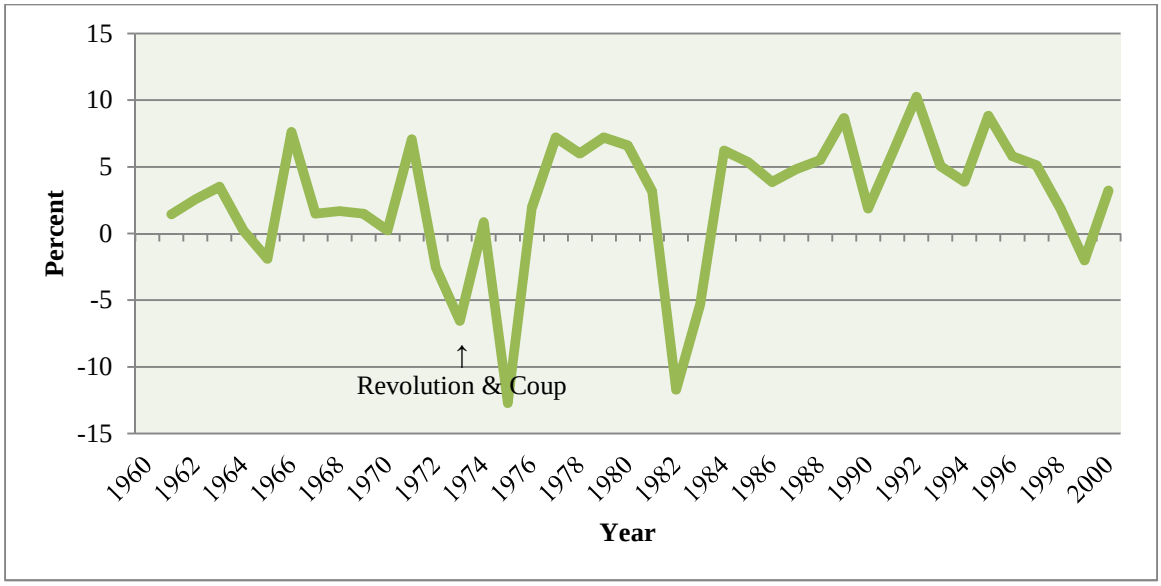
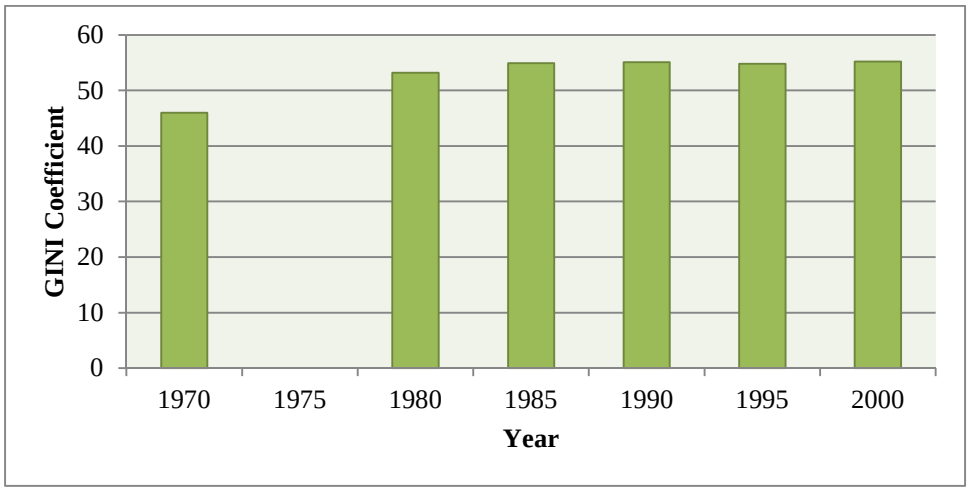


Figure 4-6: Chile: GINI Index of Income Inequality[262]



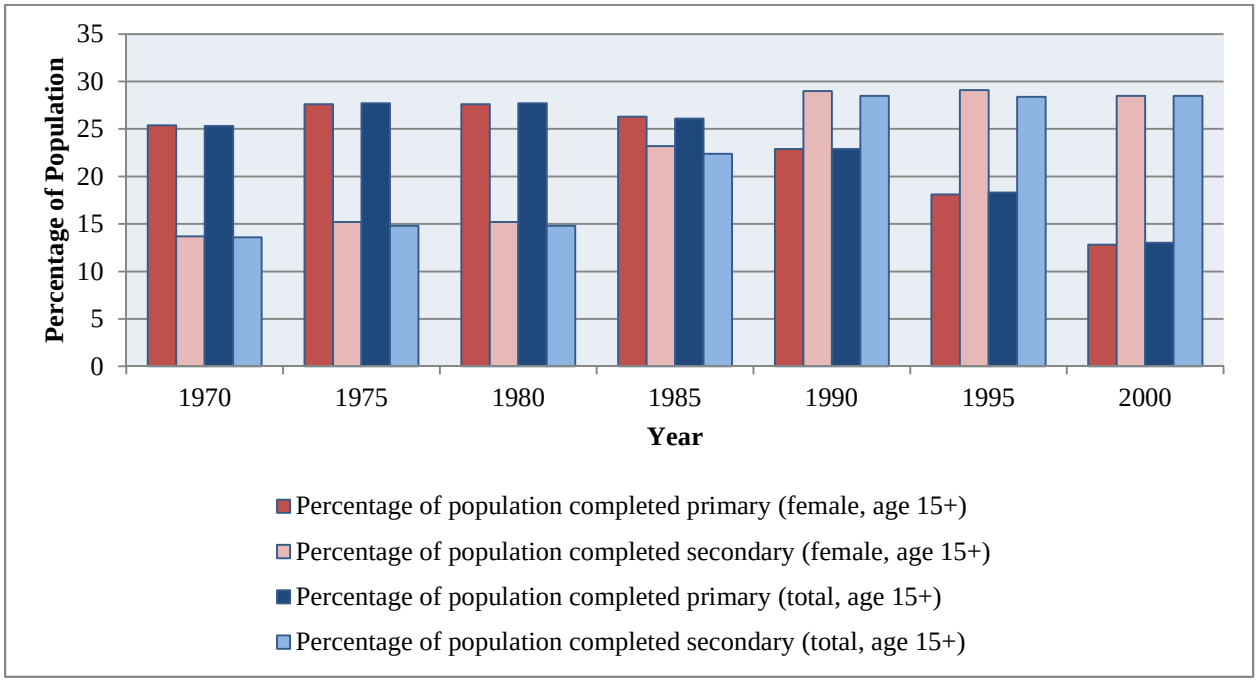
McGuire attributes particular significance to the link between health status and income inequality and states that "despite high income inequality, Chile from 1960 to 2005 did better than most other developing countries at meeting the basic needs of the least advantaged sectors

[261] The data presented in this table is derived from World Development Indicators, World DataBank.
[262] Figures derived from McGuire, 316.

of the population."[263] It can be seen in the three figures above that while GDP per capita significantly plummeted in 1975, IMR was amidst its sharpest decline. Additionally, income inequality (although there is a lack of data from 1975) seen an overall rise from 1970 to 1980.

Under Pinochet, Chile focused on literacy and education enrollment, potable water, improved sanitation methods, and family planning especially the formation of the APROFA that reduced abortion rates and decreased fertility rates since 1962. "If there is a lesson to be learned from the military government's health care policies, it is not to privatize health insurance, but rather to improve the quality and accessibility of publicly funded primary care."[264] The evidence strongly suggests that increased education (particularly among women) in spite of low GDP and high income inequality can improve the health status of a country. This, of course, is not to discredit or eliminate the implementation of social service programs.

Figure 4-7: Chile: Percentage of population completed primary and secondary (age 15+)[265]



[263] McGuire, 99.
[264] McGuire, 101-103; 110.
[265] The data presented in this table is derived from Education Statistics, World DataBank.

McGuire calls the counterintuitive juxtaposition of military dictatorship and improved health as the "Pinochet Paradox," but the situation is not unlike that of Nicaragua. Like Nicaragua, Chile found that such factors as discussed above directly influence IMR. Particularly influential is the shift of focus from hospitals to community centers, as seen during Allende's rule, which decreased IMR from 82% to 66%.[266] Although this met with antagonism from white-collar workers and private physicians that eventually contributed to his overthrow, it set the tone for the continuance of health programs and initiatives throughout the military regime.

When determining the coup's influence on healthcare, it is important to note that Chile already maintained a progressive healthcare system prior to the revolution and coup, and that the population had already recognized their right to proper health.[267] Additionally, McGuire argues that authoritarian states like Pinochet's Chile tend to adopt a paternalistic quality that consequently improves healthcare by prioritizing the needs of mothers and children.[268] The health situation seemed not to have been significantly affected by the coup; however, the coup did indeed halt some of the APROFA's efforts and led to the disappearance and imprisonment of physicians and faculty members of medical schools. Despite these tragic setbacks, fertility and maternal mortality continued to decline and the employment of nurses, midwives, and nutritionists increased.[269] As with Nicaragua, the juxtaposition between a repressive regime with an accompanying coup and the continued improvement of health status is indeed counterintuitive.

[266] McGuire, 108.
[267] Reichard, 82-83; McGuire, 115.
[268] McGuire, 115.
[269] McGuire, 102; 108.

Timeline

Similar to the Nicaraguan timeline, Chile's timeline begins with its independence in 1818 and ends in 2000. Again, it will incorporate health-related and sociopolitical occurrences.[270]

Table 4-8: Chilean Political and Medical Timeline

Independence	
1818	February 12: Chile becomes independent with O'Higgins as supreme leader.
1823-30	O'Higgins forced to resign; civil war between liberal federalists and conservative centralists ends with conservative victory.
1835	February 20: Concepcion is destroyed by an earthquake.
1839	January 20: Confederation of Peru and Bolivia is defeated at the Battle of Yungay.
1851-61	President Manuel Montt liberalizes constitution and reduces privileges of landowners and church.
1879-84	Chile increases its territory by one third after it defeats Peru and Bolivia in War of the Pacific.
Late 19th	Pacification of Araucanians paves way for European immigration; large-scale mining of nitrate and copper begins.
1891	Civil war over constitutional dispute between president and congress ends in congressional victory, with president reduced to figurehead.
1904	October 20: The War of the Pacific ends with a treaty between Bolivia and Chile.
1907	3,000 miners and their families were massacred by national troops after demonstrating in Iquinque.
1925	New constitution increases presidential powers and separates church and state.
1927	General Carlos Ibanez del Campo seizes power and establishes dictatorship.
1938-46	Communists, Socialists and Radicals form Popular Front coalition and introduce economic policies based on US New Deal.
1939	January 24: Over 28,000 people perished in a 8.3 earthquake in Chillan, Chile.
1948-58	Communist Party banned.
1952	General Carlos Ibanez elected president with promise to strengthen law and order. The Chilean National Health Service (SNS) is established.
1964	Eduardo Frei Montalva, Christian Democrat, elected president and introduces cautious social reforms, but fails to curb inflation.
1967	October: President Johnson named Edward M. Korry to serve as the U.S. ambassador to Chile. Korry served until 1971 and was kept ignorant by the Nixon administration of plans for a coup.

[270] The listed events are compiled from several sources, most notably: BBC, "Chile Timeline," *bbc.co.uk*, August 14, 2012, www.bbc.co.uk/2/hi/americas/1222905.stm (accessed March 25, 2013); Roxborough, O'Brien, and Roddick, Stephen Reichard. The latter includes sources such as the Library of Congress, World History Archives, and the Chile Information Project. The BBC and some of the timeline site are quoted directly.

	Marxists take power and nationalize.
Pinochet Dictatorship	
1970	September 4: Salvador Allende becomes world's first democratically elected Marxist president and embarks on an extensive program of nationalization and radical social reform. September 11: Henry Kissinger discusses a "covert action program" to oust Allende. September 15: President Nixon authorizes a U.S.-backed coup in Chile (failed attempt). December 31: President Allende nationalizes the Chilean coal mines.
1971	December 1: Students begin a 2-day demonstration in Santiago against Allende's government. The government responds by banning student demonstrations and declared a state of emergency.
1973	July 13: A strike begins, involving more than a million workers demanding Allende's resignation; the strike lasts until the coup. September 11: General Augusto Pinochet ousts Allende in CIA-sponsored coup and proceeds to establish a brutal dictatorship. September 21: 300 students were killed at a technical university when they announced they would not surrender to the military (based on a report made declassified in 1999). October 17: Winston Cabello Bravo, Allende's chief economic planner where copper mines were to become nationalized, was fatally shot among other political prisoners.
1974	A military intelligence agency is created, known for committing numerous human rights abuses. June 27: Pinochet declares himself "Supreme Chief of the Nation." December 11: Pinochet takes the title of president of the republic.
1980	October 21: Pinochet issues a constitution that allows him to remain in power until 1988.
1981	May 1: Social Security becomes privatized.
1983	Pinochet reacts to protests with strong repression.
1985	February 5: the U.S. halts a loan to Chile in protest over human right abuses.
1988	Pinochet loses a referendum on whether he should remain in power.
1989-90	Christian Democrat Patricio Aylwin wins presidential election; General Pinochet steps down in 1990 as head of state but remains commander-in-chief of the army.
1990	Inflation hits 26%.
1994-95	Eduardo Frei succeeds Aylwin as president and begins to reduce the military's influence in government.
Pinochet's Aftermath	
1998	General Pinochet retires from the army and is made senator for life but is arrested in the UK at the request of Spain on murder charges. August 19: Chile's senate approved a bill to abolish the national holiday marking the 1973 coup against President Allende. A Unity day was proclaimed instead to begin in 1999.
2000	March: British Home Secretary Jack Straw decides that General Pinochet is not fit to be extradited. General Pinochet returns to Chile.

	Socialist Ricardo Lagos is elected president.
2000+	Chilean courts strip General Pinochet of his immunity from prosecution several times, but attempts to make him stand trial for alleged human rights offences fail, with judges usually citing concerns over the general's health.

Comparative Remarks

Nicaragua's "modernizing authoritarian regime" under Somoza drained state resources, which created a strain on the societal balance and slowly eroded both the legitimacy of state authority and the loyalty of the elite;[271] a neopatrimonial state arose. As Johnson indicated, a "conjunction" of occurrences such as inflation, nationalism, and increased corruption exacerbate the cause for revolution. Nicaragua's revolution in 1979 witnessed a significant change in its societal and class structure and can thus be considered a social revolution as defined by Sanderson's criteria, albeit loosely when aligned with the theories of Johnson and Brinton. "The originality of the Nicaraguan revolution was that, for the first time in Latin America, it joined rural guerrilla warfare, urban insurrection, general strikes, political work among peasants and workers, and the support of important sectors of the bourgeoisie, intellectuals, and the church."[272] According to Sederberg's criteria (see Tables 1-1 and 1-2), Nicaragua witnessed a significant reorganization of its class structure by means of coercion, and became a semidemocratic state (according to the classification of Mainwaring, Brinks, and Pérez-Liñán). Chile dramatically changed from a democratic polity to a bureaucratic-authoritarian regime, the opposite of Nicaragua, yet it also witnessed a conjunction of occurrences; however, its history was complicated with democratic electoral competition and a higher emphasis on economic dependency.[273] Moreover, Polity IV accounts for factionalism in Chile from 1945 until the

[271] Sloan, 117-118.
[272] Grynspan, 97.
[273] Sloan, 117-118.

revolution in 1973, despite its democratic polity, and factionalism in Nicaragua from 1979-1983 and 1985-2007.[274] Although this factionalism may dramatically impact the political circumstances in each country, giving rise to or as a result of a revolution, it is again apparent that the health status was largely unaffected; this is particularly true for Nicaragua.

The two main hypotheses that connect public health and political science, is the (1) "wealthier is healthier" approach that emphasizes "economic output and purchasing power," and the (2) "social service provision" that emphasizes government programs and basic healthcare. Each hypothesis has a different implication for policy-making, as the former would focus on economic growth acceleration while the latter would focus on "basic social services to the poor."[275] While purchasing power is not always feasible, providing social services is less expensive and realistic. McGuire argues that "public provision of basic social services does better than income-related indicators at explaining the pattern and pace of infant mortality decline," particularly for Chile.[276] This also applies quite well to Nicaragua due to the implementation of similar inexpensive programs.

Both Nicaragua and Chile shared the implementation of socialism (for which they lost U.S. support), a large disparity between the urban and rural populations, and the prioritization of healthcare.[277] They both demonstrated success in health through improved community participation, education, literacy, preventative health, political awareness among the population (which increased expectations about the right to health), and access to rural areas. For Chile in

[274] Marshall, Monty G., Keith Jaggers, and Ted Robert Gurr, "Polity IV Project: Political Regime Characteristics and Transitions, 1800-2011," *Polity IV*, March 14, 2013, http://www.systemicpeace.org/polity/polity4.htm (accessed March 2013).
[275] McGuire, 1-7. The former has three perspectives, (1) narrow, (2) intermediate, and (3) broad, which gradually increase the number of variables in addition to GDP that can determine what affects IMR.
[276] McGuire, 99.
[277] Horn, 24.

particular, "long-term democratic experience changes citizen expectations."[278] Also, in light of low (Nicaragua) or decreasing (Chile) GDP, both countries managed to decrease IMR and increase LE. Crude death rates provide additional insight into the effect that the revolution and coup had on health status. Similar in pattern to LE, the crude death rate did not increase rapidly but rather continued to decrease in spite of the event. It can be seen with Nicaragua that it did not continue at the same pace as prior to the revolution, but it still declined nevertheless.

[278] McGuire, 11.

Figure 4-8: Nicaragua: Life Expectancy[279]

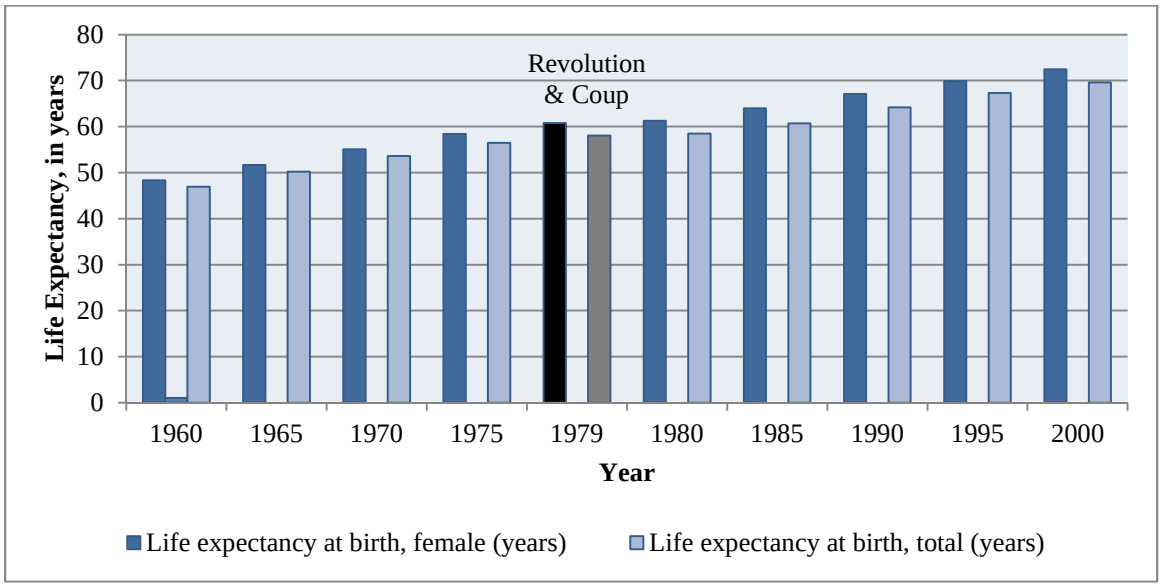


Figure 4-9: Chile: Life Expectancy[280]

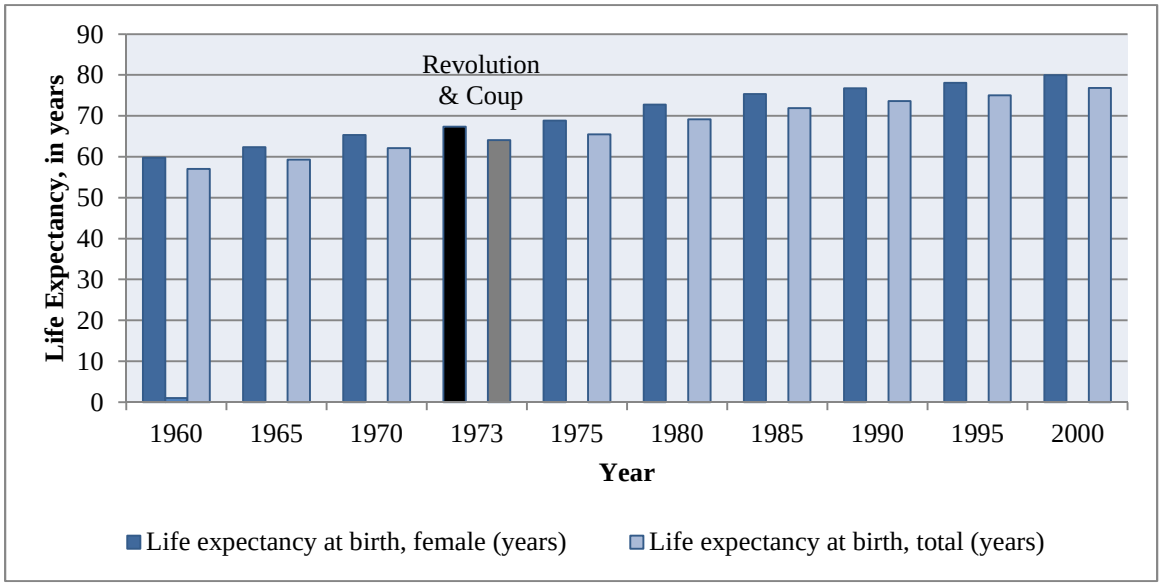


Figure 4-10: Nicaragua: Crude Death Rate, per 1,000[281]

[279] The data presented in this table is derived from Health Nutrition and Population Statistics, World DataBank.
[280] The data presented in this table is derived from Health Nutrition and Population Statistics, World DataBank.
[281] The data presented in this table is derived from Health Nutrition and Population Statistics, World DataBank.

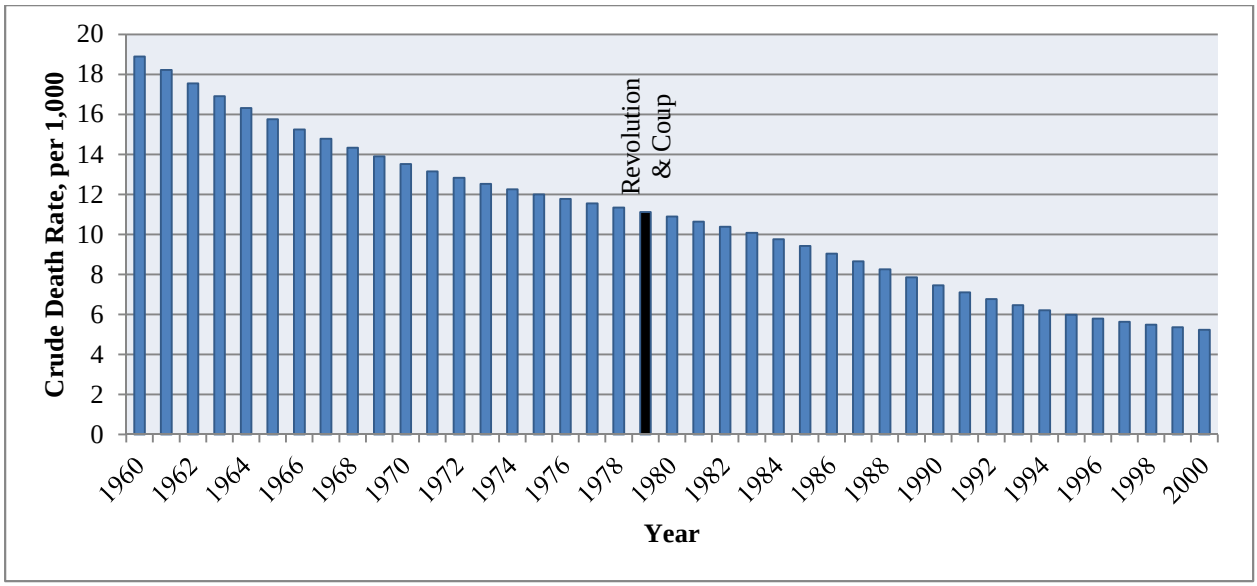
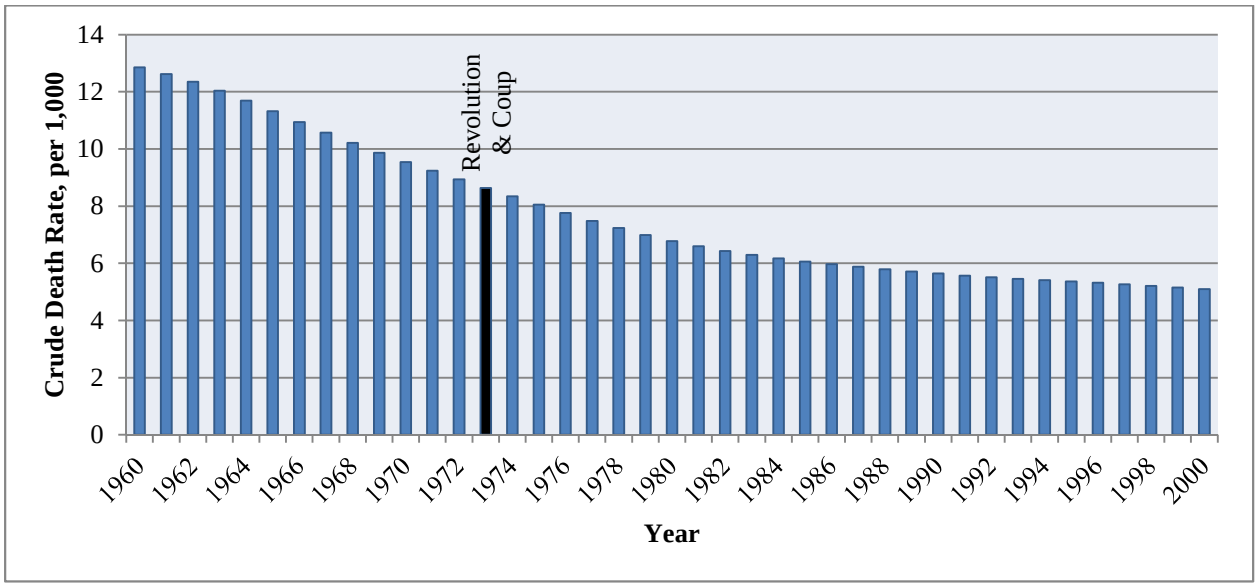


Figure 4-11: Chile: Crude Death Rate, per 1,000[282]



[282] The data presented in this table is derived from Health Nutrition and Population Statistics, World DataBank.

V. Conclusions

This study examined whether revolutions and/or coups d'état influence the adoption of healthcare policies and subsequently the health status of the country in which the revolution took place. It was hypothesized that a revolution, especially one that is accompanied by a coup d'état, would have a negative impact on healthcare. This was not the case in Nicaragua and Chile, albeit quite counterintuitively.

Six factors influence the effect on health, including (1) revolution type, (2) coup d'état type, (3) regime type and change, (4) prior existence and permanence of healthcare policies, (5) population expectation of their right to health, and (6) economic standing.

The classification of both revolution and coup d'état has an impact, albeit minimally, on healthcare. Although the revolutions of both Nicaragua and Chile can be deemed actual "revolutions" according to the more inclusive definitions, they yet cannot compare to the "grand" or "total" revolutions of centuries past; indeed, the level of violence and destruction is far less than that of the French or Chinese Revolutions. The accompanying coups d'état in Nicaragua and Chile can also be considered "coups," as the chief executive of the country was indeed ousted and replaced; however, both were in the category of an *autogolpe* (self-coup), a resignation of the leader, which is itself less violent than an assassination or total decimation of the leadership. An *autogolpe* can achieve what it needs politically without the excessive violence, and thus does not affect the health system beyond repair.

A more significant factor is regime change, since the government and public health are inherently interrelated. It is not necessarily the actual revolution or coup that affects the post-revolution healthcare infrastructure, but rather the new regime and the policies it sets to

establish.[283] Both Nicaragua and Chile have demonstrated that regime change, be it democratic to authoritarian or authoritarian to semi-democracy, *positively* affected health despite their governmental differences; the main difference between democracy or semi-democracy and traditional authoritarian or bureaucratic-authoritarian regimes concerning health should be insignificant.

Furthermore, Chile already upheld a lower infant mortality rate (IMR) with a steeper decline around the regime change (Chile had a 44% decline around the revolution compared to Nicaragua's 22%), lower crude death rate, higher GDP, higher life expectancy (LE), and a higher percentage of the population with primary and secondary education (see Figures listed in Section IV) than Nicaragua; these numbers even continued to exceed those of Nicaragua's in the post-revolution regime, despite its authoritative typology. Economic standing is also an insufficient explanation for such health successes. Although the "wealthier is healthier" hypothesis is certainly valid, it is not the case with Nicaragua and Chile. In both cases, IMR continued to decrease and LE continued to increase despite a revolution, coup, declining GDP, increasing income inequality, and a repressive authoritarian government.

The evidence presented in this study indicates: (1) the implementation of inexpensive government programs (the "social services provision" hypothesis as indicated by McGuire) that target at-risk populations, the poor, and the rural sector are most effective at improving the health status of a country during economic slumps; (2) the regime prior to the revolution can have a significant influence on healthcare, especially if the pre-revolution regime is a democracy with extant high expectations of the population as seen with Chile (this can extend to the post-revolution regime as well, as with Nicaragua, in which the population gradually attained these expectations); (3) the permanence of primary healthcare systems before the revolution can

[283] Jiménez and Romero, 462; Sloan, 117.

withstand economic fluctuation that is accompanied or even caused by a revolution and coup d'état. The revolution and coup, as seen with both Nicaragua and Chile, at most created temporary stagnation of health status for one to three years. It is the prioritization of cost-efficient and target-specific healthcare policies, in spite of or even *initiated* by revolution and regime change, which continued to improve the health status of each country. Instability and ideology in a regime alone do not create an adoption of healthcare policies; weak and unstable regimes cannot successfully centralize or integrate healthcare policies, particularly if they depend on foreign aid.

It must be noted that the additional factors of culture or religion not included in this study may influence health status. The Church's "political demands for human rights, democratization, and social justice," could have had a significant impact on public health, as well as its ban on disseminating the dangers of sexually transmitted diseases.[284] A possible positive influence (apart from culture or religion) could be the invention of the "safer" synthetic vaccine which can withstand warmer temperatures for longer hours and eliminate the risk of the vaccine's reversion to an infectious form; this invention is able to withstand the conditions of healthcare centers in remote rural areas, thus improving the health status for that population.[285]

Cuba would have been an insightful addition to this comparative study; Horn states that like Chile and Nicaragua, Cuba has made healthcare a priority and thus dramatically improved the health status of the country. It would be interesting to see how Cuba, a country that had minimal fluctuation in polity and also maintained a socialist state, achieved such high standards and results in the health arena.

[284] Grynspan, 96; Reichard, 94.
[285] BBC, "Synchrotron Yields 'Safer' Vaccine," *bbc.co.uk*, March 27, 2013, http://www.bbc.co.uk/news/health-21958361 (accessed March 27, 2013).

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