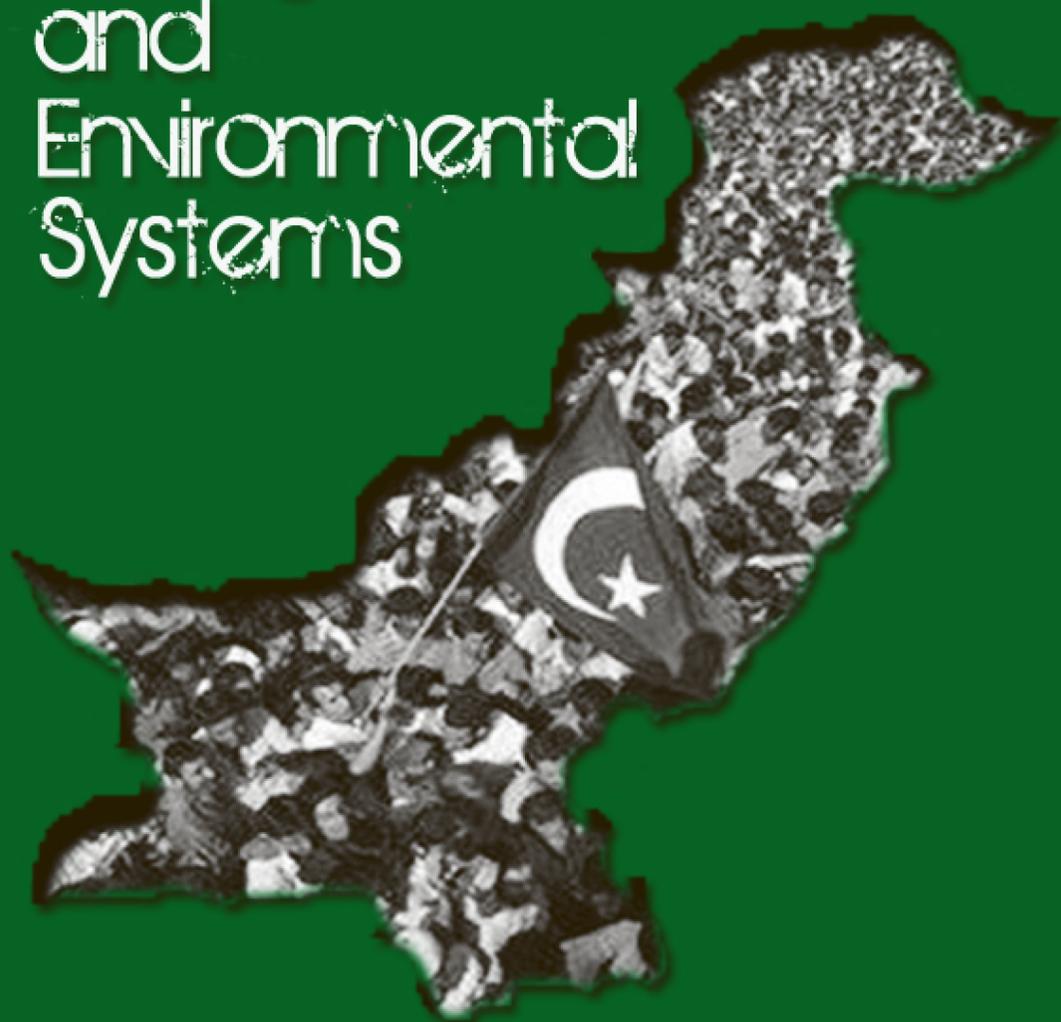


UNDERSTANDING PAKISTAN

Through Human
and
Environmental
Systems



Laurel J. Hummel

Richard L. Wolfel

Foreword by Pamela Constable

Understanding Pakistan Through Human and Environmental Systems

United States Military Academy
West Point, New York

Center for Strategic Leadership
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Foreword

Pamela Constable

Pakistan today is both a strategically important and deeply troubled country. It is a nuclear power, a constitutional democracy and a major partner with the United States in the war on terror, yet it is also a weak state with immature political institutions, deep ethnic and regional cleavages, and an over-weaning military/intelligence establishment that covertly supports radical Islamic militias to harass neighboring governments.

It is a country with enormous economic potential, yet its leaders have chronically neglected the education and social development of its 180 million people, and as a result the country now faces looming demographic disaster. Corruption, abuse, feudal land patterns and political patronage have substituted for leadership and left the fast-growing populace struggling, alienated from power and vulnerable to extreme alternatives.

Pakistan was founded six decades ago by Mohammed Ali Jinnah as a Muslim homeland with a moderate South Asian culture, but since then periods of war, dictatorship and Middle Eastern influence have dragged it inexorably toward Islamic radicalism. The society now seethes with anti-Western, sectarian and highly emotional religious sentiments that have helped empower dozens of militant Islamic groups.

The collection of essays in this book offer a dispassionate but bleak assessment of Pakistan's current situation and likely direction, and together they provide an important guide for anyone involved in trying to help Pakistan fight terrorism, become a stable democracy or develop its badly lagging economy. Filled with facts and figures, the chapters lack the human element of anecdotes and voices, but their systematic quantification of misused resources, social ills, environmental damage, violent incidents and other problems adds up to a compelling wake-up call that

should alarm and energize anyone concerned about the future of an impoverished and unstable nuclear power that will soon become the most populous Muslim nation in the world.

The book is divided into four groups of essays on the environment, demographics and health, political development and geopolitics, and economic development. There is much to be mined in each section, but the existential heart of the volume is Philip E. Jones's riveting paper, "Insurgency and Revolution: Pakistan's Crisis of State."

Jones, a scholar at Embry-Riddle University, argues persuasively that Pakistan faces a potential Islamic revolution after years of self-interested drawing-room politics by the Westernized elite that has ignored the Muslim poor and lower middle classes. He chronicles the rise of Islamic political parties, their growing bonds with the military establishment and urban underclass, and their empowerment by the anti-Soviet jihad in Afghanistan and the influx of Saudi money and religious doctrine. He documents the spread of Islamic terrorist attacks, the popularity of Osama bin Laden and the army's reluctance to fight their fellow Muslims and citizens.

"Unless there is a silent majority of moderates in Pakistan willing to fight back against the religious radicals," Jones warns, "Jinnah's vision for Pakistan is fading and not likely to be brought back." The modern secular state is a small, discredited island in a vast society of increasingly religious masses, he says, and the advent of sharia law is inevitable. Unless something changes drastically, Jones concludes, an Iran-style religious revolution could well happen in nuclear-armed Pakistan, and the West had better start planning how to do business with it.

Jones' message may be the most provocative, but many of the other essays in this collection are just as alarmist and blunt. Anne Goujon and Asif Wazir, in their chapter on "Human Capital and Population Development," present a stark choice. Either Pakistan dramatically slows its population growth rate and begins investing far more in public

education and literacy than defense, they argue, or it will soon be burdened with an enormous underclass of semi-urbanized young people who are essentially unemployable and vulnerable to the lure of both crime and Islamic militancy. This chapter, though dry and matter-of-fact, paints a truly frightening portrait of a society headed for a human train wreck.

Similarly, the chapter on “Health in Pakistan: A Security Imperative,” by Anwer Aqil and Rushna Ravji, makes clear how the vicious cycle of conservative rural traditions and low education levels condemn tens of millions of Pakistani women to lives of toil, debt, multiple childbirths, subservience to abusive rules and imprisonment in the past. Wife-beating is rampant, rape victims can be sent to prison, wives are pressured to produce as many children as possible and girls are sold to settle debts and conflicts. Until women gain more rights and education, the authors write, these patterns will continue trap society in chronic need and inequalities that are a “breeding ground for extremist ideologies” and “social chaos. Poverty and extremism perpetuate each other.”

This equation is especially relevant in Pakistan’s north-west tribal region, which is both a pocket of chronic neglect and a bastion of Taliban extremism, according to the essay on “Effective Sovereignty and Western Pakistan,” by Francis Galgano. The author argues that this “ungoverned space,” largely ignored by the state, has been fertile ground for the Taliban and al Qaeda to create a parallel government. It is no coincidence, he points out, that the area with the lowest education and employment rates in Pakistan is also the epicenter of religious militancy. Unless the government begins to exert real sovereignty in the tribal areas, he writes, it cannot hope to eliminate the terrorist threat.

Jon P. Dorschner and Thomas Sherlock explore the two sides of Pakistan’s education crisis. One is the proliferation of Islamic seminaries that often indoctrinate children with hateful and violent strains of Islam. The other is an abysmal public school system that fails to prepare students for

jobs and adulthood, leaves tens of millions unable to read and write, rewrites history and often inculcates pupils with “attitudes that support intolerance and sectarian violence.”

The authors explain the different schools of Sunni thought that co-exist in Pakistan, from mystical Sufism to punitive Saudi Wahhabism. This material is not new, but it provides an important context for the current battle among religious visions and doctrines that is tearing Pakistan apart. On a hopeful note, they suggest that some mainstream Sunni groups are becoming anti-Taliban while remaining anti-Western, an important if complicated distinction.

Clarence Bouchat, in his essay on “Pakistan’s Human and Economic Development,” asks hard and direct questions about why Pakistan has lagged behind its neighbors and many other developing countries that were once worse-off. His main argument is that the cultural tradition of high birth rates, combined with improved health care that lowers death rates, have put Pakistan in a paradoxical demographic bind that its recent years of economic growth cannot overcome.

Corruption, feudalism, tax evasion, a huge underground economy and the new scourge of terrorism have all robbed the nation of resources, Bouchat writes. The huge gap between expensive private schools and grossly inadequate public ones has created a class gulf that breeds resentment and despair. Years of low spending on schools and health care—in favor of large defense budgets—are taking a huge toll on the workforce. Traditional restrictions on girls and women have kept millions out of school and jobs. Pakistan’s GDP may be rising, he notes, but development is not just about gaining “better material possessions,” but about expanding people’s opportunities and horizons – and far too many Pakistanis have neither.

Other essays explore environmental issues that are critically important to Pakistan’s future survival, such as the role of water and river systems, the environment as a source of (in)security, and the impact of climate change and natural disasters. As the monsoon floods of 2010 and

the earthquake of 2005 made painfully clear, Pakistan is poorly prepared to deal with massive natural emergencies. Even more worrisome is the rapidly diminishing availability of water in a hot and dry country with a rapidly growing population, a heavy dependence on agriculture and an urban infrastructure that is already under terrible strain.

From every aspect – political, social, religious, economic and environmental – Pakistan is in a state of looming crisis. This volume of essays provides a sobering, persuasive and timely guide to the key issues that urgently need to be understood and addressed if this deeply impoverished, rapidly growing and strategically important Muslim nation is to survive as a modern state with a viable future.

(Pamela Constable, a veteran foreign correspondent and former South Asia Bureau Chief for The Washington Post, is the author of “Playing with Fire: Pakistan at War with Itself,” forthcoming from Random House in July, 2011.)

Pakistan, Regional Synthesis, and the Geographer's Art

Laurel J. Hummel

The Challenge of Pakistan

Since it was carved out of India in 1947, Pakistan has almost continually been “bedeviled by violence and venal politics” (Robinson 2008). Having had great promise as a modern, democratic state, Pakistan has been constantly strained by a series of “feudal dynastic politicians,” an unassailably powerful military afflicted with corruption, and religious extremists bent on establishing a caliphate. U.S. policy over the decades was inconsistent and habitually, if unwittingly, undermined Pakistan’s capacity for democracy and stability by supporting dictators and weak leaders at the expense of strengthening the institutions of civil society. Further, in an attempt to defeat first the Soviets, then the Taliban and al-Qaeda, the preponderance of U.S. financial support was funneled to Pakistan’s military; this may have wrought tactical successes, but further intensified a culture of arms without the braking mechanisms of professionalization or competent civil authority. Focusing on punitive sanctions in the wake of Pakistan’s nuclearization, the U.S. forsook mentorship for retribution, and lost an opportunity to help mold a progressive, stable state.

The basis for U.S.-Pakistan relations in the wake of 9/11 was also less than pristine. To wit, it was a quick cooperative deal brokered with then-dictator Pervez Musharraf and based largely on the Bush administration’s prevailing “you’re either with us or you’re against us” philosophy. There was a shotgun marriage between the two countries, without benefit of a meaningful discussion of mutual goals, shared ideologies, or common enemies – and without real effort by the Musharraf government to convince the Pakistani people of any potential benefits of a bilateral relationship.

In the aftermath of the killing of Osama bin Laden, who was hidden in plain sight at a compound on the outskirts of Islamabad in Abbottabad and half a mile from the country's main military academy, the relationship between Pakistan and the United States has never before been so complex, and the stakes never higher. From the U.S. perspective, the weak, marginally-to-non effective Pakistani government has a new credibility issue; how can it be that bin Laden was, for years, literally camped out in the backyard? On the Pakistani side, the American no-notification assault constituted an invasion of sovereign space and reflected a haughty and dismissive attitude: the all too familiar thousand-pound gorilla approach. Many Pakistanis are distressed that their government is publically hand-wringing over bin Laden's being found there, rather than protesting the U.S. raid that dispatched him. To the Pakistani people, this is a sell-out of the first order. On the heels of the Abbottabad operation, the U.S. launched a new round of drone strikes, killing civilians and further ratcheting up Pakistani tensions. Unfortunate and well publicized fatal incidents involving U.S.-based private contract operatives have not helped. Meanwhile, the Pakistani media has fueled public opinion with conspiracy theories of a trilateral U.S.-India-Israel plan for Pakistan's subjugation and nuclear disarmament.

The status of the U.S.-Pakistan relationship—“frenemies,” as dubbed in a recent cover article by *Time*—(Baker 2011, 37) is as critical as it is precarious. In the midst of Congressional discussion of various possible moves to distance the U.S. from Pakistan, it is critical to realize the three most important reasons why Pakistan matters to the U.S. right now. First, as the second most populous Muslim state and sixth most populous state in the world, Pakistan has great potential to become a leading Muslim moderate state if—and this is a big “if”—it can vastly improve the legitimacy and functioning of its government. The ongoing battle for Pakistan's soul between extremists and moderates will determine if positive changes will come as a result of rule of law, or if political turmoil and unrest will persist

due to actions by the “obscurantist right and...feudal-military forces” (Aziz 2010). Second, Pakistan is a linchpin in the continuing counter-terrorism war due to its shared border with Afghanistan and also its apparent safe harboring of militant and terrorist groups, notably Tehrik-i-Taliban Pakistan (TTP), Al Qaeda, and Lashkar-e-Taiba, who were responsible for the 2008 Mumbai attacks which killed 164. Third, the seemingly endless rivalry with India and ongoing tussle over Kashmir have resulted in Pakistan’s status as a nuclear-armed state, with reportedly the fastest growing nuclear arsenal in the world (Crowley 2011). Nuclear weapons in the hands of militants or terrorists and a resultant nuclear 9/11 scenario, however unlikely, would be globally catastrophic in psychological if not physical damage (Jagadish 2009).

In the wake of bin Laden’s demise, all aspects of the relationship between the U.S. and Pakistan are being recast, not just those that tie most directly to the war on terror as it is prosecuted today. Discussions are ongoing in Congress about whether to continue or freeze aid to President Asif Ali Zardari’s government, including education aid (Rogin 2011). As well, the firestorm surrounding the veracity of statements in Greg Mortenson’s best-selling *Three Cups of Tea* and questions about the management practices of his Central Asia Institute may be eventually settled, but not before various forms of education aid to non-governmental organizations are severely curtailed by those now skeptical. Whether U.S.-Pakistan relations worsen or improve in the short run, and regardless the seeming intractability of the Gordian knot, Pakistan is critical to U.S. interests and needs to be righted. It behooves the U.S. to create and execute smart policy that helps Pakistan to stabilize, democratize, and prosper. This will improve not just Pakistan’s prospects, but – at least – those of the wider region as well.

The Art and Science of Geography

This brings us to a vexing problem, one almost as disheartening as Pakistan's issues and the complexity of the current state of relations with the U.S.: that is, how little most Americans know about Pakistan. Indeed Americans' knowledge of global systems and events anywhere outside U.S. borders is infamously poor. There are a number of reasons this is so, not least of which is the abandonment of geography from the U.S. secondary public school curriculum. While integrated geography was once commonly taught in most U.S. states, the curriculum was long ago split into separate social science and earth science courses, the latter most often as an elective choice. Even in the few cases where American students take courses covering Earth's human systems *and* natural systems, little cross-disciplinary effort is made to understand how people and their environment interface, normally because social science teachers have no background, let alone expertise, in the natural sciences, and vice versa. Thus, the critical relationship of earth to people and also people to earth—that which describes the complexity of the real world—is all but ignored. The integrative nature of geography, which means, literally, “Earth writing,” is uniquely suited to deliver the necessary synergistic and comprehensive view of a place. But sadly, the national movement away from the geographic discipline contributes to what Daniel Welch (2005) has depicted as Americans' “fog of distortion, ignorance, smugness, [and] disinterest.” Though Welch's thoughts were specific to Americans' views (or lack thereof) about Africa, I posit that most Americans are either unconcerned about the preponderance of the world outside our borders, or substitute whatever we “know” from the U.S. media for self-directed investigation and informed analysis. If these characterizations make us wince, it is largely because they fit too well.

For the three reasons I just touched on and others which will be explained in the later chapters, Pakistan is a worthy place to start “knowing more” about the world. To that end we offer *Understanding Pakistan Through Human*

and Environmental Systems as fruit of the geographer's art. Geographers are interested in many things at once: indeed we look at the physical environment—climates and rain data, landforms and stream channels, natural hazards and vegetation patterns—as well as the processes, patterns, and functions of human settlement on that environment. Geographers study all aspects of the world. We seek to know both the physical and human characteristics of places, and how those characteristics intertwine and interact to make a particular place the way it is, and unique from all other places. Place has been widely accepted as an inalienable aspect of all human cultural praxis (Geertz 1996). As Doreen Massey (1994) argues, place matters, and the nature of a place is based on its internal features (both natural and human-based) as well as a result of its linkages with other places. As the geographical discipline is the ultimate place-based form of study, geography matters too.

One classic form of place-based inquiry is called regional geography. Simply put, in order to somewhat ease the complexity of global space, regional geographers define some portion of the world to be a region, put some sort of mental borders around that portion, and seek to understand all they can about what's inside those borders. Political states (aka "countries") present an easily accepted region because they are already internationally recognized spatial packages. Other regions have borders that are less formally established (for example, the American Midwest, or urban "gang space"), or their very existence contentious (e.g. Kurdistan, Palestine). Essentially, in its totality this book represents a regional geography of Pakistan. A perfect book about the region we call "Pakistan" would leave the reader with perfect clarity about Pakistan and Pakistanis. However, since authors and readers are fallible and biased, "knowledge" is arguable, and truth is a relative construction, crafting the perfect book—to be sure—is an impossible task. That doesn't make seeking understanding in the form of book writing and book reading fruitless, however, as even an incomplete and imperfect concept of a place is infinitely better than a *tabula rasa*.

In this spirit, we offer a digestibly-sized tome, divided by themes. Hopefully you have already read journalist Pamela Constable's foreword. The introductory section also features an illuminating overview of the major factors that shape modern Pakistan, along with a quick reference section called Fast Facts. The natural environment is emphasized in the next part, in chapters that deal with Pakistan's physical geography, especially water; climate change, resources, and environmental security; and natural hazards and Pakistan's vulnerability to disasters. A fairly robust treatment of human systems is divided among the next three parts (Parts III through V), loosely following the themes of demographics and health, political development and geopolitics, and economic development. Following the main chapters by academics and policymakers, travel writer Ethan Casey reminds us with anecdotes and musings that people are truly the essence of place.

If this is a geography book, though, why do none of the chapters include the word "geography" in the title? Mostly this is because each chapter delves into a particular process, system, or characteristic as it pertains to the "region" of Pakistan. This approach is known as systematic geography, as the major objective is to understand how a system works within a space (in this case, in Pakistan), as opposed to focusing on all the systems and their linkages within a defined space. In other words, each chapter brings different kinds of information that will help you begin to understand Pakistan as a complex organism. Along the way, you can start to make reinforcing connections that will bring deeper and more nuanced understanding of the region. Reading the Natel-Didier chapter on physical geography, for example, is informative in its own right, but is also helpful support for getting more out of the Gaulin-Rios-Krakowka chapter on environmental security. Our aim, then, is to use a systematic approach to separate Pakistan into more discrete processes and systems, building a holistic understanding with each successive chapter as you begin to see how each new topic influences and impacts the others. As one starts to mentally lay each characteris-

tic atop the others, the power of regional geography comes into focus. By forging connections between seemingly disparate kinds of information, we can create a means to better understand the complex totality of a place.

Some of the book's authors are not professional geographers and may not have considered their research as being "geographical." In fact they may have been somewhat initially surprised to be contributing to a geography book. This highlights the glory of the discipline. Any study with a basis in place is inherently geographical. Thus, the chapter about health and human security written by Anwer Aqil and Rushna Ravji is rightly considered as part of the fields of public health and epidemiology, but just as rightly could be viewed as geographical literature. In a complex, volatile, uncertain, and ambiguous world, good thinking and writing ought to be distributed and read by as wide an audience and in as many intellectual contexts as possible. Affixing constricting labels to solid scholarship and insightful analysis greatly dampens the likelihood of the work to inform policy and decision making, and weakens all disciplines within the academy.

A final word about geography is in order, since it directly impacts whether Americans will improve their understanding of disparate lands and cultures, and remain competitive in a rapidly globalizing world. When Congress authorized the Elementary and Secondary Education Act (ESEA) of 2001, commonly known as "No Child Left Behind," geography was identified as one of ten "core academic subjects" for which funding allocations and implementing programs were proposed at the K-12 level. However, when authorizations and appropriations were committed to support the legislation, geography was not included consistent with the other core subjects. In essence, geography was "left behind." The Association of American Geographers (AAG), North America's largest society of geography professionals and educators, has developed a resolution urging 1) geography's inclusion as a STEM (science, technology, engineering, mathematics)

discipline in federal education reform proposals; 2) Congress to properly fund geography education as part of the new ESEA; and 3) Congress to enhance geography teacher training with the Teaching Geography is Fundamental Act. The readers of this book are a self-selected group who have demonstrated concern for informed U.S. foreign policy and a desire to understand Pakistan as a linchpin to global stability. We hope the insight and inspiration gained from the readings might inspire you to see how geography provides a useful framework for understanding complex regions like Pakistan, and that you help support the AAG's resolution toward increased geographical awareness and appreciation for America's future citizens.

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Fast Facts about Pakistan

Physical Geography	
Total Area	796,095 sq km (CIA world Factbook)
Land boundaries	6,774 km (CIA world Factbook)
Border countries/Border Length	Afghanistan (2,430 km); China (523 km); India (2,912 km); Iran (909 km)
Lowest Point	Indian Ocean (0 meters) (CIA world Factbook)
Highest Point	K2 (8,611 meters) (CIA world Factbook)
Arable Land	24.44% (CIA world Factbook)
Irrigated Land	182,300 sq km (CIA world Factbook)
Demographic	
Population (mid 2010)	184,800,000 (PRB)
Population Density	166.3 pp/sq km (Goodson)
Sex Ratio	106.2 men/100 women (UN)
Crude Birth Rate	30 per 1000 of population (PRB)
Urban Crude Birth Rate	23.4 (PDS, 2007; cited by Zaidi)
Rural Crude Birth Rate	26.7 (PDS, 2007; cited by Zaidi)
Percent using contraception (1990)	11% (Blood, 1994; cited by Goodson)
Crude Death Rate	7 per 1000 of population (PRB)
Rate of Natural Increase	2.3% (PRB) 1.6% (CIA World Factbook cited by Goodson)
Net Number of Migrants	-435,000 (US Census)
Net Migration Rate	-2 per 1000 of population (PRB)
Infant Mortality Rate	64 (PRB)
Urban Infant Mortality Rate	66.5 (PDS, 2007; cited by Zaidi)
Rural Infant Mortality Rate	79.4 (PDS, 2007; cited by Zaidi) 78 (WHO, cited by Aqil and Ravji)
Under 5 Mortality Rate	87 (US Census)
Maternal Mortality Rate	267/100,000 (WHO, cited by Aqil and Ravji)

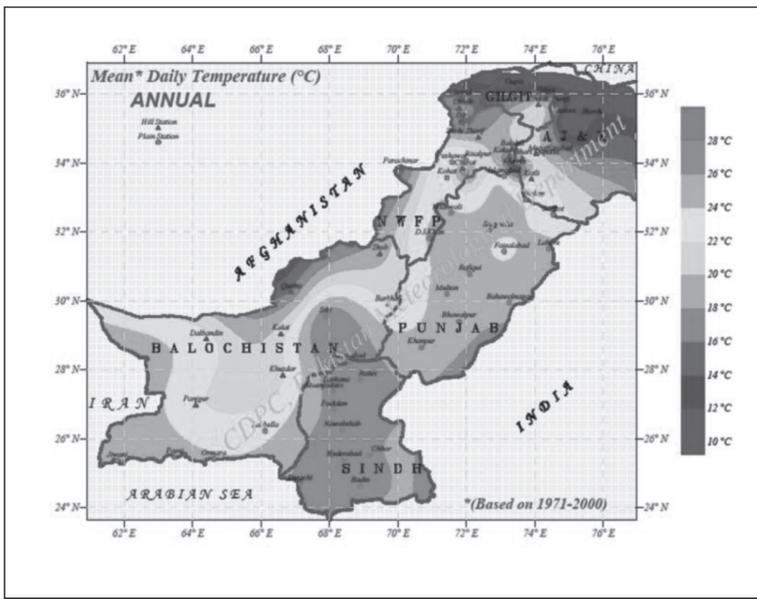
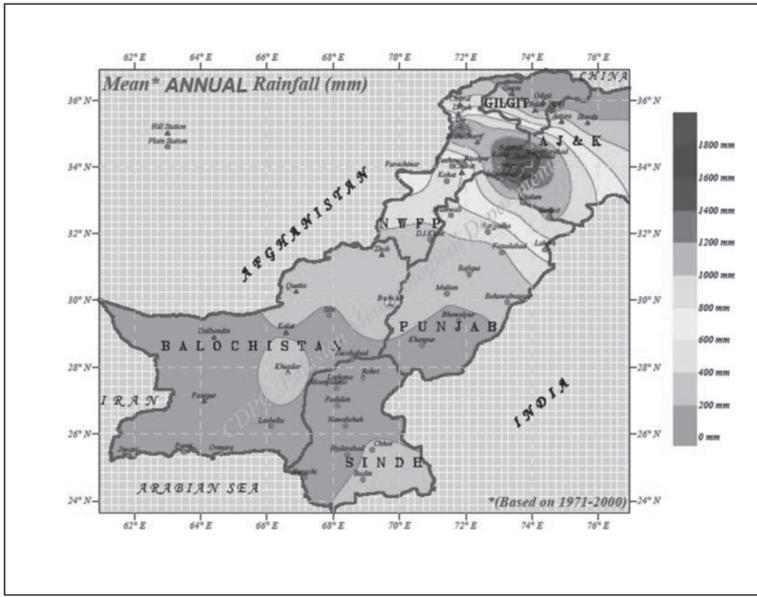
Chronic Malnutrition (low height for age)	40% (WHO, cited by Aqil and Ravji)
Immunization rate	68% (Aqil and Ravji)
Total Fertility Rate	4.0 (PRB) 3.28 (CIA World Fact book, cited by Bouchat)
Median Age	21.2 (US Census)
Percent of population under 15	38 (PRB)
Percent of population under 20	48 (Goodson)
Percent of population under 30	67 (Goodson)
Percent of population over 65	4 (PRB)
Life Expectancy at Birth	66 (US Census)
Male Life Expectancy	65.9 (UN, 2010, cited by Bouchat)
Female Life Expectancy	66.5 (UN, 2010, cited by Bouchat)
Urbanization (2008)	36% (US Census)
Rate of Urbanization	3% (US Census)
Development	
GDP Per Capita PPP (Purchasing Power Parity)	\$2400 (CIA World Factbook)
GDP Per Capita	\$981 (World Bank, 2010, cited by Bouchat)
GNI Per Capita	\$950 (World Bank, 2010, cited by Bouchat)
GDP Growth Rate	2.7% (CIA World Factbook)
GDP by sector	
Agriculture	21.8% (CIA World Factbook)
Industry	23.6% (CIA World Factbook)
Services	54.6% (CIA World Factbook)
Female Earned Income	\$760.00 (UN, 2009, cited by Bouchat)
Male Earned Income	\$4135.00 (UN, 2009, cited by Bouchat)
Labor Force	55,770,000 (CIA World Factbook)
Labor Force by Occupation (2005)	
Agriculture	43% (CIA World Factbook)
Industry	20.3% (CIA World Factbook)
Service	36.6% (CIA World Factbook)

Education	
Literacy Rate	49.9% (CIA World Factbook) 55% (UNESCO, cited by Goujon and Wazir) 54.2% (UN, 2010, cited by Bouchat)
Female Literacy Rate	36% (CIA World Factbook) 43% (UNESCO, cited by Goujon and Wazir)
Education Expenditures	2.9% of 2008 GDP
Gross School Enrollment rate	39.3% (UN, 2010, cited by Bouchat)
Male Enrollment Rate	44% (Blood, 1994, cited by Bouchat)
Female Enrollment Rate	34% (Blood, 1994, cited by Bouchat)
Percent of children enrolled in madrassas	1% (Fair, 2006, cited by Dorschner and Sherlock)
Percent enrolled in public school	73% (Fair, 2008, cited by Dorschner and Sherlock)
Percent enrolled in nonreligious private school	26% (Fair, 2008, cited by Dorschner and Sherlock)
Percent aged 5-9 enrolled in primary school	59%-72% (Fair, 2008, cited by Dorschner and Sherlock)
Percent completing primary school (Male)	46% (2005) (DHS, cited by Goujon and Wazir)
Percent aged 10-14 enrolled in secondary school	28% (Fair, 2008, cited by Dorschner and Sherlock)
Percent completing a university degree (Male)	9% (2005) (DHS, cited by Goujon and Wazir)
Percent never attended school (15-44)	44% (DHS, cited by Goujon and Wazir)
Poverty	
Poverty Rate	32.6% (World Bank) 44% (Goodson)
Unemployment Rate	5.1% (World Bank) 5.3% (UN) 15% (CIA World Factbook)
Work Characteristics	
Percent of Males working outside the home	82% (Price, et al. cited in Bouchat)
Percent of Females working outside the home	20% (Price, et al. cited in Bouchat)

Percent of Urban population with access to improved Sanitation Facilities	72% (World Bank)
Average Monthly Household Income, 2007-08	PKR 14456 (Federal Bureau of Statistics, Pakistan)
Average Monthly Household Income, 2007-08, Urban	PKR17970 (Federal Bureau of Statistics, Pakistan)
Average Monthly Household Income, 2007-08, Rural	PKR12626 (Federal Bureau of Statistics, Pakistan)
Exchange Rate:	85.27 PKR per US Dollar (CIA World Factbook)
Main Agricultural Products:	Cotton, wheat, rice, sugarcane, fruits, vegetables, milk, beef, mutton, eggs (CIA World Factbook)
Main Industrial products:	Textiles, food processing, pharmaceuticals, construction materials, paper products, fertilizer, shrimp (CIA World Factbook)
Number of tourists (2009)	855,000 (Government of Pakistan, cited by Fuhriman)
Amount spent by tourists (2009)	\$272 million (Government of Pakistan, cited by Fuhriman)
Export Partners (2009) (CIA World Factbook)	
US	15.87%
UAE	12.35%
Afghanistan	8.48%
UK	4.7%
China	4.44%
Import Partners (2009) (CIA World Factbook)	
China	15.35%
Saudi Arabia	10.54%
UAE	9.8%
US	4.81%
Kuwait	4.73%
Malaysia	4.43%
India	4.02%

Infrastructure	
Land Line Phones (2009)	4,058,000 (CIA World Factbook)
Mobile Phones (2009)	103,000,000 (CIA World Factbook) 9th most in world
Mobile/fixed phone subscriptions	56% of population (UN, 2010, cited by Bouchat)
Internet Usage	10.5% (2008) (UN) 11.1% (UN, 2010, cited by Bouchat)
Media	Government regulated. 1 state TV broadcaster. Some private and foreign TV. (CIA World Factbook)
Energy Consumption per capita	564 kilowatt hours (UN 2008, cited by Bouchat)
Cultural	
Number of Muslims	178 million (Mapping the Global Muslim Population 2009, cited by Goodson)
Percent of the Population that is Muslim	97% (Goodson)
Percent of the Muslim population that is Sunni Muslim	90% (Goodson)
Number of Christians	2.5 million (Goodson)
Political	
Corruption Index	2.3 (Transparency International, cited by Galgano)
Political Rights Index	4 (Transparency International, cited by Bouchat)
Civil Rights Index	5 (Transparency International, cited by Bouchat)
Ethnicity	
Punjabi	44.68% (CIA world Factbook)
Pashtun	15.42% (CIA world Factbook)
Sindhi	14.1% (CIA world Factbook)
Sariaki	8.38% (CIA world Factbook)
Muhajirs	7.57% (CIA world Factbook)
Balochi	3.57% (CIA world Factbook)
Others	6.28% (CIA world Factbook)

Military	
Manpower fit for Military Service (CIA World Factbook)	Males (16-49) 35,774,936 Females (16-49) 34,572,451
Military Expenditures:	3% of GDP (2007) (CIA World Factbook) 16% of the Pakistani budget (Pakistan Federal Budget, cited by Goodson)
Military Personnel in Uniform (active Duty)	617,000 (The Military Balance, 2010 cited by Goodson)
Military Personnel in Reserves	513,000 (The Military Balance, 2010, cited by Goodson)



Maps of Pakistan showing mean annual precipitation (top) and mean annual temperature (bottom).

Source: Modified from the Pakistan Meteorological Department, pmd@pakmet.com.pk

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The Five Determinants of Pakistan

Larry P. Goodson

Pakistan has become, imperceptibly for most Americans, one of the most important countries in the world. Consider the following important descriptors of Pakistan as of 2010:

- Despite an on again-off again historical relationship, it is a strategic partner of the United States, as the 14th and most recent country to be declared a “major non-NATO ally”;
- Since independence in 1947, Pakistan has had more years of military rule (35 years) than civilian leadership (33 years and counting, but under five constitutions and numerous political systems);
- It is now the sixth-largest country in the world in population (185 million), and it has one of the youngest populations in the world (in 2002, 41 percent of the population was under the age of 15, as compared to 29 percent of the world population);
- A country whose economy has been described as semi-feudal, Pakistan’s financial crisis in 2008 led it to a \$7.6 billion International Monetary Fund (IMF) bailout.
- Perennially in crisis, Pakistan was ranked 10th on the Failed State Index (*Foreign Policy* 2010);
- Pakistan is one of only nine states that are known to have nuclear weapons, and it is locked in a conflict spiral with another nuclear-weapons state and U.S. friend – India;
- Since the Afghan War of the 1980s, Pakistan has become an important epicenter of Islamist extremism, and now has some of the world’s most dangerous Islamist terrorists.

These conflicting characteristics reflect a confluence of factors that leave the United States and Pakistan uncertain about each other, with some elements pulling the two countries together even as others push them apart. For example, some 75 percent of supplies for the U.S.-led International Security Assistance Force (ISAF) in Afghanistan cross Pakistan, which is the only neighbor to landlocked Afghanistan that possesses both a major proximate seaport and is favorably disposed toward the United States. Afghan Taliban also operate from safe havens in Pakistan, from which they cross into Afghanistan to attack ISAF and Afghan forces. Elements in Pakistan help support the United States, and other elements in Pakistan help attack the United States.

Thus, Pakistan both frustrates and puzzles Americans. Understanding Pakistan is hard for those people who live far from the Asian Subcontinent and have no colonial or other relevant history there.

Five Factors for Understanding Pakistan

Five major factors shape my understanding of Pakistan, each of which this chapter will present separately, although they are interconnected in complex ways. These factors are:

1. Ethnolinguistic Regionalism – A spatial pattern of population distribution that weakens national identity and governance;
2. Demographic and Socioeconomic Contours – Enormous macroeconomic and microeconomic difficulties that are exacerbated by the rapid pace of population growth in the country, which has produced one of the youngest population profiles in the world;
3. Political Immaturity – Very poor political institutionalization, whereby weak civilian politicians struggle to govern a country where real political

power has often been held by the Army, producing pendulum swings of political power from civilian to military control of the government (Goodson 2008);

4. Ideological Uncertainty – A deeply conflicted attitude about the role of Islam, in a country founded as an Islamic homeland that has undergone nearly constant debate about what Islam should mean in such a country, resulting in an increasingly politicized and militarized role for Islam within Pakistan;
5. Geopolitical Struggle – Both actively participates in and provides an important playing field for a 21st century “Great Game” among great and rising powers (United States, China, Russia, India), other regional states (Iran, Afghanistan), and subnational proxies (Afghan Taliban, Pakistani Taliban, Kashmiri groups).

All countries are shaped, of course, by their fundamental geography, whether it is their position on the globe, natural resources, physical contours, human interactions with the environment, or a combination of all or some of these features. Pakistan is no different—indeed, it is an especially important example of a country that has been and continues to be shaped profoundly by its geography. The land that we now call Pakistan sits astride one of the world’s great river systems, on which one of humankind’s earliest known agricultural civilizations—the Indus Valley Civilization (IVC)—was established. The rivers that feed the Indus have their headwaters in some of the highest mountains in the world, either from the Himalayan chain or from its northern and western spurs the Karakoram, Hindu Raj, and Hindu Kush mountains. Pakistan’s northern Karakoram Range has more peaks taller than five miles (approximately eight kilometers) than any mountain range in the world. In addition to some of the world’s highest mountains and one of the world’s greatest rivers, Pakistan also has a portion of a great swath of arid land that stretch-

es from deep in Inner Asia to where Morocco and Western Sahara meet the Atlantic Ocean. Nearly half of Pakistan's territory is in its westernmost province, Balochistan, which also has the sparsest population due to its desert climate. Underneath the dry and rocky soil, Balochistan also contains great deposits of natural gas, making Pakistan the 23rd largest producer of natural gas in the world. There is much more to be said about Pakistan's geography and its importance, and the other chapters of this book will do so. The remaining discussion of the five factors covered in this chapter, however, will also illustrate some fundamental geographic shapers of Pakistan.

Ethnolinguistic Regionalism

Pakistan was created out of the Partition on the Indian Subcontinent in 1947, with the majority Muslim areas of eastern Bengal and the Indus River Valley and points north and west of it being combined into the "land of the pure," or Pakistan (Ali 1933, 1).¹ Partition was famously messy, as millions of people (Muslims, Hindus, Sikhs, and others) were caught on the wrong side of the new borders of states that were founded, at least in part, on religious identity. Roughly 500,000 people died in the upheaval subsequently produced by communal violence that turned into massacres, flight, and the disease that inevitably followed (Collins and Lapierre 1997; Metcalf and Metcalf 2006; Khan 2007). Thus, Pakistan was not only born in fire, as many states are, but from the outset it was a profoundly artificial state,

1 Ali wrote, "At this solemn hour in the history of India, when British and Indian statesmen are laying the foundations of a Federal Constitution for that land, we address this appeal to you, in the name of our common heritage, on behalf of our *thirty million Muslim* brethren who live in **PAKSTAN** - by which we mean the five Northern units of India, Viz: Punjab, North-West Frontier Province (Afghan Province), Kashmir, Sind and Baluchistan." He later added the "i" in the middle to ease pronunciation and make the name more similar to Afghanistan. He also claimed in a later book that the name was both Persian and Urdu in origin.

with two distinct wings (East and West Pakistan) over 1000 miles (approximately 1609 kilometers) apart, separated by a hostile neighbor (India). Pakistan not only lacked territorial contiguity, but also had huge ethnolinguistic-regional divisions, with East Pakistan based on an overwhelmingly Bengali population while West Pakistan had a majority Punjabi population along with important Sindhi, Pashtun, Muhajir, and other minorities. After the independence of Bangladesh in 1971, only West Pakistan was left, and since then that country has also struggled with ethnolinguistic and regional identity issues. To accommodate the ethnolinguistic composition of the country and in similarity to next-door neighbor India, Pakistan is one of the world's 25 federal states, whereby political power is shared by the national, provincial, and lower governments (Baxter 1974).

Today's Pakistan is a federal republic divided into four provinces: Balochistan, Khyber-Pakhtunkhwa (KPK, until 2010 known as the North-West Frontier Province, or NWFP), Punjab, and Sindh. The country also has four areas, or territories: an administrative capital territory, where Islamabad is located; the Federally Administered Tribal Agencies (FATA); and two northern mountainous parts of Pakistan, Gilgit-Baltistan (GB, until 2009 only a territory known as the Northern Areas), and Azad Kashmir. The areas all have had a special status and been ruled directly by the national government, or by the national government in conjunction with a provincial government, or have a quasi-independent arrangement. The 2009 Gilgit-Baltistan Empowerment and Self-Governance Order gave GB autonomy with a chief minister and governor, but its province-like status seems to fall short of being a fully constitutional province (Khan 2010).

Each province is centered on a major ethnolinguistic group that is primarily located in that province. This may well be the single most salient fact about Pakistan's ongoing penchant for domestic instability—that it began and has largely remained a country in name only, with its fundamental configuration and identity centering on the

regional, or provincial, with ethnolinguistic or tribal identity trumping any kind of national identity that may have developed.

The largest province in population by far is the Punjab, which has been the dominant province of Pakistan since the independence of Bangladesh. Punjab has a population of 93 million, giving it over half of the Pakistani population (Punjab Board of Investment and Trade 2010). About 75 percent of the Punjab is inhabited by Punjabis (71 million), and following Partition a significant portion of the Pakistani elite was Punjabi, a factor that contributed greatly to the civil war and subsequent independence of East Pakistan/Bangladesh. Punjab literally means, in Persian/Sanskrit, “land of the five rivers” (panj=five, ab=river), which refers to the spread of five major rivers as part of the upstream Indus River valley system. These rivers—the Beas (in the Indian Punjab), Chenab, Jhelum, Ravi, and Sutlej—spread like the fingers of a hand to create Pakistan’s largest watershed and richest agricultural area. Archaeological sites such as Harappa, Mohen-jodaro, and Taxila all show that the ancient Indus Valley Civilization (IVC, ca. 3000-1900 BCE) sustained a rich farming culture at the dawn of recorded human history, and this region has done so ever since (Kenoyer 1998). The Punjab is Pakistan’s breadbasket, producing 68 percent of Pakistan’s annual grain (Government of Punjab 2010), plus 9.8 million bales of cotton in 2009, making it the fourth-largest producer in the world. Agriculture, which is centered on the Punjab, produces 23 percent of Pakistan’s GDP and provides 44 percent of its jobs. The Punjab also houses much of Pakistan’s industry, as the country has industrialized rapidly since the mid-1980s, and many of its important landed families have made at least a partial transition from rural landlord to urban industrialist during the last half-century. Key industries include textile and food processing manufacturers, logical for a region that has long been the centerpiece of one of the world’s greatest agrarian zones. The Punjab is responsible for more than two-thirds of Pakistan’s gross domestic product (GDP) (Burki 1999, 267).

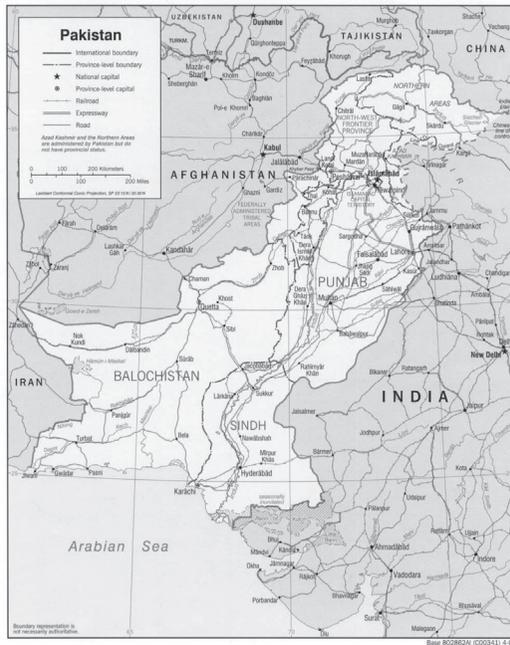


Figure 1. Pakistan’s Political Divisions.
 Source: Central Intelligence Agency 2002

The southern province of Sindh (this name means “Indus” in Sindhi) is the second-largest, with a population of about 36-38 million (*World Gazetteer* 2010). Karachi, the nation’s former capital and largest city in the world (15.5 million; *City Mayors Statistics* 2010), has been a magnet for much regional immigration, including of Urdu-speaking Muslims (known as Muhajirs, or immigrants) from Indian territory during Partition in 1947, and of Afghans during the war and refugee crisis of the 1980s. Thus, Sindh has the most mixed population of any province in the country, but even so, Sindhi-speakers comprise 60 percent of the households and 92 percent of the rural population (*Pakistan Statistical Yearbook* 2009, 333). The huge melting pot of Karachi has more than one million Afghans and large communities of other refugees or labor migrants from South Asia, the Persian Gulf, and further afield. Its most important and

largest immigrant population is the nine million Muhajirs, which make up 21 percent of the Sindh's overall population and 49 percent of Karachi's population (Pakistan Census 1998; Findpk.com 2010).

The rest of the Sindh is a less heavily-populated mixture of the alluvial plains of the Punjab, the marshy delta common to the mouths of great river systems (the Rann of Kutch), and significant deserts on both the Indian border to the east (Thar Desert) and the Balochistan border to the west (Balochistan Desert). Much of Pakistan is subject to the monsoonal weather pattern so typical of much of South Asia. The Sindh is especially prone to the annual June to September buffetings and drenchings by winds and rains sweeping in from the Arabian Sea to the southwest. These monsoons typically douse India in most years, while much of Pakistan is primarily affected by drought, at least in recent decades. As the devastating 2010 floods demonstrate, however, weather patterns can change, and when the monsoon became stuck over northern Pakistan the downstream effect of the rising waters proved catastrophic since the country's "metropolitan" center is constructed along the banks of the Indus River and its tributaries.

Khyber-Pakhtunkhwa (KPK, formerly the North-West Frontier Province, or NWFP), the smallest province in land size, and the Federally Administered Tribal Areas (FATA), border Afghanistan and are separated from the Punjab by the Indus River. The tribal Pashtun people straddle the Durand Line (Afghan-Pakistani border) and are both Afghanistan's largest ethnic group and the predominant ethnicity in KPK, where they are nearly 74 percent of the 21 million people who comprise that province's population (Pakistan Census 1998). In the overwhelmingly rural FATA the Pashtun are especially prevalent, as they comprise more than 99 percent of the population of some 3.5 million (Pakistan Census 1998).

In 1975, the FATA was formed and seven separate territories with the status of Federally Administered Tribal Agencies became a part of it. From north to south, the

agencies are Bajaur, Mohmand, Khyber, Orakzai, Kurram, North Waziristan, and South Waziristan. All of these agencies abut the border with Afghanistan except for Orakzai, which is south of Khyber and east of Kurram. The agencies have political liaisons (known as agents) whose job is to represent the federal government to the local, tribal population and vice-versa. There are also six Frontier Regions that lie to the east of the seven agencies and serve as buffers between the agencies and the Settled Districts (Government of the FATA 2010). Again from north to south, these are Peshawar, Kohat, Bannu, Lakki, Tank, and Dera Ismail Khan. The FATA and KPK are also famous for one of Pakistan's most significant geographical and historical features – the Khyber Pass, which cuts through the heart of the Khyber Tribal Agency. Throughout recorded history, this barren, craggy, and desolate moonscape has served as the gateway to India, as invaders from Alexander the Great to Genghis Khan to the Mughals have all used it as their highway to conquest. Likewise, the British used it in the opposite direction in the First (1839-1842) and Second (1878-1881) Anglo-Afghan Wars; there are many British regimental crests displayed along the main road through the Khyber Pass, where they are still maintained today by the descendants of those Pashtuns who had fought against them.

Balochistan is Pakistan's largest province in area, but it sits on the western and very dry Iranian plateau and so it is Pakistan's most sparsely populated province, with only about 12 million people and a population density of just 19 persons per square kilometer (*Pakistan Statistical Yearbook* 2009, 314). Some 55 percent of Balochistan's people are Baloch, who also overlap the border with southwestern Afghanistan and southeastern Iran (although approximately 70 percent of the world's Baloch reside in Pakistan's Balochistan). The northeastern end of Balochistan abuts KPK and FATA while on its northern side it adjoins Afghanistan's Pashtun belt, so Balochistan has a large minority (nearly 30 percent) of Pashtuns who live largely in

the provincial capital of Quetta and further north. Balochistan's population also includes some six percent Sindhis and perhaps four percent Brahui, a group that has become substantially intermixed with the Baloch.

Although Balochistan seems grafted onto the rest of the country, it is extremely significant strategically, because with 44 percent of the country's land area and a 760-kilometer long coastline (Government of Balochistan 2010), it sits on top of rich deposits of natural gas, especially the famous Sui gas fields. Its gas and petroleum allows it to produce "over 40 percent of the country's primary energy, including almost half of its total gas production" (Fulcher 2006, 1). Balochistan also contains significant deposits of coal, chromite, copper, silver, platinum, aluminum, gold, and uranium. These resources have made this sparsely settled province a rich prize to outsiders, a source of great resentment to many in Balochistan's traditional tribal population. This problem has taken on several dimensions, but generally reflects a perspective by the native population of the province that they are being shortchanged by the financial aspects of Pakistan's federalism, largely to benefit the Punjabis, who usually dominate the national government.²

Pakistan's Gilgit-Baltistan and Azad Kashmir are physically and culturally distinct from the rest of the country. Much of this area is considered by India to be "Pakistani occupied Kashmir," whereas Pakistanis consider the area to be "Free Kashmir." The Kashmir region on either side of the Line of Control (LOC), which was established as part of the 1972 Simla Agreement that followed the Third Indo-Pakistani War, is part of the mountain belt that demarcates the end of South Asia and the beginning of Central Asia, and is home to some of the highest mountains (K2, Nanga Parbat, Gasherbrum) and most rugged terrain in the world. The sparse population of both of these regions together may

2 The Seventh Award of the National Finance Commission (NFC), a formula by which government revenues are shared among the provinces and the federal government, was approved on 16 March 2010. The 7th NFC redresses some of the fiscal imbalance experienced by the smaller provinces in past NFC Awards.

not exceed five million, and being as cut off from the outside world as they are, they are divided and sub-divided into many tiny (and often distinctive) ethnic and linguistic groups (Pakistan Census 1998).

Finally, Pakistan also established a Federal Capital District in 1960 where the capital city of Islamabad (meaning “city of Islam”) was built on a grid plan (also known as the Islamabad Capital Territory, or ICT). This location was chosen for a new capital city because it was more centrally located than Pakistan’s first capital, Karachi, at least in what was then West Pakistan, and is very near to its sister city of Rawalpindi, which is the location of the headquarters of the Pakistani Army (and was briefly the capital, in 1958-1960). Islamabad sits in the shadow of the Margalla Hills, at the historic junction between the foothills of Central Asia and the plains of northern India, and the Grand Trunk Road runs just by the city.³ Some 950,000 people lived in Islamabad as of the 1998 census, almost two-thirds of whom are Punjabi, with about 10 percent Pashtuns, 10 percent Muhajirs, and the remainder representing the rest of Pakistan’s ethnicities.

The ethnolinguistic regionalism characteristic of Pakistan today has prompted repeated challenges to the country’s ongoing project of nation-building. The Pashtunistan Crisis of 1961-1963, Balochistan Insurgency of 1973-1977, Balochistan Unrest of 2004-Present,⁴ and many periods of unrest in the tribal areas all represent challenges to the federal state and the Punjabi, Muhajir, and Sindhi elites who dominate it. In the early 1990s, rioting and urban unrest in Karachi, primarily instigated by the rise of the Muhajir Qaumi Movement (MQM, now renamed Muttahida Qau-

3 The Grand Trunk Road is one of the most dangerous and historic highways in the world. Immortalized in Rudyard Kipling’s Kim, it grew up over several centuries to traverse all of northern India from east to west, and thus today runs from Bangladesh to the Khyber Pass in Pakistan.

4 These are the two most notable recent bouts of insurgency in Balochistan, but there has been resistance there to central government authority since the 1940s.

mi Movement) at the expense of the Sindhis and Pashtuns, prompted the federal government to send in the Army in 1992, which was replaced by the paramilitary Rangers in 1994. Ethnolinguistic and sectarian tensions still simmer in Karachi, and occasionally boil over, but the population of Pakistan's biggest metropolis is too mixed to present a serious risk of an ethnolinguistic fracturing of Pakistan from this quarter. This problem, although most intense in Karachi, does exist elsewhere. As Haqqani (2004-2005, 88) notes, "Intraprovincial differences, such as those between the Baluchis and the Pashtuns in Baluchistan, between the Punjabis and Saraiki in Punjab, between the Pashtuns and Hindko speakers in the North West Frontier Province, and between the Sindhis and Muhajirs in Sindh, have also festered without political resolution."

Pakistan thus appears to be a weak state that could easily split into constituent parts, especially since its major ethnic groups all have cousins across the borders in neighboring countries. Most notably, Pakistan's Punjabis live next to the Indian state of Punjab just east of Lahore, while Pakistan's Pashtuns are part of a broader tribal population, the other half of which live across the border in Afghanistan. Neighboring states see Pakistani disintegration as a security threat to their own internal cohesion, however, so as much as they or leaders of their ethnic groups might favor irredentist claims on Pakistani territory in theory (especially Pashtun claims on the FATA and KPK), in practice nothing has yet come of it. That does not mean Pakistani nationalism is flourishing, however, or shapes much of Pakistan's geopolitics.

This is the first and in many respects the most profound of Pakistan's core features. It was ethnoregionalism that split Pakistan into two states in 1971, and it is ethnoregionalism that threatens Pakistani national unity today (in Balochistan and elsewhere).

Demographic and Socioeconomic Contours

It always seems to surprise people that Pakistan is the sixth most populated country in the world, following China (first, 1.35 billion), India (second, 1.21 billion), United States (third, 318 million), Indonesia (fourth, 233 million), and Brazil (fifth, 195 million) (UN Population Division 2010). Pakistan's population is now approximately 185 million, and if it had remained united with Bangladesh (whose estimated 164 million people makes it the eighth most populated country in the world), it would be the world's third most populated country (UN Population Division 2010). Pakistan's rapidly growing and mobile population puts significant pressure on the state to provide desired social welfare goods and services (Blood 1994).

The 1998 Census, its most recent, reveals Pakistan to be overwhelmingly rural, with some 68 percent of the population living in rural areas (Pakistan Statistics Division 2010). Overall population density is relatively high, at 166.3 persons per square kilometer (compared to 33 persons per square kilometer in the United States), although population density varies, as the rugged north and barren west are nearly devoid of human habitation, while Karachi, Lahore, and other Indus Valley cities are among the most densely populated places on the planet (City Mayors Statistics 2010; Demographia 2010). Pakistan's urban areas have been inundated with migrants over the past three decades, leading to much informal housing and a general inadequacy in municipal services. These slums are reflective of the grinding, entrenched poverty of the country and have become breeding grounds not only for disease and malaise, but also of Islamist radicalism.

In many respects, Pakistan is a classic case of a country caught between the second and third stages of demographic transition (Thompson 1929). That is, its death rates have declined but its birth rates remain relatively high, creating a period of unusually high population increase. In 1951 Pakistan's population was less than 34 million (Pakistan

Statistics Division 2010). Its growth by a factor of at least four in just over a half-century is due primarily to the rapid fall of death rates in the 1950s accompanied by persistently high birth rates. As Blood (1994) notes:

Pakistan's extremely high rate of population growth is caused by a falling death rate combined with a continuing high birth rate. In 1950 the mortality rate was twenty-seven per 1,000 population; by 1990 the rate had dropped to twelve (estimated) per 1,000. Yet throughout this period, the birth rate was forty-four per 1,000 population. On average, in 1990 each family had 6.2 children, and only 11 percent of couples were regularly practicing contraception.

A country stuck in the middle of the demographic transition develops a very young population as an inevitable byproduct. Pakistan's population is extremely young, with a sharply pyramidal age structure indicative of a big "youth bulge" (Figure 2). For the two decade period prior to the 1998 census, Pakistan's growth rate was 2.7 percent per year, one of the highest in the world (Pakistan Statistics Division 2010). Even as declining fertility has finally brought that rate down to an estimated 1.6 percent (*World Factbook* 2010), the result of the previous twenty years has been dramatic. Today, 48 percent of Pakistan's population is under 20 years of age and 67 percent is under 30 years of age, so as those children and youth progress through the life cycle they will have to be educated, find jobs, and eventually have the health care and retirement options that people across the globe clamor for late in life. Of course, those young people will also have children of their own, meaning that by mid-century Pakistan's population will add at least 100 million more people, barring some huge catastrophe.

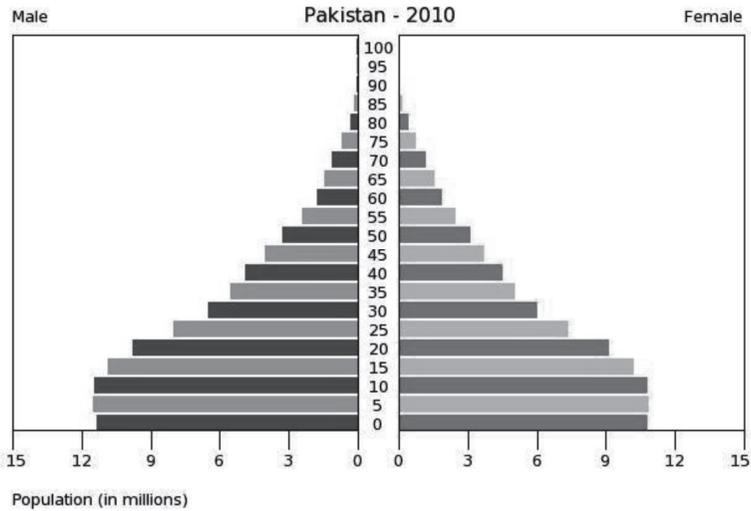


Figure 2. Pakistan Population Pyramid, 2010.

Source: U.S. Census Bureau 2010

Pakistan also struggles with the effects of population mobility, perhaps on a level unmatched by any other major country in the world. It has faced some of the most significant immigration (migration into the country) in the post-World War II era, almost all of it refugee migration. Two major inflows occurred. The first was the Muhajir influx at the time of Partition and in the years immediately following the country's birth. Approximately 7.2 million people moved from India to Pakistan during the Partition period, with about 90 percent of those people going to West Pakistan. The second was the influx of Afghan refugees, most heavily in the first half of the 1980s. From 1981 until 1997, Afghanistan produced the world's largest number of displaced people, with more than six million Afghans forced to become refugees or internally displaced persons (IDPs). Most of those refugees went to the neighboring countries of first asylum, such that by the end of the 1980s Pakistan had four million Afghan refugees. Probably more than 500,000 people of Afghan origin live in Karachi, contributing to a population of up to seven million Pashtuns that make Ka-

rachi the biggest Pashtun city in the world. Both of these inflows have had a significant impact on the ethnolinguistic character and political contours of both Karachi and the country.

Pakistan has also seen significant emigration (migration out of the country) during the same time period, with three major destinations and a mixture of causes. About 7.25 million people moved from Pakistani to Indian territory in 1947-1948, creating a net population transfer during the Partition since almost the same number went in the opposite direction. The United Kingdom, homeland of the former Empire, has attracted Pakistani migrants for years, and now has 1.2 million immigrants of Pakistani origin, the largest such population in Europe or North America (Abasi 2010). The Gulf Arab countries collectively provide a third major destination for Pakistanis, with some 2.6 million Pakistanis scattered among those countries, primarily in the United Arab Emirates and Saudi Arabia, which have used their oil wealth to import migrant labor to perform necessary jobs in their societies. Poor Pakistanis have seized the opportunity presented by low- and non-skilled jobs at relatively high wages to remit monies home and change the circumstances for their families there.

A final element of Pakistan's population mobility is the significant movement internal to the country through urbanization. While still dominated by a rural population, Pakistan's urban areas are the most rapidly growing portion of the country. Pakistan's 1998 Census shows the percentage of urban population nearly doubling from 1951 when it was merely 17.8 percent, to 1998 when it was 32.5 percent (Population Association of Pakistan 2010). Recent internal military operations (Bajaur and Swat in 2008-2009) and floods (2010) have produced a significant number of IDPs to exacerbate Pakistan's internal population profile. Rapid urbanization is a major problem in developing countries as it tends to strain the already overstretched urban services and exacerbates poverty and substandard living conditions, leading to a host of potential recruits for in-

surgent and/or criminal activities (Potter 2009; Newbold 2006).

Population pressures may contribute to Pakistan's national woes, but a more insidious feature of the socioeconomic framework is its persistent feudal pattern of land ownership and elite dominance in the countryside. Pakistan is perhaps the only major country existing today in which "feudalism" still persists. Of course, a feudal system such as was characteristic of Europe in the Middle Ages — that is, with large landowners who provided fiefs to peasants — no longer exists, but Pakistan's rural economy has been characterized as feudal since the country's birth. In Pakistan, the absence of any meaningful land or agrarian reform over the past sixty years has left large landowners in control of vast swathes of productive rural land, while peasants work the land for poverty-level wages that force them into crushing indebtedness, usually to the landowner (Haider 2010; Shuja 2000). Although poverty varies throughout Pakistan, rates of poverty have been substantially higher in rural areas throughout Pakistani history (Interim-Poverty Reduction Strategy Paper 2001).

It has been said that only a handful of families rule Pakistan, and while it is probably more correct to say that only a few thousand feudal families control Pakistan, the general contours of the situation reflect the enormous disparity in political and socioeconomic power between the zamindar (landlord) class and virtually everyone else. Pakistan is not unique in this regard; many countries demonstrate even more unequal income distribution than does Pakistan (*Human Development Report* 2010). What is unique for this period of human history is the way in which control of the land resource has been utilized to provide the foundation for political power by these landed elites. Moreover, the feudal families have also leveraged their landownership to diversify economic power by moving into the industrial sector, and have gained access to high status government and military positions through unequal access to higher education and political patronage appointments. In a

country consistently ranked as one of the most corrupt in the world (Transparency International 2010), there is little opportunity for the poor to compete successfully with those from the elite class.

At the time of Partition, Pakistan and India had similar socioeconomic profiles—for example, each had a similar percentage of the population literate (16 percent for Pakistan, 18 percent for India)—however, their paths have diverged since then. Not only has India’s literacy rate far outstripped Pakistan’s today (80 percent for India to 49 percent for Pakistan), but India’s economy has boomed, creating a burgeoning middle class of some 500 million people to transform what was once a country of rural peasants into one of the fastest growing consumer economies in the world. Meanwhile, Pakistan’s gross domestic product (GDP) growth per capita has averaged six percent per year since the late 1940s, and trended even more sharply upward during much of the first decade of the 21st century, but there has been little positive change to microeconomic conditions for Pakistan’s many poor. By 2002, almost half of Pakistan’s population (at least 44 percent) lived below the absolute poverty line, with about two-thirds of these the rural poor (not surprisingly, since two-thirds of Pakistan’s population is rural). As the decade went on, the percentage of population living in poverty declined sharply, but the economic downturn at the end of the decade saw poverty rates rise again.

Demographic and socioeconomic contours exert enormous influence on Pakistani life. The challenges posed by the swollen youth bulge and the moribund social institutions of the countryside threaten to derail Pakistan’s prospects for the first half of the 21st century.

Political Immaturity

Pakistan’s formal political system and its informal political mores have changed frequently throughout its short history. Uncertainty and impermanence are not unusual in

new countries – political institutionalization, the process by which particular political arrangements become rooted and customary in a society, takes time. Pakistan has struggled with its developing governmental structure that Charles H. Kennedy and his co-authors divide into “ten constitutional phases” following independence (Baxter et al. 2001). These are based on Pakistan’s five constitutions (of 1947, 1956, 1962, 1972, 1973), and five other periods when its political order was not fully based on a constitution, but generally some form of martial law. Kennedy writes, “Pakistan has been governed at times without the benefit of a written constitution (1958-1962, 1969-1971), under a suspended constitution (1977-1985), and under a ‘modified’ though ‘restored’ constitution (1985-1997) – the latter having been wholly altered by the passage of the Thirteenth Amendment (1977-1999). Since October 1999 the state has been governed by the military under the legal device of a ‘Provisional Constitutional Order (Baxter et al. 2001, 184).” The Provisional Constitutional Order (PCO) was repealed and President Pervez Musharraf resigned from his position as Chief of Army Staff, both in November 2007. Musharraf then resigned as President in August 2008, allowing a newly elected civilian government to fully take office. Presumably these events mark an eleventh phase of Pakistan’s constitutional history of sixty-four years (as of this writing in 2011). The four periods of direct military rule thus far total some thirty-five years, or more than half of that history, so it is quite evident that Pakistan has not yet laid a solid constitutional foundation. Thus far, in addition to the periods under martial law, Pakistan has tried parliamentary, semi-presidential, and presidential systems at different times, and has altered its federal system of government, as well.

As of 2011, Pakistan nominally has a semi-parliamentary system under a 1973 Constitution that has been heavily altered by amendments (sometimes introduced by military dictators, but then allowed to remain). The 18th Amendment, passed in April 2010, returned Pakistan to a parlia-

mentary system of government by overturning many of the constitutional alterations made by earlier military rulers Gens. Zia-ul-Haq and Pervez Musharraf to strengthen the powers of the presidency. President Asif Ali Zardari, widower of former Prime Minister Benazir Bhutto, is a weak and embattled indirectly-elected head of state, with Yousaf Reza Gillani the Prime Minister who heads the government. Chief of Army Staff (COAS) General Ashfaq Pervez Kiyani has returned the Army to the barracks and kept it there, despite deep public disapproval of the civilian government, especially following the flood disaster of August 2010. Zardari and the civilians remain in office for now, but no constitutional arrangement is solid, as the country has had so many changes over the years that everyone wants to change the constitutional framework whenever the opportunity presents itself.

Pakistan's formal political system is secondary to its informal political process, which itself has been dominated by an entrenched civilian political hierarchy that has utilized a shifting mélange of political parties as vehicles for acquiring and wielding political power. Four major groupings (or "families") of parties exist. These are the Pakistan Muslim League (PML) and its variants, the Pakistan Peoples Party (PPP) and its offshoots, the various religious parties and their multiple splinters, and a multitude of parties with single-issue, regional, or personal vehicle orientations. All of the parties have a patron-client basis of organization and identity, and even those that are not formally organized along ethnic lines tend to poll best among the ethnic group of their leadership.

The overarching grandfather of party politics in Pakistan is the Pakistan Muslim League, which came out of the post-Partition split of the All-India Muslim League (AIML). The AIML was founded in 1906 and became the political vehicle for Muslim separation in South Asia, which was realized in the 1947 Partition of the Indian subcontinent into India and Pakistan. At that time the AIML split into the Indian Union Muslim League (in India) and the PML

in both wings of Pakistan. AIML leaders Muhammad Ali Jinnah, known as the Quaid-e-Azam (or Great Leader) in Pakistan, and Liaquat Ali Khan, known as the Quaid-e-Millat (Leader of the Nation), became Pakistan's first leaders. Jinnah was Governor-General and Liaquat was the first Prime Minister, but Jinnah died in 1948 and Liaquat was assassinated in 1951. In their absence, the Muslim League began to splinter, with several factions emerging by 1953. Electoral failure followed in 1955, and martial law under Gen. Ayub Khan in 1958 led to the banning of political parties and the end of the original Muslim League. The prestige of the party name led to its resurrection in 1962, and over time this name was applied to several political organizations, usually followed by an initial in parentheses to indicate with which leader the party is affiliated. Now there are several PML factions active in Pakistani politics.

The second major family of political parties is the Pakistan Peoples Party (PPP) and its descendants. The term "family" applies literally to the PPP, which was founded by Zulfikar Ali Bhutto in 1967 following his resignation from the Ayub Khan government in which he had been serving as Foreign Minister, was later led by his daughter Benazir Bhutto, and today is led by Benazir Bhutto's widower Zardari, with their 22-year old son Bilawal Bhutto now the chairman of the party. Unlike the PML parties, which have generally been centrist or rightist in political-economic orientation, the PPP has always been a center-leftist party and its leaders have been avowedly secular in orientation. PPP fragmentation like that exhibited by the PML does exist, but the splinter groups have never been very successful at the polls or able to wrest away the loyalty of most party members from the Bhutto family.

A third group of political parties are the religious parties, and here too there are overarching parent parties and much splintering over the years. Jamaat-i-Islami (JI, or Islamic Party) was founded in Lahore in 1941 by Sayyid Abul Ala Maududi, and was initially opposed to the idea of Partition. After the Partition occurred in 1947, however, the

JI became a political party within Pakistan, although over time chapters of the party have taken root in other South Asian countries as well. The JI was close to the military government of Gen. Yahya Khan in the late 1960s and early 1970s and to the military government of Gen. Zia-ul-Haq in the late 1970s and 1980s. Neither the JI nor any of the other Islamic parties ever polled significant support from the Pakistani electorate prior to the 2002 elections, when a coalition of six Islamic parties under the title Muttahida Majlis-e-Amal (MMA, also known as United Action Front) benefited from gerrymandering and ballot rigging by the military government, limitations on the participation of the traditionally important parties, and anti-Americanism stoked by American intervention in Afghanistan. These factors allowed it to poll 11.3 percent of the vote – still quite low across six parties – and 63 seats to become a major opposition movement in Parliament, the governing party in the KPK (at that time, NWFP), and part of the governing coalition in Balochistan. The composition of the MMA reflected the culmination of the multitudinous fragmenting of the Islamist movement in Pakistan, as well as the influence of the several sources of Islamic orientation within Pakistani society.

In addition to the JI, the MMA included two factions of the Jamiat-i-Ulema-Islami (JUI, or Assembly of Islamic Clergy), a Deobandi Islamic movement in historical opposition to the JI. The Jamiat-i-Ulema-Pakistan (JUP), which represents the more moderate Barelvi Islamic tradition, formed in the early 1970s in opposition to the JI. Tehrik-e-Islami (TI, or Movement for Islam) was the Shia party in the coalition. Jamiat-e-Ahle Hadith (JAH), reflecting Gulf Arab theological influence, was the sixth party in the coalition.

The last category includes the large number of parties who appeal primarily to members of a particular ethnic group or province, or center on a particular issue. For example, the Muttahida Qaumi Movement (MQM, or United National Movement) was founded in Sindh province in

1984 as the Muhajir Qaumi Movement (MQM) to provide a voice for Pakistan's Muhajirs.⁵ There are also a number of parties that appeal to the minority group aspirations of the Baloch or Pashtun or Sindhi peoples. The tiny Sindhi parties struggle to poll well, given the dominant position of the PPP and MQM in that province, while the Baloch and Pashtun parties compete for only a small percentage of the national electorate. Finally, there are many parties that begin as personal vehicles for particular individuals, and certainly much of the splintering of the main families of parties already discussed reflects personality clashes among senior members. The most prominent recent example of a personal vehicle party would be Pakistan Tehreek-e-Insaf (PTI, or Pakistan Movement for Justice), the political party for former captain of the national cricket team Imran Khan.

In such a fragmented party system, it is often the case that parties create opposition, electoral, or parliamentary coalitions in order to maximize the chances of success in either confronting an existing (frequently military) regime, contending for seats in the national or provincial parliaments, and/or governing. Given the fluidity of party politics and the important (often dominant) role played by leading political personalities, coalitions come and go with great frequency. Overall, party fragmentation almost always produces electoral results in which no single party has an absolute majority. Thus, it is nearly always the case that the leading governmental party, which produces the Prime Minister, must rule in coalition with one or more other parties. This frequently happens at the provincial level, as well. Thus, political coalitions are often weak and perform poorly, especially compared to the generally more efficient and competent military.

The Army is Pakistan's most important institution and the biggest shaper of its politics since independence. Pakistan's active duty military in 2010 was the seventh-largest in the world, with some 617,000 personnel in uniform and another 513,000 in the reserve components (*The Military*

5 The name was changed in 1996.

Balance 2010, 367). Pakistan's Army is far and away its major service, however, both as an arm of the Pakistani military and in regard to the political role it has played in national history. It has 550,000 active duty troops and more than 500,000 personnel on reserve status, thus dwarfing the other services.⁶ The Army was always destined to be the most important of Pakistan's services, since the country saw India as its major rival and anticipated (and has experienced) that significant combat would be primarily on land. Its combat doctrine has emphasized taking the offensive in order to capture Indian territory that it could negotiate away in post-conflict talks. Also, Pakistan's most important cities and most of its population are all close to the Indian border, so any purely defensive strategy would be unlikely to secure those cities.

Pakistan has fought four wars with India (1947-1948, 1965, 1970-1971, and 1999), as well as many smaller skirmishes in the remote northern mountains. Pakistan has not won any of those wars, and has lost half of its national territory (East Pakistan, now Bangladesh) as a byproduct of one of the defeats. Thus, over time Pakistan developed a "strategic triad" for dealing with external threats (mean-

6 The Navy, with less than 30,000 personnel in both the active and reserve wings, is essentially a brown-water (or coastal) navy, and there is now a tiny Coast Guard using small navy boats and army personnel. The Air Force, with some 65,000 people on active duty, is organized into 23 combat squadrons deployed from ten major peacetime bases and has some high-technology equipment, including some 35 American-made F-16As and F-16Bs, with 18 F-16C/Ds on order. Due to the occasional cracks in the Pakistan-United States relationship, such as the invocation of the Pressler Amendment in 1989 that led to a cutoff of American aid, and the sanctions imposed by the United States following the 1999 Musharraf takeover of the government, Pakistan has turned increasingly to China for military equipment. For the Air Force, this has culminated with the joint China-Pakistan development and production of the JF-17 in 2006 and 2007. Still, a comparison with major rival India reveals the depth of the strategic imbalance, as India has over 170,000 air force personnel and over 1400 aircraft.

ing India), but even that triad has been unable to achieve national aims. The first leg of the triad is its large conventional Army, which has failed to defeat India in any wars or achieve the (re)unification of Kashmir. The conventional Army has become the world's leading supplier of UN peacekeeping forces, however, suggesting that its forces are proficient tactically in developing country conflicts.

A second leg of the triad came into existence in 1998, when Pakistan tested nuclear weapons and formally joined the nuclear club.⁷ Today Pakistan has an estimated 90-100 nuclear warheads and strategic ballistic missile capability. These weapons and delivery systems fall under the Strategic Plans Division (SPD) of the Pakistani Army. Despite an avowed "first use" policy and an open identification of India as Pakistan's only enemy (Abdallah 2010), Pakistan will hopefully never use nuclear weapons against India — these weapons primarily have utility as a deterrent.

The final leg of Pakistan's strategic triad is comprised of the irregular forces that it has used from the earliest days of its history, especially in Kashmir and Afghanistan. Militants, predominantly inspired by Islamist ideology, have been organized, trained, maintained, and deployed primarily by the Inter-Services Intelligence Directorate (ISI), Pakistan's most significant intelligence agency, which is controlled by the Army. There are many different types

7 Nine states are currently members of the "nuclear club." The United States (first test in 1945), Soviet Union (now Russia, first test in 1949), United Kingdom (1952), France (1960), and China (1962) were the earliest states to have atomic and later nuclear weapons, and are the only states "allowed" to have these weapons under the Nuclear Non-Proliferation Treaty (NPT). In 1974 India conducted its first nuclear test, followed by Pakistan in 1998 and North Korea in 2006. South Africa developed and produced a half-dozen nuclear warheads in the 1980s, but disassembled them in the 1990s. Israel has never formally acknowledged having nuclear weapons, nor has it conducted a declared nuclear test, but it is widely believed to have developed and produced such weapons since as early as the 1960s. Today it is estimated to have as many as 200 nuclear warheads.

of militants, such as those who are motivated to fight in Afghanistan, those who are Kashmiri or anti-Indian, the sectarian, the global jihadists, and those who are opposed to Pakistan's federal government on ideological grounds. Although the presence of all these militants has become a threat to domestic stability, and some of these militants have specifically singled out the security institutions of the government as their targets (Ganguly and Kapur 2010), others of the militants comprise the only tool in Pakistan's national security arsenal that has had any success against India or in projecting Pakistani influence into Afghanistan. It is hard to imagine Pakistan giving up this tool.

A fundamental reality of Pakistan is that the military dominates the political life of the country (Siddiqi 2007). The depth and breadth of this domination is hard to fathom for most Americans or other Westerners, who are accustomed to civilian control over a compliant military. In Pakistan, as already noted, the military has directly ruled the government for over half of the country's history, but it has indirectly ruled the country for almost all of the remaining time. Siddiqi describes the significant role the military played from Pakistan's very beginning, noting that the government allocated "about 70 per cent of the estimated budget in the first year for defence" (Siddiqi 2007, 63). Thereafter, military spending remained remarkably high, averaging 60 percent of total government spending during 1947-1959 (Jones 2009). In the 1960s the average was 49 percent, while by the late 1980s it was still hovering around 25 percent (Jones 2009). Even today, after the Pakistani economy has grown and diversified, and the military has acquired a nuclear deterrent against the "existential" threat posed by neighboring India, the government of Pakistan still spends over 16 percent of its budget on the military (*Pakistan Federal Budget 2010-11*). With a dominant military and immature civilian political institutions, Pakistan has struggled to develop a national ideology around which its people can unite.

Islamic Ideology

Pakistan began its existence as a homeland for South Asia's Muslims, but this Islamic identity has never provided a good foundation, primarily because it was impossible to ever get widespread agreement within Pakistan on what kind of Islam the country would follow.⁸ After the 1970-1971 War that produced the independence of Bangladesh, more of South Asia's Muslims lived outside of Pakistan than lived within its borders, and the Islamic homeland *raison d'être* for Pakistan was dead. Today, Pakistan has approximately 178 million Muslims, while India has 161 million and Bangladesh 145 million (*Mapping the Global Muslim Population* 2009). Islam remains enormously important to Pakistani identity and it has shaped and/or justified many national events over the past six decades. As with the military, however, the passage of time and the failure of the civilian political institutions to take root have allowed the clerical institutions to deepen their own role in Pakistan's public life, to both good and bad effect.

Pakistanis do have a sense of national identity, especially in relation to their Indian neighbors. That identity is shaped in part by the Hindu-Muslim division that led to the creation of Pakistan in the first place, and it has been enough (just barely) to sustain Pakistan until now, but an identity that is a negation of another's identity is not as powerful as having a positive, affirming identity, and that is something for which Pakistan is still searching. Paki-

8 A similar situation exists in Israel, with ethnic divisions between Ashkenazim and Sephardim (Mizrachim) Jews that have led to the state having a Chief Rabbi for each group. In addition, there are dogmatic divisions between secular, Orthodox, and Ultra-Orthodox Jews, and within those groups. Israel's identity problems within its Jewish population have undoubtedly been partially assuaged by its long-standing struggle for national survival among its Arab neighbors. Later, this struggle would take on the character of attempting to acquire regional supremacy, particularly at the expense of the Palestinians, in part due to the worldview of Israel's more Orthodox Jews.

stanis do have national heroes such as sports stars, whose exploits are generally unifying rather than “owned” by a particular ethnolinguistic group. Most of these sports stars have been in three sports that Americans do not generally play – field hockey, squash, and above all, cricket.

Several religious dimensions divide Pakistan’s Muslims, who comprise 97 percent of the total population. As with Muslims worldwide, Pakistan’s Muslims are subdivided first into Sunni (90 percent of all Pakistani Muslims) and Shia (the remaining 10 percent). Pakistani Sunni Muslims adhere overwhelmingly to the Hanafi school (*madh’hab*) of Islamic jurisprudence (*fiqh*), although a small minority of the Sunnis are followers of the Ahl-e-Hadith rejection of the four major schools of *fiqh*. Essentially the Ahl-e-Hadith are Salafists who are attempting a return to the pure fundamentals of early Islam, as they understand those fundamentals. The rest of the Sunni Muslims of Pakistan tend to be shaped by the religious school or tradition to which their preferred religious leader owes his education or philosophy.

There are three major subcontinent Islamic seminaries/traditions, all falling within the present-day boundaries of India and all begun as part of the 19th century Islamic World response to Western colonialism (this was British colonialism in the subcontinent). Aligarh Muslim University was founded by the famous Indian Muslim reformer Sir Syed Ahmed Khan in 1875 and has always taught a modernist or reformist brand of Islamic thought. Darul-Uloom Madrasa (or seminary) was founded in 1866 in the northern Indian town of Deoband (not far from Aligarh) and has since produced a strain of Muslim thought in South Asia that is revivalist and emphasizes the role of the ‘ulema (religious scholars). The Deobandi Movement stands in opposition to the Barelvi tradition, which is named for the northern Indian town Bareilly (near Aligarh and Deoband), where this movement’s founder, the Sufi leader Ahmed Raza Khan, lived and taught. Barelvis are traditional South Asian Muslims, which means they accept Sufism – an inner, mys-

tical approach to Islam—and a range of practices, such as veneration of pirs (holy men) and tombs, and the celebration of festivals commemorating certain events, such as the Maulid (Prophet Muhammad's birthday). This tradition was also founded in the late 19th century, and was meant to counter the revivalist Deobandi and modernist Aligarh movements.

In Pakistan today, perhaps 65 percent of the Sunni population follow the Barelvi tradition, while nearly 35 percent follow Deobandism, with the small remainder adherents of the Aligarh or Ahl-e-Hadith school. Another important South Asian Muslim tradition, the Tablighi Jamaat (Conveying Group) is a Muslim missionary movement that confines its activities to individual spiritual development and has been resolutely apolitical and non-violent throughout its history. Its annual gatherings near Lahore, Pakistan and Dhaka, Bangladesh attract millions of followers and have become the largest gatherings of Muslims in the world after the hajj and umra pilgrimages to Mecca. A number of Sufi tariqat (or brotherhoods of Islamic mystics) also exist within Pakistan, including the prominent Chistiyya Order.

The main division within the Shia is also present within Pakistan. That is, although most of Pakistan's Shia are Isna Asharia (or Twelvers), there is a large community of Ismaili Shia (also known as Seveners) who follow Aga Khan IV, and smaller numbers of Ismaili Dawoodi Bohras and Alavi Bohras. Some radical Sunnis reject Shia as fellow Muslims and have targeted them with violence; Shia militants have organized in response.

Pakistan also has two groups of Ahmadis, the Ahmadiyya Muslim Community and the Lahore Ahmadiyya Movement. This religious splinter group developed in the late 19th century in the northern Indian town of Qadian by founder Mirza Ghulam Ahmad, who saw himself as an Islamic revivalist and the second coming of Jesus Christ and, some maintain, as an Islamic prophet. This latter claim makes the Ahmadiyya, who consider themselves Muslims, to be suspect in the eyes of mainstream Muslims in Paki-

stan, who consider Muhammad to be the last of the prophets. This issue became so controversial in Pakistan that the Ahmadiyya were declared to be non-Muslims (the Second Amendment to the Constitution specifically identifies the Ahmadiyya as such) and have been targeted by sectarian violence a great deal in recent years. Finally, Pakistan also has a small Christian community of perhaps 2-2.5 million, which has faced increasing persecution as religious intolerance has deepened throughout the country.

As the Islamic World endured its post-colonial culture war in various countries over how Islam and statehood could coexist comfortably, Pakistan led the way, considering questions like what an Islamic country's constitution would look like, whether or not laws would need to be in conformity with Shariah (Islamic law), which school of Islamic jurisprudence should hold sway, how non-Muslims should be treated in a state in which the official religion is Islam, and on and on. Given that the Islamic community in South Asia was itself so divided, and that substantial ethnolinguistic divisions existed as well, these sorts of questions about Islam became a very prominent part of Pakistan's political discussion. In its early days of independence, Pakistan was led by Muhammad Ali Jinnah and Liaquat Ali Khan, both secular modernist (Aligarh) Muslims leading a Muslim League and a nation that they hoped would be founded on a very inclusive Muslim identity.

Their deaths so soon after Pakistan's founding opened the door for alternative views of Pakistan's Islamic character to be articulated. Maulana Abu Ala Maududi's Jamaat-i-Islami (JI) and other Islamic parties inspired more by the Deobandi (JUI) or Barelvi (JUP) schools began to insert themselves into the public discourse about what it is to have an Islamic country. Nonetheless, most Pakistanis believed Islam was meant to be a very tolerant religion, and did not accept the intolerant or prescriptive versions preached by the JI and other early Pakistani Islamic political parties. This reality was borne out in the electoral results, as the JI and other religious political parties never polled well (until

2002), despite the fact that as time passed Pakistan's rulers—especially the military rulers—increasingly began to look to the religious parties as electoral allies.

The JI introduced the concept of religious political parties from the earliest days of Pakistan's history, and has played a powerful role in shaping much of that subsequent history, even though it has almost never had a strong parliamentary presence. The JI agitated against the Ahmadiyyas from the early 1950s onwards, and began to side with the military governors of the country during Ayub Khan's reign and especially during the time of Yahya Khan, offering an Islamic justification for the Pakistani Army's actions in East Pakistan/Bangladesh. The JI strongly supported the "Islamization" program of the Zia-ul-Haq regime of the late 1970s and 1980s, but Pakistan's role as host to the world's largest single population of refugees in the 1980s and "front-line state" against Soviet expansion in Afghanistan caused substantial changes to Pakistan's Islamization. Money flowed into the country for the succor of the refugees and the support of the anti-Soviet Afghan fighters (known as the mujahideen, or holy warriors). Pakistan's ISI controlled this influx of funding, weapons, and other aid, and directed much of it to the most Islamist of Afghan resistance organizations, who were most often tied to the JI, or increasingly, its Deobandi rival, the JUI.

The presence throughout the 1980s and 1990s of several million Afghan refugees—primarily rural Pashtuns—in KPK (formerly the NWFP), FATA, and Balochistan overwhelmed the federal and provincial public education systems, among other deleterious consequences. Also, the Afghans became a cause célèbre among Saudi Arabian and other Gulf Arab elites, who contributed substantial sums of money (some estimate that the Saudi government matched the US contribution dollar for dollar) for the Afghan resistance. Some of that money went for an expansion of madrasa education, especially in KPK (NWFP) and FATA, and especially of those madaris (pl. of madrasa) propagating the Deobandi worldview, as modified by Wahhabi

influences from Gulf Arabs through Pakistani intelligence services. Thus, the JUI emerged as a powerful religious party in the 1980s. Eventually, personal rivalries between party leaders and tactical decisions saw the JUI split into two major factions.

The JI, JUI, and other religious parties represent one dimension of religious expression in Pakistan. For most Pakistanis, religious parties or religiously-inspired legislation, education, or socialization run counter to their conceptions of what Islam means, even as the deepening role of organizations offering ideologies centered on religion has made Pakistani politics more religious than ever. As a state founded to be a religious homeland, the “idea of Pakistan” has always been profoundly shaped by religion (Cohen 2004).

As has been the case elsewhere in the Muslim World when religious-political organizations began to contest for power, within those organizations there has been debate over whether violent tactics to seize and hold power are appropriate. This pattern of organizational behavior has been often repeated among Pakistan’s religious organizations. Student wings of the various parent organizations were (and still are) commonly used for street demonstrations, violent clashes on university campuses, and outright fights with activists from other parties. The JUI factions are particularly famous for their “students” – namely, the Taliban (which means, in Afghan Persian, “students”), many of whom came from JUI-affiliated madaris.

Islamist militants adopted violent tactics in Afghanistan and Kashmir in the 1980s and early 1990s, but as Islamization deepened some Islamist militants began to target Pakistanis as well, both those labeled as apostates, which allows them to be targeted “legitimately” for death by rabid “true believers,” and those targeted for other reasons. The sectarian violence of Pakistan in the 1980s occurred because Sunni militants viewed the Shia as apostates, while Shia militants gave as good as they got in an all-out sectarian conflict that continues today. Over time the violence

between the two groups of militants spilled outside of their original focus on each other to eventually include suicide attacks or other forms of indiscriminate attacks on innocent members of the other group's community (Jones 2009).

Even recounting in short the history of Pakistan's Islamist militant groups would exceed the space available for this chapter. Suffice it to say that numerous groups have come into existence since the mid-1980s that have been devoted to violence, and those groups have increasingly used terrorist tactics and focused on a range of targets. Some of the most violent groups include:

- Sipah-e Sahaba Pakistan (SSP), Sunni militants who target Shia, formed in 1985;
- Lashkar-e-Jhangvi (LJ), which split from SSP in 1996;
- Harakat-ul-Mujahideen (HUM), which focused on violent anti-Indian and anti-Hindu actions in Kashmir from the 1980s-on;
- Jaish-e-Muhammad (JM), an even more militant splinter group from HUM in 1994;
- Markaz-ud-Dawa-wal-Irshad, formed near Lahore in 1989, and subsequently developed an armed wing known as Lashkar-e-Taiba (LT), which engaged in violent actions in the Kashmir and India during the 1990s and 2000s;
- Tehrik-i-Taliban Pakistan (TTP), formed in the FATA by December 2007 and devoted to attacks on the Pakistani state.

Some overlap in membership and activities of these groups has developed, and many of them have undergone name changes in an effort to avoid Pakistani laws that outlawed certain groups by name (Rana 2004). These groups represent the most violent end of the Islamist spectrum in Pakistan, while the mainstream religious parties reflect a

more moderate Islamism, and most Pakistanis are not Islamists at all, but merely Muslims who live in a state that cannot escape its religious roots nor come to grips with what those roots mean.

Geopolitical Framework

Pakistan occupies a unique position in global politics. As the world's second most populous Islamic country (after Indonesia) and ostensible homeland for South Asia's Muslims, Pakistan is an important member of the Organization of the Islamic Conference and the demographic heartland of the world's Muslim community. As the world's sixth most populous country, allied with the world's most populous country (China) against the world's second most populous country (India), and yet also aligned with the world's third most populous country (United States) in the Global War on Terror, Pakistan is edging its way onto the stage of major power international politics, even as it continues to slumber and stagnate as a developing country. In the 1980s Pakistan stood as the frontline state against the Soviet Union's expansion into Afghanistan, at significant cost to Pakistan's domestic well-being. That adventure in Afghanistan ultimately led to the death of the Soviet Union, then the world's second superpower. Geopolitically, Pakistan has become an increasingly significant actor on the global stage, and five relationships are of particular importance: those with India, Afghanistan, Iran and the Persian Gulf, China, and the United States.

Pakistan's most important relationship has always been with its sister nation, India, with which it endured a painful birth. To Pakistan, India is the annoying, bullying, older sibling that got the lion's share of the inheritance when the colonial parent country, the United Kingdom, withdrew from the subcontinent. The struggle within the Indian National Congress and between it and other organizations, most especially the Muslim League, foreshadowed the eventual competition between India and Pakistan, a

competition that would center forever after on the acceptance of Pakistani poet-philosopher Muhammad Iqbal's notion of a "two-state solution" to South Asia's communal problems (Ziring 2003). The heinous bloodletting between the communities, especially those of northern India, during the Partition paved the way for a relationship that would be forever after marked by a profound, deep-seated distrust and suspicion.

For Pakistan, clearly the weaker state, the violence attendant upon the Partition and the festering sore of Kashmir, a contiguous Muslim-majority princely state that Pakistanis felt had been forced to join India unfairly, meant that building a strong military to thwart feared Indian hegemonic designs was necessary. Since then, India has retained most of the Kashmir while the religious foundational principle for Pakistan has grown stronger than ever in the minds of Pakistani leaders. Kashmir's status has become an existential issue for both India and Pakistan, both of which have federal governments whose constituent units are often constructed along ethnolinguistic lines. Fighting (or preparing to fight) India over the Kashmir region has provided the Pakistani Army with a reason for its existence, large size, and disproportionate share of the national budget for many decades. This fundamental, exigent struggle with India is at the core of Pakistan's relationship with that country and shapes Pakistan's foreign policy in general, as Pakistan has never been able to offset India's dominance on its own. Over the years, this has led to a number of wars and an otherwise unnecessarily bloated military, development of a strategic doctrine around the notion of Afghanistan providing Pakistan with "strategic depth,"⁹ and the pursuit of Great Power allies – notably China and the United States – to balance India and its erstwhile ally, the Soviet Union. To be sure, Pakistan never loses sight of India in its foreign policy.

If Pakistan sits forever in India's shadow, so Afghani-

⁹ Strategic depth developed as a Pakistani military doctrine in the 1980s. It viewed Afghanistan as a military fallback option in the face of an overwhelming Indian conventional attack.

stan sits in Pakistan's shadow. Pakistan's population is about 15 percent the size of India's population, while Afghanistan's population is about 15 percent the size of Pakistan.¹⁰ Afghanistan was also viewed by Pakistan's early postcolonial leaders as a neighboring state that was potentially dangerous because it was open to Russian/Soviet penetration and was inhabited by the same wild and untamed Pashtun (among others) who lived on Pakistan's frontier. The Great Game that was played by the British and Russian Empires in Afghanistan during the nineteenth century was beyond Pakistan's capability as the inheritor of the northwestern corner of the Indian subcontinent after World War II, which was one of the primary reasons that Pakistan developed its Cold War relationship with the United States. Still, Pakistan had interests inside Afghanistan, and it pursued those interests within its means.

Iran is Pakistan's other major neighbor (Pakistan also shares a tiny stretch of border in the high northern mountains with China), and the two countries built on an ancient history to develop strong relations in the beginning, with Iran the first country to recognize Pakistan in 1947. In the 1950s and 1960s both countries were part of the Central Treaty Organization (CENTO), a mutual defense pact to contain the Soviet Union that was led informally by the United States. Later, Pakistan's ties with Iran grew strained, in particular after Zia-ul-Haq's Islamization program, begun in 1978, was followed by the Islamic Revolution in Iran in 1979 that produced a wave of zeal among Shia Muslims. Pakistan has the world's second largest population of Shia Muslims, after Iran, so the increasing religious zealotry on both sides of Pakistan's Islamic sectarian divide during the 1980s made relations more difficult. Beyond that, Pakistan became a key frontline state against the Soviet Union in the 1980s and was thereby aligned with

10 This comparison does not hold up when made with regard to geographical size, where India's nearly 3.4 million square kilometers dwarfs Pakistan's 804,000 square kilometers, which is not appreciably larger than Afghanistan's 647,500 square kilometers. All figures from the CIA World Factbook 2010.

the United States, Saudi Arabia, and Egypt, all of which opposed the regime of Ayatollah Ruhollah Khomeini in Iran, who had replaced Shah Mohammad Reza Pahlavi in 1979. The Soviet occupation of Afghanistan lasted a decade (1979-1989), during which the Arab countries of the Persian Gulf poured money into Pakistan and gained increasing influence there. Iran thus serves Pakistan as both a way into and an obstacle to the lucrative Persian Gulf.

The complex Pakistan-Iran relationship saw Pakistan play a key role in Iran's ongoing effort to acquire nuclear technology through the activities of Abdul Qadeer Khan, as revealed in his 2004 confession. Whatever positive element the A.Q. Khan network might have introduced into the Pakistani-Iranian relationship during the 1990s was offset by their differences over Afghanistan. In 1994 the Pakistani government helped facilitate the rise of the Taliban movement as its proxy within Afghanistan. The Taliban also enjoyed support from Iran's rivals on the other side of the Persian Gulf, and in the end the only three countries to recognize the Taliban government were Pakistan, Saudi Arabia, and the United Arab Emirates. Iran was unremittingly hostile to the Taliban, especially following an incident in 1997 when the Taliban killed Iranian diplomats in Mazar-i-Sharif. Thereafter, Iran supported Afghanistan's Northern Alliance in a proxy war within Afghanistan. Pakistani-Iranian relations today are cordial and characterized by deepening energy and trade ties, but Iran has also strengthened its ties with India, especially through India's development of the Iranian port of Chahbahar and the road network that runs north through Zaranj and onward in Afghanistan to Delaram.

China is the least of Pakistan's immediate neighbors, in terms of amount of shared boundary, with only about 500 km. of international border in the high fastnesses of the Karakoram Mountains. By comparison, Pakistan's border with India is some 2,912 km., with Afghanistan it is nearly as long at 2,640 km, and with Iran the border is 909 km (*World Factbook* 2010). Moreover, Pakistan borders China's

remote and sparsely inhabited western province of Xinjiang, where China's few Muslims live in relative obscurity in the heart of Inner Asia; but neither the remoteness nor the incredibly difficult terrain should obscure the significance of the Chinese-Pakistani relationship. Pakistan's ties with China date back to 1950, when Pakistan broke relations with Taiwan, and subsequently established diplomatic relations with China in 1951. Throughout the Cold War China and Pakistan became more closely aligned, especially as China and India developed increasingly tense relations, exhibited most notably in their 1962 border conflict (although border incidents recurred in 1967). By then, China had become an open supporter of Pakistan, both in its Kashmir dispute and its 1965 War with India. India signed a Treaty of Peace, Friendship, and Cooperation with the Soviet Union in August 1971, and China supported Pakistan in its December 1971 War with India. As Pakistan's relationship with the United States waxed and waned (the United States came to be viewed as a "fair-weather friend"), China maintained a quieter but steadier relationship (characterized as an "all-weather friendship"). Although the relationship continues to be motivated by a mutual concern about India's rising power, Pakistan and China have gradually deepened their ties such that their relationship became more comprehensive. Despite the forbidding terrain separating the two countries (and perhaps because that terrain includes a portion of the Kashmir claimed by India but controlled by Pakistan), Pakistan and China built the Karakoram Highway from Kashgar down to Islamabad, completing 20 years of work in 1986. More recently, the Chinese built Pakistan's deep-sea port of Gwadar along the Makran coast of Balochistan — the port was opened in late December 2008. Longer-term plans exist for oil refineries, feeder highways and railroads, and pipelines.

Pakistan and China also enjoy significant strategic cooperation, both nuclear and conventional. China reportedly provided Pakistan with the blueprint for the development of a nuclear bomb (Department of Defense 2001;

Federation of American Scientists 2002), and China certainly aided Pakistan's nuclear program in multiple ways during the 1980s and 1990s, including signing a nuclear cooperation pact in 1986, agreeing to build the Chashma nuclear reactor in 1991, and transferring materials and components for radioactive materials processing, nuclear weapons, and delivery systems (Nuclear Threat Initiative 2007). In February 2010, Pakistan and China announced a new nuclear deal, whereby China would provide two more (in addition to two built earlier) reactors to Pakistan, clearly meant to offset growing American-Indian nuclear cooperation (Tellis 2010). In November 2010, in a move timed to be coincide with U.S. President Barack Obama's visit to India, the two countries announced that a fifth reactor would be built (Crilly 2010). China and Pakistan also have extensive conventional military cooperation, and China is Pakistan's largest defense supplier. As Curtis (2009) notes, "recent sales of conventional weapons to Pakistan include JF-17 aircraft, JF-17 production facilities, F-22P frigates with helicopters, K-8 jet trainers, T-85 tanks, F-7 aircraft, small arms, and ammunition."

Finally, Pakistan and China have also developed strong commercial and cultural ties. In 2008 the two countries signed a Free Trade Agreement, which they are widening to include more economic sectors (Afridi and Bajoria 2010). In December 2010, Chinese Prime Minister Wen Jiabao visited Pakistan to sign 22 trade deals worth nearly \$30 billion and open a new Pakistan-China Friendship Center in Islamabad that symbolizes the depth of the relationship (*Express Tribune* 2010).

If China is Pakistan's "all-weather" friend, the United States has been Pakistan's "fair-weather" friend over the years. That is, the United States has had an on again-off again relationship with Pakistan, with periods of close friendship followed by periods of estrangement. This "transactional" relationship developed because U.S. foreign policy during the Cold War was primarily shaped by containment of the Soviet Union. Also, the United States

inherited the leadership role in the international system from the United Kingdom when following World War II the British Empire was consigned to history and decolonization created a world of new states. In South Asia this meant the United States would have to develop ties with both India and Pakistan, despite their mutual hostility. India's far larger population and economy, plus its stronger democracy, combined to exert a strong pull on the United States; but its leading role in the Non-Aligned Movement of the 1950s led India toward the Soviet camp, causing Pakistan to become America's "most allied ally in Asia" during the 1950s, in Ayub Khan's famous phrase (Nolan 2005). In addition to a mutual defense agreement with the United States in 1954, Pakistan joined two regional anti-Soviet alliances in 1955, the Central Treaty Organization (CENTO, or the Baghdad Pact) and the South East Asian Treaty Organization (SEATO). In return, Pakistan was a major recipient of U.S. aid during the Eisenhower years.

Thus, the terms of the transactional relationship were established early on, but each partner had different goals, causing the relationship to wax and wane. The United States wanted Pakistan to provide an anti-Soviet bulwark, while Pakistan wanted the United States to help it against India's regional dominance. When the two regional rivals clashed in 1965 and 1971, the United States refused to aid either country, giving rise to the perception in Pakistan that the United States was not a true ally. Pakistan's nuclear research program in the 1970s, as well as Gen. Zia-ul-Haq's overthrow in 1977 and subsequent execution of Prime Minister Zulfikar Ali Bhutto in 1979, further cooled ties with the United States. However, the Soviet invasion of Afghanistan in 1979 resuscitated the relationship with the United States, as Pakistan was viewed as a "frontline" state against an expansionist Soviet Union. Pakistan became the home base for the anti-Soviet mujahideen and their refugee families and the United States led an international effort to assist both the Afghans and Pakistan. In 1985, however, Congress passed the Pressler Amendment, which forbade

U.S. aid to any country found to be pursuing the acquisition of nuclear weapons. Despite Pakistan's quiet but known pursuit of a nuclear capability during this period, the United States did not invoke the Pressler Amendment until after the Soviet withdrawal in 1989, which saw Pakistan go from being the third-leading recipient of U.S. aid in the 1980s (after Israel and Egypt) to no aid virtually overnight. Even an order of F-16 fighter aircraft for which Pakistan had already partially paid was not delivered.

The collapse of the Soviet Union and fall of the Iron Curtain in the early 1990s shifted American attention elsewhere, and Afghanistan's internal struggle, now a Hobbesian civil war, became a regional problem for Pakistan and the other neighbors to try to solve. In 1994 Pakistan turned to the Taliban as the solution to Afghanistan, even as Pakistan continued to rebuild its relationship with the United States. U.S. sanctions were eased in 1995 and the relationship appeared to be back on track, but Pakistan's nuclear tests in May 1998 (following nuclear tests by India earlier in the month) led to another rupture in the Pakistan-United States relationship. New sanctions were imposed, and the coup by Gen. Pervez Musharraf in 1999 led to additional sanctions.

The September 2001 attacks on the United States by Al-Qa'ida terrorists based in Afghanistan, where they were sheltered by the Taliban, led to yet another effort to repair the Pakistan-United States relationship. Pakistan was told very explicitly that it was either with or against the United States, and another round of transactional friendship began. In 2004 the United States designated Pakistan as its 14th "Major Non-NATO Ally," which entitles Pakistan to special treatment in military and financial assistance. Such a relationship has been critical for the United States following 9/11, because Pakistan is the only country bordering Afghanistan through which the United States could easily supply its military forces there, and today some 75 percent of its supplies cross Pakistan. Yet, the resilience of the Taliban and their ability to retreat into Pakistan to survive and

reconstitute themselves there has led to a troubled relationship that now involves U.S. drone attacks on terrorists and militants in Pakistani territory, even as the Kerry-Lugar Bill in 2009 provided \$7.5 billion in aid over the next five years.

The transactional nature of the Pakistan-United States relationship since 1947 has caused both partners disappointment and led to disruptions in ties that have prompted the existence of a “trust deficit” among the leaders of both countries. The United States has persisted in seeing Pakistan as a partner for geo strategic purposes only, and thus fluctuates from providing significant aid when it views Pakistan as important to American national security interests to suspending that aid when Pakistan is not so important to those interests. For its part, Pakistan sees the United States as unreliable, far-away, and insensitive to Pakistan’s national security interests, so it takes U.S. aid when it is offered but does not rely on it.

Today, a new “Great Game” exists, and Pakistan is both a major player and part of the playing field. In the 19th century the Great Game was an imperial contest between the British and Russian Empires that played out in Inner Asia through the activities of spies, diplomats, political agents, and proxy warriors. Today’s Great Game bears little similarity except in two major respects. First, it is a contest for supremacy between the great powers of today, and second, it is again taking place at the farthest reaches of the territory being claimed by those powers.. Afghanistan, parts of Central Asia, and western and northern Pakistan have all become locations where today’s Great Game is being contested, and the United States, Russia, China, and India are all contestants. Therefore, Pakistan is a contestant, also.

Pakistan: A Troubled Ally

Pakistan is a key player in the future stability of the Central and Southern Asian regions. As this discussion of Pakistan’s key determinants has suggested, the characteristics that have combined to shape Pakistan’s history and current

situation are all potentially destabilizing, especially when they interact together. The ethnolinguistic regionalism that has plagued the country was a significant influence on the demise of the larger Pakistan state that fell apart in 1971 as Bangladesh seceded. Today, ethnolinguistic regionalism still plagues Pakistan. This alone would challenge Pakistan's government; however, when layered with several of the other determinants identified – political immaturity, ideological uncertainty, and geopolitical struggle – the combination of challenges that results is difficult to overcome. On top of all that, the demographic explosion that has occurred and continues to plague Pakistan undermines economic development and contributes to militancy and political unrest.

These factors all work together to create a troubled ally in the global war on terror. American success in Central Asia is strongly tied to the ability of Pakistan to address successfully these five issues. It is not reasonable to expect Pakistan to resolve all of its intertwined problems in the next few years, but a failure to address and make progress on them will continue to promote, and potentially expand, instability not only in Pakistan, but throughout the entire region. Indeed, Pakistan has become one of the most important countries in the world to the U.S., even if far away and little understood.

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Physical Geography of Pakistan: Variability, Water, and Cultural Implications

Heidi H. Natel and Hannon A. Didier

Introduction

Pakistan's economic, environmental, and social infrastructure centers on the availability of water. The country's geologic history influences the current hydrologic overlay. Climate and the seasonal variability of rainfall have a direct, important impact on the geomorphic features found within Pakistan's political boundaries. Of these features, the Indus River dominates the hydrologic landscape of the country. Its primacy, both in size and scope, extends to all regions and shapes the physical and cultural landscape.

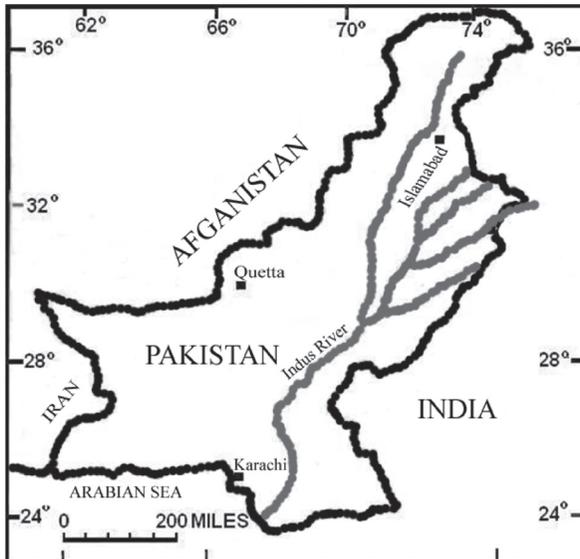


Figure 1. Map of Pakistan featuring the Indus River.

Source: Siddiqui and Ahmed 2005

The country's ability to sustain its growing population is based in large part on its management of the river. Overpopulation coupled with an increased demand for water causes additional stress on the water supply due to contamination by industrial pollutants, effluent and agricultural runoff. The river and its importance to the region are of great concern to Pakistan and will likely prove to be an even more valuable resource in the future (Vergheze 1997; Biswas 1999).

In order to truly understand and assess the country's interconnectivity with the Indus, one must first conceptualize its origins and the forces that create, alter, and sustain it. A complex and disaster prone geologic past has in many ways fostered a culture willing to accept the price of natural catastrophic events to continue its economic and social growth. This chapter identifies and explains those processes present on the natural landscape to afford the reader a visualization of the human footprint, and subsequent cultural landscape, of Pakistan.

Geology

Based on the theory of Plate Tectonics, the Indian subcontinent resided near the equator as a section of the mega-continent Gondwanaland approximately 150 million years ago. Its general climate formed a thick layer of sedimentary rocks, dominated by limestone. A significant northward migration of the plate began 120 million years ago. As the continental crust interacted with subsiding oceanic crust, an island arc formed along its northern periphery. This arc came in contact with the Eurasian plate 90 million years ago, followed by a collision with the Indian subcontinent around 45 million years ago, which until then had been es-

entially a large island. India thus became welded to Eurasia, and the resultant deformation between these two continental plates produced the world's highest mountains—the Himalayas and neighboring ranges. This environment sustains the persistent glaciers that feed the large rivers that drain to the Arabian Sea. (Inam et al. 2007; Siddiquini and Ahmed 2005). High tectonic uplift rates have ensured a constant balance of erosion and sedimentation throughout South Asia. The Indus River is a textbook example of this ongoing process (Metivier and Gaudemer 1999). These processes and their surface expressions provide the foundation for the physical geography of the country.

Collision and Tectonic Uplift

Pakistan resides along the western boundary of the geologic interaction between the Indian and Eurasian plates. A significant elevation gradient exists between the northern and southern boundaries of the country, ranging from sea level on the Indus flood plain to a maximum of over 28,200 feet (about 8595 meters) on K-2 (also known as Mount Goodwin-Austin). Uplift occurs at a significant rate along Pakistan's northern boundary, producing the Karakorum mountain range and the Hindu Kush Mountains. In the west, a more complex interaction between the flanks of the two plates has produced the Baluchistan Mountains, more moderate in both topography (surface configuration) and grade (slope) when compared to their northern cousins. This western boundary is referred to as the Indus Suture zone. Tectonic forces in the region continue to uplift the area and force the Himalaya Mountains upwards. These forces shape climate and drainage patterns in Pakistan, and set the stage for the focus of this chapter—the enduring presence of the Indus River (Inam et al. 2007; Roberts 2005).

Natural Hazards

The collision of the two continental plates creates significant natural hazards, including numerous earthquakes and flooding. The most relevant example of this is the magnitude 7.6 earthquake that affected the northwestern portion of the country in October 2005, resulting in a historic natural disaster and substantial loss of life. As in many underdeveloped countries, social, economic, and political factors contributed to this tragedy. Environmental degradation, discussed later in this chapter, exacerbates effects of earthquakes due to increased slope failures after loss of forested land (Halvorson and Hamilton 2010).

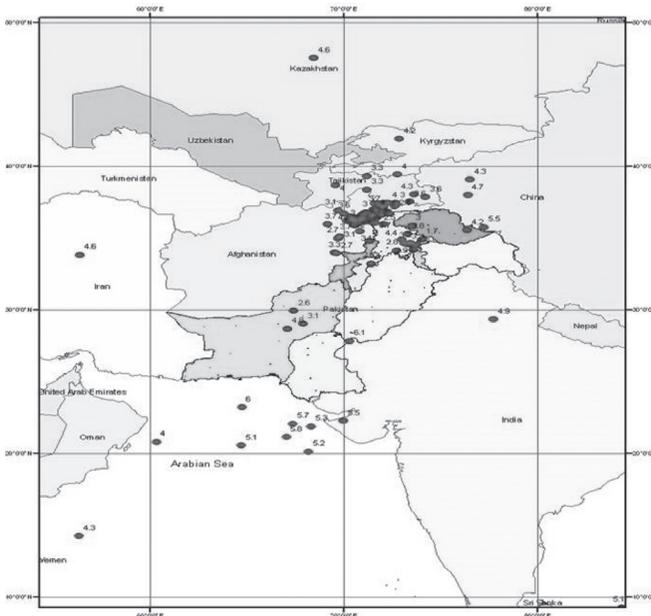


Figure 2. Earthquakes in the region of Afghanistan and Pakistan during the month of December 2009. Values listed next to each dot indicate strength of event with respect to the Richter scale. Source: www.pakmet.com.pk/seismic/index.htm

Uplift and topography affect regional drainage patterns and rivers shift to accommodate changing input (Clift and Blusztajn 2005). As uplift occurs, stream incision processes are more effective, permitting increased erosion and depositional processes. These processes manifest in the form of seasonal flooding and frequent channel shifting along major rivers. The magnitude and frequency of flooding is unpredictable and dramatic. In addition, slope failures along the steep-sided upper reaches of rivers may trigger catastrophic flooding events, and glacial lake outburst floods may infrequently produce singular events of magnitudes greater than annual monsoonal floods (Inam et al. 2007; Kale 2002). As with earthquakes, human-induced factors often compound the effects of flooding. A detailed discussion on Pakistan's natural hazards is found in a separate chapter in this book.

Geomorphology

Four distinct yet interrelated areas exist within Pakistan's historic boundaries. The mountains in the north rise to incredible heights. From their southern slopes flows the Indus River, whose catchment basin, alluvial plain, and delta dominate the central and southern portion of the country. The river's historic and current boundaries are flanked to the west in Baluchistan by an upland area of moderately-sloped hills and valleys. To the east of the river and its floodplain resides the Thar Desert, an area of formerly deposited alluvium (deposits emplaced by flowing water) that has migrated eastward with predominant winds (Holmes 1968).

Pakistan's northern boundary is positioned along the western one-third of the Himalaya mountain arc. Ridges and valleys vary in orientation along the bound-

ary, trending east to west in the country's northeastern border and trending northeast to southwest along the northern and western flanks. The extreme heights of the Karakorum Mountains allow for the formation of perennial alpine glaciers. These glaciers often serve as the headwaters of tributaries that feed the large rivers that flow to the Indian Ocean (Wescoat et al. 2000).

Because of historic sedimentary deposits and the steep grade from high mountain peaks to the Indian Ocean, the repositioning of alluvium from upland to lowland areas is significant. The majority of transport occurs during the onshore monsoon, when rivers are at their highest carrying capacity (a river's ability to carry sediment). Deep incisions and cutting in riverbeds allow these sediments to move and eventually matriculate along the alluvial plain in the south. This event is most prominently represented by the Indus River system and its tributaries (Roberts 2005).

The western portion of the country, most commonly referred to as Baluchistan, is characterized by lower elevation, steep-sided ridges and valleys with a northeast/southwest orientation, drained predominantly by the Indus River. This folded system is most easily characterized as similar to the Appalachian mountain chain, but differences in climate and elevation produce a more angular, less forested effect here. Elevations vary between 4000 and 7000 feet (1200 to 2100 meters). The eastern boundary of the system serves as the western border of the Indus River floodplain (Inam et al. 2007; Holmes 2005).

A desert exists along the eastern boundary of Pakistan, comprised mainly of former alluvium from the ancient Indus River. The Thar Desert partially resides in the floodplain of the Indus River, but is characterized as a distinct region here due to its strikingly dif-

ferent surface morphology. Silt accumulation without a clay foundation facilitates rapid drainage, and lack of rainfall accounts for an absence of vegetation in the area (Holmes 2005). The wind mobilizes sand that is deposited during significant flooding events and builds sand dunes, which are carried eastward by dominant westerly winds (Kale 2002).

Climate

The majority of Pakistan resides under the influence of the subtropical high, where persistent high pressure creates atmospheric stability and discourages rainfall. As a general rule, this stability is responsible for Pakistan's dry climate. The exception occurs during the monsoon season, when a shift in pressure changes the dominant wind direction, bringing moisture-laden air to the country. Rainfall associated with the monsoon is greater near the coast, but the entire country is affected by this seasonal shift in winds and resultant increased precipitation. Inland areas experience a greater annual temperature variation due to the enhanced heat exchange properties of land, but the area near the Arabian Sea is moderated by its proximity to water. Mountainous areas in the Khyber Pakhtunkhwa Province (formerly known as Northwest Frontier Province) experience a greater daily temperature fluctuation due to altitude and distance from the ocean.

Trends and Patterns

The regional climate is mainly hot and dry, with more temperate regions in the north and northeast and colder conditions at higher elevations. Pakistan's general climate is classified as humid subtropical, with hot summers and cool winters. Fully 25 percent

of the country is classified as desert due to low annual rainfall. Average high temperatures above 40 degrees Celsius (104°F) in the summer months coupled with low humidity force high evaporation rates throughout the majority of the country (Goode's World Atlas 2007; Inam et al. 2007). The availability of perennial water sources drives the cultural overlay for sustainability and agricultural use, and is addressed in detail later in this chapter.

The Summer Monsoon

Extreme low pressure centered over the Arabian Peninsula during the summer months precipitates a shift in predominant wind direction across the lower two-thirds of Pakistan. The southwest monsoon alters the dominant northwesterly wind pattern from July through October. This shift incurs an onshore flow, resulting in moisture-laden air traveling across the country. Orographic uplift—the forcing of air over a mountain—along the southern slopes of the Himalayas provides 6-8 inches (about 15-20 cm) of precipitation during the peak months of the monsoon, particularly during August and September. Lower-lying regions typically receive one inch (about 2.5 cm) of rainfall per month, which still accounts for greater than 60 percent of total annual precipitation (Roberts 2005; Kale 2002).

This seasonal shift and resultant rainfall recharges aquifers, provides water for crops, and defines the rhythm of life for Pakistanis. Glaciers in higher elevations expand during this time, ensuring continuous water flow to the Indus through its tributaries. The marked annual pattern creates natural hazards, produces lasting surface changes, and dominates socio-political management in government that often cre-

ates friction and social unrest (Mustafa 2005). The agrarian society wholly depends on the arrival of the monsoon for its sustainment. A shift in timing or a change in the amount of rainfall that occurs may create a significant alteration in the livelihood of millions of Pakistanis.

Hydrology and Water Resources

Due to seasonal variability, the general aridity of the country, and reliance on agriculture, water is Pakistan's most precious resource. Rapid uplift in the north and moderate uplift in the west direct flow primarily towards the south and southeast. Braided rivers—those which contain multiple channels—predominate in areas where uplift is more active, while meandering streams occur in sections of lower grade and closer proximity to the Arabian Sea. The multiple channels of a braided river result when river flow drops substantially and larger sediments are deposited in the riverbed. In general, rivers in Pakistan are characterized by a high but variable carrying capacity and discharge. Rivers will often move more than 50 times their wintertime water and sediment loads during the monsoon months. Snowmelt, glacial runoff, and monsoon-induced rains provide simultaneous, exponential increases from July through September with minimum discharge generally November through February (Kahlowan and Majeed). Underground water resources are often found at depth, due to significant silt accumulation above an impermeable layer of bedrock (Inam et al. 2007; Roberts 2005; Kale 2002). Lack of clay as a source material accounts for this depth, and links Pakistan's dependence on tube wells as a means for irrigation during arid months.

The Indus River

The hydrology of Pakistan is dominated by the Indus, a glacier-fed river that undergoes large seasonal fluctuations in discharge due to monsoons and glacial melting during the summer (Kale 2002).

The Indus River originates in Tibet at over 16,000 feet (4900 meters) in elevation and flows 1800 miles (2900 kilometers) through Tibet, India, and Pakistan before emptying into the Arabian Sea, south of the port of Karachi. A combination of seasonal precipitation from monsoons and glacial melt, although variable, provide the Indus its perennial status despite the aridity of the region.

The Indus is one of four large rivers on the Indian sub-continent, all of which experience large variations in seasonal flow, with a majority of its discharge and sediment movement occurring during the months associated with monsoons. Much of the bedrock in the region is sedimentary in origin, and accounts for the unusually high sediment movement transported by the river. The upper river's discharge is dominated by a sandy bed load that forms a braided channel pattern, due to its substantial fluctuation in flow. The lower reaches of the river reposition and deposit the finer silts. Very little clay is transported by the river, which affects water tables in the region. This lack of clay is a result of the source material from the river's main tributaries. From a practical standpoint, this means that aquifers are less likely to develop under pressure, and will require pump-driven wells for agricultural use (Fetter 2001). Later discussion in this chapter links this natural phenomenon and its cultural impact. Ancient riverbed locations suggest that the Indus River

has been flowing and discharging high sediment loads for a long period of time. These bedrock units representing the paleo-river channel average 600 meters in thickness (Inam et al. 2007; Pivnik and Khan 1996; Kale 2002).

A distinguishing feature of the river when compared to others of similar size and importance is its apparent longevity. Evidence indicates that the Indus has maintained a similar course since the subcontinent's initial collision with the Eurasian plate 45 million years ago. This is due in large part to the constraint of the Indus Suture Zone to the west, and continued uplift in the north which provides a constant gradient to the Arabian Sea. The Indus River's drainage basin, length, carrying capacity, and delta place it among the world's most dominant rivers. Its perennial status in an arid landscape defines its historical significance, and has shaped the cultures that have relied on it for life and prosperity.

Watershed and Channel Physiography

The Indus River watershed contains eight main tributaries, all of which feed into the main river inside of Pakistan's border. The watershed extends approximately 450,000 square miles (1,165,500 square kilometers), draining all of Pakistan as well as the eastern one-third of India and portions of China and Afghanistan. Silty bedrock invites rapid erosion in these mountainous areas, and the majority of this sediment is moved during peak rainfall associated with the summer monsoon. Erosion has increased due to recent human-induced deforestation in the region. It is estimated that deforestation occurs at a rate of 1 percent per year in Pakistan, significantly increasing the amount of soil transported downstream (Kale 2002).

This deforestation is a result of the need for additional agricultural fields as well as use of wood as a natural resource for building and fuel. The majority of the country's forestland is located in the Khyber Pakhtunkhwa Province, an important section of the river's watershed, which is largely comprised of coniferous trees harvested for timber. The effect of this change is seen in increased sedimentation and decreased crop yields (Hasan 2008).

The northern 1100 miles (1800 kilometers) of the great river exhibits a braided stream pattern, due to the incredible variation in flow. As monsoonal flow decreases, gravel, sand, and silt are deposited along scoured channel bottoms and await transport farther downstream during the following year's monsoon (Pivnik and Kahn 1996). Upon reaching the province of Sindh, the grade of the river decreases dramatically. This alters the stream pattern and type, and the river exhibits meandering characteristics for the next 700 miles (1100 kilometers) until it reaches the Arabian Sea. Stream competence (maximum sediment size) decreases as the river nears the sea, but carrying capacity remains high during peak flow. This change in grade marks the beginning of the Indus alluvial plain (Inam et al. 2007; Holmes 2005).

Alluvial Plain

The Indus alluvial plain extends 15-30 miles (24-48 kilometers) across the province of Sindh until it reaches the current delta complex. A general westward movement of the river has produced a broad, flat area marked by infilled historic river channels, meander scars, and natural levees created during seasonal flooding. Often, flooding during the monsoon season creates a broad, shallow expanse of water that filters slowly through the finer silts. Meander plains

predominate in the upper sections, while a cover flood plain characterized by broad silt accumulation and abandoned deltas exists in the southern areas (Pivnik and Khan 1996; Holmes 1968).

Since the 1700s, the Indus River has shifted its path near Hyderabad, Pakistan, consistently to the west. This could be credited to large earthquakes that may have created a damming effect along the river, creating temporary waterfalls or lakes as materials and debris fell into the channel. However, when the river does change its channel path, it is most often due to excessive sedimentation. Avulsion—changing of the river's course to the sea near the delta—may occur both in the upper reaches of the alluvial plain and closer to the Arabian Sea as a more efficient path is found after excessive progradation (building up) of the current delta (Pivnik and Khan 1996; Kale 2002).

Delta and Submarine Fan

The Indus River delta is a wave-dominated, tidally-influenced expanse of silty mangrove creek beds and tributaries. The delta most closely resembles the Shat El Arab delta in Iraq and Kuwait, which receives the combined flow of the Tigris and Euphrates rivers. Much of the Indus River's sediment load is deposited along the alluvial plain prior to reaching the delta. Prior to recent water diversions, the delta prograded into the Arabian Sea at a moderate rate, but decreased discharge and sediment rates have retarded this process. Similar to inputs along the alluvial plain, any accretion of sediment at the delta occurs only during August and September, while the rest of the year is characterized by a more saline, dormant river system (Gupta et al. 1999; Khan et al. 2002). Decreased discharge along the delta as a result of human activity

has altered ecosystem patterns along this portion of the river, and is discussed later.

Tidal creeks predominate along the delta front. These features often represent former river channels and are lined with extensive mangrove forests. Wave and tidal action have reshaped and widened these creeks over time. Decreased discharge in recent decades has modified the type of barrier island found at the mouths of these tidal creeks; mudflats are slowly being replaced by sandy barrier islands as waves and tides dominate and rework previously deposited sediments.

The Indus submarine fan deserves special attention due to its immense size, which is second worldwide only to the Brahmaputra River fan in India. The majority of river sediment that reaches the Arabian Sea is deposited in deep water as part of the submarine fan. The Indus Canyon, a remnant river channel formed during former glacial maxima, begins only two miles off the mouth of the delta and provides an underwater transport system to deposit incredible sediment loads offshore. This fan allows scientists to retrace the river's origins and build a better understanding of the processes that affect it.

Cultural Significance

The offshore fan, delta, alluvial plain, and drainage basin of the Indus River account for a complex hydrologic system that is irrevocably tied to the inhabitants of Pakistan (Inam et al. 2007; Metivier and Gaudemer 1999). In a region of substantial variability of river volume, the Indus changes seasonally but is always available to sustain its inhabitants. Paths may be altered by tectonic forces, floods of greater or lesser magnitude may occur, but life in the form of water

is ever present. With this foundation, a discussion on the challenges faced by the population affected by the great river is appropriate. A great contrast of traditional and modern applications along the Indus produces an environmental friction point of complex origin, and an uncertain future for the country.

Water Resources

Pakistan is home to over 170 million people, with an average household size of 7.6 (Mustafa 2005). Since its independence in 1947, Pakistan has struggled to feed its growing population. During the 1980s, Pakistan was able to provide for itself and sell surpluses of wheat and rice; however, it is no longer able to supply food to the growing population and now imports more foodstuffs than it exports (Wilchens 2004). Widespread, inefficient irrigation practices produce unintended consequences on the Indus River system. Damming and diversion of its waters, for example, carries economic and environmental impacts. The increased human footprint has also polluted its waters and led to international riparian conflicts.

Agriculture forms the foundation of Pakistan's economy, with wheat, rice and cotton serving as primary crops. Pakistan's 4:1 irrigated to rain-fed crop ratio is the highest in the world. The Indus River and the coastal mangrove swamps have traditionally supported a robust fishing industry; overfishing and reduced discharge from the Indus River over the past 40 years have severely diminished this resource. Pakistan's economic and political future is largely dependent on its ability to address these current challenges (Roberts 2005; Inam et al. 2007).

The ability of the government to affect the rate and flow of the Indus River's tributaries has dictated po-

litical protocol with India since the de-colonialization of the region. For twelve years, India and Pakistan wrangled over the details of the Indus Waters Treaty (IWT), as both countries eventually accepted military, strategic, and financial concessions to facilitate an agreement. Pakistan's lifeblood could be controlled by a series of dams and barrages – structures similar to a low dam with a series of gates that are independently opened and closed to control the flow of the river – built by India. The accord, which has been in effect since 1960, maintains a tenuous yet successful partnership between the two countries to ensure mutual access to the Indus watershed (Zawahari 2006).

Taming of the Indus River and Unintended Consequences

Modification of the Indus River's boundaries and channels has been attempted since the first civilizations settled along its banks over 5000 years ago. Three major dams and 12 diversion canals have been built on the river in the past century. A series of 16 barrages also exist along its course. The river's relatively straight, flat course through its alluvial plain fosters diversion of its waters with relative ease. Ancient engineers were highly successful in capturing the river's water for agricultural uses, and that tradition continues today.

Human modification of natural processes often produces unintended consequences. For example, levees, control structures, and barrages may decrease the frequency of flooding, but often invite more catastrophic events. Also, greater pressure from increased water flow that is trapped within manmade boundaries may lead to structural failure. As well, increased urbanization near population centers affects the soil's ability to absorb rainfall. A historic example of this

unintended consequence is seen in Rawalpindi, where flooding along the Lai river led to significant loss of life in the past decade. As squatters and lower-income families inhabit flood-prone areas, friction among disparate socio-economic groups within communities results after these events (Mustafa 2005). The taming of the Lai River has other significant unintended consequences. Re-routing water for human use results in a 65 percent flow reduction and a decrease in carrying capacity of over 75 percent. Effects of this alteration are widespread, and will be divided spatially between the alluvial plain and the delta.

Along the alluvial plain, populations downstream of engineered structures receive less water than their upstream counterparts. Disputes on the local level mimic broader tensions seen between countries, which are discussed at the end of this section. Allocation of such a precious resource is time consuming and difficult, and each decision brings consequences. Decreased sediment discharge disrupts the natural process of replenishment, bringing fewer nutrients (most notably nitrogen and phosphorus) to fields, forcing unsustainable agricultural practices. Interestingly, the river likely carries more topsoil than it did prior to human intervention, because of increased soil erosion in the drainage basin due to poor land use practices. That precious soil, however, is eventually deposited along the Indus submarine fan due to human engineering structures discussed previously (Rowley 1990). Although the intent is to control flooding and increase agricultural output, nutrients replenished in soil by annual floods are no longer inserted into the system. Also, flushing of manmade sewage and pollutants from the system is more difficult, creating a toxic environment that affects people, agriculture, and the economy.

Water that was allowed to reach the Arabian Sea was considered a wasted resource until recent environmental and economic impacts were recognized and better understood (Roberts 2005). Decreased flow has completely altered species dominance in the delta, directly threatening shrimp, mangroves, the Indus River dolphin, and the communities that depend on them for survival. This complex interaction is seen in other major estuarine systems controlled by manmade structures. High biodiversity usually observed in deltaic systems decreases dramatically with reduced discharge. In addition to the cultural impact on communities residing in the delta, Pakistan is affected economically from the loss of mangroves, which provide habitat for seafood in its juvenile stages and firewood for inhabitants (Wescoat et al. 2000; Inam et al. 2007).

Agriculture and its Effects

The green revolution of the 1960s resulted in exponential increases of crop yields for Pakistan. Sugarcane, cotton, wheat, and rice production soared throughout the 1980s. This facilitated a population increase, and the country has struggled to maintain the pace of agricultural production over the past two decades. Pakistan has seen a shift from being able to export surplus grains to now requiring imports of basic foodstuffs to feed their burgeoning population. Crops traditionally grown across the arid landscape of Pakistan are very demanding with respect to available water and nutrients. Poor groundwater quality and poor soil fertility in these regions compound the difficulty of supporting high yield crops. Unlined diversion canals, often used to redirect water to agricultural fields, actually saturate the soil to the point that it is unsuitable for

crop growth. This process, known as water-logging, also increases evaporation and salinizes the soil over time (Wilchens 2004).

Fully two-thirds of the Indus River basin's runoff is used for irrigation. Due to the absence of clay in the soil to serve as a natural barrier to evaporation, the problems just described with unlined canals are replicated. To wit, there is excessively high water loss into the surrounding silty soil before it can be harnessed and used for irrigation, and the soil becomes water-logged and increasingly saline due to high evaporation rates. Effectively, irrigation under present conditions is poisoning the land for future use.

Decreases in production have been combated by two notable methods: increased tubewell irrigation and increased nitrogen use. Tube wells are very common along the Indus River alluvial fan. A metal pipe is bored into the ground to the depth of the water table, which is then fitted to a pump to raise the water to the surface. An advantage of a tube well is that water is not lost while transported from the river to the fields for irrigation, eliminating water logging and subsequent increased salinization. Unfortunately, excessive tube well use has caused the water table to drop to dangerous levels in many areas of the country as demand outstrips recharge rates, and government-subsidized electricity for well use strains the economy (Wilchens 2004).

Demand for foodstuffs focuses attention on more productive means of growing crops. Increased nitrogen use in fertilizers is often thought to answer the demand for increased crop yields. This concept is often successful, but only to a certain level; excess nitrogen is wasted. This material flows as a pollutant in runoff, creating algae blooms and decreased dissolved

oxygen levels further downstream. An alternative method to purchasing fertilizer is to use wastewater for agricultural gain. Unfortunately for Pakistanis, there is no national program or monitoring practices aimed toward achieving World Health Organization benchmarks, and there is a noted, marked increase in intestinal disease when untreated wastewater is used in agriculture (Ensink and Van der Hoek 2009). Economically, the government-subsidized programs supporting fertilizers continue to be overused without positive results (Roberts 2005). This has placed a substantial strain on the economy and is linked to national level failures in public policy for environmental issues.

Political and Territorial Disputes

Water rights issues have remained a top political issue since Pakistan's independence. The Indus Waters Treaty (IWT) resolved many of these disputes, but as populations continue to grow and development needs rise, water conflicts will become endemic once again. As water use for ecosystem preservation is legitimized, internal political discourse over irrigation practices, diversions, and efficiency will increase (Verghese 1997; Biswas 1999).

As noted earlier, the Indus River's importance has in part dictated the political relationship between India and Pakistan since their independence from Great Britain in 1947. Fortunately, international organizations successfully mediated the dispute over water rights between the two countries. India was given riparian rights to the three eastern tributaries of the Indus, while Pakistan was given access to the five main western tributaries. Approximately 80 percent of annual runoff from the Indus watershed then belonged

to Pakistan. This complex political and environmental compromise has had military and economic implications, but is considered a success by most. The IWT is often cited as an example of patient diplomacy in a politically unstable atmosphere, and provided a model for the Ganga Water Treaty between India and Bangladesh in 1996. The Tigris and Euphrates River dispute between Turkey, Iraq, and Iran involves a similar set of complex variables (Verghese 1997; Zawahri 2006; Biswas 1999).

Water Contamination

Pakistan's population explosion created the widespread pollution of its river systems. In the urban environment, runoff is often contaminated with oils, metals, and sewage, which then enters rivers untreated. Raw sewage threatens water supplies, and the variable discharge of the river creates a more significant problem during periods of low water in the winter and spring months. Nitrogen use for agricultural purposes in excess of three times the necessary amount significantly adds to pollutants in the river (Wilchens 2004; Fatmi et al. 2009; Choffnes and Mack 2009).

Although surface water pollution continues to cause concern in Pakistan, groundwater contamination also poses a significant threat to the health of the population. Groundwater sampled from wells located along the Indus River in the past decade was found to contain high concentrations of arsenic. This was likely responsible for skin lesions commonly found in the population. Arsenic, fluoride and iron have all been reported in groundwater across the Indian subcontinent, and are linked to poor mining practices. As a heavy metal, arsenic attaches to fine-grained sedi-

ments, similar in size to that found along the river's flood plain. This allows heavy metals to concentrate in the overbank sediments that hold groundwater (Verghese 1997; Fatmi et al. 2009).

Summary

Pakistan's geologic past impacts its current cultural landscape. Uplift in the northern portions of the country creates immense mountains. This continued uplift fosters the drainage system associated with the Indus River. Dominant climate patterns, specifically the amount and variability of rainfall coupled with high temperatures, affect the surface features present in the country. Despite the arid environment, the river retains perennial status and acts as a vital lifeline to the population. Its drainage basin, alluvial plain, and delta affect four countries along its 2900 kilometer path to the Arabian Sea. A decrease in the grade of the river along its lower reaches encourages large-scale engineering projects to use its waters for irrigation.

Seasonal variability in climate entwines the population with the river. Monsoons drive this high variability, and the natural hazards associated with this natural event drive complex socio-economic systems that often struggle to provide stability for the population. Proximity to the Indus focuses intense farming practices in the agrarian society. Lack of environmental control and poorly implemented agricultural techniques have limited additional crop yield gains after an explosion in productivity during the 1960s. Dramatic population growth as a result of this productivity continues today, even though yields are no longer increasing. This growth has also produced a series of environmental concerns, from polluted drinking water to increased flooding and decreased water supply.

Pakistan's ability to manage and protect its vital link to the river and the land is paramount to its future success as a country. Although intractable conflicts with neighboring countries were averted due to successful intervention, increased pressure on water supplies elevates the likelihood of political friction. Educating the population on the importance of protecting its most precious natural resource may deter future conflicts that will arise if action is not taken. The Indus River will continue to serve as the single most important economic, political, and environmental issue for Pakistan through the 21st century. Effective government structures must be emplaced to adequately address wise stewardship of the Indus, and all environmental issues.

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Environmental Security in Pakistan

Christopher Gaulin, Luis A. Rios and Amy Krakowka

Introduction

In Pakistan, a country of harsh terrain, much of the population is dependent on natural resources, especially water. In a very real sense, climate change alters the availability of water, which, in turn, limits the availability of other resources. These changes endanger the well-being of Pakistanis and can be causes, catalysts or accelerators of conflict and instability.

Environmental security is the freedom from destabilizing forces and stresses brought about by environmental degradation and poor governance (Krakowka 2010). All of these can be influenced by a changing climate. When state security is compromised by a changing climate, any severe, long-lasting or significant natural hazard can not only degrade life for humans, but it can also diminish the overall quality of the environment they occupy. The inevitable challenge to day-to-day sustainability is thus profound and can systematically affect the daily lives of millions across South Asia by simultaneously threatening the viability of regional and highly interconnected local agricultural and irrigation systems, such as the vast meltwater-fed agriculture along the Indus River Valley. Non-governmental aid organizations concerned with food and water security aim to ensure a sufficiently robust resource supply system that is capable of supporting local and regional populations at various spatial scales. Unfortunately, they are facing increasingly difficult challenges just to supplement decreasing crop yields and water shortages. The implications of climate change on the resources of Pakistan are of keen interest to these organizations. Knowledge of the current and future climate situation can assist in near term and long range planning to mitigate environmental insecurity.

According to the National Intelligence Assessment (NIA) on the National Security Implications of Global

Climate Change to 2030, “climate change could threaten domestic stability in some states, potentially contributing to intrastate or, less likely, interstate conflict, particularly over access to increasingly scarce water resources” (Fingar 2008). As far as the United States military is concerned, former CENTCOM commander Gen. (Ret.) Anthony Zinni asserted that conflict from unmitigated climate change would involve loss of human lives (Broder 2009). Beyond global security concerns, the spread of conflict from insecure regions can have direct impacts on the United States, as it feels compelled to protect its vital national interests.

This chapter will investigate the impacts of changing climate on the natural resources and environmental security of Pakistan in order to address the simple, yet interconnected and complex question of “how vulnerable is Pakistan to climate change and variability?” Using data from the Intergovernmental Panel on Climate Change (IPCC) and other peer-reviewed projections, this chapter will sharpen the focus on the direct impact that climate change has had on Pakistan. Specifically, in terms of temperature and precipitation patterns we will look at some of the potential future implications for the state and region of South Asia at-large. Connecting changing climatic conditions such as precipitation and temperature to the availability of resources such as water and food is critical to understanding the future availability of these resources and how this availability will influence the habits of the local population. This could include migration or displacement, resource exploitation or conflict in addition to the connection between social disintegration and environmental degradation.

Environmental Security and Climate Change

The effects of a changing climate on Pakistan are seen as (mostly) deleterious to its standing as a state (Khan 2003). According to Khan (2003), disregard for sustainable development is responsible for the increased impact of these changes. Sustainable human development is a concept that

focuses on three central pillars: economic, social and environmental strength. Pakistan is especially weak in each of the aforementioned areas and is thus more vulnerable to the potentially negative impacts of climate change, which often manifest themselves in ways that are difficult to predict and complicated/expensive to adapt to. Indicators of this include saline and waterlogged irrigated land, deforestation, and both water and air pollution (Khan 2003).

The impacts of climate change on peace and security make it an important aspect of national policy. The UN debated this issue for the first time in April of 2007, marking its significance on the global scale (Busby 2009). The many reports since then have concluded that developing countries, especially those in Africa and Asia, are most susceptible to the negative impacts of climate change. These impacts include worsened natural disasters, heat waves and water scarcity. While geographic factors such as latitude, coastal proximity, and reliance on glacial meltwater are primary factors in susceptibility, inadequate governance and poor populations catalyze the conflict in these areas (Busby 2009).

Developed states are better able to survive droughts, flooding or other climate-influenced situations. Many have begun to include these environmental dimensions into national security and other policy. While public figures in the field such as GEN (Ret.) Zinni and Deputy Assistant Secretary of Defense for Strategy Amanda Dory espouse adaptation and assert that failure to spend and act now will only lead to larger spending in the future, many states have yet to commit resources to such efforts (Broder 2009). Commitment of resources to adaptation may be viewed as conceding that nothing can be done to curb emissions of greenhouse gases and other causative agents of climate change (Busby 2009).

Joshua Busby also presented a Special Report to the Council on Foreign Relations two years earlier, which emphasizes the importance of climate change in national security policy. He highlights the various initiatives such as

the Center for a New American Security (CNAS) and the Center for Naval Analyses (CNA) Corporation's studies as well as a Senate bill for a National Intelligence Estimate on the potential security risk of climate change (Busby 2007) as examples of the importance of climate change on national security policy. These and other movements to bring climate change to the forefront of security discussions are important steps in developing policy with the potential to manage these issues. However, policy may be incorrectly split between mitigation and adaptation. Busby points out that mitigation and adaptation are not competing alternative solutions to the growing climate problem. Rather, they are two mutually reinforcing integral parts to reducing the risk of both long and short-term effects. It is essential for the United States as a global super power to take the lead in the climate change challenge (Busby 2007).

Background/Geography of Pakistan

Pakistan can be divided into three distinct areas clearly defined by their physical geography and population footprint. The southeastern third consists of the Indus River Plain; to the west is the Baluchistan Plateau, and north and west of the capital of Islamabad are the Northern Highlands (Figure 1). Other areas such as the mountains on Pakistan's western border can be considered separately, and mark a complicated and rugged border region with Afghanistan (Blood 1994).

The Indus River Plain contains the provinces of Sindh and Punjab with correlating Sindhi and Punjabi ethnic groupings. Because of meltwater from the Himalayas, the Indus River Plain contains the bulk of the Pakistani population centers and is the most fertile and agriculturally productive region, accounting for 25 percent of the Gross Domestic Product (GDP) and 47 percent of agriculture-based employment (Mulk 2009). The Indus Basin receives most of its water from some of the largest glaciers in the world. Snow and ice melt from the Himalaya glacial area supply

approximately 80 percent of the total flow of the Indus in the summer. The main source of surface water for Pakistan is the Indus River. This is the key region of focus in understanding environmental security in Pakistan as it maintains the bulk of the country's population and economic development. Much of the irrigation infrastructure was built when the Indus Basin was under British administration and control (Mulk 2009) although it has since grown in size and usage as a result of population growth pressures within Sindh and Punjab Provinces.

West of the Indus River Plain is Baluchistan, a very arid and sparsely populated southern border area with Afghanistan. Finally are the Federally Administered Tribal Areas (FATA), and southern portions of the Khyber-Pakhtunkhwa Province (formerly the North-West Frontier Province). Within these provinces a mix of Baluchi, Pushtun, and some Punjabi populations exist. The Northern Highlands contain the Khyber-Pakhtunkhwa Province, Northern Areas, and the disputed Kashmir Region. The boundaries in the southern portion of Pakistan are relatively clear in regards to political boundary and control. However, further north the topography as well as the political boundaries increase in complexity. The North and Northwest are administrated and controlled by tribal leadership and other non-central factions beyond the reach of Islamabad.

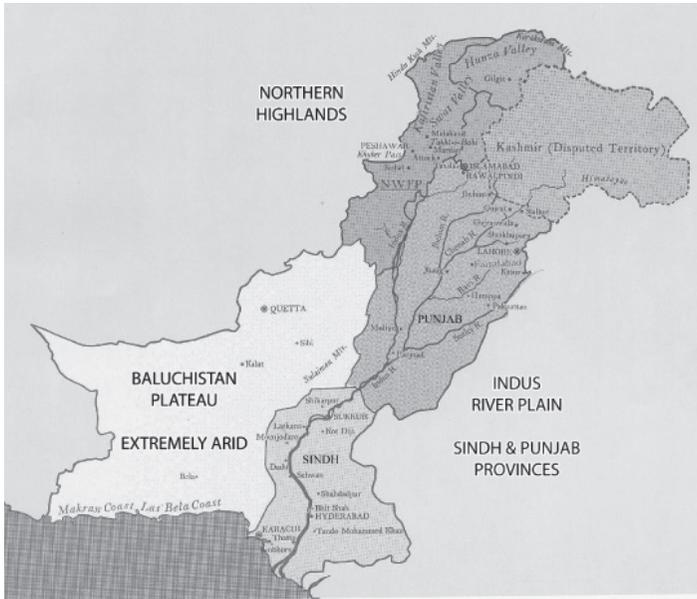


Figure 1. Map of the Islamic Republic of Pakistan with provinces.

Source: National Trade & Transport Facilitation Committee 2009

In addition to the varied physical and cultural geography of Pakistan, there are also distinct climatic seasons to consider. Monsoons are responsible for the precipitation pattern observed throughout Pakistan. During the summer monsoon months (June through September), the country receives the majority of its precipitation with slightly over 50 percent falling between July and August. However, the monsoons affect different parts of the country in varying ways. Increased precipitation from intensifying monsoons in the mountains helps fuel the Indus and its agriculture, while the same changes on the coast could be deleterious, inflicting costly damage to fishing vessels, homes and coastal wetlands.

A wild card exerting additional pressure on the region is the specter of climate change and its impact on monsoon-driven precipitation patterns and the subsequent toll on Hi-

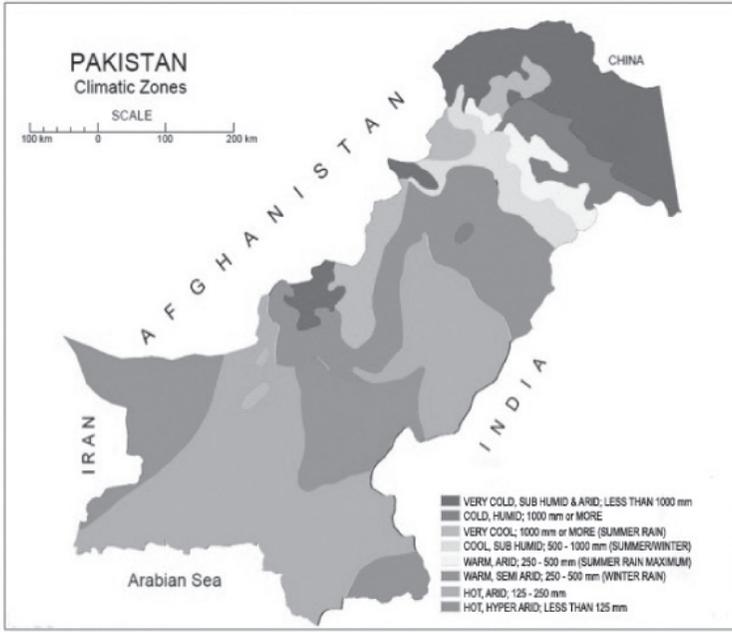
malayan glaciers. There are approximately 15,000 glaciers in the Himalayas, which contain 12,000 cubic kilometers of fresh water (IPCC 2007). However, most glaciers, such as the Gangotri (located in India), are quickly retreating. The Gangotri is noteworthy because it is one of the largest in the Himalayas and the source of the Ganges River. In 2004, it was noted that the Gangotri was retreating at 98 feet per year, a rate that would suggest the end of minor Himalayan glaciers by 2035 (Farooq and Khan 2004). Interestingly, melting ice does not appear to correlate with increased river flow. Instead, melt rates are coupled with increased measurements of evaporation and irrigation along the Indus' million-plus square kilometer watershed, to illustrate the increasing (and future) rate of population-based pressure on this very sensitive commodity/resource (Farooq and Khan 2004).

Climate Change in Pakistan

Climate Types

Within Pakistan there are several different climatic regions, largely due to the highly variable topography found within its borders (Figure 2). With increasing latitude the temperature generally decreases and precipitation increases. Southern and eastern Pakistan are hot to warm and semi-arid to hyper arid.

Northern and western Pakistan are generally cooler or cold with humid and sub-humid climates: a climatic regime characterized by mild, moist winters and hot, dry summers. However, the northeastern mountainous and sub-mountainous areas receive more than 1,700 mm annual precipitation with a major share (over 1,000 mm) from the summer monsoon (Islamic Republic of Pakistan 2003).



Source: Survey of Pakistan

TOPOGRAPHY OF PAKISTAN

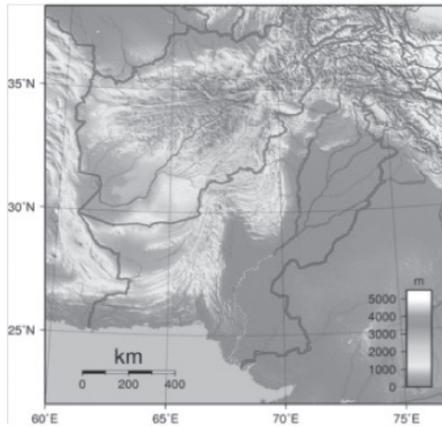


Figure 2. Climatic zones (top) and topographic relief (bottom) of Pakistan.

Source: adapted from Islamic republic of Pakistan 2003

Agriculture

Agricultural production accounts for roughly 35 percent of Pakistan's GDP, 60 percent of the labor force and 20 million hectares of land (Kazi 2010). The eight climatic zones of Pakistan determine what kind of agriculture can take place in a certain area. Pakistan can also be divided into ten agro-ecological zones based on physiographic factors. These zones (shown in Figure 3) are: a) the Indus delta; b) the southern irrigated plain; c) sandy deserts; d) the northern irrigated plain; e) barani (rain fed) lands; f) wet mountains; g) the northern dry mountains; h) the western dry mountains; i) the dry western plateau; and j) the Sulaiman piedmont. Figure 3's agro-ecological zones can be qualitatively compared to Pakistan's climatic regimes (Figure 2) in order to better understand the four major cropping patterns used within the state. As a result of this complex climate-topography relationship, four major growing regions emerge: rice-wheat, cotton-wheat, sugarcane-wheat, and maize-wheat (Islamic Republic of Pakistan 2003). It is worth restating that the Indus, its tributaries and the intricate canal system built around these waterways primarily facilitate much of this agriculture. Out of the 20 million hectares dedicated to agriculture, 15.3 million are irrigated through canals, tube wells, and tanks (Kazi 2010). This canal/irrigation system is ancient, although it was substantially modernized and expanded by the British during the middle half of the 20th century. As is the case with most of today's developing states, agriculture is extremely important in Pakistan, accounting for one quarter of the country's GDP while employing approximately half of the population (Islamic Republic of Pakistan 2003).

Livestock farming also plays a significant role in the economy of Pakistan. Livestock and crop production are commonly found together on small landholdings. About one third of Pakistan's area is classified as rangeland. However, landless farmers also rely on livestock as it is inherently portable. This is important when droughts or disaster cause temporary intrastate resettlement. Livestock

is still a major source of fertilizer during crop production, power for farm operations, and fuel for cooking. In addition, commodities such as wool, hides and skins, which are used to produce carpets, leather garments and footwear, are important components of the export side of the economy (Islamic Republic of Pakistan 2003).



Figure 3. Agro-ecological zones of Pakistan.

Source: adapted from Islamic Republic of Pakistan 2003

Indicators of Climate Change

Precipitation and temperature are two of the clearest manifestations of a changing climate. Changes in agricultural productivity, rate of glacial melt, and arable land can generally be traced to these factors. Although the overall mean annual precipitation of the state is generally increasing, and forecast to continue this increasing trend, some more localized patterns show a decreasing trend, by about 10-15 percent each. Two such regions where a decrease in pre-

precipitation is expected include the immediate coastal region and inland arid plains, which account for about one half the state's area (IPCC 2007). The aforementioned (localized) decrease is of special concern to an area such as the plains of southwest Baluchistan that already receive only 30 mm of precipitation during the wet season (Islamic Republic of Pakistan 2003). The models and projections analyzed here show fluctuations in the overall trend of precipitation with relatively high uncertainty. However, all of the results tend to show increasing summer and decreasing winter precipitation over the next decade (Khan 2005).

The mean annual temperature in Pakistan has been increasing throughout most parts of the country (Khan 2005). Sub-Montane, Western Highlands, and the Lower Indus Plain are the only areas with a consistent cooling trend. Although not shown directly in Table 1, it should be noted that model output does suggest localized areas of increasing temperature around highly urbanized areas, consistent with the concept of "urban heat islands." Coastal temperatures (at the southern extreme of the country) in the past decade have increased about one degree Celsius; an increased frequency of hot days and nights since 1960 adds approximately three weeks of warmer weather (World Bank 2009). Globally, climate based projections predict that both seasonal and annual temperatures will continue to rise. By the end of the decade the average annual temperature could be approximately four degrees Celsius warmer (Khan 2005). To put this in perspective, the generally accepted figure is that global temperatures have risen between 0.5°C and 1°C over the past half century (IPCC 2007) with clearly documented impacts across the planet. It is safe to envision that a 4°C increase in global temperatures—somewhere between four and eight times the warming experienced since 1950—is likely to shift existing norms of every aspect of daily life into chaos, with the more fragile developing states and regions paying the greatest price.

Table 1. Mean Annual Temperature Trend 1951-2000, °C.

Region	Annual	Summer Monsoon	Winter (Dec – Mar)	Apr – May	Oct – May
Greater Himalayas	0.04	-0.8	+0.32	+1.09	-0.06
Sub Montane	-0.19	-0.57	0	+0.13	+0.12
Western Highlands	-0.72	-1.48	-0.65	+0.17	-0.47
Central/Southern Punjab	+0.11	-0.25	+0.03	+0.83	+0.31
Lower Indus Plains	-0.08	-0.55	-0.07	+0.35	+0.15
Baluchistan Plateau (east)	+0.11	+0.46	+0.63	+0.79	+0.5
Baluchistan Plateau (west)	+1.17	+1.3	+0.43	+2.17	+1.8
Coastal Areas	0	-0.18	+0.05	+0.03	+0.3

Source: Khan 2005

Changing temperature and precipitation patterns can be indicators of climate change. However, the impacts of these changes may not be clearly visible to the average person. The impact of temperature and precipitation changes is more noticeably reflected in shortening growing seasons, changes in average yields, sea level rise and other consequences, which directly affect the people of Pakistan. In relation to the previously discussed changes these also affect some areas of the country more adversely than others.

Growing season length can be attributed to both temperature and available water resources. As temperature increases there is a decrease in the length of growing season for wheat; that is, the length between sowing and harvesting since the biological maturation of the grain would happen much faster. Wheat, it should be noted, is Pakistan's staple crop and the driver of its agricultural engine. Considering Pakistan's varied terrain it should be noted that the length of the growing season decreases at approximately 5 percent per degree Celsius increase in the mountainous regions (where change is most extreme) and 3.5 percent per degree Celsius in the arid plains (where change is

least extreme) (Kahn 2005). A five degree Celsius increase would shorten the average wheat-growing season by approximately one month. Increases in temperature shorten the length of the growing period, which reduces crop productivity. Changes of this nature could greatly reduce the available food supply and lead to a need for more intensive farming techniques in order to offset the shortened season. This would likely lead to a need to grow different crop types or heartier strains of crops in place of the ones that can be grown under today's climatic conditions.

Sea level rise is another common indicator of a changing climate. Using the least extreme scenario predicted by the IPCC, there is an expected rise in sea level of 40 centimeters by the end of the century (IPCC 2007). More drastic changes could result in a 90 centimeter rise in sea level by 2100, which would be consistent with current sea level rise trends observed and documented in many parts of the planet (Islamic Republic of Pakistan 2003). Even the more modest sea level estimate could contribute to flooding along the heavily populated coastline and up the estuarial rivers. This could be amplified during extreme monsoons or an exceptionally busy tropical cyclone season, which would be especially disastrous in the heavily populated Indus estuary.

A side effect to rising sea level is an increase in the salinity of the soil near water. In 2008, one quarter of the Indus River Basin was saline (Mulk 2009). Increased irrigation, poor irrigation techniques, the mismanagement of irrigation resources, and sea level rise coupled with decreasing precipitation in arid regions will increase the extent of salt compounds within soils, which are then less suitable for agriculture and lead to decreased yields. Additionally, increased salinity could decrease the health and biodiversity of coastal habitats to include those of mangrove trees (Pakistan 2003). Mangroves provide an important habitat to many forms of marine life. This includes shrimp and prawns, which Pakistan exports. They also provide vital coastal storm protection.

These factors as well as many others can greatly stress the resources available to Pakistan. The changes will alter the growing season for crops and the space available for agriculture and livestock. Rising sea levels, urbanization, and these resource changes will also shift the population of Pakistan around. Coupled with the precarious and ineffective government structure of Pakistan, this all could lead to great insecurity.

Environmental Security

Understanding Pakistan's current level of development is essential in effectively analyzing the environmental security situation of the country. Not surprisingly, the vast majority of Pakistanis live very close to the Indus River (Figure 4) in order to support a mostly agrarian lifestyle (Fund for Peace 2009). Agriculture and its corresponding infrastructure (directly tied to the Indus) account for nearly half of the state's employment opportunities. A decrease in the amount of precipitation or a change in where precipitation occurs could lead to more people migrating to areas closer to the river itself, placing an increasing amount of stress on an already limited and seasonal resource. Additionally, disappearing upstream glaciers, increased evaporation, decreased precipitation, and increased pressure on finite irrigation resources may limit the Indus River's potential. These stresses could worsen the living conditions in the cities around the river and add to environmental damages already underway. This negative effect is amplified as urbanization and population growth increases.

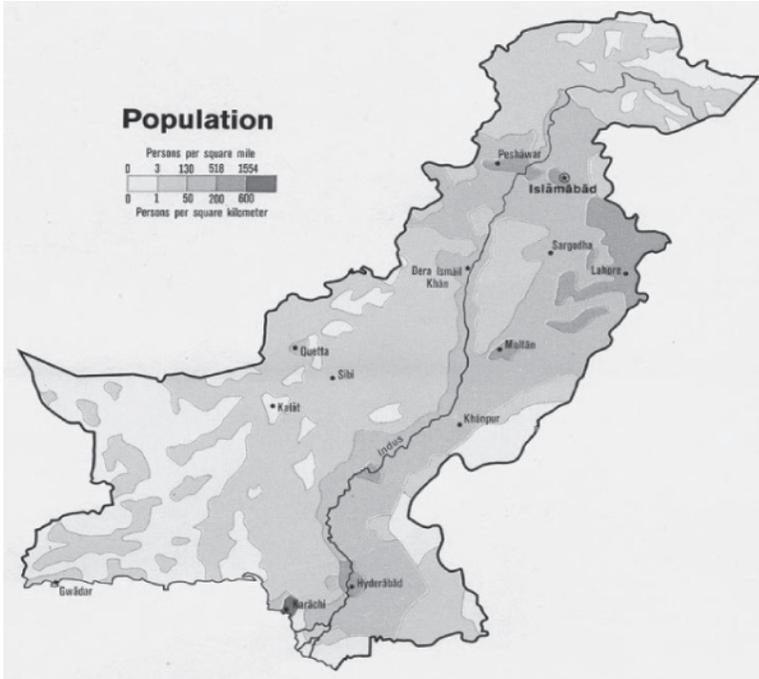


Figure 4: Population density focused around the Indus River.

Source: University of Texas

Without a doubt, worsening agricultural conditions threaten the economic vigor of the state. One quarter of Pakistan's GDP is tied to agriculture which would be harmed by a decrease in crop yields and growing season length caused by climate change. These decreases would strain the ability of the population to obtain sufficient food and also decrement the amount of food available for exports. It is of interest to note, however, that although changes in growing season length caused by a drier and warmer climate may be detrimental to some crops, others might actually benefit. The problem for Pakistanis is recognizing this change in time to adjust to a new norm and change to growing a more appropriate set of crops.

Kashmir is a region that has been a source of conflict between India and Pakistan for over 60 years. While much of the conflict is based on religious and political turmoil, there are also environmental ramifications of the area's control; 80 percent of Pakistan's agriculture receives water from the rivers that originate in India (Faris 2009). In 1960, Pakistan and India signed the Indus Waters Treaty, which divided the tributaries to the river. In Kashmir, there is evidence of decreasing amounts of snow, faster melt rates and even rain (versus snow) in the winter months (Faris 2009). The controlled snowmelt is essential to power production and use within the Kashmir. Now, these changing rates of snow, rain, and melt are limiting agriculture as well as hydropower potential. Decreasing water availability may disrupt this long-standing pact. Potential dam projects in Kashmir could mean even less water flow to Pakistan, which uses 96 percent of its water for agriculture (Faris 2009). Thus, decreasing yields would be diminished even further. In the area that former President Bill Clinton called "the most dangerous place in the world," a decreasing water supply could end the 50-year treaty and contribute to conflict as neither side wants to yield their diminishing resources (Faris 2009).

Pakistan is a country with an increasing urban population. Approximately 35 percent of the 169 million residents live in urban areas (Fund for Peace 2009). Pakistan's largest city, Karachi, has a projected population of 19.4 million by 2015 and is the economic and industrial hub of the country, primarily because of its ports on the Arabian Sea (Smith 2007). However, being located on the coast also makes Karachi vulnerable to some of the more drastic effects of climate change. The rising sea levels as well as increased intensity of storm surges and floods present a threat to the growing city (Balk et al. 2009).

Conclusion

The impacts of climate change in Pakistan begin with the immediate physical ramifications of basic resource availability and changing conditions. Well known indicators such as increased temperature, decreased precipitation and changing seasonality have long term as well as immediate influences on population. Decreases in crop yield and water availability are first order effects, and they are profound in their own right. However, they can also lead to migration, inter- and intra-national conflict, and impoverishing conditions. A factionalized and ineffective government coupled with the concentration of ethnicities in certain regions and the lack of interaction between groups, due to cultural and geographic factors, also serve to increase/magnify the tensions among the people.

Especially important to Pakistan is the fate of the Indus River, its very lifeline. With the majority of the population living on or near its banks and irrigating their crops with its canals, the Indus is essential for the environmental security of Pakistan, supplementing arid land with water to grow, and feeding its population. Insufficient resources could increase the need for outside assistance, in the form of humanitarian aid or even military (U.N.) intervention if the situation deteriorated to the point of extreme/severe human insecurity. Climate change's effect on environmental security will be visible in the basic human needs of the people, degradation of the environment they live in, and the potential for conflict over the disappearing resources they depend on to survive.

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Natural Hazards, Vulnerability, and Disaster Preparedness in Pakistan

Wiley Thompson

Hazards, Humans and Vulnerability

In his review of the response to the 2005 Kashmir earthquake, Ozerdem suggested that human actions were “incompetent” leading to the creation of a post-event social disaster (Ozerdem 2006). Hicks and Pappas (2006) were also very critical of the disaster response effort. Each of these works suggest that the very high death toll (estimated at as high as 84,000) was in part due to the uncoordinated post-event efforts. Similarly, others suggest that socio-political failings extended the suffering from the 1998-2001 drought both temporally and in scope (Barlow *et al.* 2006). Natural hazards in Pakistan, like many other areas, will result in long-term impacts on the population which continue to manifest far beyond the resolution of the precipitating event. To study the physical forcing mechanisms which create hazards and ignore issues of vulnerability and response would be to continue down a well-worn, myopic path. Hazards are conditions, events, and forcing agents of natural or human origin which are capable of creating insult or harm to living things or property. Harm can range from emotional distress to death. When allowed to disrupt social and economic systems, hazards can cause humans to drastically modify their way of life. Alexander (1999, 4) describes a hazard as an extreme event that “makes an impact on human beings and their environment,” and that originates “in the biosphere, lithosphere, hydrosphere or atmosphere” (Alexander 2000, 9).

Two key concepts used when examining hazards and their affect on humans are risk and vulnerability; essentially, these are the links between humans and hazards. Disaster scholars define risk as the “probability that a particular level of loss will be sustained by a given series of elements as a result of a given level of hazard impact” (Alexander 2000, 10). Therefore, risk results from the intersection of a hazard and human system. The proportion of population, infrastructure, or economic assets that are at risk relates directly to the level of exposure to a hazard. As well, populations or components of human systems exposed to a hazard may have differing abilities to cope with their exposure. This is vulnerability, or “the characteristics of a person or group and their situation that influence their capacity to anticipate, cope with, resist and recover from the impact of a natural hazard” (Wisner *et al.* 2006, 11).

Pakistan - The Physical Environment

Pakistan is a country which contains many diverse landscapes and climates. Much of this can be attributed to its northeast-southwest trending extent. The northernmost extent begins in the Karakoram Range, in which the famed Wakhan Corridor is found. From there the country stretches to the south where the Makran Coast Range Mountains and Thar Desert meet the Arabian Sea. Pakistan contains three major physiographic regions - the northern highlands, the central Indus River plain, and the Balochistan Plateau, which reaches westward to Iran and frames the landlocked southern border of Afghanistan. The raised relief of the western border with Afghanistan and the northern border with China is a result of the active tectonics

in the region. As the Indo-Australian tectonic plate continues to collide with the Eurasian plate, the uplift created from this suture results in mountain formation and earthquakes.

In general, the climate of Pakistan (Figure 1) can be described as temperate and arid. The northern and western regions are semi-arid due to the topographic barriers, as these mountains tend to increase precipitation and accumulate snowfall in the higher elevations. Snowfall feeds many of the tributaries to the Indus River during the spring melt. The climographs (depiction of precipitation and temperature averages over a one year period) in Figure 1 show the timing and concentration of the precipitation across Pakistan. The concentration of precipitation normally corresponds to the periods of greatest flooding. Increased precipitation also correlates well with increased slope stability events, which can result in large landslides. The climograph for Muzaffarabad depicts a particularly noteworthy precipitation pattern as it has two peaks in precipitation. The July-August, increase follows the typical monsoon precipitation pattern. The earlier peak, in February-April, can be rather disastrous when warm, precipitation prematurely and rapidly melts accumulated snow packs in higher elevations. Termed a "rain on snow" event, this is a common and sudden method of flooding onset. Though often a more localized event, the results can nonetheless be very devastating to isolated mountain communities.

As the topography dips much like an uneven table from northwest to southeast, the climate transitions from semi-arid uplands to arid lowlands. The arid lands include the Thar Desert, which is interrupted in name only by the presence of the Great Indian Desert. Outside of the arid western portion of the country,

July and August are the months with by far the greatest precipitation, as a result of the South Asian Monsoon. The monsoon brings much needed rain and a slight respite from the oppressive heat in some areas. Significantly cooler temperatures do not arrive until mid- to late October. As one would predict, areas in the north and northwest experience lower average annual temperatures and a greater temperature range.

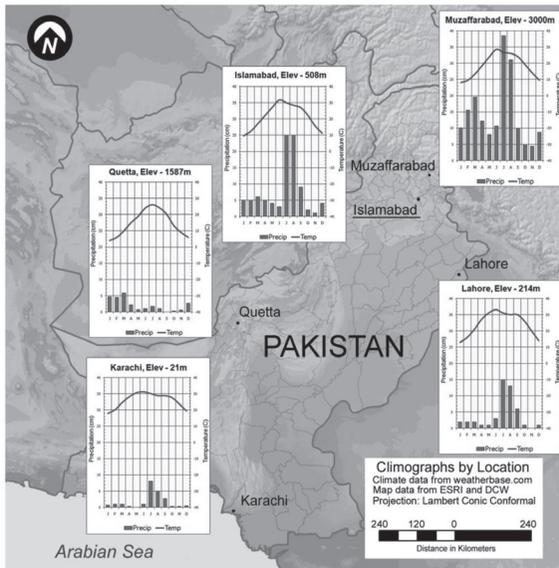


Figure 1. Temperature and precipitation data at selected locations in Pakistan.

Source: Climate data from weatherbase.com

Hazards In Pakistan

Hazard Trends in Pakistan

South Asia in general and Pakistan in particular are home to a suite of natural hazards, to include earthquakes, floods, drought, tropical cyclones, and mass

wasting events (Figures 2 and 3). This chapter will briefly address floods, droughts and tropical storms and then address earthquakes in depth, as earthquakes have caused the greatest number of cumulative deaths (from 1900 to present) and also the greatest expense. Floods are the most common type of hazard, affect the greatest numbers of people, and rank second in deaths caused by all hazards. In terms of number of people affected, the single greatest natural hazard event was the 2010 floods. During this time 20.2 million people were listed as having been affected (EM-DAT 2010) however use of the term *affected* can vary greatly.

Each of these hazards vary in spatial and temporal extent and magnitude of impact. Floods and tropical cyclones have well understood causes and readily identifiable precursors and are therefore relatively easy to prepare for, yet each event can still result in death, displacement, and great loss of resources. These events, while often catastrophic in a micro-scale sense, rarely lead to a high overall death toll. Droughts, which are complex, slow-onset events, rarely result in immediate death, but can create long lasting impacts in a region which then may take years to recover. Earthquakes, on the other hand, have a much longer reoccurrence interval than climatological hazards, but are by far the deadliest hazard. This chapter will address the major natural hazards that affect Pakistan but, accordingly, a more in depth treatment will be given to seismic hazards.

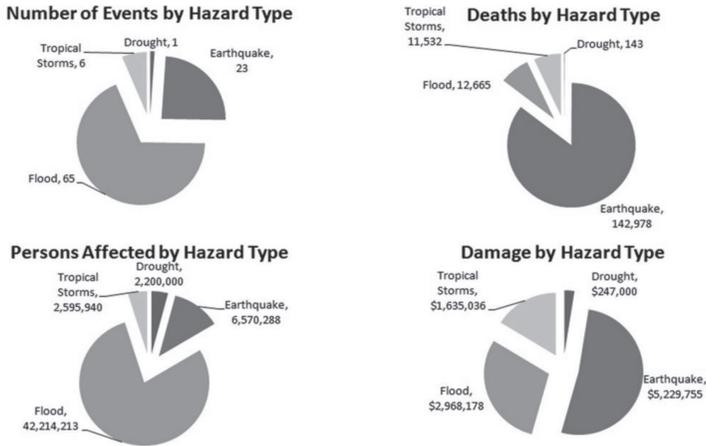


Figure 2. Cumulative Hazard Data for Pakistan from 1900-2010.

Source Data: EM-DAT Centre for Research on the Epidemiology of Disasters 2010. (All disasters included in the EM-DAT database must include at a minimum: 10 or more people reported killed, 100 people reported affected, a call for international assistance, or a declaration of a state of emergency).

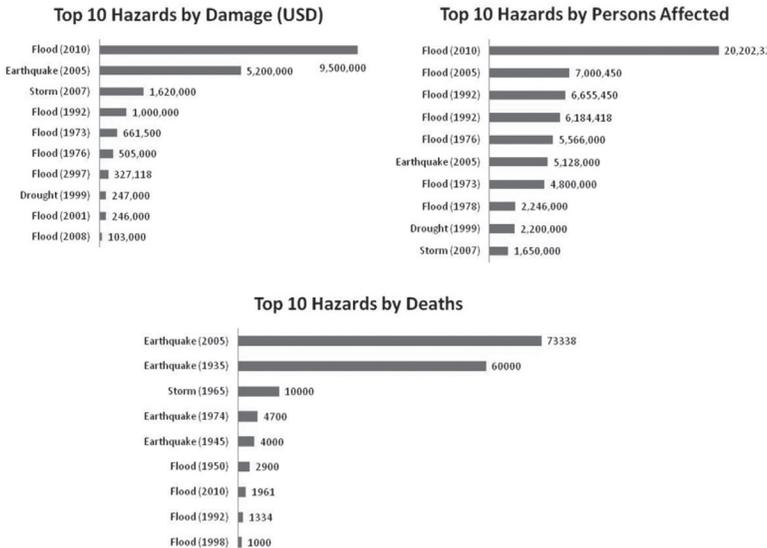


Figure 3. Top 10 Hazards in Pakistan by Death 1900-2010), Persons Affected, and Damage.

Source Data: EM-DAT Centre for Research on the Epidemiology of Disasters 2010

Tropical Cyclones

Tropical cyclones can present a hazard to coastal and southern Pakistan. These disturbances will often originate as tropical storms in the northern Arabian Sea. The pattern of cyclonic activity in the Arabian Sea follows a distinct bi-modal pattern of pre- and post-monsoon peaks. Significant activity peaks first in the months of May and June and then again in October and November (Membery 2001). Although Pakistan has a significant coastal extent in the vicinity of warm, tropical waters, very few of these storms reach its shores. In fact, only 7 percent of all tropical disturbances form over the northern Indian Ocean (Dube *et al.* 1997). Regional data suggest that only 1 percent of tropical storms world-wide form in the Arabian Sea, making this the least active tropical storm producing region (RMSC 2009).

Due to their low elevation, lack of early warning systems, and inadequate evacuation plans and resources, coastal communities in many areas of the developing world represent the largest at-risk population from hazards associated with tropical cyclones. Often the greatest hazard associated with the approach of tropical storms is coastal flooding associated with storm surge. Storm surge results from an artificially elevated hydrologic sea response that is caused by a combination of the decrease in atmospheric pressure from the tropical storm and the very strong winds in the advancing quadrant of the storm. The water is literally piled up and pushed ashore. The onset of coastal inundation is often very rapid and results in widespread flooding. Vulnerable coastal populations in Pakistan are concentrated in Karachi and other smaller communities stretching into Balochistan. However damage is not restricted to coastal

Pakistan. Extreme precipitation events, often associated with cyclonic activity, can result in flooding and mass wasting in inland mountainous areas.

True to this trend, the most devastating cyclone to make landfall in Pakistan in recent times was the May 20, 1999 event which most directly affected communities in the Thatta and Badin districts. This cyclone remained unnamed and was referred to only as 2A. This storm killed 191 people and affected many tens of thousands more. Those affected were primarily in coastal villages, with many of the dead and missing being fishermen (IFRC 2009). Unique to this storm was the affect of the storm surge which resulted in damage of up to 400,000 acres of agricultural land by salt water infusion (IFRC 2009).

In June 2007 Tropical Cyclone Yemyin struck the coast of Pakistan resulting in much flooding, affecting 2.5 million people, displacing thousands, and accounting for the deaths of over 420 people within the provinces of Balochistan and Sindh (NMDA 2007). The greatest contributor to the death, destruction, and displacement came from the heavy rains Yemyin brought into the region which resulted in widespread flooding. While the districts of Thatta and Badin in Sindh province, which jut out into the Arabian Sea, took the brunt of the storm, some of the most severe flooding occurred in the inland districts of Balochistan and Sindh. This is largely due to the mountainous terrain which channelizes intense precipitation resulting in flash floods. Many of these areas are also far from or not integrated into emergency warning information source, and lack first response capacity. Each of these factors can greatly contribute to initial loss of life and delayed recovery of the missing.

Drought

Droughts are slow-onset events meaning that their warning signs may be slight and barely discernable while the impact may take many months to fully manifest. They may be seasonal or extend a number of years and can result in crop failure, death to livestock, and mass migration from affected areas. Spatially, droughts may have impacts within areas of a single country or span across multiple countries within a region. Droughts may directly kill few persons or livestock, while still adversely affecting millions. Even during modern times with readily available aid and advanced distribution systems, prolonged drought can become a compound and/or complex disaster. Compound disasters beget other disasters. In the case of a prolonged drought, famine, desertification, and conflict can result from the conditions created or worsened by the drought. Complex disasters are a result of a natural event that is exacerbated by human action or inaction. A drought in an area where there is an ongoing conflict may prevent food and development aid from getting to those who need those resources. For these reasons, drought may have “the greatest negative impact on human livelihood” (Barlow *et al.* 2006, 1). This is especially true in communities which rely primarily upon farming and husbandry but where precipitation levels only marginally support agriculture to begin with.

Especially in more arid and less developed provinces of Pakistan, the effects of drought can be further aggravated by the actions of humans (Islam 2004). Overgrazing can spatially extend pressure on vegetation and even lead to human enhanced desertification. Poor irrigation practices can result in water waste and soil salinization if not properly drained. Overcutting forest resources and improperly managing watersheds can also worsen the impact of a drought and

result in land degradation beyond the drought period. Each of these activities has occurred in Pakistan.

Pakistan, as well as the rest of southwest and central Asia, has a long history of drought. In Pakistan the areas most affected by contingent drought are Balochistan, Sindh, Punjab and the Khyber Pakhtunkhwa (formerly the Northwest Frontier Province) (Ahmed *et al.* 2004). Contingent droughts result from the delay or lack of normal rains for a period of months to years (Alexander 1999). The other form of drought in Pakistan is the seasonal drought, which shows a strong seasonality in precipitation from year to year (Alexander 1999). Kahn and Kahn (2008) noted that all of these areas except Balochistan benefit from the precipitation that results from monsoonal flow. As much of Pakistan is marginally suited for, yet reliant upon agriculture, small delays or shortages of precipitation can result in failed crops. The worst drought in fifty years, which was a contingent drought, was the result of the prolonged period of aridity which stretched from 1998-2001 (Figure 4).

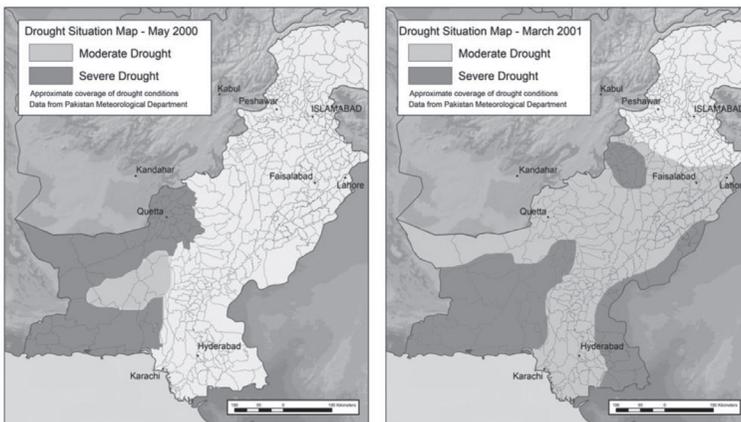


Figure 4. Progression of drought conditions from 2000 to 2001.

Source: Based on data from the Pakistan Meteorological Department

These drought conditions, which netted precipitation levels ranging from 12 percent (2000) to 30 percent (1999) of normal amounts in Sindh province, persisted into 2002 and left hydrologic resources at 51 percent of normal capacity (Ahmed 2004). Storage in the Tarabela Dam, the largest water storage structure in Pakistan, was below dead levels or the levels below which water can be released by gravity. This is critical as dead storage is typically unavailable for crop irrigation, power generation and human consumption downstream.

Data suggest that the 1998-2001 drought was a result of La Niña conditions, which pooled warm water in the western Pacific and increased precipitation in Malaysia (Barlow *et al.* 2002; Perkins 2003). While not every onset of drought conditions in southwest Asia coincides with this climatic anomaly, there appears to be a correlation between La Niña events and southwest and central Asian droughts and Indian Ocean precipitation. As more is learned about El Niño and La Niña cycles, scientists can better understand these teleconnections and more accurately predict the arrival of long-term, hyper-arid conditions.

Long-term recovery from drought must go beyond providing monetary supplements and food aid. In fact these solutions may actually worsen conditions, as supplements may encourage pastoralists to continue unwise livestock practices which place continued pressure on already degraded lands (Islam *et al.* 2004). As droughts often are extended events and will reoccur, mitigation strategies should involve changes in pastoral and landuse practices, to include dry farming, minimum tillage and planting drought resistant grasses. Structural solutions may involve using dams primarily for water storage, not just as mitigation strategies for flood prevention. However, even dams

have limits—as much of the storage capacity in the Indus basin has been reduced due to siltation Ahmad *et al.* (2004). In addition to flooding (discussed later), droughts represent a challenge requiring the most comprehensive societal changes (such as population relocation, livelihood changes, and changes in governance and regulation) and land use reforms. This creates an unfortunate situation in which the hazard is well understood and predictable but existing mitigation strategies are difficult to implement because of the spatial and temporal extent of the hazard and the costs of strategy implementation.

Flooding

Riverine and coastal flooding represent natural, cyclic events which occur when contributions to hydrologic systems exceed their capacity to store or transport ground and surface water contributions. Flooding in Pakistan can generally be attributed to three root causes: monsoon rains, rain-on-snow events, and flooding from tropical cyclones. The long-inhabited floodplains surrounding the Indus River experience the majority of the flooding in Pakistan. Traditional cycles of flooding are common in the lower Indus basin. This is primarily due to the contribution of five major tributaries which significantly add to the discharge of the Indus (Ahmad 1964). While flooding in Pakistan may not result in an unusually high death toll, the Indus, like other rivers, often displaces hundreds, to even millions¹ of people as seen in the 2010 Indus River floods. The significance of such large dis-

1. Even in developed states during disaster events with reasonably low numbers of affected people, gaining rapid and full accountability of the numbers of displaced, injured and dead is difficult. This is even more difficult in developing regions where the population displacements are very large and those displaced may move temporarily or permanently to other areas. Once moved if they do not report to a registering agency, assuming one exists, the accountability loop is not closed.

placements lies in that what made the event a disaster in the first place – lack of first response and rescue capabilities, lack of adequate shelter and relief distribution systems – and is indicative of government that will also be unable to accommodate and provide basic needs for such a large displaced population. Furthermore, although the death tolls in these events are not particularly high, floods do cause significant damage to homes and crops. Punjab and Sindh provinces will often see the greatest flooding from the Indus River. Balochistan, which has no major bodies of water transiting the province, experiences a majority of its flood hazards in the form of flash flooding. Flash flooding in this semi-arid area is accelerated by the steep topography and lack of vegetation.

Greatly increased levels of precipitation in July and August resulting from the annual monsoons are the greatest, consistent contributor to flooding in inland areas. While precipitation levels in Karachi and Quetta may be less affected by monsoons, locations like Lahore have summer totals which are normally three times those of winter totals due to the summer monsoons. The Indus River floods (2010) were caused by an intensification of normal monsoon cycle precipitation by the jet stream resulting in four months of precipitation falling over the course of four days (Larkin 2010). The extent of the flooding is shown in Figure 5. Like most floods in Pakistan, the death toll was relatively small at 1,961 people dying from flood-related effects (EM-DAT 2010), however, the number of people affected has been estimated to reach over 20 million (EM-DAT 2010). Showing the power of floods on society, sources estimate the numbers of displaced persons to be over 10 million (UNICEF 2010). The scale of impact, damage and persons affected has made this the largest disaster in Pakistan since 1900.

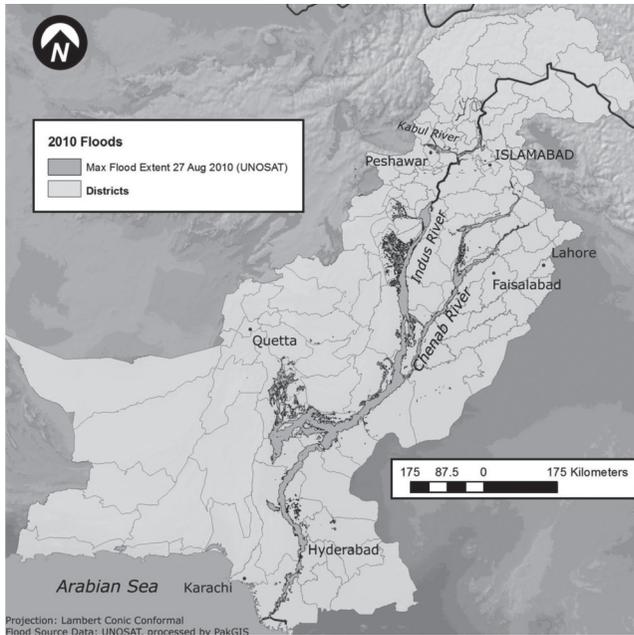


Figure 5. Extent of the 2010 Pakistan floods.
Source: Data from UNOSAT 2010

In 2007, Tropical Cyclone Yemyin (Figure 6) and the inflow of early monsoon moisture created a series of flooding events that left only a few hundred dead, but up to 1.3 million persons adversely affected (EM-DAT 2010). Precipitation from Tropical Cyclone Yemyin added to the river basin captures, which were already at elevated levels due to monsoon rains. Tropical cyclones, as previously noted, represent a low-frequency episodic event but are nonetheless a significant source of flooding. Flooding from tropical cyclones can manifest in the form of two distinct flooding events from the same hazard mechanism. Inundation from tropical cyclones may come from increased precipitation in inland river basins and coastal flooding from storm surge. Coastal flooding in developing countries like

Pakistan often results in large death tolls, especially when compared to similar events in more developed countries. Developing countries, unlike their more developed counterparts lack early warning systems and coordinated and resourced response systems. This can result in a greater death toll and extended suffering following the onset of a hazard.



Figure 6. Affected districts from monsoon and Cyclone Yemyin flooding.

Source: After IFRC (2007) Appeal MDRPK001

Flooding, specific to coastal areas, can also be a result of tsunami activity. Tsunamis – seismically generated ocean waves – can come from afield, or originate locally. The Makran Coast has ruptured and created tsunamis in the past and will continue to do so in the future (Okal and Synolakis 2008). Tsunamis from the 1945 Makran earthquake (Figure 6), in addition to causing destruction throughout the Arabian Sea coast, killed an estimated 4,000 people and sent a wall of water 15 meters high into the towns of Pasni and

Ormara (Jordan 2008). Responding to coastal flooding from a locally originating tsunami becomes more complicated as the damage caused to local infrastructure by pre-tsunami shaking and subsidence impairs local response capacity prior to the arrival of the first tsunami. This was observed by many following the 2004 Banda Aceh rupture. Destroyed infrastructure, damage to first response equipment and even death of response personnel made post-tsunami response difficult in Banda Aceh. Similar difficulties in coordinating and executing a post-event response in Pakistan should be expected.

Efforts to mitigate flood risk to populations or resources are normally categorized as structural and non-structural mitigation. Structural mitigation may consist of using dams, dikes, bunds or even diverting water systems. Much of Sindh Province is protected by a series of bunds (a regional term for levee). These structures protect many communities which occupy floodplains in Pakistan. When they fail, the results are often catastrophic. Non-structural strategies include flood forecasting, flood warning and evacuating those at risk. However, these strategies do not always mitigate risk, especially in areas where particularly vulnerable populations exist. Much has been written regarding vulnerability and flooding in Pakistan. Mustafa (1997; 2004; 2007) cites poverty and poorly structured government systems as the root causes which allow a hazard to become a disaster. Lacking livelihood alternatives and documentation of land ownership, many in Pakistan are hesitant to abandon the fertile soils of floodplains, even when faced with increased risk to life and property. Such examples highlight the fact that managing flood risk may not be just a matter of regulation, but also requires addressing development needs and overcoming cultural inertia.

Seismicity

Flood and drought events have a shorter reoccurrence interval and actually affect more people than any other hazard in Pakistan. However the remainder of this chapter will be dedicated to providing a better understanding of seismicity in Pakistan and South Asia, for two reasons: seismic events have killed more people in Pakistan than any other natural hazard (Figure 1), and they are very difficult to predict. To be sure, every other natural hazard provides significant signals or warnings prior to onset and therefore – with appropriate warning and response in place – risk to humans and resources can be mitigated. But earthquake prediction is difficult, even in regions which are heavily instrumented and studied. Furthermore, the fields of seismology and earthquake geology are filled with uncertainties, such as when a temblor will occur, the amount of energy that will be released and how prepared communities and their governments will be to respond to the impending catastrophe.

Sub-Himalayan Tectonics

The regional tectonics in South Asia are dominated by the continental-to-continental collision between the Indian and Eurasian plates. The rates of convergence vary between 44 to 61 mm/yr (Minster and Jordan 1978) along the boundary front. Over time, major formations were created which today are known as the Main Central thrust, the Main Boundary thrust, and the Himalayas. Current measurements throughout the Himalaya indicate that the boundary beneath the Tibetan Plateau is locked (Bilham 2004). This means

that while the surface shows movement, the sub-surface boundary between Asia and the Indian sub-continent does not. Consequently, Bilham suggests that the continued movement of the Himalaya over the Indian plate is and will be accommodated by the reoccurrence of large earthquakes.

A key feature of interest in the area is the Kashmir seismic gap (Khattri 1987). Seismologists classify a seismic gap as “a section of a fault that has produced large earthquakes in the past, but has been quiet at present, and has been experiencing strain accumulation” (Gahalaut 2006, 507). Countries which are located south of the Himalayan range should be concerned that such gaps, like the one in Kashmir which have not completely ruptured in the past, are still accumulating strain and will one day release their accumulated strain in a catastrophic rupture.

Historical Earthquakes in Pakistan

We do not have a good understanding of the seismicity in northern Pakistan and Kashmir. Historical evidence of large earthquakes in the region is rare and the reoccurrence intervals are rather long, on the order of 450 years. Some of the earthquakes that have occurred were “blind-thrust” events, leaving no surface rupture for scientists to study. The quest for understanding is further complicated by the complex geology of northern Pakistan and Kashmir.

The complexities behind reconstructing a historical earthquake record can also account for some of the impediments to obtaining a greater seismological understanding of the region. Quittmeyer and Jacob (1979) and others have worked toward historical reconstruction of the length and orientation of rupture zones in Pakistan by interpreting magnitudes of non-instrumented accounts. Some of Pakistan’s notable

historical earthquakes are listed in Table 1 and depicted in Figure 6.

Table 1. Major historical earthquakes in Pakistan with deaths of 150 or higher.

Name	Year	Magnitude	Deaths
PAKISTAN: JUNGSHAHI, SINDH	893	8	150,000
PAKISTAN: SHAHBUNDER, SINDH	1668	7.6	50,000
PAKISTAN: LAHORE, PUNJAB	1827	7.8	1,000
PAKISTAN: SUKUR, SINDH	1852	8	350
INDIA: SRINAGAR	1885	7*	3000
PAKISTAN: SIBI, BALOCHISTAN	1909	7.2	231
PAKISTAN: QUETTA	1935	7.5	60,000
PAKISTAN: MARKAN COAST**	1945	8.3	300
PAKISTAN: BALAKOT, PATAN	1974	6.2	5,300
PAKISTAN: GILGIT	1981	5.9	220
PAKISTAN: MUZAFFARABAD	2005	7.6	86,000
PAKISTAN: QUETTA	2008	6.4	166
* Data from Geological Survey of India			
** Produced a tsunami.			

Sources: Quittmeyer and Jacob 1979, Ambraseys and Douglas 2004, NGDC 2009, Geological Survey of India 2009, and USGS 2010

Note: Due to lack of accurate data, the 1555 earthquake is not included in the list

The largest historical earthquake in the Kashmir region is believed to have occurred in 1555, but little data from this event is available. This event was so great that the Vitasta River (today called the Jhelum River) is reported to have changed course (Radhakrishna 2006). Although the exact location is unknown, this earthquake is thought to have occurred in the Kashmir seismic gap and is believed to have had an estimated magnitude 8.6 and a displacement of 6.2m (Khattari 1999). If the October 8, 2005 Kashmir earthquake, which occurred near this gap, was the next largest earthquake in the region, the probable recurrence interval can be estimated at approximately 450 years. If the Kashmir earthquake did not relieve

any or all of the strain, then up to 454 years of strain has accumulated and is waiting to be released, possibly in the form of a complete rupture.

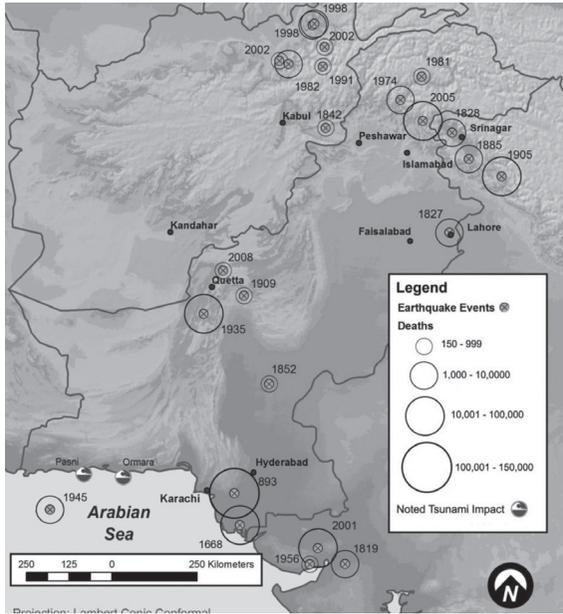


Figure 6. Major historical earthquakes in Pakistan with deaths of 150 or higher.

Sources: Quittmeyer and Jacob 1979; Ambra-seys and Douglas 2004, USGS 2006, Jordan 2008, NGDC 2009, and Geological Survey of India 2009

October 8, 2005 Kashmir Earthquake

On Saturday morning, October 8th, 2005, the Kashmir region in northern Pakistan and India was struck by a 7.6 earthquake (Figure 6). This earthquake took the Pakistanis by surprise, as there had not been an event of this magnitude in the area for approximately 450 years (Thakur 2006). Emulating the 1935 Quetta earth-

quake, the Kashmir earthquake's forces destroyed Muzaffarabad, the capital of Azad Jammu and Kashmir (AJK), and reduced Bagh and Balakot to rubble. The unfortunate timing of the earthquake coincided with the morning attendance of schools, resulting in many educators and scores of students from elementary through university ages being crushed in their classrooms. Death estimates range from 73,000-84,000, with at least as many injured, and over two million made homeless or displaced. Many of the deaths resulted directly from poor construction and a lack of first response capabilities at the local level.

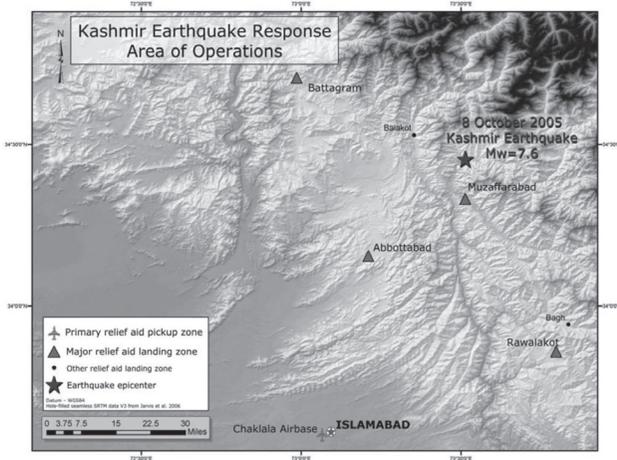


Figure 7. The above image depicts the 8 October, 2005 Kashmir earthquake and its relationship to the physical landscape and population centers. The 70km fault stretched from Bagh to Balakot.

Source: Based on information from Thompson and Halter 2006 and Thompson 2010

Predicting Earthquakes in Pakistan

Seismologists believe that large Himalayan earthquakes of magnitude greater than 8 will occur in the near future. The quandary they find themselves in is

that the larger scale tectonics and the longer term forces in the region are well understood, while the short-term processes that control the timing of earthquakes along the Himalayan thrust front are not (Bilham and Hough 2006). Factors such as the possible decrease in the India-Himalayan convergence rate and the uncertainty of reoccurrence of earthquakes of magnitude greater than 8 anywhere along the Main Himalayan thrust make accurate short-term forecasting more difficult (Yeats and Thakur 1998).

The relatively long reoccurrence intervals and the incomplete historic record create a series of seismic gaps in South Asia. Identification of seismic gaps is difficult in this region, keeping experts at odds over whether the October 8, 2005, earthquake actually occurred within the Kashmir seismic gap. As noted by Quittmeyer and Jacob (1979), the concept of seismic gaps, in-between areas of known, recent larger earthquake activity, does not apply to the Himalayan boundary in a straightforward manner. Current rates of shortening, on the order of 4.3 meters, represent only 200-300 years of gross Himalayan strain. This has led to the concern that the Kashmir earthquake was only a partial relief of the accumulated strain (Kaneda *et al.* 2008). Where, when and how much strain will be released next should be the focus of the seismological community in that region.

Seismic Preparedness

Populations in at-risk areas of Pakistan and Kashmir continue to increase, as people with little or no other choice move to marginal lands. Correspondingly, in neighboring India, one-third of the population lives in at-risk areas along the Indo-Gangetic Plain (Radhakrishna 2006). In fact, half of the world's largest cities lie on plate boundaries (Hough and Bilham 2006).

Urbanization rates in developing countries continue to increase; however, they almost universally do so without the accompanying preconditions of developed urbanization. Urbanization in the developed world normally includes the availability of social and emergency services. Most importantly, when in a zone of known seismicity, critical structures and housing are engineered to be seismically resistant. An example of this dichotomy of development is seen in the magnitude 6.7, 1994 Northridge earthquake which killed only 50 people, yet the magnitude 6.6, 2003 Bam earthquake killed 40,000 (Hough and Bilham 2006). A smaller earthquake and nine years to apply lessons from other earthquake disasters did little to stem the loss of life.

As compelling as implementing seismically resistant construction codes may seem, the failure to do so in countries such as Pakistan and India is largely understandable. The populations of these countries face enormous poverty and the governments are challenged to provide even basic services to their citizens. When viewed with this understanding, the costs associated with making buildings earthquake-resistant, as desirable as this may be, are likely to forestall serious attention. Recall that large magnitude earthquakes are very few and the reoccurrence interval between them is very long. As noted by Bilham and Hough (2006), such devastating events are forgotten by successive generations. Pakistan's previously most devastating earthquake, which killed 30,000 people in 1935 in Quetta, was in a location far removed from today's forward capital Islamabad. As well, some of the regions of Pakistan with the greatest seismic potential are in areas that are populated by people who are ethnically different from the Punjabi national lead-

ership. One may ponder what role that this and the contested nature of Kashmir plays in the resistance to implement seismically resistant building codes in this region.

A disproportionately large number of dead and injured during earthquakes in developing areas have resulted from poor construction techniques. In Iran alone, some 200,000 people have died since 1890 from earthquake-induced collapse of poorly constructed, mud-roofed homes (Hough and Bilham 2006). In Kashmir, collapsed residential dwellings resulted in numerous casualties. Here, open first floor or soft story construction is the accepted building standard. Unfortunately, this type of construction leads to catastrophic failures in an earthquake (Figure 8).



Figure 8. A house in Balakot, Pakistan “pancakes” after the 2005 Kashmir earthquake. The roof is relatively intact, yet the wall structures are absent. Pancaking is a term used by civil engineers to describe the flat collapse of a roof above resulting from soft-story construction. Image source: author

Improving family home durability in a developing area like Kashmir will be difficult. Beyond the obvious funding obstacles, planners should consider a Kashmiri suspicion of outsiders and the cultural impact of the feeling that earthquakes are “God willing” or *inshallah* in order for any program to be successful.

Recommendations for improvement in home construction must be locally driven and embedded in a good education program. Such programs should emphasize seismic resistant construction practices using locally available materials, if possible. In fact, some indigenous construction techniques, especially those involving wood frame and masonry infill single-family homes, withstood significant damage from the 2005 earthquake (Hough and Bilham 2006). Programs should also involve local craftsmen during the reconstruction process. In this manner, seismic resistant construction techniques can be taught to other craftsmen in the area (Ozerdem 2006). Traditional approaches should not be abandoned where they are working.

In developing countries like Pakistan a total retrofitting of improperly constructed buildings and enforcement (in some cases adoption) of a seismic code is beyond expectation, especially in economically depressed regions. Instead, an alternative, more realistic strategy should be entertained. This strategy could include special focus on key facilities, such as schools, hospitals and community centers, as they not only house large populations at any given time, but will also become key centers of a post-seismic relief effort (Radhakrishna 2006; Thompson 2009).

Some Final Recommendations

Gilbert White, considered by many to be the first American scholar to study disasters through his flood research, would have relished the opportunity to study recent hazard events in Pakistan and the subsequent human response to each event. In his dissertation he wrote “Floods are acts of God, but flood losses are largely acts of man” (White 1945, 2). This statement has become an immortal phrase in disaster studies and eloquently frames the hazard-society-disaster relationship. Although it took many years, the concept proposed by White has gradually shaped the modern disaster research agenda whereby disasters are no longer exclusively “equated with features of physical agents” (Quarantelli 2000, 682).

Continued work by scientists on the understanding and predicting of natural hazards will, over time, allow governments to better prepare for future disasters. As seismologists are better able to identify seismic gaps and tell officials where the next disaster is most likely to occur, governments can focus their sparse resources in those areas. The Kashmir earthquake of October 2005 and floods of 2007 and 2010 should serve as a wake-up call for the governments and citizens of countries in South Asia and elsewhere to push for and create more survivable communities. The government of Pakistan has agencies which predated the earthquake, yet the world witnessed great loss of life. The Emergency Relief Cell (ERC) is a national cabinet-level agency which supplies emergency relief and is the focal point for disaster management. The Federal Flood Commission (FFC) is charged with national-level flood preparation, protection, forecasting and warning. There are also many district-level

agencies and directorates which have the focus of relief and response. Still, community vulnerability to a suite of hazards remains very high in Pakistan as well as other developing countries.

Observations made during the Kashmir earthquake response and subsequent research point toward emergency preparedness capabilities and the ability to conduct search and rescue at the local level as two of the most critical factors in an effective disaster response. Pakistan must build local response capacity. Others have noted the presence of local surge capacity critical weaknesses which must quickly be addressed by the Government of Pakistan (NDMA 2007). The ability for local communities to conduct as much relief as possible in the first 24-48 hours of a disaster is crucial. In fact the rates of rescue diminish exponentially and casualty rates are highest in the first 36 hours (Alexander 1999). After the initial 48 hours, when local response and resources are exhausted, workers and supplies from around the world will begin to infiltrate the disaster area, bringing relief to local rescue teams. Furthermore, all levels – local, district, provincial, and national must be prepared to conduct the full spectrum of disaster-related activities from response to relief, recovery and rebuilding.

The Government of Pakistan must also improve hazard-warning systems (NDMA 2007). Early warning systems allow lead response agencies to begin to muster and stage resources prior to the onset of a hazard. The most critical improvement in early warning could be made in the ability to provide warning to rural communities of impending danger. Even the opportunity to conduct foot evacuation prior to a flood event or move to relief shelter prior to the impact of a tropical cyclone will greatly reduce the population at

risk. Finally, as populations in developing countries like Pakistan continue to grow, governments and developmental agencies must make a concerted effort to guide people away from marginalized, often hazard-prone areas in a manner which still provides opportunity for a livelihood, but with reduced risk. Only by the combined work of scientists, governments, developmental agencies and the affected population can communities become more resilient, and less vulnerable to the potential hazards they face.

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Human Capital and Population Development Pakistan and the “Cannon or Butter” Dilemma¹

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The challenge facing Pakistan is very clear. Either it manages to dramatically slow population growth—increasing from 33 million according to the first census taken in 1951 to 132 million in 1998 and estimated at 185 million in 2010—and educate its children, the country’s future labor force, or it will have to deal increasingly with a large uneducated working age population that will increasingly put the country at risk of political unrest. Specifically, large youth cohorts have been associated with higher risks of political violence in developing countries, where young people have few alternatives besides unemployment and poverty (Collier 2000, Goldstone 2001, Urdal 2006). Pakistan is at risk of similar destabilization. The other danger is that the country will be stuck in a poverty trap, where low levels of education and high population growth rates prevent it from driving the road to higher development. Because education and population have such a large momentum, the window for action is actually not very wide. Any delay in investing in education now will have repercussions in the future. However, the investments in education have been too low in the distant and recent past. In 1980, the government was spending four times more on military expenditures than on education. In 2002, the ratio of military to education spending was still above two. In 2010, with 37 percent of its population below age 15 (UN 2008) and 44 percent

1. From the argument developed by Paul A. Samuelson, Nobel Prize winner, in *Economics: An introductory analysis* (1948) according to which an economy which produces slightly more of one good, for instance cannons, must necessarily give up some of other goods, like butter or in this particular case, education.

of the working-age population (20-64) having never been to school, the government spent less than 3 percent of its GDP on education, increasing from less than 2 percent for the period 2000-2005². Women are particularly disadvantaged in accessing education; 64 percent of the working age population with no education is female and women barely make up one-third of the secondary and tertiary educated working age population. The country is nevertheless experiencing a decline in birth rates and population growth is beginning to level off as part of the demographic transition. Hence Pakistan will experience a demographic bonus—a period of time when the share of the working age population is prominent—in the next 30 to 40 years, as the majority of its population will be of working age with fewer younger and still few aged citizens. In this context, human capital will be central to the realization of this window of opportunity for rapid economic growth and further investments in education and infrastructure. The purpose of this chapter is to explore the present and future human capital of Pakistan. Human capital usually refers to the people who are in the labor force, differentiated by their health and their skill levels, conveniently approximated by levels of educational attainment (Crespo Cuaresma *et al.* 2009). In the following analysis, we only focus on the educational attainment aspects of human capital by age and sex since data on health and labor force participation are difficult to obtain. Moreover, education is a marker at both the individual and societal level for better quality of life, including for greater autonomy among women (Jejeebhoy 1995). Besides, the educational composition of the population is one of the most important factors for economic development (Lutz *et al.* 1998). The chapter will assess the potential for the achievement of the United Nations' Millennium Development Goals (MDGs) and education for all in Pakistan, especially universal primary education and gender equality. It will also assess how realistic national goals on

2. The government plans to increase financial allocation to 7 percent of the GDP by 2018.

educational attainment are in view of the present speed of change in the education sector, using the population projections methodology.

How the Past Structures the Present

Policy Development Regarding Education

Any assessment of the education sector in Pakistan today is submerged by the abundance of negative aspects ranging from inadequate physical infrastructure, shortage of school facilities and qualified staff and poorer student performances than any other Asian developing country. In 1947, when Pakistan received independence from Great Britain after 100 years of colonial rule, one of the first aims of the government, following the recommendations of the 1947 education conference, was to provide free and compulsory elementary education. Again in 1973, under the leadership of Zulfikar Ali Bhutto, the newly adopted constitution included an article stipulating that “the State shall remove illiteracy and provide free and compulsory secondary education within minimum possible period.” Indeed, human capital formation, the result of education, is essential in raising the efficiency and productivity of the labor force. This obvious link which should result in the prioritization of education in the development policy of a country is not always taken into account mostly because of the short and medium term time span in which politicians are thinking, whereas returns to investment in education will happen in the long term. Similar to many developing countries, the low levels of educational attainment in Pakistan are firstly attributable to extremely low levels of public investment in the education sector. Public expenditures on education remained less than 2 percent of GDP until 2005, when it started to increase. In 2008, although public expenditures accounted for almost 3 percent of the GDP, it is still less than what most other countries in the southern Asia region invested including authoritarian governments such as in Iran (4.8 percent) and Bhutan (5.1 percent). Birdsall *et al.*

(1993) looked at the cost of low schooling and large gender gap. They found that, in 1985, Pakistan's income would have been 25 percent higher had they achieved Indonesia's 1960 primary enrolment rate and about 16 percent higher if female enrolment rates had been at the same level as for boys. Therefore, if Pakistan had invested more in education in 1960, it would have much higher economic growth rates today. As well, Nasir and Nazli (2000) showed also that "the allocation of government funds is skewed towards higher education so that the benefits of public subsidy on education are largely reaped by the upper income class." Special efforts by the government to promote education started mainly in the 1980s but were very unsuccessful due to political instability. At the beginning of the 1990s, Pakistan achieved a reasonable level of economic growth, but failed to raise human development. For this reason the government launched the Social Action Program (SAP) in 1992, with the support mainly of the World Bank and other international donors. This was an open-ended action plan, carried in several phases, which was aimed at increasing the quality and quantity of social services such as the education sector, wherein the objectives were to increase enrolment and school quality as well as eliminate gender and regional disparities. The SAP yielded unsatisfactory education outcomes, with almost no increase in primary enrolment rates, and little reduction of the gender and regional gap. As can be seen from Figure 1, education expenditures have been increasing since 2002, mainly as part of the National Plan of Action (NAP 2001 to 2015) whose basis for planning was the UNESCO Education for All goals, aiming mostly at achieving universal primary education by 2015 for both girls and boys. Other governmental objectives are set in terms of increasing participation at lower secondary level and producing more higher education graduates.

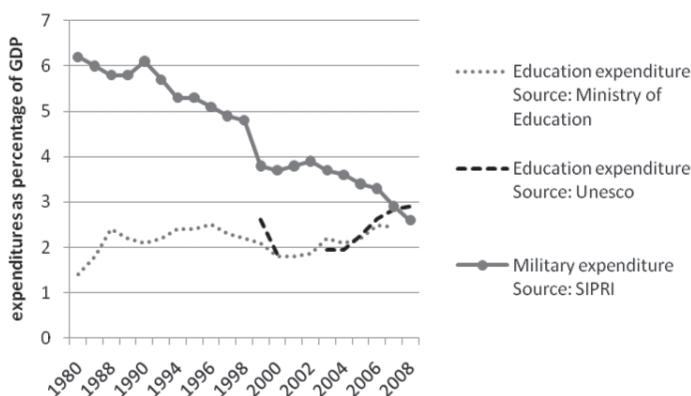


Figure 1. Education and military expenditures as percentage of GDP.

Source: Ministry of Education, UNESCO, and SIPRI database

Until the end of the 1990s, Pakistan was doing worse than the average of least developing countries across the indicators of enrolment and budget allocation, e.g. the primary school enrolment rate in Pakistan was 62 percent compared to the 76 percent average for low income countries (UNDP 2003). In 2010 (Figure 2), Pakistan scores less than the South Asia³ regional averages in terms of indicators related to the generation of human capacity, such as access (enrolment of both girls and boys at primary and secondary levels), investment, performance (measured by literacy and primary completion rates), and quality of education, dependent for instance upon grade repetition and pupil to teacher ratio.

3. Consisting of eight countries: Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka

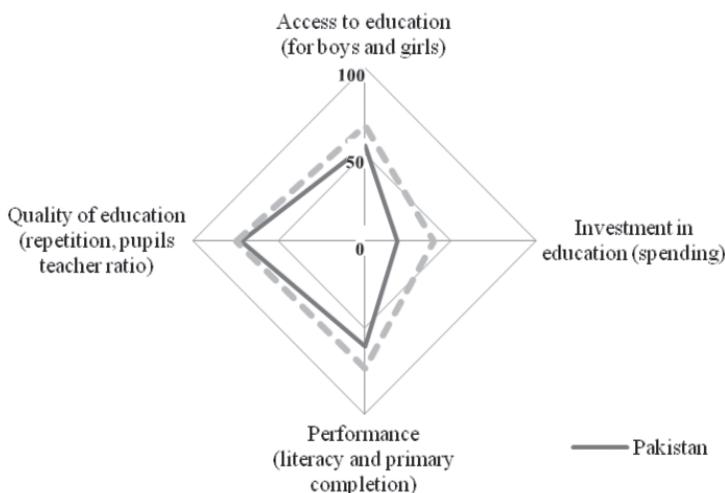


Figure 2. Generation of Human Capacity in Pakistan compared to countries in South Asia.

Source: Adapted from the Global Education Database (UNESCO)

Education Development in Last Decades

The “problem” with education is that it takes time to influence society. Levels of educational attainment are acquired mostly during childhood. Hence any improvements in enrolment and completion rates will not have diffused through the entire working population until some 50 years later⁴, meaning that any lack of improvement in educational policies in Pakistan will plague the human capital characteristics of the labor force for many decades. Educational momentum is visible in the evolution of three types of indicators: (1) literacy rates; (2) the share of the population distributed between levels of educational attainment,

4. Education occurs mostly in schools, adult education being marginal. Any change, for instance in the intake level of primary education, will take a few decades before it has reached the whole working age population by the process of generation replacement, the old and less educated generations being replaced by the new generations who have benefitted from increased education.

meaning the translation of past investments (or lack thereof); and (3) enrolment ratios that reflect present education flows and which later translate into human capital stocks.

Literacy has been expanding since the beginning of the 1970s. In 1972, only 22 percent of the population was literate compared to 54 percent in 2008. Still Table 1 shows that it is only in 2006 that the population became majority literate. The overall literacy rate for 2008 was estimated at 54 percent: 67 percent for males and 40 percent for females. These rates are among the 10 lowest in the world for the countries with data available in 2008 – data was not available for Afghanistan where rates of illiteracy are presumably higher than in Pakistan – and Pakistan is the only country in the bottom 10 outside sub-Saharan Africa. The difference in literacy levels of the 15+ population and the 15-24 population is striking and show that literacy is gaining ground in the population; still Pakistan is among the 10 countries with the lowest scores in terms of literacy of the 15-24 population, meaning that the pace of change for the youngest age group is not any faster than in the other least-literate countries. Since the overall population of Pakistan is large, the absolute number of illiterate men and women is very large as well, 51 million in 2008 – about the whole population of South Africa for the same year. Table 1 also shows that the increase in literacy rates is not keeping up with the population growth rates as the total illiterate population is more or less staying constant at about 50 million.

Not surprisingly, the persistent high levels of illiteracy are visible in the levels of educational attainment of the working age population – the age group 20-64 – which is dominated by a large proportion with no education (Table 2). Still the share of men who have at least completed a lower secondary education has increased from 19 percent in 1972 to 46 percent in 2005, pointing at imbalances in the development of the education sector with a barrier restricting access to primary education; however, once this level has been accessed, there are fewer obstacles to higher levels. Still, the percentage of the working age population that is highly educated is very low, and as of 2005 only 9 percent

Table 1. Literacy indicators.

Age group	Year	Literacy rate (percent)			Illiterate population (in millions)			Illiterate Population
		Total	Male	Female	Total	Male	Female	% female
15+	1972*	22	30	12	31	14	17	54
	1981	26	35	15	36	17	19	54
	1998	43	55	29	47	19	28	60
	2005	50	64	35	51	19	32	63
	2006	54	68	40	48	18	31	64
	2008	54	67	40	51	19	32	63
15-24	1981	35	45	24	10	4	6	56
	1998	55	67	43	12	5	7	62
	2005	65	77	53	12	4	8	65
	2006	69	79	58	11	4	7	65
	2008	69	79	59	12	4	7	64

* Data for 1972 is for age-group 10+

Source: UNESCO and Choudhry (2005)

of men have a university equivalent education. The situation is far worse for women where the barrier to primary education has been impervious in many settings, especially in rural areas. Only 33 percent of the working age female population had completed a primary education in 2005 – increasing from 8 percent in 1972 – and only 9 percent had an upper secondary or tertiary education, as compare to 2 percent in 1972.

Table 2. Educational attainment of the working age population (20-64), in percent.

Census	Sex	No Education	Primary Incomplete	Primary Complete	Lower Secondary	Upper Secondary	Higher Education
1972	Male	68	3	10	14	3	2
	Female	92	1	3	3	1	1
1981	Male	66	...	12	16	3	3
	Female	88	...	5	5	1	1
1998	Male	48	6	12	24	5	6
	Female	74	4	7	10	3	3
2005	Male	34	5	15	29	8	9
	Female	64	3	11	13	4	5

Source: IPUMS and DHS

Levels of enrolment (Table 3) point to an increase in the number of students at all levels and hence future progress in the education of the labor force, although these gross enrolment rates do not automatically translate into levels of educational attainment because of dropouts and grade repetition. It is noticeable that most of the increase is happening at the level of lower secondary education for both sexes, whereas fewer pupils seem to be able to progress to upper secondary education, limiting therefore the scope for increases at the tertiary level.

Table 3. Gross enrolment ratios in percent, 1970-2008.

Level	Sex	1970	1980	1990	2000	2001	2002	2003	2004	2005	2006	2007	2008
Primary	Male	46	51	52	82	83	84	85	91	94	89	93	93
	Female	13	19	27	56	56	57	62	66	71	69	76	77
Lower secondary	Male	18	20	20	...	...	...	38	41	43	47	51	50
	Female	3	5	8	...	...	...	26	29	32	35	38	38
Upper secondary	Male	2	3	-	...	...	...	24	27	24	24	26	28
	Female	0	1	-	...	...	...	21	23	20	19	20	21

Source: UNESCO

Future Challenges

We have clearly shown the Pakistani education system has thus far failed to increase the instructional levels that would be necessary to produce associated benefits such as better health, reduced population growth rates and higher economic growth rates. In this second part, we would like to look into the future levels of educational attainment to investigate two scenarios to determine if the pace of change in levels of educational attainment will be enough to reach the goals set by governmental and international organizations for this sector

The Methodology in Short: Projecting Future Levels of Education

The projections are done using the PDE (Population-Development-Environment) multistate population projection software⁵. The model requires the base year population in 2005 by four levels of educational attainment—no education, primary education, secondary education and tertiary education—as shown in Figure 3, by age and by sex.

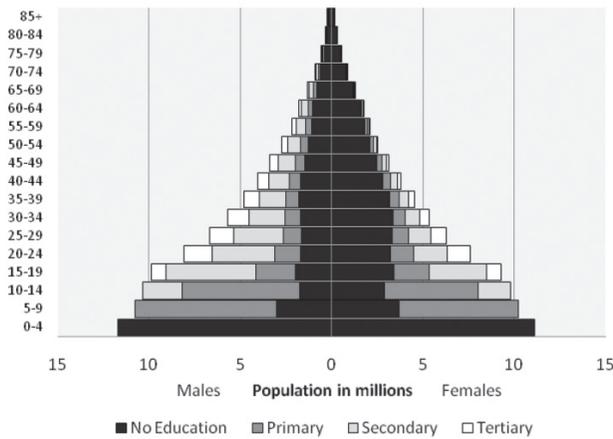


Figure 3. Population pyramid of Pakistan in 2005, by four levels of education.

Source: DHS (2006-2007)

The projections require further fertility rates by women’s level of education. In 2005, the differential in fertility rates was quite high, with women with no education having more than twice the fertility of those with a tertiary education, who already have achieved below-replacement fertility rates of 1.9 children (on average) per woman. This low fertility level of tertiary educated women means that although few women have a tertiary education, the opportunities of higher education act as a disincentive to “investing” in having many children. Thus, if the education of women was to increase, important declines in fertility

5. Software developed at International Institute for Applied Systems Analysis, downloadable free of charge from: www.iiasa.ac.at/Research/POP/pub/software.html (accessed December 14, 2010).

and consequently in population growth would potentially follow (see Abadian 1996, Jejeebhoy 1995, Castro Martin and Juarez 1995, on the link between women's education and fertility). We assume that the quite ambitious national fertility goals are reached by 2025 with the total fertility rate, basically the average number of children born to each woman, reaching the replacement fertility level of 2.1. This would be quite hard to achieve without drastic improvements in women's level of education, as in the case of Iran where the fertility declined from 5.6 to 2.1 children in just 20 years (Abbasi-Shavazi *et al.* 2008). Further inputs are required about mortality and migration rates by level of educational attainment that will not be detailed here but follow the medium assumption of the UN (2008). Mortality differentials by education follow the findings of Lutz *et al.* (2007)⁶ and migration differentials by education follow the study of Docquier and Marfouk (2006).

The last input required for the projections are transition probabilities between levels of education, which model the flows of the population of schooling age – here between 5 and 24 years of age – from the no education category to the primary education category, from primary to secondary, and from secondary to tertiary. We are here considering two scenarios (Table 4) to answer the following question: *Based on the trend in educational improvement in the last 15 years (Scenario "Trend"), does Pakistan have the right pace of educational improvement to reach the goals set by the national⁷ and international⁸ agenda (Scenario "Goal"), and more importantly what will be the consequences in terms of the future educational attainment of the working age population?*

6. According to their research, the life expectancy at age 15 of the population in the no-educational category is on average one year less than that of the primary educated category, three years less than that of the secondary educated category, and 5 years less than that of the tertiary educated category.

7. NEP: National Education Policy (1998-2010) – see here: www.moe.gov.pk/edupolicy.htm

8. Such as that of the United Nations Millennium Development Goals (MDGs) for education – see here www.un.org/millenniumgoals and the UNESCO Education For All (EFA) initiative – see link here www.unesco.org/en/efa/

The objectives in terms of education set on the national and international agenda are the following:

- All children will be able to complete primary education by 2015 (MDGs, UNESCO Education For All (EFA) initiative, National Education Policy (NEP))
- All gender disparities will be eliminated from all levels by 2015 (MDGs, EFA, NEP)
- Increase in enrolment in secondary and tertiary education – freely interpreted⁹ by the authors as meaning that 80 percent of 10-14 year-olds would be enrolled in secondary and 50 percent of 20-24 year olds would be enrolled in tertiary by 2050 (NEP)

Table 4. Projection parameters for fertility and education.

Component:	Fertility		Education transition				
	Base-period	Scenario	Base year (2005)		Scenario Goal	Trend	
	2005-2010	2025-2030	Male	Female	Both sexes	Male	Female
No education	4.4 children	2.6 children	17%*	30%*	0%* by 2015	10%* by 2050	13%* by 2050
Primary	3.6 children	2.2 children	83%*	70%*	100%* by 2015	90%* by 2050	87%* by 2050
Secondary	2.7 children	1.7 children	58%*	43%*	80%* by 2050	59%* by 2050	45%* by 2050
Tertiary	1.9 children	1.4 children	20%*	13%*	50% * by 2050	19% by 2050	22% by 2050
Total	3.6 children	2.1 children	--	--	--	--	--

* Transitions are set in age groups 5 to 9 years for primary education, 10 to 14 years for secondary education, and 15 to 19 years for tertiary education.

Source: Authors' calculations

9. Actually the government has not formulated specific numerical goals for secondary and tertiary. The targets are interpretations of the wish of the government to increase participation in higher level studies.

Results

Even though we assume that Pakistan will manage to achieve replacement fertility levels by 2025, the Pakistani population would still almost double by the middle of the century, from 166 million inhabitants in 2005 to about 300 million in 2050. This population momentum would lead to further increase in the school age population (0-19) until 2025 – from 83 million in 2005 to 91 million – meaning that more children will need to be enrolled in schools, more schools will need to be built and more teachers will need to be trained, especially in rural areas. The working age population, 20-64, will more than double during the projection period – from 76 million in 2005 to 183 in 2050. Rapid fertility decline would accelerate ageing of the society and the 65+ population would quintuple from 6 million in 2005 to 34 million in 2050 (Figure 4 and Figure 5).

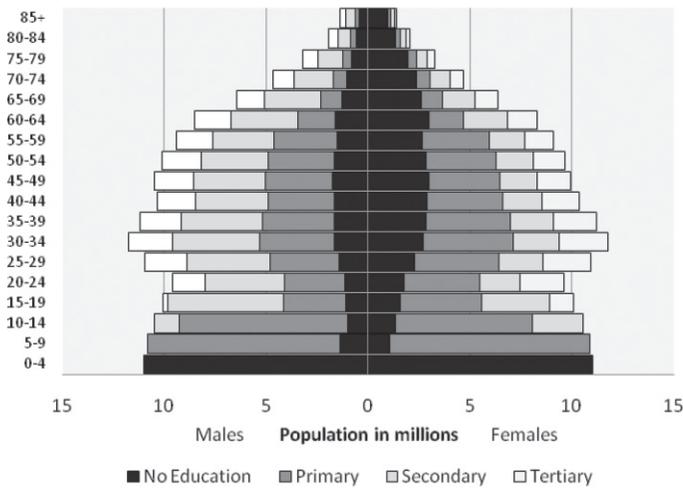


Figure 4. Population pyramid by levels of education, Trend scenario, 2050, Pakistan.

Source: Authors' calculations

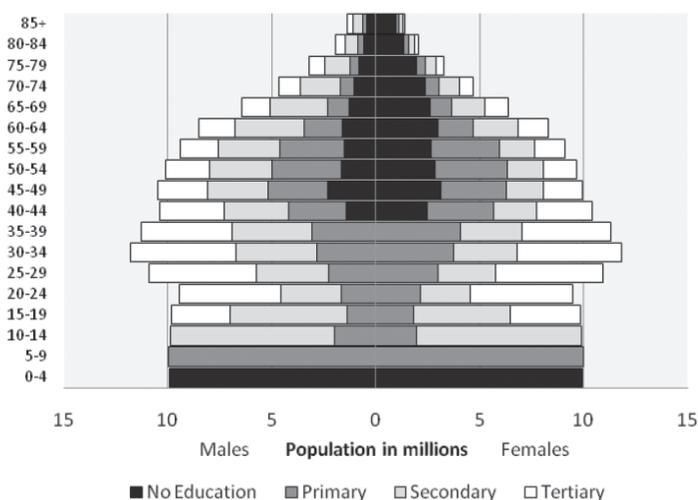


Figure 5. Population pyramid by levels of education, Goal scenario, 2050, Pakistan.

Source: Authors' calculations

In 2005, 34 percent of the male and 64 percent of the female working age population had received no education in Pakistan. According to the trend scenario, this would decline to respectively 15 percent and 26 percent in 2050 (Figure 6). This is far from the 9 percent and 15 percent that would be achieved under the goal scenario. The fact that this optimistic scenario does not lead to a fully educated working age population is due to population inertia. Actually as can be seen from Figure 5, the uneducated portion of the population would be above 40 years of age in 2050.

There are several patterns of change (Figure 6) in the level of educational attainment in the future that reflect the emphasis of the education development policy in recent years. In 2005, the share of primary level to the working age population was 15 percent for male and 12 percent for female. Under the trend scenario this would increase to 31 percent for male in 2050, and with almost no difference for female, at 35 percent in 2050. The changes of the past 15

years in secondary and tertiary education for males do not translate into much progress in the 50 years, as shown from the stability of the share of the working age population with a secondary or tertiary education. The same is true for females at the secondary level but since women have benefited from an increased access in tertiary studies in the last few years, this would mean a doubling of the share of women in that education category – from 9 percent in 2005 to 19 percent in 2050.

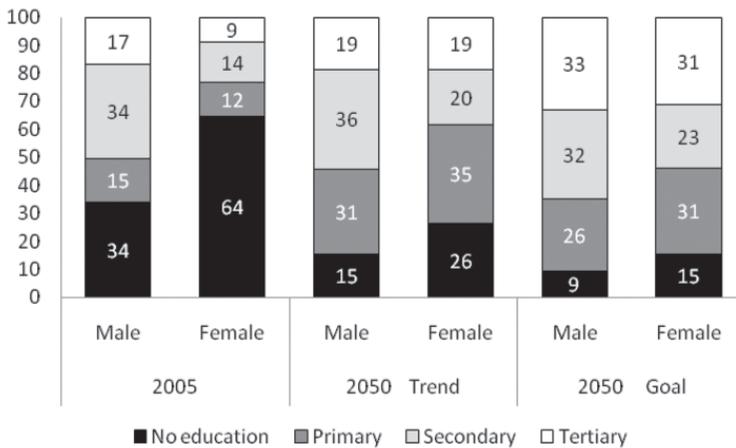


Figure 6. Share of the working age population (20-64) by levels of education in 2005 and 2050, Trend and Goal scenarios.

Source: Authors’ calculations

Meeting the Education National and International Goals

It does not really come as a surprise that Pakistan will not be able to reach the international education development goals nor its national educational targets if it extends the pace of change witnessed in the recent past until mid-century. Table 5 shows that according to the trend scenario, there would still be 23 percent of the 5-9 age group who

would not go to school by 2015, far from the full intake envisioned by the education MDGs and EFA targets. Actually, this international goal would not even be reached by 2050, which calls for further investments in the education sector. Furthermore, gender disparities will be far from eliminated at both levels of primary and secondary education in 2015 where girls would still have 15 percent less chance than boys to reach a primary education and 30 percent less to enroll into secondary education in 2015. Although improvements are noticeable by 2050, the opportunities for a girl are still respectively 3 percent and 25 percent lower than a boy at primary and secondary level. Interestingly, gender disparities would be eliminated at one level – tertiary education, where the increases in the last few years have been tremendous and even more so for girls than for boys. Hence, by 2015 female students would still have 17 percent less chance to have a tertiary education but the relationship would be reversed by 2040 when more women would enter tertiary studies compared to men. Even though, the forecast also shows that the rapid increases at secondary and tertiary levels foreseen by the national goals would also be quasi-impossible to be reached by 2050, where 50 percent of children would have access to a secondary education and 20 percent to a tertiary education.

Table 5. Access to education of male and female, in percent, Trend scenario, 2015 and 2050.

	2015			2050		
	Male	Female	Both sexes	Male	Female	Both sexes
No education	17	30	23	10	13	11
Primary	83	70	77	90	87	89
Secondary	51	34	43	59	45	52
Tertiary	20	17	19	19	22	20

Note: Access is based on the proportion of the relevant schooling age group achieving the relevant education level.

Source: Authors' calculations

If we make the hypothesis that the 'no education' category in the projection is a good approximation of the proportion of illiterate in the total population¹⁰, then the projections show that the EFA goal to achieve 50 percent improvement in levels of adult literacy will not be reached by 2015, and not even by 2050. The proportion of literates of both sexes in the 15+ population would increase from 53 percent in 2005 to 62 percent in 2015 and to 77 percent in 2050 according to the trend scenario. The goal scenario indicates that some of the objectives set for countries by international organizations are unrealistic and show a lack of understanding about the spread of education. Indeed, the 50 percent improvements in adult literacy would only be realized after 2040 if all girls and boys become literate by 2015. It would be difficult to imagine the scale of the adult literacy campaign needed to halve the number of illiterates from the 50 million persons above 15 living in Pakistan at the moment.

The past lack of investment in female education will be hindering Pakistan far into the future unless adult educational campaigns are reinforced to at least render the many girls who come to adulthood without literacy skills, able to read and write. The lack of qualification of women is a handicap for the development of Pakistan as it prevents their full participation in the labor force. In 2008, according to the Labor Force Survey, women accounted for only 20 percent of the active labor force population aged 20-64. According to the trend scenario, at the pace of today's increase, in 2050 there would still be 29 percent of the 15+ female population, 9 percentage points more than under the goal scenario, of women with no education. Thus, though illiteracy of "future women" is eradicated early in the projection period, the problem of the many women without education who already exist is unaddressed. In absolute

10. The category 'no education' underestimates the number of literates on one hand because some children who enter school for a short period may not acquire all literacy skills. On the other hand, it concurrently overestimates since some children and adults can learn to read and write while not being in school.

terms, it means 35 million women with no education in 2050 under the trend scenario and 23 million under the goal scenario (see Table 6).

Table 6. Share and absolute population of men, women, and total population aged 15+ with no education in 2000 and 2050, Trend and Goal scenarios.

Year	Men		Women		Total	
	Share	Absolute	Share	Absolute	Share	Absolute
2005	33%	18 million	61%	30 million	47%	48 million
2050 – Trend scenario	16%	19 million	29%	35 million	23%	54 million
2050 – Goal scenario	11%	13 million	20%	23 million	15%	36 million

Source: Authors' calculations

The Window of Opportunity

A demographic window of opportunity occurs when the ratio of the non-working age population (typically the children in school ages, usually measured as less than 15 years, and the elderly population aged 65+) to the working age population is low. The rising share of the working age population can translate into a subsequent rise in the rate of economic growth if the economy can employ effectively and productively the growing labor force. The demographic window of opportunity has a beginning and an end, closely associated with the start and the pace of the fertility decline, which influences the age structure. The United Nations defines it as the period when the proportion of children and youth under 15 years falls below 30 percent and the proportion of people 65 years and older is still below 15 per cent. According to this definition, the demographic window of opportunity would start in 2025 in Pakistan according to our projection – for both scenarios – and would end sometime after 2050. As stated earlier, this would mean a period with an important demographic po-

tential for high economic growth. However, the realization of this demographic window of opportunity is dependent on several factors. Levels of educational attainment are important as too low levels, for instance among women could limit participation in the labor force. As well, the economy should be able to absorb through employment the growing working age population. There again unemployment may limit the impact of those favorable age structures.

Unfortunately, the level of educational attainment of the working age population in 2025 is practically set already since educational change has such a large momentum. According to both the trend and goal scenarios (Figure 7), in 2025 the majority of the population would have a level of education equivalent to primary or less (56 percent) and the rest would have a secondary or higher education (44 percent). These numbers would be quite favorable if not for the fact that 32 percent of the working age population would not have received any education, as will be the case even if Pakistan succeeds in reaching its national education goals.

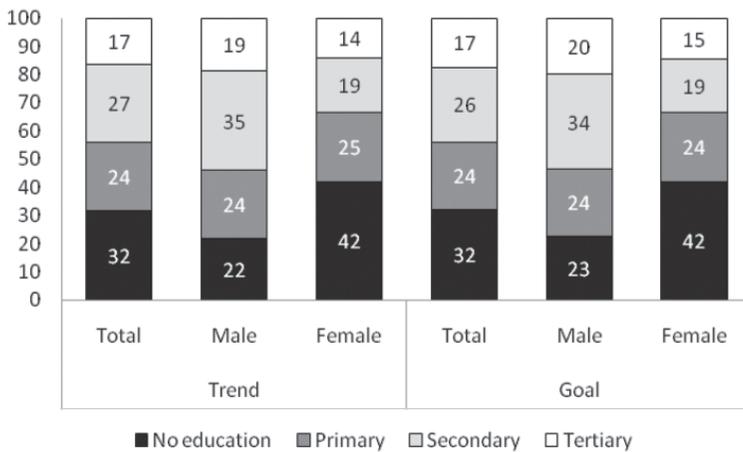


Figure 7. Share of the working age population (20-64) by levels of educational attainment at the onset of the demographic window of opportunity in 2025, Trend and Goal scenarios.

Source: Authors' calculations

This calls for a need to increase the scope of the adult educational campaign to bring literacy to almost all the working age population in the country, as has been successfully implemented in India, and to a lesser extent in Egypt. Historically, tackling adult literacy has not been a priority for the government of Pakistan although some initiatives have been launched. During the Ayub era (1959-1969), literacy programs were run under the community development program at village level. In the 1980s, the Literacy and Mass Education Commission (LAMEC) was set and started a new adult literacy campaign through the “*Nai Roshni School*”. Under this initiative, many adult literacy schools were set up all around the country. Furthermore, under the slogan “each one teaches one” it was mandatory for those persons who had passed intermediate exams to convert one illiterate to literate. The *Nai Roshni* program taught a few thousands adults how to read and write but it was a mixed success, mainly because of corruption and was terminated in the 1990s during the first Bhutto regime. A benchmark effort was launched in 2002 during the Musharaf regime which established the National Commission for Human Development¹¹ (NCHD) at the federal and provincial level to set up adult literacy centers in local communities to provide basic literacy skills to individuals (especially women) between the ages of 11 and 45, who were either never enrolled before or dropped out of school before acquiring literacy skills. So far, the 120,000 adult literacy centers of the NCHD have provided 2.5 million adults, 90 percent of which are females, with literacy skills.

The Regional Variation

The diversity of Pakistan is not only visible across the various landscapes but also across the differentials existing in levels of development. Already at the provincial level, the differences are quite marked as can be seen from Figure 8,

11. See link for more details: www.nchd.org.pk

which shows the share of the working age population by four levels of education in 2005 and 2050 according to a trend scenario¹² in the four main provinces – Baluchistan, Khyber-Pakhtunkhwa (KHP), Punjab, and Sindh – which accounted for 97 percent of the country’s total population in 2005¹³. This shows that the two less populated provinces of Baluchistan (7 million) and KHP (18 million) were particularly lagging behind in terms of educational development in 2005, since 66 percent of the working age population in Baluchistan and 57 percent in KHP had never been to school, compared with respectively 49 percent in Sindh and 46 percent in Punjab. In those two provinces, the pattern is close in terms of school progression, meaning that there are very few with a primary education, and most of those who have managed to go to school actually achieve either a secondary or a tertiary education. Sindh has the highest share of the working age population with a secondary education whereas Punjab has the highest share of the working age population with a tertiary education.

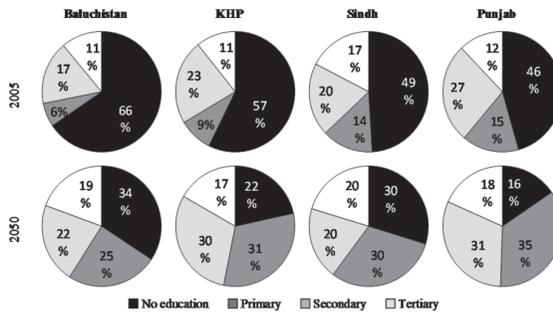


Figure 8. Working age population share by levels of education in 2005 and 2050 for the four most populated provinces, Trend scenario.

Source: Authors’ calculations

12. Calculated in a similar way for each province as that for the whole country based on the trend observed in the last fifteen years.

13. We have excluded from the analysis the Federally Administered Tribal Area (FATA) where data on levels of educational is scarce. The FATA Multiple Indicator Cluster Survey (2009) found the 10+ literacy rate to be very low at 21.4%, and only 7.5% for female.

The speed of change is as well different if we look at the result of the trend scenario. The only similarity is the share of the working age population with a tertiary education that would become almost equal to 20 percent in all provinces. Reductions in terms of people with no education are clearly visible in all provinces, especially in KHP and Sindh. Although 34 percent of the working age population would still have received no education in Baluchistan in 2050, this would still be a tremendous decline from the 66 percent found in 2005. On the contrary, Sindh's decline in the next 40 years would be less impressive—from 49 percent to 30 percent with no education—showing that this province is not diligently pursuing the achievement of full intake into primary. Besides the persistence of a large population with no education, the fact that the working age population is more balanced between those with primary, secondary, and tertiary education is a good sign in that the labor force could fulfill the requirements of skills to work in all sectors of the economy necessary for the development of the country.

Conclusion

Faced with the future growth of its population and of its labor force, Pakistan will have to adopt a development model capable of absorbing the increase. If the country fails, it will be confronted with two main risks: political instability and a poverty trap, a self-reinforcing mechanism which causes a persistent and cyclical poverty unless measures are taken to break the cycle. At present, Pakistan seemed to be ruled by geopolitics, security, and natural disasters, affecting the lives and well-being of its inhabitants. Pakistan's development is highly dependent on the capacity of the country to educate its population so that the 300 million Pakistanis in 2050 can live prosperous lives in a nation economically, socially and politically successful. Education has mostly failed so far in terms of provision and quality, because of the poor involvement of the state in improving education. Because of that Pakistan will fail to achieve the Millennium Development Goals for education, in terms of universal

primary education for both sexes and other objectives on the national and international agenda. The scenarios that we looked at show that the speed of change in advancing education has to be dramatically increased if the country would like to achieve all these goals by mid-century. This is more urgent because the age structure will become more and more favorable and as of 2025, the large labor force, if well educated, could be a major asset in the government's hands. The study points at two areas of particular concern: illiterate adult population and female education, where investments will be highly needed.

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Health in Pakistan: A Security Imperative

Anwer Aqil and Rushna Raoufi

Introduction

“I cannot go out of the house seeking health care without the permission of my husband and his family,” is a common finding in health surveys in Pakistan, indicating women face major social barriers and are forced to deal with insecurities to their well-being. Only one-third of married women in Pakistan use modern contraceptives. The overall maternal (267/100,000) and infant (78/1000) mortality rates are still high compared to other South Asian countries (World Health Organization 2010). Lack of an early childhood development program to improve child growth contributes to the high school dropout rate (40 percent in year one). This reduces productivity in later years and creates the vicious cycle of poverty. The Lady Health Workers (LHW) program—designed to improve child and maternal health by visits from female health care professionals—could not be implemented for one-third of the population due to a lack of recruitment of women in far flung rural areas. Women’s recruitment in the LHW program is severely curtailed by conservative social norms and low education levels, which perpetuate each other. A high population growth rate of 2.1 percent (World Bank 2009) takes away the fruits of economic development. In addition, there are major health status disparities and inequalities in availability and access to health services between urban and rural, and among various provinces, especially in Khyber Pakhtoonkhawa (KPK), Southern Punjab and Balochistan, where Taliban and other insurgent groups are a strong influence. The health system is not well equipped to deal with major disasters and emergencies.

This chapter is organized in five sections. It starts with a discussion on understanding health security in the context of human security and alludes to implications for Paki-

stan's national security. The second section describes the health situation in Pakistan by highlighting death, diseases and malnutrition. Section three focuses on the health issues that intersect with social issues in ways that make them hidden or taboo subjects, and emerging health problems related to increasing violence and terrorism. The fourth section explains various health services, the programs, and their limitations to improving the overall health situation—especially that of mothers and children, who remain the priority target group due to high mortality and morbidity. Lastly, under section five, we summarize how limited investments in the health sector (2 percent of GDP) is not only threatening lives and increasing economic and social costs, but also contributing to major security threats to Pakistan's survival. We end with the hope that better policies and an enabling environment will be created to ameliorate the existing health security situation.

Understanding Health Security

"You must understand the environment in Pakistan, this has become a moneymaking concern. A lot of people say if you want to go abroad and get a visa for Canada or citizenship and be a millionaire, get yourself raped (Washington Post 2005a)." When the President of Pakistan states that women get raped in order to get to emigrate (Washington Post 2005b), when women are murdered in the name of honor killing and are considered half in the eyes of the Hudood Ordinance of 1979, when elected representatives hesitate to change laws that make women and religious minorities second class citizens and instead create an enabling environment for women to be raped and killed—these attitudes, practices, and laws reveal deficiencies in the security of the population and cast serious implications on health. Since its inception in 1947, Pakistan has remained preoccupied with national security; this heightened after its breakup in 1971 and the creation of Bangladesh. The perceived threat from India has always diverted resources

to national security at the expense of development priorities, including health and education. This imbalance was perpetuated with the rise of the Afghan war and the Iran revolution, which created a Kalashnikov culture,¹ sectarian violence and drugs (notably, a heroin epidemic that plateaued in the mid-eighties).

The long-term neglected development policies resulted in social disparities, inequalities that are a breeding ground for extremist ideologies, intolerance, social chaos and insecurities. The nineties saw the emergence of the Taliban, which became a destabilizing force within Pakistan in first decade of 21st century and a wave of extremists has further deteriorated personal freedom, women's status and the security situation until today. Thus, Pakistan is at a critical juncture in making hard choices, balancing between investing in its people, infrastructure and national security, as poverty and extremism perpetuate each other and threaten personal, community and national security. However, there seems to be a limited conceptual understanding and attention in Pakistani policy circles on the economic and social development linkages to national security and thus, a lack of policies to combine both to improve national security. Although it is interesting to note that Dr. Mahbub-ul-Haq, a Pakistani economist, was the pioneer of the human security concept and served under two army dictators, he could not bring any policy changes to better the human development and security which he espoused, indicating the fossilized security mindset of the country. Before understanding those linkages in the Pakistani context, especially health security, we would like to provide a brief overview of the human security conceptual frameworks, where we differ and add to the debate on the health security in Pakistani context.

¹ Kalashnikov culture is a term coined in the late 1980s by Pakistani media to depict that the rifle was easily available in Pakistan, and that rich people and political leaders had started keeping body guards armed with Kalashnikovs to show power and status. Violence increased during this period as the Kalashnikov rifle was used in sorting social conflicts among people, and in crimes such as car theft and, kidnapping for ransom.

United Nation Human Development Report (HDR 1994) defined its human security concept as having two major components: 1) freedom from fear and 2) freedom from want. The UNHDR's human security concept has origins in a United States Secretary of State report. The HDR says:

The battle of peace has to be fought on two fronts. The first is the security front where victory spells freedom from fear. The second is the economic and social front where victory means freedom from want. Only victory on both fronts can assure the world of an enduring peace. No provisions that can be written into the Charter will enable the Security Council to make the world secure from war if men and women have no security in their homes and their jobs.

However, at that time the concept did not go too far. After a detailed discussion, HDR concludes with a long list of threats to human security that could be summarized in seven categories:

- (1) Economic security;
- (2) Food security;
- (3) Health security;
- (4) Environmental security;
- (5) Personal security;
- (6) Community security; and
- (7) Political security

These categories are interdependent and make human security an integrative concept, where everyone is responsible for creating enabling conditions of their own, as well as conditions enabling communities, countries and general human development. Despite having its roots in universalism of life claims, people-centered, participatory and focuses more on early prevention than later intervention, the concept is not without its critics. Paris (2001), reviewing the literature, concludes that human security in its current form does not provide enough distinction for priority setting for policy makers. He tried to sharpen the definition of human security and offers two dimensions of the concept for creating research agenda and setting policy priorities:

source of conflicts (military vs. non-military or both), and security for whom (state vs. societies/groups/individuals).

Under HDR, there is no operational definition of health security. However, the discussion on health security is around prevention and protection from diseases and deaths, and their determinants as well as access to health services. This description is no different from the general goal of public health and indicates that the health security concept could be subsumed under the goal of better public health. If we consider health security as an end, the other dimensions of human security could be seen as determinants of health security. The second question arises: what is the impact of health insecurity on other dimensions of human security, or in other words, what are the consequences of health insecurity? These two questions and their interrelationships are depicted in Figure 1.

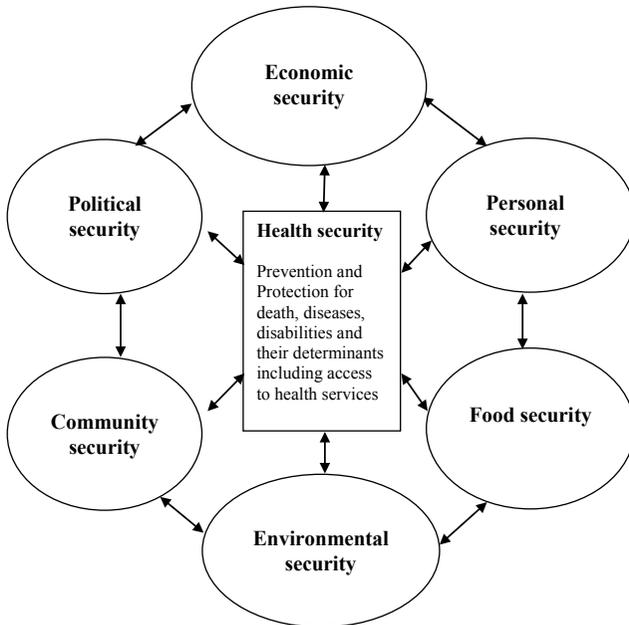


Figure 1. Understanding Health Security, Human Security Paradigm and Public Health.

There is neither an empirical study to understand health security linkages as depicted in Figure 1 nor will we attempt to do that. However, we will describe the magnitude and pattern of deaths, diseases, disabilities and malnutrition, and the health services available to handle them under the health security domain. By illustrating major social, cultural and financial impediments to developing policies conducive for improving health security, we indirectly allude to the factors in the other six dimensions of human security, which impinge on health security. In addition, it is assumed that increasing health insecurity could undermine national security in the long term and thus, should be part of the national security debate, like economic security. Unfortunately, there are scarce systemic studies that explore the financial and others costs to illustrate the consequences of health insecurity.

Health Situation

Health insecurities lead to deaths and diseases. In the following section we will describe them, along with malnutrition, which is one of the outcome of food insecurity.

Mortality

Pakistan is making slow progress in reducing infant and child mortality (Figure 2) which is still high compared to many developing countries. The Pakistani experience substantiates the theory that as child mortality goes down so does the fertility after a lag period. In other words, when people believe their children will survive and they can attain a desired family size, they produce fewer children. The total fertility rate (TFR) is a common measure of fertility and can be loosely interpreted as the average number of children per woman over her entire reproductive period, between 15 and 49 years of age. The current TFR estimate of Pakistan is 4.1 children per woman (WHO 2010) with differences in urban (3.3 children per woman) and rural (4.5 children per woman) areas (PDHS 2006), indicating that

rural women produce more children than urban women. Figure 2 shows that by 2005, the infant and child mortality drop plateaued as did reduction in the fertility rate, substantiating a linkage between the two.

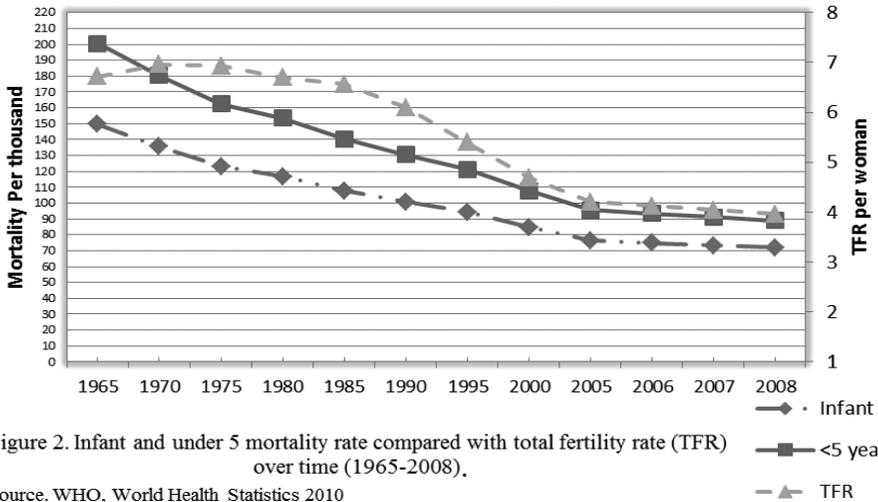


Figure 2. Infant and under 5 mortality rate compared with total fertility rate (TFR) over time (1965-2008).

Source: WHO, World Health Statistics 2010

Diseases

The last National Health Survey of Pakistan (NHSP) (PMRC 1994) showed that infectious diseases burden the people of Pakistan. Morbidity and mortality from diarrhea and cough remain at a very high level among children, and remained high at 25 percent and 15 percent respectively according to the Pakistan Demographic Health Survey (PDHS) 2006-07. NHSP also showed that chronic diseases are on the rise. Hypertension affects one out of every three persons over 45 years in the country. Diabetes affects over one in ten persons aged 60 years and above. High cholesterol levels are common, affecting about 20 percent of the population over 60 years. Chronic bronchitis affects one in ten rural women over 65, mainly due to cooking practices. Pakistan's disease pattern is slowly transitioning from infectious to non-infectious diseases but still infectious diseases predominate due

to unsafe water and limited sanitation services and practices, indicators of environmental insecurity.

Malnutrition

Malnutrition is the leading underlying cause of child mortality. Although it reflects health status, it is also an indicator of food security indicating that women and children in low socioeconomic status have limited access to food, leading to malnutrition. According to the World Health Organization (WHO 2010), both chronic (low height for age, or “stunting”) and acute (low weight for age) malnutrition decreased over a ten year (1991-2001) period from 54 to 40 percent and 38 to 32 percent (Figure 3) respectively, indicating that chronic shortage of food decreased during that period. However, 2009 data showed that improvement has stagnated in the last nine years. The Pakistan Demographic Health Survey (PDHS 1990) data, similar to the health survey of Pakistan (PMRC 1994), showed that more than 35 percent of children under five years of age are short for their age, over 10 percent are under weight for their height (Figure 3), and over half are anemic. A 40 percent malnutrition rate in children under 5 years means that more than 14 million children under five are moderately to severely malnourished. Due to missing data, it is not possible to connect data points of different periods, which could otherwise erroneously give the impression of steady upward or downward trends. Thus, we avoid the possibility of false inference, and leave it to the reader to draw conclusions.

Low birth weight babies rose from 25 to 32 percent from 2006 to 2009 (WHO 2010). Under PDHS (1990, 2006), mothers who did not report a birth weight were asked to report the size of the child at birth; responses were categorized as “very small,” “smaller than average,” and “average or larger.” There was an increase (31 percent) in very small, “smaller than average” babies in 2006 compared to 1990-91, which was 22 percent (Figure 3)—similar to the WHO (2010) finding of LBW babies. Malnutrition is a major risk

factor for disease and death in children. This has serious consequences for children’s social and cognitive development, leading to repetition and dropout in school and long-term lower productivity, as evidenced in early childhood development studies (PADECO et al. 2001; Myers 1995).

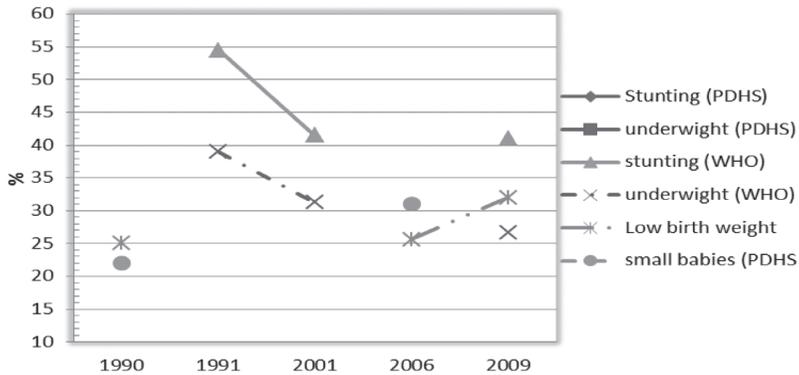


Figure 3. Malnutrition in children under five, 1990-2009.

Source: PDHS 1990 and 2006, WHO-World Health Statistics 2010

Health Issues No One Talks About

This section elucidates health issues, which intersect with social issues in such a way that make them out of bounds for discussion in Pakistan. These hidden or taboo issues have serious direct and indirect health consequences and need to be brought to public discussion for action as well as to understand the emerging health issues related to terrorism.

Violence Against Women and Personal Safety

Violence against women is a major personal threat which has serious health consequences. The root lies in the belief that women are subservient to men, which in Pakistan has been made into law. Human rights and women’s advoca-

cy groups (Human Rights Commission of Pakistan 2001; Khan 2001; Amnesty International USA 2002; Amnesty International USA n.d.; Joanne 2008) have noted that violence against women has been on the rise since the introduction of the Hudood Ordinance in 1979 in the Constitution, in an attempt to “Islamize” Pakistan’s laws. The Hudood Ordinance deals in part with sexual conduct and is discussed in greater detail later in this chapter. A United Nations research study (Tinker 1995) found that 50 percent of the women in Pakistan are physically battered and 90 percent of women reported that their men mentally and verbally abuse them. A study on “Battered Housewives in Pakistan” by the Women’s Division on National Commission of Status of Women (1997) revealed that domestic violence takes place in approximately 80 percent of the households. The Human Right Commission of Pakistan (2010) reported on its website that violence against women increased 13 percent from 7571 reported incidents in 2008 to 8548 reported incidents in 2009 based on the police department statistics. The highest increase was noted in reported domestic violence, from 281cases in 2008 to 608 in 2009. Table 1 provides details of types of violence, which include abduction/ kidnapping, honor killing, rape/gang rape etc. However, these findings are only based on those women who reported them, therefore reflecting only those women/families who showed courage to report the incidence to the police, as social stigma, shame and guilt cause many to keep quiet. Therefore, the under reporting of incidents of violence could mask a bigger problem at hand.

Table 1. Types of Violence Against Women in 2009. (N=8548)

	Number	Percentage
Abduction and kidnapping	1987	23.25
Murder	1384	16.10
Rape/gang rape	928	10.86
Suicide	683	7.99
Domestic violence	608	7.11
Honor killing	604	7.07
Sexual assault	274	3.21
Stive burning	50	0.58
Acid throwing	27	0.30
Miscellaneous offenses (Custodial violence, torture, trafficking, child marriages, incest, attempted murder, suicide and rape)	2003	23.13
Source: Human Right Commission of Pakistan, 2010		

Pakistan Rural Households Survey (Pakistan Institute of Development Economics 2004) showed that women feel more safe inside their houses than outside the settlement. In addition, they need permission to seek health care. Only 38 percent of the women stated they can go alone to a health facility if it is within less than one hour distance, while 18 percent of women said that they can go alone if the trip is equal to one or more hour. This finding reflects that perceptions of women's personal security also can act as a barrier to access of health services, thus undermining their health security.

Mental Health

There is not much available data on mental health in Pakistan. It is estimated between 10-20 percent of the population (Gadit 2007) suffer from some form of mental health malady, which means by a conservative estimate of 10 percent, about 17 million people are in need of some kind of mental health services. However, more women suffer from mental health problems due to cultural practices such as preferential treatment of male over female, limited mobility, low

decision power, lack of say in marriage partners, expected subservient behavior from wives, and cultural acceptance of wife beating (Niaz 2004). Similarly, Gadit (2006) alludes to insecurity and terrorism leading to an increase in the number of people suffering from mental health problems. To meet mental health services demand, there are only 2500 psychiatrists and 2000 beds in public health hospitals (Haroon n.d.). Assuming that 0.5 percent of the severely mentally ill need hospitalization at any given time, a need would exist for 85,000 beds, while in reality only 2000 beds (less than 1.4 percent of the needed) are available. Many of these problems are handled by faith healers, as there is limited knowledge about mental health problems and stigma attached to being diagnosed with mental health problem in general. To date there has been no study to determine the cost burden of these chronic health problems.

Drug Dependence, HIV and Hepatitis B and C

In 1977, alcohol was made illegal. However, it did not reduce the drug dependence problem. With the Iranian revolution and war in Afghanistan, Pakistan became the route for heroin to Europe and the US, as well as a market for heroin. By the early eighties, almost all opium users shifted to heroin smoking and two million people became heroin addicts (Blood 1994). In the nineties, due to the destruction of the poppy cultivation in Afghanistan, low supply, and increased costs, heroin which had been sold 80 percent pure started getting diluted; this precipitated a change in user pattern from smoking to injection to get a quick high. The latest estimate by the Ministry of Narcotic Control (2006-07) showed an estimated 628,000 (0.7 percent of the adult population ages 15-64) opium users. Currently, there are estimated to be 125,000 injection users. The study also reported that not all districts have outreach or drop-in-centers for drug users and less than 15 percent of drug users have knowledge of the drop-in-centers in the area, indicating a low availability of service coverage for drug users.

Injection drug users (IDU) are at risk for acquiring HIV infection. Pakistan is not immune from it and has a concentrated epidemic of HIV/AIDS in injection drug users (21 percent) with variability among the cities (HIV Second generation surveillance 2008). Another study (Nai Zindagi 2008) showed that 15-20 percent of spouses of injection drug users had HIV/AIDS. The IDUs also stated having had sex with commercial sex workers, suggesting that the population of injection users and commercial sex workers overlap and could hasten the spread of the disease. Saeed (2001) in her book "Taboo" traced the history and inner working of commercial sex workers in Pakistan and brought this issue to light, which is especially important in the context of the HIV pandemic.

Hepatitis B and C have the same route of transmission as HIV and are chronic conditions with high burden of disease. A Pakistan Medical and Research Council (PMRC 2008) study showed that Hepatitis B and C prevalence is 2.5 and 4.9 percent respectively, or about 8 million people have either virus. The study traces 97 percent cases to unsafe injection practices, while 3 percent of infection are due to other transmission routes. This prevalence is more marked in those districts where drug addiction and HIV prevalence is also high, indicating that HIV could move from injection users into the general population unless preventive measures of safe injection use are taken.

Occupational Health and Social Security

International Labor Organization (ILO 1992) describes social security as, "the protection which society provides for its members, through a series of public measures, against the economic and social distress that otherwise would be caused by the stoppage or substantial reduction of earnings resulting from sickness, maternity, employment injury, unemployment, invalidity, old age and death; the provision of medical care; and the provision of subsidies for families with children." There are no institutional mechanisms to track occupational health in the country. The industrial and

commercial organizations provide insurance, which covers employees and their dependents' health costs. Approximately one million labor workers are under this scheme (Mahmood & Nasir 2008). However, those organizations which employ less than twenty workers are exempt from providing employee health insurance. Since the late seventies, when these laws were introduced, many industrial units introduced the contract system to get away from the obligation of providing social security cover to the workers. In addition, available information on medical facilities and health services show that the expenditure covered per employee on health services is negligible as compared to the disproportionately huge per capita sums on the administrative expenditures (Mahmood & Nasir 2008), indicating that the quality of health services for the workers' families remains limited. There is also no social security protection for the retired and elderly population.

Terrorism, Personal and Political Insecurities and Their Health Consequences

Pakistan has gone through major transformation from being a peaceful country to an increasingly violent country. The roots of this violence can be traced to the Afghan war with its abundant and free supply of arms, which not only made ethnic and sectarian clashes violent but also enabled the emergence of extremist Islamic organizations using force to convert Pakistan into their restricted definition of Islamic order. After the removal of the Taliban regime in Afghanistan, these forces become more operational in Pakistan resulting in increased terrorist attacks. Human Rights Commission of Pakistan (HRCP2008) reported that there were 71 suicide blasts in 2007 and 927 people killed. The HRCP annual report of 2008 stated that there were at least 1,016 terrorist attacks, including 37 suicide bombings by militants in KPK province, killing 961 people and injuring 1,698. According to the Pakistan Institute for Peace Studies (2010) the terrorist attacks in different parts of Pakistan range between 250 and 300 per month over the whole

year (Figure 4). By the end of November 2010, there were a total of 3067 terrorist attacks, injuring 9615 and killing 9343 people. In addition, in KPK province, an army action against the Pakistani Taliban displaced 300,000 people in Swat valley, and 1600 extremists were killed as well as 158 army soldiers.

These terrorist attacks not only destroy human lives, injure, and disable people, but also create tremendous psychological stress and fear within the target population, which has mental and physical health consequences. This situation has also put pressure on the existing health services which are not equipped to deal with disasters and large emergency situations as evidenced by the earthquake of 2005 where more than half million were affected and by the 2010 flood. According to National Disaster Management Agency (2010) the flood caused 1985 deaths, while about 3000 people were injured. Over 20 million population were affected, and 1.7 million houses and 417 health facilities destroyed in 78 districts, affecting abilities to manage health crises.

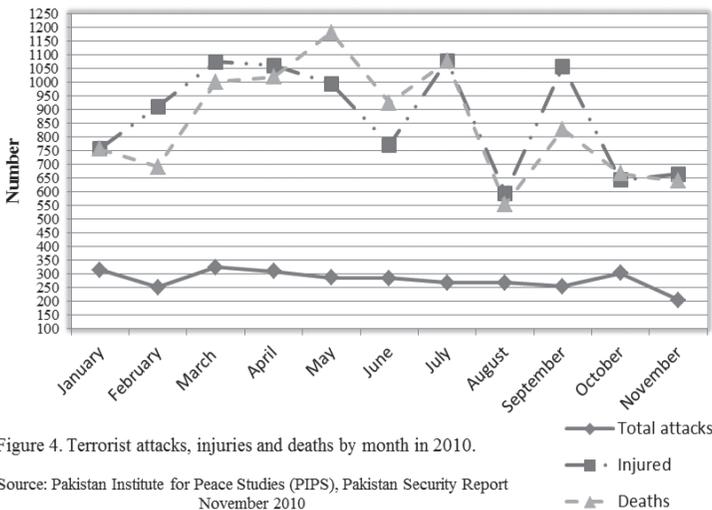


Figure 4. Terrorist attacks, injuries and deaths by month in 2010.

Source: Pakistan Institute for Peace Studies (PIPS), Pakistan Security Report November 2010

The ethnic, sectarian conflicts and suicide bombings have not only created personal and community security issues but also political insecurity, which has serious consequences on the health of the population. Other examples of community and political insecurities are the laws violating the universal human rights declaration, of which Pakistan is a signatory. The Hudood Ordinance 1979 and the Blasphemy law of 1982/86 have reduced women and religious minorities into second class citizens, however, many Islamic and legal scholars consider them controversial interpretations (GIANT forum 1996; National Commission on the Status of Women 2003). Under Hudood Ordinance 79, a woman's testimony is half as valued as a man's, meaning compared to a man's testimony, two women's testimonies are needed to verify a claim. A woman rape victim requires corroboration of four adult males that rape has occurred, making it extremely difficult to prove rape. Rape without establishing the absence of consent could go against women as adultery. Unfortunately, 54 percent of women in jails are waiting for their fate under these laws. The Qisas and Diyat Act of 1984 (Pakistan Law Commission 1984) is also discriminatory to women, as there is an absence of mandatory provisions for compensation to women victims of violence and no remedy for persistent discrimination in the distribution of inheritance. Under Qisas, a killer can go free, if he negotiates with the family of the victim that a woman from his house can be given to the family of the victim for marriage. Thus, a woman in the killer's family is sacrificed to free the killer and avoid punishment for his deed. Minorities remain under constant threat because of the Blasphemy Law of 1986 (Pakistan Penal Code), where someone can be accused of insulting Prophet Mohammad (Peace be upon him) and that punishment is death. The latest example is a Christian woman Asia Bibi (Guerin 2010), who has been in jail for the last two years and was recently sentenced to death by lower court. The Islamic extremists are asking the government to implement the court verdict while the majority of population are against the execution.

Unfortunately, the Governor of Punjab, Mr. Salman Taseer, who requested President Asif Zardari to pardon Asia Bibi and also supported the repeal of the Blasphemy law, was gunned down (BBC 2011) by an extremist Islamic security guard on the pretext that the Governor was an accomplice to Asia Bibi's "crime" by supporting her. This murder raises many concerns, especially the personal and political insecure environment, and rising intolerance to different perspectives, which in turn create stress and health consequences in the general population.

Pakistani people in general believe in Sufi traditions of Islam, which are more people-centered, tolerant and peace loving. Thus, it is no surprise that Pakistanis believing that acts of terrorist violence against civilians are "never justified" rose from 35 percent in 2004, to 69 percent in 2006 (Pew 2007). It is interesting to note that decline in support coincided with a tenfold increase in terrorism over the same period – from five terrorist attacks in the first quarter of 2004, to 50 in the last quarter of 2006 (MIPT 2007). As the attacks increased, opposition to them almost doubled.

Addressing Health Issues

This section describes how availability of health infrastructure, human resources and maternal and child health services are addressing common health issues, and their weakness in meeting health challenges. It focuses on maternal and child health services and programs as they are closely related to achievement of the UN's Millennium Development Goals.

Health Infrastructure and Human Resources

The Pakistan health system is based on the biomedical model, where curative care dominates over preventive care. There is an emphasis on building more hospitals and health facilities, and although in the 1970s more primary health care facilities were constructed in response to a call for health for all by 2000, the emphasis has remained on

curative care. Since 2000, there has been less construction of public health facilities but the number of beds in existing hospitals have increased, from 93,723 to 103,037 in public sector (Federal Bureau of Statistics 2009). There is no data available on private sector hospitals and health facilities. For every doctor there is supposed to be four nurses, however, the ratio is reversed such that for every one nurse, there are two doctors. These numbers show that the nursing profession is not valued in Pakistan. One of the barriers is that women are not supposed to touch men and the opposite is also true. On the other hand, men's attitude toward nursing is that it is not their job but that of a woman to take care of the sick. The trend is slowly changing as the nurse to doctor ratio of 1:4 in the 1990s fell to 1:2 in 2009. This could be due to more women entering into workforce, which is occurring due to the increasing urbanization and economic pressure to complement family income.

The disparity of human resources to address women and children's health issues is also witnessed in the limited availability of the lady health visitors (LHV) and midwives. LHV is another title for midwife and has no connection with LHW program. There was only a 50 percent increase in the number of LHV and a 13 percent increase in the number of midwives in the last ten years (Federal Bureau of Statistics, 2009), indicating the limited availability of skilled birth attendants. Only 38 percent of births are attended by skilled birth attendants (PDHS 2006), indicating the need for rapid increase to ameliorate the existing gap. The Maternal, Neonatal and Child Health (MNCH) program (2006) planned to train 12,000 community midwives by 2012. However, the plan's implementation has been slowed by shortages of midwifery schools, training quality, and students.

Maternal Health Services

Antenatal care (ANC) coverage has improved significantly over time (Figure 5) but still 40 percent of pregnant women do not go for a first antenatal check-up (PDHS 1990, 2006).

In addition, quality and continuity of services reflected by four antenatal care visits although doubled (14 percent in 1990 vs. 28.4 percent in 2006) but remained a big issue, as more women are not sought out by health providers to complete all required four ANC visits and drop-out rate between first and fourth ANC visit has increased from 1990 to 2006. Tetanus prevention for mother and neonatal is achieved through provision of tetanus toxoid vaccine. Although it has improved over time, 44 percent of pregnant women do not complete both doses, reflecting low effectiveness of ANC as well. Thirty-nine percent of the deliveries are attended by a skilled birth attendant, only a four percent change from 1990, showing limited progress over time in improving delivery services and addressing pregnancy emergencies. Lastly, postnatal care is also very limited (43 percent), affecting both maternal and neonatal health. The low coverage of maternal health services could be traced to the limited availability of the lady health visitors and midwives cadre.

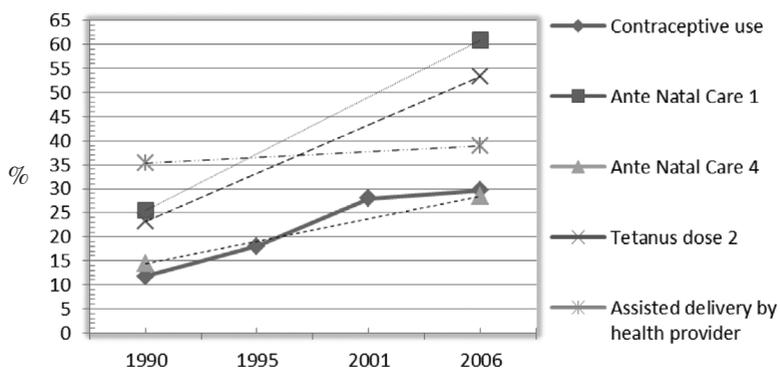


Figure 5. Percentage distribution of contraceptive use, antenatal care (ANC) visit 1 and 4, tetanus toxoid dose 2 (TT2) and assisted deliveries 1990-2006.

Source: PDHS 1990, 2006; WHO statistics 2010

Pakistan's family planning program was started in late 1950s and is one of the oldest programs in developing countries. However, it came to a standstill during the rule of President General Zia-ul-Haq from 1977-1988. It started picking up momentum again after the civilian government took over. Douthwhite and Ward (2005), analyzing the Lady Health Worker Program evaluation data, concluded that the doubling of the contraceptive prevalence in 1990 to 2001 was due to the impact of the Lady Health Worker Program. However, the progress declined and contraceptive prevalence rate is only 30 percent (Figure 5), indicating more assertive social policies and better contraceptive services are needed.

Lady Health Worker (LHW) Program

The Lady Health Worker program was introduced in 1994 to address the lack of access to preventive health services and improve family planning. Every lady health worker was supposed to cover 1000 households. These LHWs work in the community and are linked to the first level primary care facilities. The program started with 40,000 LHWs and increased to 90,000 in 2008.

Oxford Policy Management Group (2002, 2007-2009) conducted external evaluations of the LHW program. The latest evaluation in 2009 showed that performance of the LHW program continued to improve both at the LHW individual level and at broad health system indicators level. The mean LHW performance score, which measures the success with which the LHW is delivering all the services required of her, given the size and demographic breakdown of her registered population, has increased from 42 to 52 percent. Under health system performance indicators, the tetanus toxoid (TT) coverage in pregnant women (five or more doses) improved from 14 to 31 percent under LHWs as did the attended deliveries coverage, which increased from 27 to 48 percent. The proportion of children fully immunized has increased from 57 to 68 percent from 2000 to 2007. Exclusive breastfeeding also improved, although this

may simply be due to expansion of the program into populations that are poorer and more rural, where exclusive breastfeeding is more common.

The evaluators conceded that better health measures in 2008 compared with 2000 are not all related to the LHW program. The other explanations provided are: trends in the national population as a whole, the expansion of the program into new areas, and that the served population has substantially better health status measures than the control population for almost all measures, with the exception of some indicators on breastfeeding and weaning. However, the multivariate analysis, which controlled for the confounding factors, confirmed that the LHW Program has had a positive impact, particularly in relation to family planning and antenatal care. Comparable served households are 11 percentage points more likely to be using a modern family planning method than households that are not served. Women who gave birth in the past 3 years before the survey are 13 percent more likely to have had tetanus toxoid injection during their pregnancy, and neo-natal check-ups are 15 percent more likely to have occurred. Children under three years of age are 15 percent more likely to be fully immunized than those children not served by the LHW program.

The report also drew attention to the weaknesses of the program:

- There is no evidence of a positive effect on breastfeeding – in fact, there appears to be even a small negative relationship.
- There is no evidence of an increase in skilled attendance at delivery.
- There has been limited increase in growth monitoring.
- There is no impact at all on the incidence of diarrhea and respiratory infections in children.

- There is a need to improve a group of underperforming LHWs whose working practices must be improved and there are gaps in LHWs' knowledge.
- There remain significant failures in supply systems, both in medicines and equipment.

Another important aspect of the program is empowerment of LHWs as individuals. LHWs are more likely to make decisions about whether to have another child, the use of family planning methods, and whether to consult someone if a child is sick than other house bound women. They are also significantly more likely to make decisions about visiting friends or relatives, reflective of more mobility outside of house, and slightly more likely to make decisions on economic issues, such as those relating to the household budget and paying for their children's medical costs. Over 50 percent of LHWs said they should speak their mind compared with 32 percent of women working in the home, 38 percent of women working outside the home, and only 27 percent of women who are not working. Among LHWs in the 15-24 age bracket, this was even higher at 62 percent, as was the percentage for LHWs with university-level educational backgrounds, indicating the impact of education and generational attitude change. Over 90 percent of respondents in a community survey as part of the LHW evaluation (Oxford Policy Management Group 2007-2009), stated that LHW assisted women in improving their health as well as improved people's lives in the community, and that a woman was usually respected after becoming LHW.

Child Vaccination Coverage

An expanded program of immunization (EPI) has been a flagship of the government of Pakistan since the late 1970s. It has gone up and down with availability of funding and technical support. The major boost was in the 1980s with USAID assistance, but coverage stagnated after USAID

pulled out of Pakistan in early 1990s. Slowly, the government took over the finances of the program especially the polio eradication campaign, which improved polio vaccination coverage from 42 percent in 1990 to 90 percent in 2006 (PDHS 1990, 2006). However, the full vaccination package which bundles the BCG vaccination for TB, as well as vaccinations for Polio; Diphtheria, Pertussis, and Tetanus (DPT); and Measles reached a peak of 53 percent of children in 2001, dropping back to 47 percent in 2006 (Figure 6) (PDHS 2006; WHO 2010). In addition, the dropout rate (16 percent) between DPT1 (74 percent) and DPT3 (58 percent) showed that vaccinators were not following up on childrens' immunizations; this is indicative of low quality of vaccination service. Clearly, much remains to be done for improving the coverage of child vaccinations, which has a major effect on child survival.

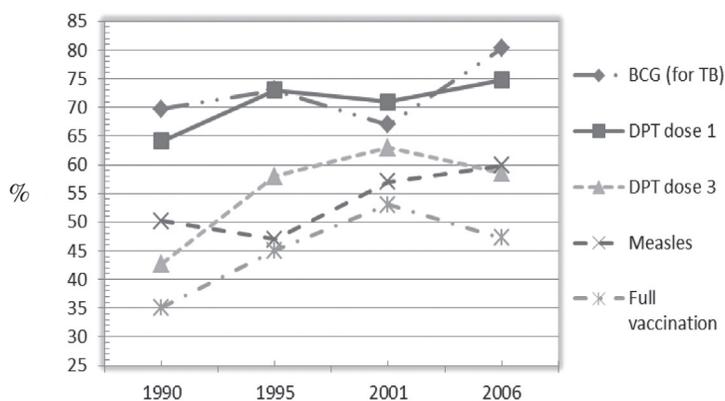


Figure 6. Types of child vaccination 1990-2006
Source: PDHS 1990, 2006; WHO 2010

Early Childhood Development

Pakistan is signatory to the convention on the rights of children (UNICEF 1948). Children have the right to live and realize their full potential. The government of Pakistan is also committed to providing health, nutrition and education services to children. However, availability and

accessibility to health and nutrition services are limited. The government is trying to improve access to preventive health services for mothers and children through the Lady Health Worker program, while the Ministry of Education under its vision for National Plan of Action on Education for All (2003) has included early child education through preparatory classes. The Ministry of Women Development and Social Welfare initiated the Tawana Pakistan Project to combat malnutrition and increase school enrollment among primary school girls (Badruddin et al. 2008). Some NGOs with assistance from UNICEF are also involved in implementing early child development projects. These different initiatives are commendable for improving child growth and development. However, there are no concerted efforts to integrate different interventions for improving early child development, especially during the age of 2-5 years, when a child needs good care and stimulation for developing sensorimotor, cognitive and social skills.

Child rearing and caring practices are crucial parts of early childhood development, where children learn to socialize and develop cognitive skills. One study in Quetta city (Aqil and James 2003) found that only 50 percent of mothers have correct knowledge of child development milestones such as the usual age at which a child starts standing alone, walking and speaking, indicating that half of the mothers would not seek help if their children's milestones are delayed, as they would be unaware that a problem exists. Also, 59 percent of mothers reported either beating their children or showing anger if their children wet the bed, and think those behaviors are a good treatment for bed-wetting. Forty-four percent of mothers reported having no time to play with children despite being at home, indicating heavy domestic workload. Beating was considered an acceptable behavior to discipline children and 44 percent of parents beat their children daily, while 75 percent of mothers admitted being beaten by their parents in their childhood. Their intergenerational transmission of behaviors legitimizes use of force for discipline or learn-

ing new behaviors, which also likely translates into using it for settling differences of opinions later in life. Preferential treatment for boys starts early by giving them more time, more quantity of food and meeting their demands. One-third of mothers reported that they would not educate their girls, putting limits to girls' growth and development. These findings showed that there is limited knowledge of early childhood development and understanding of rearing and caring for children without violence. The existing health and education services do not address the development needs of children under five.

Discussion

The Pakistan health history is like wild grass, which is resilient and has shown improvements despite many setbacks. Mortality levels have decreased and life expectancy, availability and access to health service have improved over time. However, the differentials in health status measures between poor and rich, women and men, educated and non-educated, urban and rural have remained either stagnant or increased over time (Ahmed 2005; PDHS 1994, 2006; Federal Bureau of Statistics 2010). Pakistan's economic growth remained slow due to high population growth rate in the past. The growth rate is slowly coming down. However, even with reduced fertility rates, population growth normally takes generations to decrease appreciably as more and more young women enter the childbearing years. This population momentum constantly requires more investment to reduce increasing health inequities and inequalities. Pakistan's budget (Annual budget 2010-11) showed that 62 percent of revenues are being used for debt servicing, 31 percent for defense and only 0.5 percent for health, indicating limited fiscal space for social services and economic development. This is the tip of iceberg of the national security establishment, as Siddiqua (2007) noted in her book, *Military Inc.* She described that the armed forces have spread their tentacles into Pakistan's economic life.

The military runs its own schools, hospitals, factories, businesses—including Shaheen Airline—and some 11.58 million acres of land. While other branches of the government have larger holdings, the military alone has the right to redistribute state land for the benefit of its officials for personal use. The massive military commercial involvement also makes the army somewhat autonomous and asserting a greater than usual stake in the state's development and its affairs (Rizvi 1988), which have had detrimental effects on other economic and social development.

Pakistan is a signatory to the United Nations' Universal Human Rights Declaration (1948), of which articles 1 and 7 are particularly relevant to human security in Pakistan in relation to women, minorities and vulnerable groups who have no voice.

- All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act towards each other in a spirit of brotherhood (Article 1).
- All are equal before the law and entitled without any discrimination to equal protection of law. All are entitled to equal protection against any discrimination in violation of this Declaration and against any incitement to such discrimination. (Article 7)

Universal Declaration of Human Rights,
United Nations 1948

With low investment in health and education and other social services, and government priorities that need change to meet emergency demands such as the 2010 flood disaster, how Pakistan will be able to achieve the Millennium Development Goal by 2015 is open to debate. Birdsall and Kinder (2005), drawing on the Social Action Program for improving social services and reducing poverty, concluded that sustainable poverty reduction and develop-

ment requires addressing structural problems and political economy issues. We have tried to create an understanding that a shift of resources towards national security at the expense of social and economic security, including health, could become a threat to national security. Therefore, a balanced approach to address these issues is needed to avoid people's frustrations. The pain of unfulfilled expectations of increased quality of life after independence in 1947 is well expressed by the famous poet Faiz (poetry translation by Kiernan 1971) and is true for recent times:

This leprous daybreak, dawn night's fangs have
mangled—,
This is not that long-looked-for break of day,
Not that clear dawn in quest of which those com-
rades
Set out, believing that in heaven's wide void
Freedom's Dawn, August 1947

However, like Faiz, we believe that Pakistan needs to move forward in creating an enabling environment and policies to provide a better quality of life for its people.
Of mind and spirit's ransom has not struck;
Let us go on, our goal is not reached yet.
Freedom's Dawn, August 1947

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Urbanization in Pakistan and Its Effects On Environment and Security

S. Shabih-ul-Hassan Zaidi

Introduction

Cities are the engines of economic growth and they attract human capital and talent by offering a range of lifestyle amenities, higher wages and better health and education facilities. Pakistan with a population of above 180 million (in 2011), is one of the fastest urbanizing countries in the world. At the time of independence in 1947, only 15 percent of the population of Pakistan lived in urban areas. At a current urban growth rate of 3.5 percent it is estimated that in 2011, the urban proportion of the population is above 36 percent. It is expected that by the year 2050 the majority of Pakistanis will be living in urban areas and that most of the urban population will be in the large cities such as Karachi, Lahore, Faisalabad, Hyderabad, Multan and Peshawar. This is mainly due to the trend of rural populations shifting to the large cities, bypassing the middle order towns. In Punjab province, five cities will become metropolises of more than 4 million each. By the year 2030, Lahore's current population of about 9 million will rise to above 15 million, while the Karachi metropolis will have a population of more than 20 million. Similarly, other big cities will increase in population, but the question is whether the quality of life of their residents will improve or decline. The current trends of deteriorating environments in the large cities indicate that citizens' quality of life will worsen tremendously if nothing is done to improve their environments. Traffic jams, high pollu-

tion levels, lack of parking spaces and poor law and order are all indicative of this trend. The urban sprawl and the resultant increased average trip length for jobs, schooling, and shopping is another important issue which has increased the cost of living in these mega cities. Moreover, during the past five years the security situation has deteriorated tremendously due to suicide bombings by extremist and terrorist groups in nearly all the big cities of Pakistan. The increased cost of living, heightened pollution levels and reduced safety and security in these cities have made the lives of citizens miserable. Thus, it is imperative to make corrective efforts and carry out planning for sustainable development. This means that city administrators and planners will have to make sustained efforts to improve the quality of life of their citizens by reducing pollution levels, avoiding unnecessary urban sprawl and improving the security of life.

Urbanization Trends in Pakistan

Urbanization is a phenomenon by which the percentage of population living in urban areas increases. Pakistan has faced rapid urbanization since independence in 1947. After partition from India, a large influx of refugees came to Pakistan and most settled in the urban areas, particularly the large cities of Karachi and Lahore. According to Census Organization of Pakistan, urban areas are defined as those settlements which have a population of more than five thousand persons (1998 census). The urban areas are mostly the home of industry and businesses, and they attract human capital and talent by offering job opportunities and a range of lifestyle amenities. Thus they exert forces of attraction, the combination of which makes

a *pull factor*. On the other hand the rural areas have a declining number of job opportunities and the lack of public utility services and amenities make the quality of life very poor. The tradition of dividing inherited land among heirs makes the small landholdings uneconomical for cultivation and most earners become unemployed or underemployed. Thus the rural areas exert forces of repulsion, the combination of which makes a *push factor* which causes people to migrate to the cities for employment, education and better quality of life. Another factor which adds to the bulging population of cities is the reclassification of rural settlements located on the outskirts of the large cities which are engulfed into the expanding cities with the passage of time. Some large villages also grow to form new urban areas or small towns.

In addition to attracting migrants, the urban areas of Pakistan also exhibit a high natural growth rate due to an overall high birth rate and reduced death rate enabled by better hygiene, better nutrition and health-care availability. This fact is supported by the data about the birth rates, death rates and infant mortality rates in urban and rural areas of Pakistan. The birth rate in urban areas of Pakistan was 23.4 (per 1000 population) while in rural areas it was 26.7 in 2007 (PDS 2007, 22). The death rate was 5.4 (per 1000 population) while in rural areas it was 7.5 in 2007 (PDS 2007, 27). The infant mortality rate in urban areas was 66.5 (per 1000 live births) while in rural areas it was 79.4 (PDS 2007, 30). Unlike the modern West, the low income families living in urban areas of Pakistan do not consider their children as an economic liability. Instead the perceived value of a male child for the economic development of family is still so high that some people continue having children for want of a male child.

Thus, reductions in urban birth rates lag. All these factors contribute towards rapid urbanization trends in Pakistan.

Hameed (1973) has studied the process of urbanization in the upper Indus plain and emphasized two points. Firstly, economic gains both in public and private sectors brought by the opening up of the vast lands were enormous and with each new town in the center of a canal irrigated agricultural area, one notices an upward shift in the degree of urbanism. Secondly, the establishment of new towns led to better planning of settlement morphology than what existed before. Hameed (1973) also analyzed various economic factors leading to rapid urbanization and consequent patterns of urban growth in the area under study. As well, Khan and Rahman (2000) have identified the various stages of urbanization in the country and have made a number of recommendations to reduce urban problems.

Table 1. Urbanization in Pakistan

Year	Urban Proportion (percent)	Urban Growth Rate
1951	17.8	-
1961	22.5	4.9
1972	25.4	4.7
1981	28.3	4.3
1998	32.5	3.5
2010 (estimate)	36.2	3.5
2050 (projected)	50.1	3.5

Source: Census of Pakistan, 1951, 1961, 1972, 1981 and 1998

Table 1 demonstrates that there has been 15.7 percent increase in the proportion of urban population in Pakistan between the first census (17.8 percent) in 1951 and the last census (32.5 percent) in 1998. Shirazi (2006) remarks that the level of urbanization in Pakistan in 1998 (32.5 percent) is not high by global standards. This level, however, is the highest among the SAARC (South Asian Association for Regional Cooperation) countries as highlighted in Figure 1. The growth of the urban proportion of population was greatest (4.9 percent) during the decade of 1951 to 1961. This may be attributed to the influx of refugees from India in the earlier post-partition years and the industrial development in the large cities, particularly Karachi. The growth rate of urban population has reduced steadily from 0.49 percent per annum in 1961 to 0.35 percent per annum in 1998 and beyond. However, it is expected that this growth rate will continue for the next few decades. Thus by the middle of the 21st century the majority of the population in Pakistan will be living in urban areas.

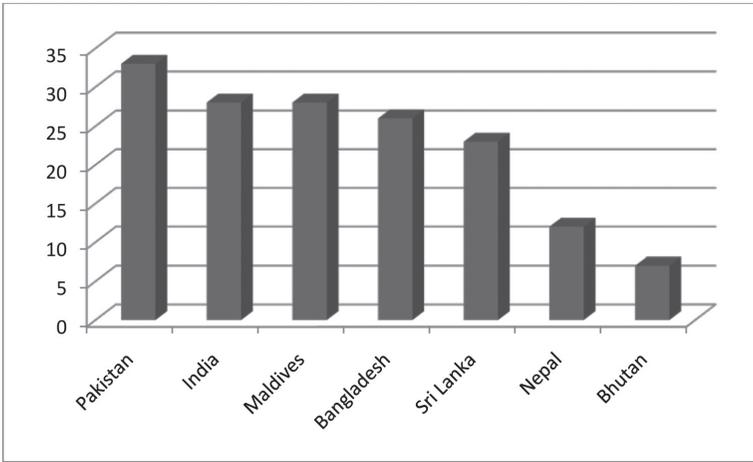


Figure 1. Urbanization Rate in SAARC Countries.

Source: Population Division of the United Nations Secretariat, World Urbanization Prospects: The 2001 Revision, Data Tables and Highlights (ESA/P/WP.173, 20 March 2002). Data extracted from the website http://www.nationmaster.com/graph/peo_urb-people-urbanization.

Mega City Trends

The cities having a population of more than 5 million are termed mega cities. It is interesting to note that the greatest trend of urbanization in Pakistan is concentrated in mega cities. This trend is obvious in other developing countries also (Figure 2).

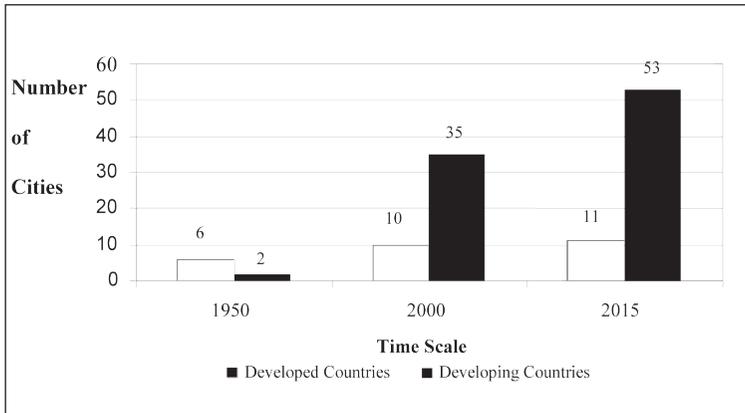


Figure 2. Growth Patterns of Mega Cities in the Developed and Developing Countries

Source: UNCHS 1999, Basic Facts on Urbanization, as quoted in Mayo and Zaidi 2007

Figure 2 demonstrates the number of “five million plus” cities in developed and developing countries over the last six decades. It was evident that in 1951, there were six mega cities in the developed world while the developing countries had only two. In the year 2000, the developed world had 10 mega cities while the developing countries had 35 mega cities. In the year 2015, it is expected that the developed world will have only 11 mega cities while the developing countries will have 53. Evidently the trend of movement of people in the developing countries is towards large metropolitan cities. This phenomenon is also evident in Pakistan. Haq Riaz (2009) writes:

More than half of the total urban population of Pakistan lived in 2005 in eight urban areas: Karachi, Lahore, Faisalabad, Rawalpindi, Multan, Hyderabad, Gujranwala and Peshawar. Between

2000 and 2005 these cities grew at an average rate of around 3 percent per year and it is projected that this growth rate will continue for the next decade.

Large metropolises, such as Karachi and Lahore not only attract migrants from rural areas but also draw migrants from other cities. The 1981 census revealed that the population of Karachi was growing at a rate of 7.5 percent per annum. However, this growth rate was reduced to around five percent according to 1998 census. The overall population growth rate of the country was also reduced from 3.1 percent in 1981 to 2.6 percent in 1998. The present natural growth rate of the country is estimated to be around 2.2 percent (Zaidi and Mayo, 2009). This indicates that the government's family planning efforts may have shown some positive result.

Hierarchy of Urban Settlements in Pakistan

The hierarchy of urban settlements in Pakistan has changed with the passage of time since independence in 1947. Table 2 indicates the growth in the number of settlements of various sizes in Pakistan between 1951 and 1998. The number of small towns (with a population of less than 25,000) have increased from 196 in 1951 to 276 in 1998 which is a 41 percent increase only, while the large cities (with a population of more than 100,000) have increased from 10 in 1951 to 59 in 1998 which is a 490 percent increase. Thus, the number of large cities is growing more rapidly than the number of small towns. It also indicates the trend of movement of rural migrants to large cities bypassing the small and intermediate towns.

Table 2. Numeric Growth of Towns with respect to Hierarchy of Population Sizes in Pakistan

Year	Number of Settlements with Respect to Hierarchy of Population Sizes				Total
	<25,000	25,000-50,000	50,000-99,000	>10,0000	
1951	196	23	9	10	238
1961	280	31	14	12	337
1972	335	52	22	24	433
1981	276	73	35	31	415
1998	276	131	72	59	538

Source: Census of Pakistan, 1951 to 1998, as quoted in Zaidi and Mayo 2009

Rural to Urban Migration Trends in Pakistan

Ahmed (1965) used 1951 census data and found that the movement towards the cities was due to the application of new methods of cultivation enabling a large production of food from a small amount of land, and allowing a portion of the rural population surplus, now unneeded for farming, to go to towns to find opportunities for employment. Similarly the growth of commerce and industry in the towns and cities offered better opportunities of employment and many people left the land even if they had to purchase their food. There is an extreme dearth of research on migration trends in Pakistan. However, in a study of the migration situation in Pakistan, Karim and Robinson (1986, 37) conclude:

Overall mobility is high. There is not one migration stream in Pakistan but several including:

- (a) a substantial North-West Frontier to Karachi

flow which in the past has been primarily temporary migration but is [now] becoming semi-permanent and is involving more family units. These migrants maintain strong ties with their country-side [rural home areas];

(b) the large industrial centers of the Punjab are at the core [the receivers] of their own migration streams and these include commuters from the nearby areas, as well as both temporary and permanent movers;

(c) an urban to urban stream which will grow as new, larger urban centers emerge. The new urban areas draw their skilled labor supply from old urban areas and their unskilled labor from rural regions;

(d) rural to rural seasonal movements continue and may increase if seasonal labor shortages develop in some rural regions due to out-migration of permanent workers.

While explaining the causes of migration from rural to urban centers, Karim and Robinson (1986, 38) write:

The decision to migrate is as much a family decision as an individual one. It is a way of extending the family resource base or more fully using its human capital. Through family linkages, migration is an effective way of channeling income from well-off to poorer regions.

The above conclusions seem to be still valid for Pakistan and the migration of people from rural areas towards large urban centers is likely to continue in the 21st century because the large metropolitan cities in Pakistan will remain the best choice for industrial

and commercial developments. This will happen at the cost of development of intermediate cities in the country which will ultimately result in widening inter-regional disparities.

Effects of Rapid Urbanization

It is evident from the preceding that the level of urbanization in Pakistan is the highest in South Asia and that Pakistan is urbanizing very rapidly. Urbanization is an index of national development and it is an indicator of industrialization and commercial development in the country. However, the potential benefits of rapid urbanization are not achieved because of the slower pace of growth of the national economy and scarcity of resources with the local city governments which results in deficiencies in housing, infrastructure and amenities for the growing populations of the cities. The rising demand for urban facilities is unmet and the lag between the demand and supply of housing and urban services continues widening. This situation culminates in low quality of life in the cities. The negative effects of rapid urbanization in Pakistan are summarized next.

Urban Sprawl and Intra City Trip Length Enhancement

One of the major effects of rapid urbanization in Pakistan has been the urban sprawl, particularly in the large cities such as Lahore and Karachi. Urban sprawl or city obesity is defined as “low-density development that outpaces population growth” (Mayo and Zaidi 2007, 24). Urban sprawl is accompanied by low density developments, loss of open space and increased use of automobiles. A study of land use plans of vari-

ous cities in Pakistan indicates that (Zaidi 1993, 11):

The distances to work-places and schools from the residences have increased steadily due to the horizontal sprawl of large cities and relatively low density developments in the newly planned areas. The work places and schools are mostly available at distances which are certainly longer than walking distances and thus people are forced to use automobiles to visit these places. The rapid increase in car ownership rate will further aggravate the situation. It means that if the present trend remains unchecked, the use of automobile vehicles for going to work places and schools will definitely increase. The increased use of vehicles for visiting shopping areas, recreational areas and public buildings in the large cities like Lahore is evident from the growing parking problems at such places.

Though these observations were made almost 20 years ago, they remain accurate today. The increased use of automobiles results in the increased level of fuel consumption and consequently an increased level of air and noise pollution in the city. Thus an attempt to reduce the number and average lengths of automobile trips to job places, shopping areas and schools will save energy and reduce the pollution levels in the cities. However, no such effort is being made by the government at any level in Pakistan.

High Levels of Pollution

UN Habitat (1999, 1) states:

The continued rapid growth of urban populations in developing countries – with the least financial resources to deal with the problem of urbanization –

will be one of the major challenges to humankind in the 21st century. Cities in developing countries are already faced by enormous backlogs in shelter, infrastructure and services and confronted with the increasingly overcrowded transportation systems, unsustainable consumption patterns, deteriorating sanitation and environmental pollution.

The UN's forecast turned out to be quite prescient in the case of Pakistan, where rapid urbanization combined with the slow pace of development has created a number of environmental issues within urban areas. The rapid growth of population in cities puts a tremendous pressure on the existing utility services such as water supply, sewerage and drainage system, electricity, gas and public facilities such as schools, hospitals, commercial and civic centers, open spaces and parks. This results in the environmental degradation of the cities. Due to growth of industrial development and automobile traffic, environmental pollution levels have increased tremendously in the large cities. This is especially true in the many slums and squatter settlements, which are prone to and essentially defenseless against environmental pollutions. The large cities suffer most from environmental pollution because of their rapid population growth and slow pace of infrastructure development including water supply, sewerage system, solid waste management and the provision of other utility services (Zaidi 2000).

The lack of infrastructure in Pakistani cities is the main cause of rising environmental pollution levels. Haider (2006, 3) writes:

Less than 1% of wastewater is treated in Pakistan. The rest is dumped into ravines, streams, and riv-

ers. The result has been drastic. Brooks, streams, ravines and rivers have turned into sewers. The metropolitan governments recover fewer than 50% of the solid waste generated in the cities. The rest is left to rot on the streets. Even the waste that is collected is mostly dumped in open fields or is incinerated. The dumped waste pollutes the groundwater and the incinerated waste creates air pollution. Lahore, a sprawling metropolis of seven million, has fewer than 100 traffic lights...The result is severe traffic congestion. In the federal capital, Islamabad, even the well-off communities face chronic water shortages.

Air pollution is primarily an urban problem. In Pakistan, the large cities are facing very high levels of air pollution. A study carried out by the Pakistan Environmental Protection Agency with the assistance of JICA (Japan International Cooperation Agency) has reported the presence of much higher levels of PM₁₀ (Suspended Particulate Matter in the size of 10 micrometers or less) in $\mu\text{g}/\text{m}^3$ (microgram per cubic meter) than the Japanese and WHO (World Health Organization) standards in three major cities of Pakistan - Lahore, Rawalpindi and Islamabad (Pakistan EPA 2005, 66):

The average SPM data in 3 cities showed that SPM concentration exceeded 3.8 times for the Japanese standards ($200 \mu\text{g}/\text{m}^3$) and 6.4 times from WHO standards ($120 \mu\text{g}/\text{m}^3$). The levels of SO₂, NO, and CO were found in excess of acceptable standards in some areas but the average levels were found below WHO guidelines. The study found that Lahore had the highest concentration of SPM while

Rawalpindi is less contaminated with SPM. Islamabad had least concentration of SPM showing marginally better environmental conditions.

The concentration of high levels of SPM and other hazardous gases in the air has certainly serious implications for the health of the city dwellers. Other indicators of air and noise pollution in Pakistani cities also tell the same story.

Deteriorating Security

Rapid urbanization has contributed to an increased level of crime and deteriorated security in the cities of Pakistan. A study on Urbanization and Crime (Jalil and Iqbal 2010) carried out by Pakistan Institute of Development Economics (PIDE) concludes a very strong positive correlation between urbanization and crime.

According to the Pakistan Daily report (Pakistan Daily 2009), in 2009 alone Pakistan suffered at least 44 suicide bomb attacks. The death toll from this steady stream of violence stands at more than 650. Due to the uncontrolled and unmanaged urbanization in Pakistan, a number of people who had a low standard of living and were suffering from poverty and unemployment have resorted to violence which was being carried out in many cities of Pakistan at the behest of extremist groups.

The rapid urbanization has also lead to the formation of slums and squatter settlements in the urban areas which are centers of street crime and juvenile delinquency. These are spontaneous settlements and are a manifestation of the urban poverty. Overcrowding, unhygienic conditions, squalor and blight are common in these areas. Slums and squatter settlements (locally known as Katchi Abadis) exist because their residents cannot afford to live in authorized and

planned housing schemes or because there are more people than affordable housing. Since these are unauthorized settlements, there is no record of the people living in them. In these areas, most of the inhabitants even do not possess a Computerized National Identity Card (CNIC). Thus the criminals and terrorists find these areas to be safe heavens.

Conclusions and Recommendations

From the above discussion and evidence provided by data it can be concluded that the rapid and unmanaged urbanization in Pakistan is the major cause of environmental and security problems in the urban areas. The response of the government to this situation has been that of general apathy and ignorance. Generally, the government has been incapable to even discern the problems of urbanization and urban growth, much less address them. However, in the recent past there has been a realization by policy makers regarding the need for urban development and management. In the Ten Years Perspective Development Plan 2001-2011 it was proposed that a countrywide program shall be undertaken for development of satellite, intermediate/secondary and industrial towns and employment centers to focus service on the rural population and to reduce further migration to urban centers. The plan called for incentive packages to be prepared for local and international investors and developers in order to develop these new urban settlements. Similarly, to ensure integrated and cost effective urban development, all the metropolitan and major cities authorities were called on to prepare or update master plans, and for the towns and union councils to finalize their De-

velopment Plans to combat the problems caused by increasing urban population (Shirazi 2006). However, these recommendations have not been implemented so far due to a variety of reasons including political instability, economic recession, natural catastrophes and the country's involvement in the war on terror. The situation is bound to worsen if nothing is done regarding the control of urbanization and the need for development of infrastructure to cope with the fast growing populations of the cities in Pakistan. This chapter concludes with the following recommendations to avert catastrophic scenarios in the future.

Development of Reception Areas

Every city should develop multiple numbers of reception areas for incoming migrants from the rural areas. These reception areas should be composed of small rental accommodations for single persons or small families. They should also have attached skill development centers and employment offices so that poor migrants will not suffer during the initial stage of their movement towards an urban life. All the migrants benefitting from these reception centers should be registered and provided with new Computerized National Identity Cards (CNICs). The reception areas should provide temporary accommodation for a period up to six months only. It may be noted that residence in these centers cannot be made mandatory for all migrants to the city. However, they should serve as public welfare centers and may be linked with National Database and Registration Authority (NADRA) offices which have a mandate to issue new CNICs to every Pakistani who attains the age of 18 years and those who change their address.

Development of New Small Towns

New small satellite towns may be developed to decentralize urbanization. These new towns should be self-sufficient and provide employment opportunities in the form of small and medium sized industry. Proper road linkages may be provided to connect these towns with the villages and large cities. The employment opportunities available in these towns and proper road linkages will prevent rural dwellers from residing in the urban areas permanently and help them to become commuters to the jobs and other public facilities.

Curbing Urban Sprawl

In order to curb urban sprawl, compact and vertical development is proposed in all urban areas. This will help to reduce average trip lengths for job, schooling, shopping and recreational purposes. Another suggestion could be the creation of green belts around all metropolitan cities and development of satellite towns outside the green belt areas. These satellite towns will be self-sufficient towns which will keep linkage with the mother cities for higher order facilities occasionally required by their residents. The development of a multiple number of town centers in the metropolitan cities can also help to reduce the average trip lengths for the purpose of job, shopping and use of other public facilities. The development of rail based mass transit systems may reduce the need for additional length of roads and hence can help to curb unnecessary urban sprawl.

Development of Small Walkable Neighborhoods

The development of small walkable neighborhoods to accommodate all the new growth of population should be undertaken in the master plans. These small neigh-

borhoods will demonstrate a social factor of neighborliness, which can enhance mutual support and security as people form crime watch networks. Moreover, such communities will enjoy a better environment through self-help projects. All the residents of these small neighborhoods should be registered members of a local community based organization. This organization will resolve local problems and conflicts at the local level. No through traffic will be allowed in these neighborhoods. The local government will be better able to manage and maintain services in these small authorized neighborhood units as compared to the existing unauthorized large slum areas.

Integrated Planning for Sustainable Development of Towns

Integrated planning for sustainable development of all towns should be carried out in the form of Smart Master Plans. These plans will propose development of green cities with the involvement of local people in all development projects. Citizen Community Boards (CCBs) should be established in all existing and future neighborhoods to provide infrastructure facilities to the people on self-help and a matching grants basis. The role of CCBs should be enhanced as a community organization working for community empowerment, poverty alleviation through micro-credit schemes and low income incremental development housing projects on the pattern of Khuda-Ki-Basti (KKB) in Hyderabad and Karachi. The KKB model of low income

housing development must be replicated in all urban areas of Pakistan since it has been very successful in accommodating the lowest income people through an aided self-help project in which people build their own houses and local infrastructure on an incremental basis as and when they can afford it.

This chapter has highlighted the issues related to rapid urbanization in Pakistan and suggested new innovative ways of resolving these issues and the development of sustainable cities. However, the dedicated support of the government and the people of Pakistan is critical for achieving these objectives.

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Insurgency and Revolution: Pakistan's Crisis of State

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Today in Pakistan, the decline of the post-colonial order is increasingly evident, like a spinning top winding down. Indeed, it can be argued that Pakistan is in a full-blown crisis of state, for the Taliban and allied groups in the jihad movement not only present a systematic, ideological alternative, but challenge a weak and faltering state structure unable to contain such critical phenomena as violent sectarianism, autonomous armed militias, and proto-revolutionary parallel institutions. Granted, the jihad movement is not a monolith, but it has an inner core built around Al-Qa'ida and the Tehrik-i-Taliban-i-Pakistan (TTP) that is increasingly allied with Punjabi elements. As a revolutionary combine, unless it is defeated, it probably will retain a degree of unity as long as it has a common enemy in the state. For now, however, in command of a jihadi ideology, skilled in covert means, audacious in attack, unrestrained in the use of violence, and implacable in its ambition, the jihad movement aims at nothing less than a Sunni revolution in Pakistan. Should they gain this objective, allied with a nuclear capable military, the consequences for the people of Pakistan and the surrounding region will be immense. Admittedly, this is a worst case scenario, one that would not have been given any credence even five years ago, but the fact that it is on the table in the universities and think tanks of the West, South Asia, and elsewhere, and presumably in their intelligence and defense agencies, suggests that the situation in Pakistan is in rapid and uncertain flux.

The Religious Parties and Leadership in Pakistan

The Muslim religious clergy (*ulama*) and their political organizations played only a minimal role in the creation of Pakistan and were marginal to its politics in its early decades. The men who made Pakistan were an elite of lawyer-politicians, senior civil servants, feudal landlords, and World War II battle-tested officers of the new Pakistan Army, all educated in a Western-oriented, secularist milieu. Most Sunni orthodox *ulama* in India, including those of the Jamiat-ul-Ulama-i-Hind (Deobandi), and the founder of the Jama'at-i-Islami, Maulana Sayyid Abul a'la Maududi, opposed the creation of Pakistan. Those *ulama* that did support Pakistan – those of the Jamhuriyah-i-Islam (Brelvi School) and a faction of the Deobandi School – came out in support in 1946, only a year before the foundation of the country. The opposition of much of the *ulama* had to do with their dislike for the Muslim League, a party that was really an outgrowth of the Aligarh Movement of educated, secular, largely well-off, modern-thinking Muslims, who believed there was no conflict between science and Islam. The social base of the *ulama* was not in the drawing rooms of the westernized elites, but in the warren-like *mohallahs* of the old city centers of the traditional Muslim middle and lower middle classes. Here they dominated the institutional linkage between the *masjid*, *madrassah*, and *bazaar* merchants. The *ulama* had never accepted British rule, opposing it for its perceived Christian identity, system of law, materialist values, and the fact that it had replaced Muslim rule in North India. Indeed, with the collapse of Mughal Empire, the *ulama* had come to see themselves as the guardians of Muslim political power, as well as Islamic orthodoxy (Metcalf 1989). Where possible, their opposition to the British Raj took military forms, as in the so-called Mutiny, on the Northwestern Frontier and in various conspiracies, but for the most part, given British power, it had to be a cultural and political opposition. Hence, the *ulama* allied with the Indian National Congress, particularly after

World War I in the joint Non-Cooperation-Khilafat Movement. Thereafter, a substantial body of the *ulama* in the Jamia-Millia Movement stayed with the Congress to become a key element in the electoral base of the Congress Party. These *ulama* saw the Muslim League as a party of pro-British, modernist Muslims who had abandoned any loyalty to orthodox Islam. As a body, they were not ready for the Pakistan Movement, although many of them would migrate to the new State.

Pakistan was created as a homeland for India's Muslims, but from the beginning, as the debates over the Constitution showed, the new nation was unable to define how religion should relate to the state. The modernist founders could not accept the minimum demands of the *ulama* for Islamic Law (the *Shariah*) and control of the judicial system. Certainly, for most Pakistanis, Islam could provide an inspiring ideology, but only in an ideal sense, as there was no consensus among the Muslims of the subcontinent about what Islam was beyond the 'five pillars' – the creed or *shahadah*, the daily prayers or *salat*, pilgrimage (*hajj*), the giving of alms (*zakat*), and the month of fasting (*Ramadan*). The Muslims of the subcontinent, who were mostly Hanafi-Sunni, lacked any central, authoritative body or institution to guide belief and practice, or to speak for Muslims as a whole within the political realm. There were many differences in how to deal with the Sunni-Shi'i divide and among Sunni in how to treat the lesser festivals (*Id-i-Milad*), the prayers at the shrines (*mazar, ziarat*) of long-dead sufi saints so beloved by the peasantry and the urban poor, and the relationship between the Sufi preceptor (*Baba, Shaikh, Pir, Wali, Akhund*) and the disciple (*murid*). Most Muslims in Pakistan belong to the more tolerant, more ecumenical Barelvi Sect, a grouping of partly reformed traditionalists that spanned the rural-urban divide and involved popular forms of belief and ritual, including religious observances at sufi shrines in both the countryside (e.g. Uch Sharif, Sehwan Sharif) and city (e.g., Rukn-ud-Din Alam in Multan and Data Ganj Bakhsh in Lahore).

Although the Barelvis have undergone some reformist influences, the strongest reformist thrust has come from the Deobandi Sect. The sect takes its name from the Dar-ul-Uloom founded in 1867 at Deoband, a small town east of Delhi in the Ruhelkhand, but its antecedents go back to Shah Wali-ullah, the greatest Muslim thinker in eighteenth century India, and to his son, Maulana Shah Abdul Aziz, who built the Madrassah-i-Rahimyyah in Delhi and promulgated the *fatwah* of 1803 that called on Muslims to abjure contacts with the British. Destroyed in the retaking of Delhi in 1857, the Madrassah was re-established at Deoband, where it pursued a thorough program of reform in Islamic belief and practice. For our purposes, the most important effect of Deoband was its success in establishing important *madrassahs* all along and on both sides of the Indo-Afghan border. Here, Deobandi reformism blended with the egalitarian, honor-bound warrior culture of the Pakhtun borderers, where defense of religion has the highest claim to action. This ensured that the most widespread and difficult wars the British fought on the Frontier were the religious ones, led by the mullahs (Ahmed 1983).

Although Indic Islam is largely moderate and tolerant, there has always been a thread, a skein of what we may call a militant, jihadi response to non-Muslim rule in the complex tapestry of Islam in the subcontinent. Perhaps the most interesting of these movements was that of Sayyid Ahmad Shaheed (1786-1831), who led a great jihad on the Frontier between 1826 and 1831 that in many ways prefigures the current jihad movement in the same region (Jones 2003). Although the jihad was defeated and Sayyid Ahmad killed at Balakot, the movement survived in both covert and open organizations, initially called that of the "Indian Wahhabis." Based in North India, the movement maintained centers on the Frontier, finally moving to Charkand in Bajaur, where it remains today (Qureshi 1972). Suppressed by the British in the late nineteenth century, the group became the Jamiat-Ahl-e-Hadith, which, in our own time, has produced the Jama'at-ud-Dawa (formerly the Markaz Dawa wal-Irshad) and the Lashkar-i-Taiba. The Deobandis also spawned militant phenomena; in Punjab,

the decline of the Khilafat Movement after 1924 produced a number of successor groups, including the Tehrik-i-Khatm-i-Nubuwwat, a viscerally sectarian anti-Ahmadiya and anti-Shi'i organization based in Jhang City. The extremist Lashkar-i-Jhangvi of today traces its evolution back to this organization, via the Sipah-i-Sahaba-i-Pakistan (SSP), and before that to the Majlis-i-Ahrar.

Religion and the State

In any state claiming to be a homeland for Muslims, the demand for an Islamic framework would not be long in coming. Despite relatively minor differences, the *ulama* have a common "vision of Islam as a closed religious system with clearly defined dogmas and practices, encapsulated in the works of the scholars of Islam, matchless in their eruditeness and piety, written hundreds of years ago without there hardly being any need or room for further improvement, addition or revision." (Qasmi 2010, 1204). Given their divided support for the idea of Pakistan, and the fact that political power lay elsewhere, the early involvement of the *ulama* in politics was muted. Indeed, the *ulama* and the religious parties have never done well in elections, except in the Pashtun areas of Northern Baluchistan and Khyber-Pakhtunkhwa, where the Deobandi Jamiat-ul-Ulama-i-Islam (JUI) has a strong base (Table 1). Further, the wider landscape of religious groupings and organizations was diverse, disunited, and quarrelsome. These included the schools of the orthodox Sunni (Deobandi, Brelvi, Ahle-Hadith), the Islamists (Jama'at-i-Islami), the Imami Shi'i (Twelvers), the Ismailis (Seveners, Agha Khanis), the formal sufi brotherhoods (Naqshbandi, Qadri, Chishti), the *mashaikh*, or leaders of popular, localistic (*piri-muridi*) traditions, and myriad minor groupings and identities, including the highly esoteric Zikris of the Makran. Despite these divisions, the *ulama* did unite temporarily in 1953 around violent opposition to the Ahmadiyyas, a sect that appeared to violate the fundamental doctrine that Muhammad was the last of God's messengers (*khatam-i-nabawiyin*), by holding

that the founder of their own sect, Mirza Ghulam Ahmad, was also a Prophet (Lavon 1974). This Anti-Ahmadiyya Movement demonstrated the importance of the mosque as an organizing center and the capacity of the clergy to lead a powerful street agitation—one that led to the first post-independence declaration of martial law in the Punjab.

Table 1. Religious Parties in National Elections.

Election	Party	Seats	Comment
1951 Punjab	Jama'at-i-Islami	1 of 188	Legislative Assembly (Adult Suffrage)
1970 Nat'l Assembly	Jamiat-ul-Ulama-i-Islam Jamiat-ul-Ulama-i-Pak Jama'at-i-Islami	7 of 138 7 " " 4 " "	The first adult suffrage national election held in Pakistan, largely regarded as free and fair.
1977 NA	Pakistan National Alliance (PNA)	36 of 200	PNA was a coalition of both religious and secular parties. The data is unreliable as all agree the Bhutto Government manipulated the results.
1988 NA	Jamiat-ul-Ulama-i-Islam (JUI) Islami Jamhoori Ittehad (IJI)	8 of 237 55 of "	IJI was a coalition of the Jama'at-i-Islami and pro-military Leaguers. The group was regarded as the creature of the Inter-Services Intelligence Directorate (ISI). This party was led by Nawaz Sharif and evolved into a revived Muslim League (PML)
1990 NA	Jamiat-ul-Ulama-i-Islam Islami Jamhoori Ittehad	6 of 237 105	The JUI has strong support in Khyber Pakhtunwah (formerly NWFP) and the Pashtun Districts of Baluchistan. Most IJI candidates lacked a specific religious identity and were mostly connected to the rising, urban grouping that would become the PML. Not as fair an election as 1988.

1993 NA	Islami Jamhoori Mahaz Mutahidda Deeni Mahaz Pakistan Islamic Front	3 of 237 3 “ “ 3 “ “	
1997 NA	Jamiat-ul-Ulama-i-Islam (JUI-Fazlur Rahman)	2 of 237	Other religious parties boycott the polls.
2002 NA	Mutahidda Majils-e-Amal (MMA)	59 of 268	MMA was a coalition of religious parties, however most of the winning candidates were of the JUI-F in KP (formerly NWFP), where feelings were high after several hundred Pakistani Pakhtuns, who had been urged to go into Afghanistan and fight alongside the Taliban, were killed when the US overthrew the Taliban Government in Afghanistan
2008 NA	MMA, but only JUI-F candidates contested	3 of 268	

Source: Reports of the Pakistan Election Commission

The Army-Clergy Alliance

The religious parties gained a permanent place in Pakistan’s politics in the Pakistan National Alliance (PNA) Movement. This movement was an agitation against the 1977 elections by a largely religious coalition led by Maulana Mufti Mahmud. It resulted in an alliance between the army and the religious right which, while it has gone through various permutations, remains in place today. In overthrowing Prime Minister Z.A. Bhutto and his secular-minded Pakistan People’s Party in 1977, the army not only restored its role in Pakistan—badly battered by defeat in East Pakistan in 1971—as the arbiter of last resort, but shifted the country distinctly to the political right. Putting aside the controversy over his personal piety, General (later President) Zia ul-Haq, who led the 1977 coup, was far more oriented to religion than any previous ruler. His regime actively—and financially—patronized the clerical establishment and its institutions through the zakat committees and Ministry of Islamic Affairs. He took the first steps to bring the *Sharia* (Islamic Law) into the system of

law and the courts. He emphasized Islamic precepts and behavior in the army, shaping a generation of officers (Cohen 2004). Zia's "Islamization" program was complemented by wider social and economic trends, particularly the opening of job opportunities in the Gulf states, now awash in petro-dollars. To a significant degree, the bazaari social networks—the Sheikh *biraderis*—benefited from the Gulf, as did the historically peripatetic Pashtuns, not only repatriating multi-billions of dollars annually, but also the *salafiyya/wahhabi* doctrines they had encountered. The Government of Saudi Arabia also promoted *wahhabi* interpretations by leveraging funding for the mushrooming growth of the *madrasah* institutions in Pakistan and elsewhere in the Muslim world. In Pakistan, Saudi funding particularly favored the religious schools of the Ahl-e-Hadith, the *Wafaq al-Maradis al-Salafiyah* (Malik 1996).

But 'Islamization' was only part of how Zia began to reshape Pakistan. The hanging of Zulfikar Ali Bhutto, the suspension of the Constitution and fundamental rights, censorship of the media, the crackdown on labor union and student protests, and the formation of an appointive Majlis-i-Shura—Zia recognized the electoral limitations of the religious parties—all showed the authoritarian hand of the Army. Not surprisingly, it was during this period that the Inter-Services Intelligence Directorate (ISI) became the covert arbiter of Pakistan's politics, setting out on a pathway to unprecedented growth and influence, while the military as a whole began the massive expansion of its industrial and commercial interests into a controlling economic empire (Siddiq 2007). Although it would take two more decades to fully mature under General (later President) Pervez Musharraf, the foundations of the Pakistani 'national security state' were greatly strengthened during the Zia Period.

International events in 1979 also aided the legitimacy of Zia's 'national security state,' and vastly strengthened the religious nexus in Pakistan. The Iranian Revolution and the Soviet invasion of Afghanistan were transformative

events for Muslims worldwide and thrust what had been a secondary region of the Cold War into a proxy struggle between the superpowers. Although it occurred in Shi'a Iran, the most important effect of the Iranian Revolution was the foundation by Ayatullah Khomeini of a theocratic state. The takeover and reconstruction of a major state by the religious clergy was unprecedented in the modern era and rare enough in the history of Islam. The fact that it succeeded was not lost on orthodox and Islamist Sunnis, who could now envision a 'Sunni Revolution,' led by the *ulama*, in Pakistan, Afghanistan, and elsewhere in the Muslim World, while dreaming of the recrudescence of the universal Muslim state (the *Khalifat*). Indeed, the outcome of the Soviet-Afghan War (1979-1989) and the emergence of the Emirate of Afghanistan under the Taliban—a Deobandi-linked group—seemed to move that possibility closer as the latter and their allies in Al-Qa'ida looked north to the collapse of the Soviet Union and the emergence of unstable successor states in Central Asia.

For Pakistan, the 'Great Anti-Soviet Jihad' had far-reaching consequences. The failure of the Soviets gave Pakistani strategists a sense of new possibilities in Central Asia, in what they saw as an extension of their strategic sphere of influence. The idea that Islamabad could gain strategic depth, acquire access to the energy resources of Central Asia, and become the great conduit to a north-south transportation and trade corridor down to the Arabian Sea littoral is a dream that Pakistani policymakers continue to promote. Certainly, with the emergence of the Taliban, patronized from the start by the ISI, Islamabad could hope it had found a partner in its larger ambitions. This is a hope that refuses to die in parts of the Pakistani establishment, but the reality is that the Taliban are a largely Pashtun movement who have their own perspectives and ambitions, ones that do not necessarily coincide with those of Islamabad. It is instructive that, despite Islamabad's urgings, the Taliban, Afghan and Pakistani, have always refused to recognize the Durand Line—the Indo-Afghan border drawn by the British in 1893.

The “military jihad” in Afghanistan gained a powerful impetus, leading to new organizations, galvanized youth from both *madrassahs* and government schools, resources from wealthy Arabs and sympathetic Pakistanis, experience in guerrilla warfare gained inside Afghanistan, and a strong footing in the emerging global *jihad* networks. The Afghan experience and the influence of Arab *salafiyya-wahhabi* groups like Al-Qa’ida narrowed – though not eliminated – doctrinal differences between the Deobandis, Ahl-e-Hadith, and Islamist Jama’at-i-Islami. Many of the extremist jihadi groups in Pakistan today, and their successors and splinters, got their start in the Soviet-Afghan War and the subsequent civil war, or, after the Soviet withdrawal, in the training camps that dotted the landscape of Eastern Afghanistan and which trained a generation of international jihad youth. *Madrassahs* like the Jamia Islamia Arbiah at Binnori Town in Karachi and the Dar ul-Uloom Haqqania at Akora Khattak in the NWFP trained a large proportion of the Taliban leadership (Rana 2004).

As the Soviets wound down their operations in Afghanistan in 1988 and 1989, inspired Muslim youth in Indian-held Kashmir had already begun the long-running anti-India intifada. The sources of this insurgency were in long grievances over inequitable Indian policies on education, culture, and investment; the history of political manipulation by New Delhi in Kashmiri politics; the corruption of the second, post 1947 generation of Kashmiri politicians; and the zeal of a new generation fired by the Iranian Revolution and the Afghan *Jihad*. Although begun as a struggle for an independent Kashmir by the Jammu and Kashmir Liberation Front (JKLF), the movement soon largely was taken over by pro-Pakistan elements in the Hizb-ul-Muhajideen, increasingly backed by Pakistan’s ISI. This enabled Islamabad to intensify its part in the so-far permanent, covert war these two countries have fought since 1947. Inevitably, the two disturbed areas on Pakistan’s borders, Afghanistan and Kashmir became connected, both in ISI operations and the activities of jihadi organizations, which now extended their activities to Kashmir. Both areas were vital to Paki-

stan, but Kashmir held a special place, as Kashmir and the conflict with India had been the primary focus of Pakistan's foreign and security policies since 1947. From at least 1995, new groups emerged in the organizational interstices that connected these conflicts: the Harakat-ul-Jihad-ul-Islami (HJI) nexus, Lashkar-i-Taiba, and Jaish-e-Muhammadi. Under the direction of the ISI and its trainers, and largely Punjabi and Pakhtun in ethnicity, these groups took their experience from the Afghanistan jihad and applied them in Indian-held Kashmir.

Decline of the State and the Growth of Private Power

With the death of Zia in a still unsolved plane crash on August 17, 1988 and the Soviet withdrawal from Afghanistan, completed in February, 1989, the army stepped back from day-to-day politics and the country passed through a period of 'triarchy' in which three forces appeared to share power: the military under the Chief of the Army Staff behind the scenes, the bureaucracy under the President, and four parliamentary governments under elected party Prime Ministers. None of the elected parliamentary governments – two under Benazir Bhutto, alternating with two under Nawaz Sharif – was notably successful. None achieved a full term, got the economy into sustained growth, loosened the grip of the army on the budget, put significant resources into social development, moved against high level corruption, or curbed the decline of education and basic public services. Each was ended by some form of military intervention, the last, of course, being the post-Kargil coup by General Musharraf in October, 1999.

What strikes one about this period was the rapid growth of what we may call 'private power,' that is the emergence of groups – ethnic-linguistic, religious, business, political, criminal, or a combination of these – that, with the command of new resources and capabilities, operated for their own interests beyond the law and outside the conventional channels of political and economic power. Karachi slipped

increasingly out of effective governance, as episodic street wars between the Muhajir and Pakhtun mafias alternated with periods of relative peace enforced by paramilitary security forces. Overwhelmingly, in Punjab, this was a bottom-up push for urban land and economic opportunities by lower middle class (*ajlafi*) social networks, middle class professionals, and bazaaris (lower orders of the Sheikh *biraderis*). In the rapidly growing towns and market centers in Southern Punjab, where the continuing vitality of the nexus between the mosque, *madrassah*, and bazaar, the Sipah-i-Sahaba-i-Pakistan (SSP) and its covert spin-off, the Lashkar-e-Jhangvi, consolidated its social base (Table 2). Here, the most salient development was the migration of merchant networks out from the cities (Faisalabad, Jhang, Multan, Muzaffargarh, Bahawalpur, Rahim Yar Khan) into the rapidly growing towns and market centers to buy – or takeover – plots in the bazaars, establish new commercial opportunities, and build mosques and *madrassahs*. Local resistance, which did occur, was easily overcome by applying SSP or Lashkar muscle. By the late 1990s, this region was the heartland of the SSP and the Lashkar-e-Jhangvi (LeJ). Some areas – in Khanewal, Lodhran, and Muzaffargarh – became low level war zones in a conflict between the police and the Lashkar-e-Jhangvi, characterized by ambush-attacks on police, Lashkar cadres returning from training or sheltering in Eastern Afghanistan, covert funding networks, sandbagged police checkpoints, night-time curfews, armed patrolling – all evidence of a low level rural insurgency. The police were acting at the behest of the local district and tehsil administration and the big landlords – some of them Shi'a (Bukhari Sayyid network) – worried about the penetration of extremist Sunni militias into the market centers that flanked the countryside and functioned as relays of power between town and country. This conflict pitted the old rural order of the *zamindar-thanadar* against the rising force of the Sunni orthodox (Deobandi) *ulama*, the bazaar entrepreneur, and the armed extremist.

Table 2. Population of Selected Small Cities and Towns in Southwestern Punjab.

City/Town	District	1998	1972	1951
Rahim Yar Khan	RYK	233,366	74,262	14,919
Dera Ghazi Khan	DGK	188,149	72,343	36,239
Khanpur	RYK	117,764	49,235	16,964
Sadiqabad	RYK	141,509	37,121	5,758
Muzaffargarh	MUZ	121,641	24,736	11,271
Chishtian Mandi	Bahawalnagar	101,659	38,496	10,270
Ahmadpur East	Bahawalpur	96,032	43,312	20,423
Kot Addu	MUZ	79,054	21,409	10,507
Leiah	Leiah	70,272	33,549	14,919
Lodhran	Multan	64,952	14,232	4,890
Kabirwala	Khanewal	46,265	12,287	4,330
Rajanpur	DGK	42,986	10,011	5,280
Taunsa	DGK	38,056	11,412	7,286
Abdul Hakim	Khanewal	37,821	12,143	5,155
Chak Azam Shahu	Leiah	32,418	No Data	No Data
Chak Sawar Shaheed	MUZ	26,004	No Data	No Data
Trinda Sawai Khan	RYK	20,350	No Data	No Data

Source: Census of Pakistan

The reverse of this trend was, of course, the concomitant inability of the police to put down the proclivity of armed groups, including private militias, to fight for their interests. In part this was a result of the role, training and capabilities of the police. Like much else in the government, including the municipal, district and tehsil administrations and the courts, nothing had been done to upgrade and modify what were still colonial period institutions, despite decades of enormous population growth and social and economic change, aspects of which remain poorly understood. The police were still 'law and order' forces, acting for the interests of powerful elites, without any notion

of 'public service.' Their capabilities and training were rudimentary. The primary investigative tool, the much-used *lathi* (wooden staff) and, against bandits, the .303 Enfield rifle, were no match of AK-47-armed cadres, organized in covert cells and committed to an ideological Islam that required the revolutionary restructuring of the state.

Political organizations, the political parties and legislatures, remained weak representative institutions, unable to evolve due to the frequent interventions of the military-bureaucratic oligarchy. These organizations were dominated by the old landed *ashrafi* and gentry elites, whose fathers and grandfathers first sat in the tutelary assemblies of the British Raj. These institutions are now somewhat leavened by rising urban industrial and business family-conglomerates, the most notable being the Sharif family of Lahore. Political parties have remained the parochial vote banks of powerful zamindars and urban patron-client networks where personal leadership is all important. Political careers are pursued to protect or accumulate wealth and the political culture in Punjab is one that values influence-peddling, non-transparent deal-making, and, where conflict occurs, temporization, compromise, and manipulation. These are not organizational or cultural qualities that enable the old order to stand against religious forces that are armed, ideologically driven and uncompromising.

Insurgency: Consolidation and Spread

By the time extremist groups cross the radars of government security forces and become a threat to the established order, they usually are well-organized, trained, armed, funded, and capable of mounting costly surprise attacks using covert cells and networks. In Pakistan this was complicated by the fact that the jihad movement had strong official patronage for the insurgencies in Afghanistan and Indian-held Kashmir. The attacks on 9/11 and the US invasion of Taliban-ruled Afghanistan changed the security dynamics in South Asia once again, bringing the focus back to Afghanistan. Under persistent US pressure, President

Pervez Musharraf—formally at least—joined the ‘Global War on Terrorism,’ reduced Pakistan-based covert operations in IHK, engaged in diplomacy to lower tensions with India, and gradually brought his security forces into confrontation with the most independent jihadi groups along the Pakistan-Afghanistan border. Not surprisingly, the reduction in support for operations across the Line of Control in Kashmir, infuriated those ISI-patronized groups with a major stake in the Kashmir struggle, prompted key leaders and groups to break with Islamabad’s declared policies, and led to several attempts to assassinate President Musharraf.

The arrival of United States forces in Afghanistan presented enormous dilemmas for Islamabad, striking at key Pakistani security interests. At one time, Pakistan had seen the US as its protecting power, but disillusionment set in as early as 1965, when Washington took a neutral stance in the September War between India and Pakistan and relations had see-sawed thereafter. Islamabad adopted a classical policy of realism and balance, cooperating where interests overlapped, pursuing its own interests—often covertly—where they did not. This approach worked well in the 1980s, when Washington and Islamabad for the most part worked together against the Soviet occupation of Afghanistan. But relations soured again in the 1990s, as Pakistan pursued and gained nuclear weapons capability, pushed the insurgency in Kashmir, patronized the rising Taliban regime in Afghanistan, and engaged in nuclear brinkmanship in the 1999 Kargil Crisis. Now, after 9/11, Islamabad could hardly reject Washington’s demand that it sign on to the ‘Global War on Terrorism’ and assist in defeating the Taliban and Al-Qa’ida in Afghanistan. Pakistan was constrained by the fact that its nuclear weapons were within striking distance of highly capable US forces, plus the fear that any US-India combine could turn Pakistan into a client of India. However, Islamabad also calculated that, in the longer run, US involvement in Afghanistan would be temporary. Hence, Islamabad adopted a calibrated policy:

partner in the Afghanistan game sufficiently to keep the US convinced of its bona fides and keep up the flow of international and bilateral assistance desperately needed to underwrite the Pakistan economy. In reality, however, Pakistan would not abandon its essential security interests. This meant the Afghan Taliban would be allowed to use Pakistani territory to mount attacks in Afghanistan and the long covert war with India would continue.

In Pakistan, international security concerns inevitably interconnect with domestic, national concerns. Pakistan is a relatively new state, still insecure, already divided, the basis of its nationhood – the “two nation theory” – perhaps fatally undermined by the separation of Bangladesh. The Punjabis dominate the state, the armed forces, and in most indices of economic strength and social development. The Pakhtun (Pathan), however, have a junior partnership in the state, forming perhaps twenty percent of the security forces and federal bureaucracy, with secure economic bases in hydropower, transportation, construction and defense industry. The connection between KPK and Karachi, where perhaps five million Pakhtuns may now live, is a robust economic and social linkage and gives the Pakistani Pakhtun a strong stake in a united Pakistan. Nonetheless, the potential for Pakhtun separatism has always been an underlying concern for Pakistan, given the fact that the Pashto-speaking world is divided roughly in half by a border that neither the Pakhtun tribes nor the Government of Afghanistan recognize. Indeed, early in its history, Pakistan faced the Pakhtunistan Movement, led by secular Pakhtun nationalists in the NWFP who wanted to join Afghanistan. Perhaps afraid to upset the legal and administrative arrangements left by the British, Pakistan has done little to change the status or develop the tribal areas along the border, apart from withdrawing regular forces in 1947. The Soviet-Afghan War had an enormous impact on the North West Frontier Province (NWFP), now Khyber-Pakhtunkwah (KPK), bringing three million refugees in from Afghanistan and forging new political, economic,

social and religious linkages. Now that Afghanistan is in yet another war, the concern in Islamabad must be that too strong a military policy on the frontier would alienate the Pakhtun and threaten the territorial integrity of Pakistan itself. The last thing Pakistan wants is a general Pakhtun revolt, on either or both sides of a border.

Since the Soviet invasion of Afghanistan in December, 1979, a complex – even bewildering – variety of radical religious groups and leaders have passed across the scene in Pakistan. It would take far more space than we have to detail all these organizations. A study by a Pakistani journalist, published in 2004, identified 104 jihadi organizations in Pakistan, the great majority of which are little more than fronts to get contributions (Rana 2004). Three generations of *mujahids* have now fought in and from Pakistan on behalf of what is essentially a religious revolutionary movement. By 2010, the third generation had resolved into two groupings. For the most part, the effective organizations in the radical Deobandi underground had joined up with the Tehrik-i-Taliban-i-Pakistan (TTP), which was founded in Orakzai by Mullah Muhammad Rahim in 1998. This includes both the Jaish-e-Muhammad and Lashkar-e-Jhangvi, groups that were banned and forced underground after the attempts to assassinate President Musharraf in 2003. Undaunted, the cadres of these groups found hiding places in the big cities and towns, especially Karachi, separated into small cells, engaged in crime to raise funds, traded weapons and explosives, and cooperated for specific missions. This was effective in increasing both the number of terrorist and sectarian incidents and the number of those killed (Table 3).

One other jihadi group bears note. The Lashkar-e-Taiba (LeT) was formed in 1991 by the then Markaz Dawa-wal-IrShariah – now the Jama'at-ud-Dawa – to fight in Indian-held Kashmir (Clarke 2010). These groups are part of the Ahl-al-Hadiths or salafiyya/wahhabi tradition in South Asian Islam. Historically, this Lashkar has been patronized and trained by the ISI and apparently has not engaged

in terrorist operations inside Pakistan. Although the group now has a significant international reach, including cells in the United States, the LeT has focused most on India, Kashmir, and Indian activities in Afghanistan. It seems, at times, to have its own foreign policy, as demonstrated in the December, 2001 attack on the Indian Parliament and the Mumbai assault in 2008. The attack on Parliament led to military mobilization on both sides of the border and almost wrecked President Musharraf's demarche to reduce tensions with India – the latter undertaken at the behest of Washington. Whether this was done by the jihad groups alone, with encouragement from a divided Pakistani security establishment, or from a rogue element of retired ISI personnel, or pressed by Al-Qa'ida, remains to be seen. The LeT and its parent, the Markaz, have strong ties with Al-Qa'ida. Indeed, in the late 1990s, Al-Qa'ida representatives, and, as rumored, Usama bin-Laden himself, visited the annual convention of the Markaz at the latter's 200 acre campus at Muridke, 45 kilometers north of Lahore. In any civil war over the future of Pakistan, the LeT and its patrons in the security establishment more than likely would be engaged in fighting for the Sunni revolution.

Table 3. Annual Fatalities in Terrorist Violence, 2003-2010.

Year	Civilians	Security Force Personnel	Terrorists/ Insurgents	Total
2003	140	24	25	189
2004	435	184	244	863
2005	430	81	137	648
2006	608	325	538	1,471
2007	1,522	597	1,479	3,598
2008	2,155	654	3,906	6,715
2009	2,324	991	8,389	11,704
2010	1,784	465	5,075	7,324
TOTAL	9,398	3,321	19,793	32,512

Source: South Asia Terrorism Portal Database

The overall death toll took a significant jump in 2007, for that was the year in which the spreading insurgency in Pakistan crossed a threshold into a larger war along the border, in an arc from South Waziristan to Swat District, but with increasing bombings and assassinations in the cities and towns: Peshawar, Kohat, Bannu, Dera Ismail Khan in KPK and Islamabad and Rawalpindi in Punjab. This period also saw the spread of the suicide bombing tactic, both by car bombs and individual. The threshold was crossed on July 3-11 with Operation Sunrise by the Pakistan Army to clear the Lal Masjid (Red Mosque) complex, located in the center of the largest commercial area in Islamabad. Long a center for Sunni radicalism, the Ghazi brothers who presided and their male and female students (*talib-ilm*) became increasingly unruly. Their activities included violent demonstrations to demand the imposition of the Shariah, armed clashes with the police and Rangers, setting fire to the Ministry of Environment, closing video/DVD stores by force, kidnapping eight Chinese nationals, kidnapping – and reforming – prostitutes, and “purifying” a children’s library – all in the heart of the national capital.

On July 9th, Pakistan Army commandos stormed the Lal Masjid complex. In a tough fight against well-prepared defenses and well-armed students, reportedly backed by eighteen Al-Qa'ida fighters – Uzbeks, Egyptians, and Afghans – the commandos prevailed, killing some 91 and losing 10 of their own. According to the Army, a veritable arsenal was recovered from the complex: recoilless rifles, several kinds of Russian and Chinese automatic rifles, RPGs, light machine guns, anti-tank and anti-personnel mines, night vision equipment, suicide bombing vests, gas masks, grenades, 50,000 rounds of various ammunition, two-way radios, and three crates of Molotov cocktails. In addition, according to Pakistani intelligence, letters were found from Ayman al-Zawahiri, Al-Qa'ida Number Two, directing the Ghazi brothers – who had claimed regular contact with Usama bin-Laden and Al-Qa'ida – to conduct an armed revolt against the Government. Such a putsch in the national capital, Zawahiri apparently argued, would set off a wider rising in the country.

We do not know Al-Qa'ida's precise plan for Lal Masjid, whether an imminent strike was pre-empted by Operation Sunrise, or if what amounted to an Al-Qa'ida base in the heart of the capital was being prepared for something down the road: a decapitation strike perhaps or an assault on the Parliament. What was evident in 2006 and 2007 was a major effort by Al-Qa'ida to protect its base of operations in the Federally Administered Tribal Areas (FATA). During the winter of 2006, Usama bin-Laden announced his strategy to establish bases and pockets of territory along the Afghan-Pakistan border. Twice in 2006, top leaders of Al-Qa'ida were targeted by US drones. In January, Ayman al-Zawahiri narrowly escaped death in the strike on Dama-dola in Bajaur and, in March, bin-Laden and his personal security force reportedly were targeted in a strike on the Al-Qa'ida training camp at Danda Saidgai, in North Waziristan. Among those killed were two members of bin-Laden's inner circle (Roggio 2006).

The next two years were good ones for Al-Qa'ida and the Pakistani Taliban. The Pakistan Army, trained to fight a conventional war with India, demonstrated both a lack of skill and will in counter-insurgency operations. Officers and men, mostly Punjabi, had little desire to fight against brother Muslims and no stomach for combat against the tough, warrior Pakhtun tribes fighting in some of the most rugged and thankless mountains on earth. Ceasefires and peace agreements collapsed one after another, as much of FATA, plus the Malakand and the Districts of Lower Dir, Swat and Shangla went under effective Taliban control. Under the skilled leadership of Baitullah Mahsud, the TTP emerged as a coherent guerrilla organization, combining both Pakhtun and Punjabi fighters. The leaders of the Lashkar-e-Jhangvi and Jaish-e-Muhammadi moved to Waziristan and from there, in coordination with the TTP, directed a series of successful attacks against the state and the national elite. Among the victims was former Prime Minister Benazir Bhutto, a symbol of everything the *ulama* hate about a modernizing, secular Pakistan. During this period, insurgents struck deep into the heartland of the Punjab, including a series of stunning attacks in Lahore, the country's cultural capital (Table 4). Even more shocking was the October, 2009 attack on the General Headquarters of the Pakistan Army in Rawalpindi. By this time, the true scale of the threat to the Pakistani state had become clearer and the army, under General Pervaiz Kayani, had begun to respond more effectively, and with newly trained counter-insurgency troops.

The takeover of Buner District in April, 2009 by the Taliban's Lashkar-i-Zil (Shadow Army) shocked the establishment in Islamabad. Having worked a social revolution in Swat, the Taliban arrived in Buner over the Ilam Pass and occupied most of the district in three days. This brought them to the mountainous edge (*Samah*) of the Mardan Plain, placing them within 45 miles of the massive multipurpose Tarbela Dam on the Indus River and the new Ghazi-Barotha Hydropower Project just downstream. From Ghazi Town

between these two projects, it is only 68 miles to Islamabad. Maulana Fazlullah, who directed the takeover of Swat, told the press it would be only a matter of days before the Taliban were in the national capital. Despite the unreality of this boast, the takeover of Buner was a major threat to the government and the army. It led to a long summer campaign to take back Buner, Swat, Upper Malakand, Bajaur and Lower Dir. This was the beginning of a more robust response by the army, including the so far successful campaign to push the Taliban out of South Waziristan in 2010. Despite these military successes, the ultimate outcome on the Frontier remains uncertain. Some experts believe the road-bound army will face increasing insurgent attacks as the Taliban adjust to the loss of territory, while others suggest the slow effort by the civil administration to rebuild the northern tier of districts will provide openings for the return of the Taliban.

Table 4. Major Insurgent Attacks on the State.

Date	Incident	Location	Group	Comment
12/14/2003 12/25/2003	Attempted Assassination of President Pervez Musharraf: first incident 250 kg bomb under bridge; in second incident suicide bombers used two bomb-laden vehicles; 14 killed	Punjab: Rawalpindi to Islamabad Highway	“Brigade 313,” loose alliance of five jihadi groups: Jaish-e-Mohammed, Lashkar-e-Taiba (?), Lashkar-e-Jhangvi, Harkat al-Jihad al-Islami, Harkat ul Mujahideen al-Almi	Special Branch Officer, Capital Police arrested; four junior officers of the Pakistan Air Force also arrested
10/18/2007	Suicide bombing in crowd welcoming Benazir Bhutto, who was returning to Pakistan	Karachi	Tehrik-i-Taliban-i-Pakistan, with Punjabi jihadi networks	Bhutto was returning from political exile

12/27/2007	Assassination of former Prime Minister Benazir Bhutto, head of the Pakistan People's Party; 20 others killed	At party rally, Liaquatbagh, Rawalpindi	Tehrik-i-Taliban-i-Pakistan (TTP)	TTP Chief, Baitullah Masud congratulated planners via intercepted telephone call
2/2008	Assassination of Lt-General Mushtaq Baig, Surgeon-General of the Pakistan Army	Rawalpindi	'Amjad Farooqi Group,' (aka, Punjabi Taliban) Lashkar-e-Jhangvi	Muhammad Aqeel (aka Dr. Usman), deserter from Pakistan Army Medical Corps—had worked with Mushtaq
9/20/2008	Massive suicide truck bombing at Islamabad's Marriott Hotel; 60 killed, 200 injured	Islamabad	TTP Ghazi Force	Planned cabinet meeting at hotel shifted at the last minute
1/26/2009	Four high intensity bombs recovered in plot to blow up the offices of senior police officials	Lahore	Lashkar-e-Jhangvi?	
3/3/2009	Armed assault on a convoy carrying the Sri Lankan Cricket Team and two Australian umpires; six police escorts and one driver killed, 20 wounded, including 7 cricketers.	Liberty Circle, near Gaddafi Stadium, Lahore	Lashkar-e-Jhangvi, Punjabi Taliban	12 gunmen involved; planned by Muhammad Aqeel (aka Dr. Usman)
3/30/2009	Armed attack on the Police Training Center at Manawan by 10 militants; 8 police recruits and one civilian killed	Lahore	Punjabi Taliban	

5/27/2009	Suicide car bomb destroyed the ISI Building; 27 killed, 326 injured	Lahore		Included in the dead was an ISI Colonel
10/10/2009	Armed assault on the General Headquarters of the Pakistan Army by 10 militants in Army uniforms	Cantonment, Rawalpindi	Five attackers were Punjabis with the Lashkar-eJhangvi; five were Mahsud Pakhtuns with the TTP	Dr. Usman captured, deserter from Pakistan Army Medical Corps
10/15/2009	Triple Bomb Blasts kill 19, including 15 SF personnel in Lahore; 41 wounded	FIA Building, Temple Road; Police Training Center, Manawan; Elite Police Academy, Bedian Road	TTP, JeM: Amjad Farooqi Group	
12/7/2009	Moon Market Bombing; 38 killed, 100+ wounded	Lahore	TTP?	Police are unclear if it was a suicide bombing or package bombs; two bombs were detonated
2/8/2010	Police arrested six, including a suicide bomber, plus suicide jackets, detonators, grenades	Lahore	Those arrested are said to be TTP-linked	The plot was to attack a 5-star hotel and kill US nationals; possibly a Mumbai-style attack
3/8/2010	Suicide Blast destroyed offices of the Special Investigative Agency; 15 killed	Model Town, Lahore	Punjabi Taliban (Lashkar-e-Jhangvi, Ghazi Force)	Close to the compound of former PM, Nawaz Sharif

3/12/2010	Twin suicide blasts kill 62, including 8 soldiers	RA Bazaar, Lahore Cantonment	TTP?	A popular bazaar next to the Barracks area of the Cantonment; also used by wealthy families who live in the Defense Colony
7/1/2010	Three suicide bombers kill 44 and injure 175 at the popular Shrine of Data Ganj Baksh	Lahore	Punjabi Taliban	The shrine honors the eleventh century patron saint of Lahore, a sufi missionary
11/26/2010	Capital Police say they have broken up a plot to assault the National Parliament	Islamabad		

Source: Media Reports

From Insurgency to Revolution

Ideologically, the Taliban and its allies in the jihad movement are revolutionary groups that aim at nothing less than to overthrow the Pakistani state and replace it with their version of an Islamic ‘emirate,’ a building block in the reconstitution of the universal Muslim state. This vision is articulated by the core leadership of the movement – Usama bin-Laden and his Al-Qa’ida cohorts – and supported by the Tehrik-i-Taliban-i-Pakistan and its Punjabi allies. Bin-Laden’s position in this movement goes far beyond simply the claim to hospitality (*melmastia*) made incumbent on the tribes by their ancient Pakhtunwali code. The fact that almost no information about bin-Laden comes out of these regions shows that he is absolutely protected and deeply revered, although it helps that the “foreigners” – Arabs mainly – have considerable financial resources. The

“Shaikh,” and his Arab cohorts, have the respect of their Pakhtun protectors for their commitment to a purist Islamic revolution, and their willingness to undergo privation and live under constant threat. The Arabs are the inner circle, the underground revolutionary cadre, protected also by Uzbeks and Chechens, tough fighters that have nothing to lose. Presumably, Al-Qa’ida’s first priority is to protect its sanctuaries and survive, but next to that is the gradual expansion of territorial control and access to the extensive military and economic resources that control of Pakistan would bring. Although one cannot gainsay the Pakhtun tribesman’s absolute loyalty to his religion, the chance to get at the wealth of the lowlands—*zar, zan, zamin* (gold, women, land)—is an ancient vision that undoubtedly continues to animate the buccaneering side of the fractious Pakhtun nation. But for now it is religion (*deen, deen*) that holds all this together.

How far will the Al-Qa’ida/TTP movement go in Pakistan? True social revolution, the overturning of a long-established social order, is rare enough in history. As Homer-Dixon has noted, some “scholars argue that revolutions happen when inflexible societies experience multiple shocks—or body blows—at many levels simultaneously or in quick succession” (Homer-Dixon 2006, 123). He quotes Jack Goldstone, a theorist of revolution: “Massive state breakdown is likely to occur only when there are *simultaneously* high levels of distress and conflict at *several levels* of society—in the state, among elites, and in the populace” (Goldstone 1991, 469). In revolutions, “there is a crisis of national government, but there are also crises of local government. There are conflicts with the state, but also regional conflicts and even conflicts within families. There are elite rebellions, but also a variety of rural and urban popular movements” (Goldstone 1991, 36). But Goldstone also warns that:

A focus on revolutionary processes helps us understand what social scientists call the “agency” and “path dependency” characteristics of revolutions. “Agency” im-

plies that not all aspects of a revolution are predetermined by macro-social, structural factors. The decisions of key actors (or “agents”) make a difference in whether a revolution will be successful and how it evolves. “Path dependency” implies that events and actions that occur during the revolutionary process affect later outcomes. If actors had made different decisions, or if a war or popular uprising had occurred at a different time or had not occurred at all, then the eventual outcome might have been different. (Goldstone 2003, 12-13).

Certainly, Pakistan is experiencing multiple conflicts at all levels, but the discovery of a path to a successful revolution is something that has to occur in hindsight, when the decisions that key actors have made are known. Prediction is more difficult. What does seem indicated is that Pakistan is turning a systemic corner. Unless there is a silent majority of moderates in Pakistan willing to fight back against the religious radicals, Jinnah’s vision for Pakistan is fading and not likely to be brought back. After more than six decades of independence, during which the population exploded more than five times from 33 to 175 million, the old, essentially secular, ruling elites are a small island in an expanding sea of urban middle and lower-middle class people, most of whom—especially the lower middle class—have a deeply integrated sense of religion in how they live their lives. The old elites, who have run Pakistan, have paid more attention to protecting their assets and untaxed privileges than building a country. Education, the one function that could have brought younger generations into a modern state, was neglected. The old landed classes of the Indus Plains are in decline, selling off estates and moving assets and their sons and daughters abroad, where the best and brightest have always gone. Pervasive corruption corrodes respect for the political class and undermines the economy. The establishment simply lacks legitimacy and there is less and less fear of the state and its security forces. The assassination of Benazir Bhutto in December, 2007 and that of Punjab Governor, Salman Taseer on Janu-

ary 4th, 2011, almost universally welcomed by the religious establishment, moderate (Brelvi) clerics included, shows how seriously the country is polarized and how much the security forces are affected by religious sentiments. These killings show contempt for those who espouse a moderate, largely secular state, and the fear that this engenders robs the moderates of a voice. Undoubtedly, one of the reasons the generals hesitate to press the army into a full scale war against the Taliban is a knowledge that their soldiers are also deeply religious and have little desire to war against other Muslims—the Qur’an is clear that Muslims should not fight other Muslims. At the end of the day, the generals’ highest priority is to preserve the unity of the Pakistan Army. In the end, this writer believes, generals will stick with the religious parties. There seems little future in upholding a decayed, faltering, essentially secular order.

And on the other side there is the jihad movement and its increasingly coherent insurgency, implacable and uncompromising, with friends in the army, ISI, the police, the bureaucracies. It already has tested a revolutionary model in Swat, where it exploited rural class divisions and frustration with official corruption at all levels: dysfunctional courts, poorly paid police, a compromised and lax bureaucracy, avaricious timber merchants, and landlord-politicians. In two years, the Taliban took over Swat by mobilizing the peasants against the landlords, organizing them into armed gangs. These were the shock troops of the revolution, reinforced by seasoned fighters from the tribal areas with ties to Al-Qa’ida and the TTP, the Lashkar-i-Zil or shadow army of Pakhtuns, Arabs, Uzbeks and Chechens. The Taliban enforced the Shariah, set up courts promising swift justice, gave the landless tenants control over the land they cultivated, and struck at the police and the landlords. Maulana Fazlullah, the leader of the Swat Taliban, used a FM radio station to deftly appeal to the disenfranchised and terrorize the landlords with demands that they present themselves to the Shariah courts, or else. Not surprisingly, the large landlord class — perhaps fifty of

them—were either killed or chased into exile. For over a year, the Taliban fought an Army brigade to a standstill, until the former were forced to retreat by a larger military force, which used helicopter gunships and troop carriers to go after Taliban-controlled villages. The revolutionary model enforced in Swat is applicable to other parts of the country, the settled districts of KPK, the heartland province of Punjab, and Sindh, where the rural tenants are similarly restless. Although they lack the resources and predisposition to rebel on their own, if organized and mobilized by a force like the jihad movement, and able to convince the poor that Islam justifies a religious revolution, the Punjab could be ripe for revolution. Although the wider political implications of the vast monsoon floods of 2010 have yet to be seen, neither the poor response of the administration nor the selfish behavior of the landlords—who cut flood protection dikes to protect their own lands—has strengthened the legitimacy of the established order.

Pakistan probably will survive, but it will be a country far more oriented to religion, much less secular and moderate. Geographically, given the hydrological unity of the Indus-Punjab Rivers, its vast irrigation system, its transportation corridors, and the dependence of the whole on the port at Karachi, Pakistan makes sense. However, much depends on the capacity of the central government. A strong center, based on an army-clergy alliance, would keep the country together, provided a settlement was reached with the TTP. The Taliban and their allies lack the skills to run a complex government, for Pakistan is far more developed than Afghanistan when the Taliban ruled there. However, there are trained professionals in all fields, engineers, managers, and security officials who would gladly serve a more religious Pakistan. Although small, the Jama'at-i-Islami is a modern, Islamist political party, whose members are highly educated in fields like modern science, engineering, administration, and education. An army-Jama'at alliance at the center could provide good governance, a negotiated settlement with the orthodox religious parties, imposition

of the Shariah—it will come someday anyway—and a responsible foreign policy. With the Shariah in place and, as Jama'at literature constantly demands, rule by an authentically pious, practicing Muslim as Amir (ruler), together with an appointive Majlis-i-Shura (parliament) of upstanding citizens, a further rebellion from the right could no longer have legitimacy. Although this kind of Pakistan is not a country that would ally with the West, or where Westerners would feel particularly comfortable, it is one with which one could do business—after a period of settling down, of course, perhaps after a “reign of terror.”

If the center remains weak and the army fails to stem the Taliban, either through negotiations or military operations, Pakistan would enter a period of great instability, as the fractious religious groups, their revolutionary unity gone, fight over the spoils. The army would attempt to protect the Potwar Plateau, Salt Range, and the urban corridor from Lahore to Islamabad. Historically, the Indus Plains region has pulled back into “little kingdoms” when the metropolitan power has faded away, with local power-holders negotiating with each other to maintain their autonomous regions. Something like that could happen again, at least temporarily, with smaller entities—emirates?—emerging in part along ethno-linguistic lines. Urban centers like Rawalpindi, Lahore, Faisalabad, Multan, Bahawalpur, Larkana, and Hyderabad might reach out to control their rural hinterlands. Such a situation would not be at all stable, featuring small wars and leaders, when threatened, willing to make deals with external powers: Lahoris with India, Pakhtun nationalists with Kabul, Sindh and Baluch nationalists with New Delhi, the Northern Areas with India or perhaps with Beijing. After all, the westernized, secular-minded citizen of Lahore or Karachi has more in common culturally with like-minded middle class Indians—including middle class Muslims in India—than he or she does with the likes of the Taliban. These are all speculations, of course, and the future remains hidden. Nonetheless, Pakistan is in a crisis of state and its future is anything but certain.

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Effective Sovereignty and Western Pakistan

Francis A. Galgano

Introduction

In the tenth year of America's longest war, the decisive battlefield in the Global War on Terror (GWOT) has expanded to include western Pakistan—the sovereign territory of a principal ally in the fight against the *Taliban* and *al-Qaeda*. Thus, Pakistan occupies a precarious geo-strategic position because it straddles an abstract fault line between Islamic terrorism and the rule of global law; but more importantly, a more tangible fault line that coincides geographically with its uncontrolled and violent western border with Afghanistan. In fact, many would argue that the Afghan-Pakistani border is no boundary at all; rather that the two states, in reality, form one organic region (Kaplan 2009). Hence, from a geographic perspective, the relationship between western Pakistan and the war on terror is of paramount importance because it demonstrates salient geographic dynamics that define the contemporary security landscape and the challenges associated with asymmetrical warfare. Furthermore, it is apparent that there can be no resolution in Afghanistan without a solution for Pakistan's essentially ungoverned Federally Administered Tribal Areas (FATA, Figure 1).

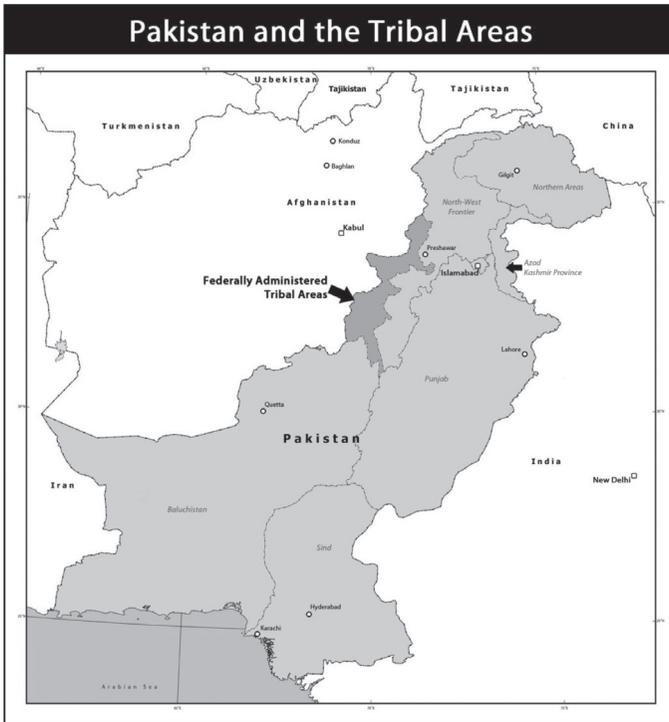


Figure 1. Map of Pakistan Illustrating the Location of the Federally Administered Tribal Areas. Cartography by the author

In December 2010, the U.S. issued two National Intelligence Estimates, which claimed that there has been progress in the war on terror in Afghanistan and Pakistan. However, the reports also concluded that Pakistan's unwillingness to control and pacify militant sanctuaries in its western tribal region is a serious obstacle to military and political success in the in the GWOT (Bumiller 2010). Thus, for the U.S. and its allies, engaging the *Taliban*, *al-Qaeda*, and other violent non-state actors in the FATA has become *the* conflict in the GWOT because it is the new base of operations for terrorist organizations (Cordesman 2007, 2009; Sappenfield 2008; Siddique 2009). In fact, U.S. President

Barack Obama made this point fundamentally clear during his Afghan strategy speech given at the United States Military Academy on 1 December 2009:

Since 9/11, al-Qaeda's safe-havens [in Afghanistan and Pakistan] have been the source of attacks against London and Amman and Bali. The people and governments of both Afghanistan and Pakistan are endangered. In addition, the stakes are even higher within a nuclear-armed Pakistan, because we know that *al-Qaeda* and other extremists seek nuclear weapons, and we have every reason to believe that they would use them.

President Barak Obama, 1 December 2009 (White House 2009)

The national security landscape has evolved since the collapse of the Soviet Union and now includes a dangerous nexus of state-centric threats, threats from terrorist organizations, and weapons of mass destruction. The underlying process that enables these threats is the pervasive spread of failing states, especially in the developing world where violent non-state actors exploit weakly governed places such as Afghanistan and western Pakistan (Barnett 2004). Connected with the emergence of failed states is the new reality of effective sovereignty doctrine, which implies that if a state cannot, or will not, exert effective control over its territory which is being exploited by a violent non-state actor – another state may take action (military or otherwise) to re-establish control or avert a security threat (Gray 2009). This chapter examines the nexus of ungoverned space and effective sovereignty doctrine in western Pakistan, which has become the epicenter of the war on terror.

The Emergent National Security Landscape

The Cold War strategic partition of the world dominated the global security landscape for more than four decades following WW II, and fostered a rather simplified national

security geography within which the bi-polar world was dominated by two super-powers and their respective alliance blocks. The core of this geography was the power of the state and pervasive superpower influence (Snow 2008). However, a major tectonic shift in the geography of national security occurred following the collapse of the Soviet Union characterized by redefined regional balances of power, new conflict dynamics, and environmental challenges, all of which present a new set of geographic realities. The fundamental national security dilemma of the modern age is that we now live in a multi-centric world—that is, national security is influenced nearly equally by traditional states and violent non-state actors (Barnett 2004).

Hence, the 'new' national security geography is more complex and much less stable. Contemporary national security is dominated by many more problematical factors, such as globalization and the spread of military technology; the proliferation of nuclear and non-nuclear threats; environmentally triggered instability; insecurity generated by weakly governed states; and the emergence of violent non-state actors. This contemporary national security landscape is different and more unstable because, notwithstanding the danger inherent to the former national security landscape, it was nonetheless state-centric. Given that the state was the dominant actor, conflict resolution and global balance could be achieved by quasi-peaceful means using established diplomatic and international protocols. In such cases, well-established diplomatic doctrine was reasonable and viable. However, the emergent geography of national security is influenced strongly by violent non-state actors and the overarching problem of effective sovereignty. In other words, many states cannot exert effective control over their territory, and these areas are being used as a springboard for the export of global jihad and violence. Thus, it appears that the old rules of state sovereignty may no longer apply (Rosenthal 2004).

The U.S. experienced a rather violent demonstration of this emerging national security dynamic on 11 September

2001 when a violent non-state actor perpetrated a surprise attack against New York City and Washington, D.C. The national security implications and strategic geography of this attack are clear and demonstrate the stark reality of the contemporary national security geography. *Al-Qaeda* planned and directed the attacks from ungoverned and poorly controlled space in Afghanistan. In attacking the U.S. in such a manner, *al-Qaeda* demonstrated the strategic reach that was once reserved for states. The geographic fulcrum of this event, however, was the inability, or perhaps unwillingness, of Afghanistan to exercise effective control over its territory. This pattern was to be repeated during the train bombings in Madrid (2004) and London (2005), and the Mumbai attacks (2008), which were planned, staged, and coordinated in the FATA of western Pakistan (Cordesman 2009).

Expanding the Global War on Terror into Western Pakistan

American military and diplomatic efforts in the war on terrorism have returned to Afghanistan—once the cradle of the *Taliban* and former training grounds of *al-Qaeda*—but, of even larger geo-political importance, the effort is now incorporating expanded operations in the FATA of western Pakistan (DoD 2006; Constable and Witte 2009; Mayer 2009). This shift is compelled by the fact that there is now a fundamental connection between global terrorism and safe havens that now exist in western Pakistan. Furthermore, eliminating the threat from the FATA is essential to the successful prosecution of the war on terrorism because these wild tribal lands have now become the center of gravity for the *Taliban* and *al-Qaeda* (White House 2009). Growing militant activity in western Pakistan creates three security threats: the potential for direct attacks against the U.S. and its interests; threats to Pakistani stability; and an obstacle to a stable Afghanistan (Murphy 2009). U.S. and NATO intelligence organizations are certain that it is now the sanctuary

for Osama bin-Laden and his second in command Ayman al-Zawahiri, and is the prime training ground for soldiers of global jihad (Bajoria 2007; Constable 2009; Constable and Witte 2009; Kyl 2009).

Hence, the seminal predicament for the U.S. and its allies is that they must somehow contend with violent terrorist organizations within the sovereign territory of a nominal ally, thus making operations against the *Taliban* and *al-Qaeda* in the FATA fundamentally problematical. The dilemma is compounded further because until recently, the Pakistani government has been indifferent about pursuing an aggressive policy toward terrorist organizations within the FATA—its sovereign territory—and its intelligence service (ISI) is directly aiding the *Taliban* (National Security Archive 2007; Sappenfield 2008; Cordesman 2009). For example, in November 2010, the Pakistani government rejected a U.S. request to expand the areas where its missile-firing drones can operate and target *Taliban* and *al Qaeda* bases and leadership cells (Associated Press 2010). This military campaign in South and North Waziristan has been remarkably successful, and the U.S. request was intended to expand the target area to previously ‘off-limits’ places in western Pakistan that are now serving as sanctuaries for terrorist organizations (Wright and Owais 2010). The U.S. and NATO request followed a successful drone-strike in early October 2010, which killed, among others, five German nationals who were undergoing terrorist training in Northern Waziristan (Shazad 2010). The results of this strike along with other intelligence indicates that violent non-state actors are now migrating to other areas within the FATA (DeYoung and Warrick 2008; Wright and Owais 2010).

Ungoverned Space in Western Pakistan

Ungoverned spaces are areas where government control is essentially absent and warrant attention because violent non-state actors can exploit them as sanctuaries largely

without interference. Tribal areas in western Pakistan are being exploited by violent non-state actors and are influencing U.S. strategy in the prosecution of the GWOT, as well as destabilizing the region. The contemporary terrorist threat is transnational in nature and characterized by enemies without territory and borders. This global security reality enables growing threats such as the export and franchising of terrorism, proliferation of weapons of mass destruction, arms and drug trade, and piracy (Galgano 2009). The *Taliban* and *al-Qaeda*, along with other violent groups such as the *Haqqani* network, are exploiting areas in western Pakistan where government control does not exist. Because Pakistan is a nuclear state, and the *Taliban* is committed to taking it over for its own purposes, the tribal lands of western Pakistan are perhaps the most dangerous ungoverned areas in the world (Cordesman 2009). Hence, the examination of ungoverned areas is of vital importance to the GWOT because despite tactical victories, decapitation of terror networks, and other relatively successful military operations, the West has been slow to attack the conditions that foster terrorism (Galgano 2007). The existence of ungoverned areas is not a new phenomenon and clearly, their exploitation by transnational actors has a long-standing history. The compelling problem that we now face is the potential for an ungoverned space to be used as a springboard for disruptive or perhaps catastrophic activities by terrorist organizations. Furthermore, the dynamics of globalization: i.e., telecommunications, the internet, banking and money transfers, and less restrictive travel have virtually eliminated the friction of global distance and have aided violent non-state actors in the prosecution of their goals.

A classification system for defining and delineating ungoverned space is given in Table 1.

Table 1. Classification of Ungoverned Space.

First Order Classification	Second Order Classification	Definition
Genetic Classification	Physical Ungoverned Space	A remote region within which a state cannot or is unwilling to exert control
	Non-Physical Ungoverned Space	A state lacks sufficient regulations to control territory and/or has an insufficient security apparatus to enforce or uphold existing regulations
Functional Classification	Frontier Territories	Rugged, remote, maritime, or littoral areas not effectively governed by a sovereign state
	Competing Governance	A place where a sovereign state is unable or unwillingness to exercise authority over part or whole of a country
	Exploitation of Legal Principles	Areas within which legal norms/processes can be exploited by non-state actors who threaten domestic or international order
	Opaque Activity	Areas created by the inability of a government to monitor or control illicit or facilitating transactions

Given this scheme, the FATA exhibits the genetic attributes of a physical ungoverned space – it is a remote, undeveloped territory that is considered a frontier region by the Pakistani government (Galgano 2007). This type of region is ideal for violent non-state actors seeking concealment or separation from a state’s security apparatus. Despite the FATA’s geographic proximity to Islamabad (Figure 1), Pakistani federal authorities have in essence been incapable or averse to develop infrastructure and exert control over the region. Development indicators suggest that at every level, the FATA lags well behind the rest of the state (Library of Congress 1994; Sappenfield 2008). Consequently, the FATA’s Pashtu tribes manifest a high level of poverty and social stratification, and thus are exploited or recruited

by organizations such as the *Taliban* and *al-Qaeda*. The area has little infrastructure and is susceptible to devastating humanitarian and natural disasters; furthermore, this type of ungoverned space characteristically extends over the borders of neighboring states—in this case Afghanistan—creating difficult sovereignty issues, thus making unified responses more difficult. Humanitarian disasters in these regions are particularly problematic because a responding government or non-governmental agency may have to expend enormous effort simply to establish infrastructure in order to bring relief supplies into the region. In terms of security operations, the Pashtu lands span the border region between Afghanistan and Pakistan and there is little control exerted by either sovereign entity. Furthermore, the dearth of basic infrastructure and government presence means that for the indigenous population, day-to-day survival and security is a matter of personal initiative (Galvano 2007).

Functionally, however, the FATA is a territory of competing authority (Table 1). This type of ungoverned area is typical of a sovereign state's unwillingness to exercise authority over part or all of a country, leaving areas open to exploitation by non-state actors, who can establish a competing, parallel shadow government (Galvano 2007). In the case of the FATA, federal authorities use taxation and colonial-era laws to selectively control the region and consequently, it has become disenfranchised, alienated, and susceptible to exploitation. The Pashtu identify more closely with their ethnic identity than they do with the Pakistani government; and government agents have systematically alienated the population through invasive corruption, erratic and malicious application of antiquated laws, and lack of accountability. Problems in the region were exacerbated following the Russian invasion of Afghanistan when millions of Pashtu refugees moved into the FATA. The crushing poverty and lack of education proved to be fertile ground for Wahhabi madrasas that moved into the area and established a *de facto* education system. Thousands of

young men were indoctrinated and radicalized, and they became willing recruits of the *Taliban*, *al-Qaeda* and other fanatical organizations (Siddique 2009). These conditions were further exploited by the *Taliban* as they have moved into the area following Operation Enduring Freedom in 2001. They have in effect begun to establish a parallel government by providing a rudimentary health care system, a security force, and other government-like services—in effect establishing a competing authority in the region (Siddique 2009). However, the *Taliban* have also instituted their insidious version of Shari'a law that bans such things as video stores, drinking, co-mingling in public, women's use of medical facilities, and other strict interpretations of the Koran (Constable 2009; Siddique 2009).

The governance void in the FATA is illustrated by development, governance, and corruption indices that place Pakistan among the most poorly governed states in the world. For example, Pakistan has a Human Development Index score of 0.572, which ranks it at 125 of the 200 states measured by the United Nations (U.N. 2010). This score ranks just below Yemen, Cambodia, and the West Bank; and only slightly above Haiti, Nigeria, Myanmar and Angola by way of example. The U.N. (2010) also indicates that only 54 percent of Pakistan's population is literate, but the lack of education and economic development are far worse in the FATA. For example, only 22 percent of the FATA's population is literate, and the mean number of school years is only 4.9 (U.N. 2010). Economic indicators present an even starker story. Only 34 percent of the population is above the state's poverty level and only 3 percent live in towns or villages. *Per capita* income is only \$663.00, and the region is so remote that non-governmental aid organizations cannot gain access. These data indicate a region with extreme social stratification that has been ignored for years by the government (Bajoria 2007).

In the area of governance, Pakistan is among the most ineffectively governed states in the world. The U.N. (2010) governance index assigns Pakistan a score of 0.414 (1.0 is highest and 0.0 is lowest), or a global rank of 153, which places it only slightly ahead of Somalia (158)—one of the

most weakly governed states in the world. The World Bank has a more robust governance database, which uses six indices to rate levels of governance: voice and accountability; political stability and absence of violence; government effectiveness; regulatory quality; rule of law; and control of corruption (Kaufmann et al. 2008). Pakistan's scores are summarized in Table 2.

Table 2. Governance Indicators for Pakistan.

Pakistan				Global Comparison ⁴		
Index1	Rank2	Score3	Mean	High	Middle	Low
VA	171	-1.01	-0.04	Norway (1/1.53)	El Salvador (106/0.06)	Myanmar (212/-2.24)
PS	207	-2.61	0.00	Luxemburg (1/1.52)	Solomon Is. (106/0.12)	Somalia (212/-3.38)
GE	186	-0.73	-0.01	Singapore (1/2.53)	Guyana (106/-0.17)	Somalia (212/-2.51)
RQ	138	-0.47	-0.20	Singapore (1/1.92)	Guatemala (106/-0.12)	Somalia (212/-2.77)
RL	170	-0.92	0.01	Norway (1/1.96)	Panama (10/ 0.020)	Somalia (212/-2.69)
CC	159	-0.77	-0.03	Finland (1/2.25)	Columbia (106/-0.25)	Somalia (212/-1.90)

1 Index Codes:
VA: Voice and Accountability
PS: Political Stability and Absence of Violence
GE: Government Effectiveness
RQ: Regulatory Quality
RL: Rule of Law
CC: Control of Corruption

2 Total number of state entities n=212. Ranking rubric: 1 equates to most highly governed state.

3 Positive scores equate to governed states, negative scores equate to weakly governed states. The more positive score equals stronger governance.

4 Indicates: State Name (global ranking/governance score)

Source: Kaufmann et al. 2008

These data indicate that in all areas measured by the World Bank, Pakistan consistently ranks within the lower two quintiles of the 212 state entities monitored. Its political stability ranking (207) is among the 10 worst in the world (Table 2) and is particularly troubling given that Pakistan is a nuclear state and absolutely on the front line of the GWOT. This level of ungovernance defines and accentuates the effective sovereignty dilemma that we now face in region.

Pakistan's governance problem is further illustrated by Transparency International's Corruption Perception Index (2010), which ranks Pakistan as one of the more corrupt states of the 178 in their database. Pakistan's corruption index is 2.3 (a score of 10.0 equals no corruption) and places it at number 143 among the states measured. This ranking is complemented by the World Bank corruption rating (Table 2). This is troubling because terrorist organizations thrive and depend on their ability to bribe or coerce government officials. Thus, the *Taliban* and to some extent *al-Qaeda* are adroitly using the power vacuum in the FATA to establish a 'legitimate' parallel government structure. In this lawless area, the *Taliban* have been able to assimilate legal norms and have established themselves within legitimate activities and government positions such as magistrates, police, and the judicial system to provide cover for their operations. Their emplacement of clinics and schools has given them credibility among a population that has been ignored for generations by the Pakistani government (Sappenfield 2008). Given these conditions, it is easy to understand why some local tribes now provide security, logistics, and sanctuary for extremist organizations in the FATA.

The Federally Administered Tribal Areas

In the context of the GWOT, Pakistan occupies a position of great geostrategic importance, bordered by Iran, Afghanistan, China, India, and the Arabian Sea (Figure 1). The essentially ungoverned and remote FATA region is now

the primary training ground for *al-Qaeda* and the base for the *Taliban's* insurgency against Afghanistan and Pakistan, and the common border between the two states is now one of the most contentious and dangerous areas in the world (Cordesman 2009). Furthermore, the *Taliban* is working to create a parallel government in the FATA, which is now the epicenter of Islamic extremism in the region and the springboard for exportation of violence on a regional and global scale (Bajoria 2007; Siddique 2009). In a 2008 report, the U.N. indicated that more than 80 percent of all suicide bombers in Afghanistan and Pakistan were recruited or trained in the FATA (Cordesman 2007; U.N. 2007). On a global scale, the train bombings in Madrid (2004) and London (2005), the Mumbai attacks (2008), and failed Times Square bombing (2010) were planned, staged, and coordinated in the FATA as well (Black 2008; Miller 2010).

Pakistan's boundary with Afghanistan is about 2,250 kilometers long (Figure 2).

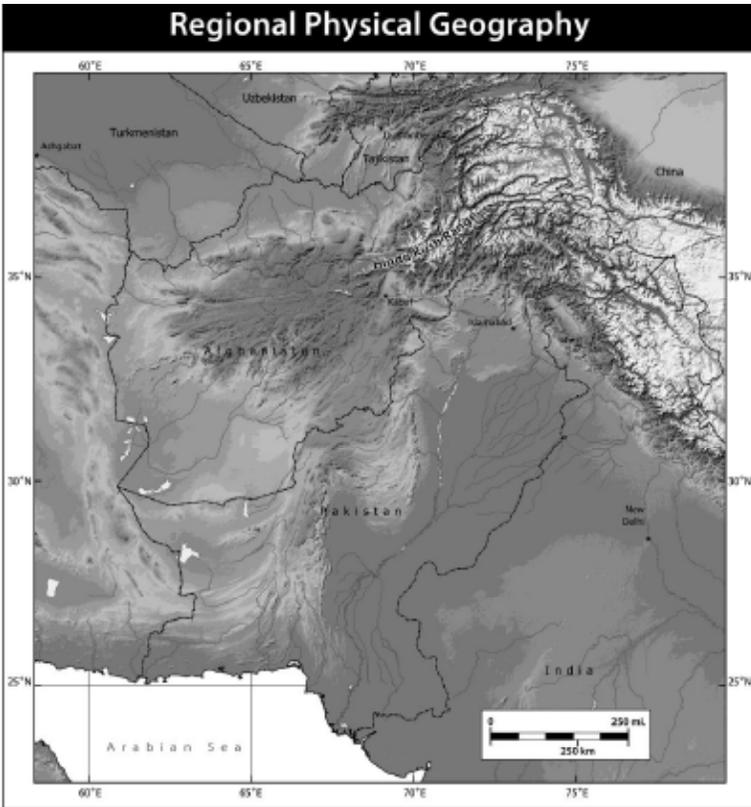


Figure 2. Physical Geography of Afghanistan and Pakistan.

Cartography by the author

The modern boundary was drawn in 1893 by British diplomat Sir Henry Mortimer Durand as a means to divide and weaken the Pashtu tribes that dominate the region, and to turn Afghanistan into a buffer zone between the British and Russian empires (Library of Congress 1994). This boundary, called the Durand Line, became the official Afghan-Pakistani border when Pakistan became independent in 1947. Nevertheless, its legitimacy has been disputed by Pashtu tribes that straddle the border since it effectively divides them. Afghans too, rejected the Durand Line because they feel that it was imposed by Great Britain, thus nullify-

ing their claim to Pashtu lands in western Pakistan, which they view as a natural extension of their territory (Bajoria 2007). More importantly, Afghans are apprehensive over the Durand Line because its division of the Pashtu tribes has fueled their desire to establish a separate state and it has in effect destabilized the eastern region of the country (Siddique 2009).

The semi-autonomous tribal lands of the FATA (Figure 3) consist of seven so-called *agencies*: Bajaur, Mohmand, Khyber, Orakzai, Kurram, and North and South Waziristan. This remote, mountainous territory is populated by fiercely independent Pashtu tribes. Although the Pashtu tribes elected to join Pakistan after it gained independence in 1947, Islamabad historically has had negligible control over the region (Bajoria 2007). Thus, the FATA is a classic ungoverned space: the border is un-controlled and the *Taliban* routinely makes incursions from Pakistan into Afghanistan. Even though Pakistan's constitution imparts executive authority over the region to the President, the Governor of the North West Frontier Province (Figure 3)



Figure 3. The Seven Agencies of Pakistan's Federally Administered Tribal Areas.
Cartography by the author

controls the FATA by managing *bureaus* that administer the tribal areas (Library of Congress 1994). However, actual power in the FATA rests with each agency's political agents or magistrates, who represent the Pakistani federal government. The magistrates exercise control (such that it is) over the tribes through a set of archaic colonial-era Frontier Crimes Regulations that were established by the Brit-

ish (Bajoria 2007). These colonial-era laws are quite repressive and individual tribesmen in the FATA have limited rights—the laws are typically used by federal authorities as a political weapon, and have long been a source of animosity between tribal leaders and Islamabad. Instead of imparting a measure of control, the Frontier Crimes Regulations have established conditions that degrade effective governance within the region and have promoted distrust, resentment, and disorder. Furthermore, government officials have shown little regard for the Pashtu tribes and limited accountability for their actions. This has fostered inherent political instability, pervasive violence, capricious rule of law, and endemic corruption (O’Loughlin et al. 2010). Actually, the colonial laws permit federal political agents to impose collective punishment on tribes and the magistrates can indiscriminately hand down prison sentences and other legal judgments without due process or right of appeal (Bajoria 2007; Siddique 2009).

The absence of government accountability in the region is exacerbated by pervasive corruption and non-existent social infrastructure. Nepotism and favoritism are effectively law of the land, and selected tribal leaders known as *maliks* are given economic incentives, doled out by federal magistrates, in exchange for their loyalty. Magistrates collect and distribute tax revenue with little oversight from Islamabad, and tribes suffer from a lack of development and oppressive poverty, which only intensifies conditions that facilitate radical activities in the region (Siddique 2009). For example, development data indicate that the population is poor, rural, and essentially illiterate. The distribution of health care is dismal as well—there is only one doctor for every 8,000 people as compared to 1,500 people per doctor in the rest of the country (Bajoria 2007).

Divisive and inconsistent laws, widespread corruption, social stratification, and pervasive inequities in infrastructure have enabled the proliferation of extremist Islamic views and the radicalization of much of the region’s disenfranchised male population. There are only 102 high

schools in all of the tribal lands to service a population of more than 3 million. This gap has been filled by more than 300 madrasas, or Muslim schools operated by Wahhabist clerics (sponsored by Saudi Arabia), and the number is growing. The alarming proliferation of these religious schools reflects the growing power of Islamic extremism in the tribal lands (Siddique 2009). There is an abundance of extremely poor, disenfranchised, uneducated young men who are easily radicalized in the madrasas and are recruited and exploited by extremist Islamic groups with little trouble. Thus, the region exhibits characteristic indicators of an ungoverned area that is susceptible to polarizing, radical violence that can be exploited by violent non-state organizations (Bajoria 2007).

Given these conditions, religious extremism and radical, anti-western violence are significant problems in the FATA and consequently, the tribal lands have become a melting pot for jihadists from all over the world (Bajoria 2007). In addition to the *Taliban* and al-Qaeda, the tribal lands are a base for the *Haqqani* network, Chechen groups, and organizations such as the Islamic Movement of Uzbekistan (National Security Archive 2007). Since the beginning of the Afghanistan war in 2001, key members of the *Taliban* have advanced into leadership roles, particularly in North and South Waziristan and Bajaur. The emergence of the *Taliban* has disturbed the political balance in the FATA and there have been cases of tribal leaders being executed for challenging the *Taliban's* growing power or for working too closely with the Pakistani army (Bajoria 2007).

It is important to note, however, that the *Taliban's* religious extremism is not a new dynamic in the tribal lands, and for decades, the Pashtu have practiced various forms of fundamentalism and highly conservative social values that predate contemporary counterterrorism efforts in the region (Constable 2009). This is compounded by the reality that for most of the region's Pashtu population, being Pakistani citizens is secondary to their Pashtu identity, and they regard foreigners, including the Pakistani army, with

extreme suspicion (Bajoria 2007). This problem has been exacerbated since 9/11. The region came under U.S. scrutiny after the *Taliban* and *al-Qaeda* took refuge in the FATA. Consequently, then- President Musharraf ordered a series of half-hearted offensives designed to eliminate terrorist organizations in the region, but these efforts largely failed. The newly elected government has also service to supporting military action to stabilize the tribal lands, and those military operations have had minimal success (Brinkbäumer and Goetz 2010). These failures were enabled because the military actions were window dressing, and became increasingly unpopular with the Pakistani army in which Pashtus are the second-largest ethnic group; and also because the *Taliban* continues to receive direct support from the ISI (National Security Archive 2007). These circumstances make Pakistan a particularly dubious ally and thus, the FATA represents a very dangerous area for the export of violence on a global scale. The problem is compounded because the FATA is within the sovereign territory of a so-called ally that has thus far lacked the political will to prevent its territory from being used as a springboard for violent attacks. Given this reality, the question facing the global community is what do we do to eliminate, or at least mitigate the danger represented by this region?

Effective Sovereignty

To respond effectively to the danger posed by a violent non-state actor operating from ungoverned space, a threatened state may be required to challenge the long-established rules of diplomacy and doctrines of international relations (Rosenthal 2004). In other words, does the threat of attacks emanating from ungoverned space in a sovereign state challenge the long-standing notion of sovereignty, and can one state intervene in another's ungoverned space? This paradigm has been termed effective sovereignty doctrine, which contends that in situations where U.S. national security may be threatened by a foreign government's fail-

ure to exercise adequate control over its territory—un-governed or otherwise—the U.S. reserves the right to take action deemed necessary to ensure its security (Isacson et al. 2004; Armstrong 2005). However, not all responses to effective sovereignty problems necessitate military action. In some cases, government leaders and non-governmental organizations have been able to remedy problems through peaceful means using recognized diplomatic and international protocols. In such cases, well-established doctrine is practical as it imparts the normative guidance that we need (Rosenthal, 2004).

However, the actions of *al-Qaeda*, the *Taliban* and *Haqqani* network in the FATA, coupled with the feckless response of the Pakistani government, has clearly demonstrated that long-standing and well-established diplomatic protocols as well as international doctrines and the principles they engender, must be reconsidered in light of the contemporary global security situation (Galgano 2007). Specifically, the serious threat posed by these militant organizations, with the avowed goal of promoting mass murder, must be dealt with using direct military force even if that means military action without the consent of the territorial sovereign (Rosenthal 2004; ASIL 2009). Thus, the U.S. is now involved in a war that may be unique in history in that it is waging a military campaign within another sovereign state, without having to send troops (Hoffman 2005; Brinkbäumer and Goetz 2010). This is the core of the problem in the FATA, and the seminal diplomatic conflict between the U.S. and Pakistan. Despite publically praising the Pakistani government, U.S. officials maintain long-held doubts about its true commitment to going after the terror cells operating within its territory (Kronstadt and Katzman 2010). The acceleration of the drone campaign during the fall of 2010 suggests America's mounting frustration with Pakistan and is evidence of its new willingness to expand the geographic boundaries and strategic scope of the campaign (Schmitt and Mazzetti 2008; Brinkbäumer and Goetz 2010).

Although the FATA has been the training, planning, and staging site for a number of terror attacks, Pakistan has demonstrated little genuine desire to intervene and prevent the lawless use of its territory (Bajoria 2007; White House 2009). More importantly, and of direct bearing on the issue of effective sovereignty, is that the Pakistani government, through the ISI has directly and materially aided the *Taliban* since 1996. Furthermore, it is believed that key leaders in the ISI and the Pakistani army still support the *Taliban* and *al-Qaeda* with intelligence, weapons, and money even as the Pakistani government alleges to take action to pacify the FATA (National Security Archive 2007; DeYoung and Warrick 2008). Furthermore, U.S. and NATO leadership believe that the *Haqqani* network is a proxy force for the ISI, which explains their unwillingness to confront this faction, which has conducted numerous deadly attacks against Coalition forces (Miller 2010). Consequently, the U.S. has been forced to employ direct military intervention—in the form of drones—in the FATA and the CIA has been effectively given the green light to ramp up its aerial campaign during the past year (ASIL 2009; Miller 2010).

Such attacks are the manifestation of direct military action, which the U.S. pursued during the Bush and now Obama administration. The U.S. position is that it has the right to self-defense and use pre-emptive military action when deemed necessary, and the legality of this doctrine has been upheld by the U.N. Security Council and by International Law (Hoffman 2005; Mayer 2009; Murphy 2009; Miller 2010). In fact, the Department of Defense (DoD) published a classified order in 2004 that gave wide-ranging authorization for U.S. military forces to conduct direct operations against *al-Qaeda* within the borders of some 20 countries (ASIL 2009). Although the U.S. began promoting its effective sovereignty doctrine as early as 1995, the 2004 DoD order implies a rather expansive interpretation of the right to self-defense (Hoffman 2005; Thomas 2006; ASIL 2009). In concert with this new paradigm, the U.S. has conducted more than a dozen 'secret' ground operations in Syria, Pakistan, and Somalia since 2004 (Schmitt and Maz-

zetti 2008); and it carried out 98 missile attacks in Pakistan between 2004–2009 (ASIL 2009; Roggio and Mayer 2010a). One such operation, a heli-borne cross-border attack by a small U.S. force into Syria from Iraq drew strong protests from Syria in the U.N. In addressing the justification for the attack against jihadists operating against U.S. forces in Iraq from Syrian territory, American officials referred to comments from President Bush’s 2008 address to the U.N. General Assembly:

To uphold the words of the Charter in the face of this challenge, every nation in this chamber has responsibilities. As sovereign states, we have an obligation to govern responsibly, and solve problems before they spill across borders. We have an obligation to prevent our territory from being used as a sanctuary for terrorism and proliferation and human trafficking and organized crime.

President George W. Bush, 23 September 2008 (White House 2008)

It is clear that the Obama Administration pursues this doctrine in Pakistan as well—it has drastically accelerated drone attacks against suspected *Taliban*, *Haqqani*, and *al-Qaeda* targets in Pakistan since January 2008 (ASIL 2009; Roggio and Mayer 2010b). As indicated in his December 2009 speech, it appears that President Obama will continue to authorize cross-border attacks into the FATA because the Pakistani government has demonstrated that it has little means and even less political will to force a showdown with terrorist organizations operating there. The sobering reality is that Pakistani-led operations in the FATA have become increasingly unpopular and the Pakistani army is reluctant to pursue these operations to placate the West (Bajoria 2007; Constable 2009).

The U.S. war in western Pakistan represents a new and geographically unbounded use of military force within the borders of a sovereign state (Mayer 2009). To date, cross-

border operations into western Pakistan from Afghanistan have taken place in three forms: missile-drone attacks against militant cells; ‘hot pursuit’ of militants into the FATA following attacks against Coalition forces; and the covert employment of special operations forces in western Pakistan (Murphy 2009). However, the most prominent of these operations are the Predator and Reaper drone-strikes in the FATA. The data given in Figure 4 illustrate the dramatic increase in the tempo of these strikes since 2008.

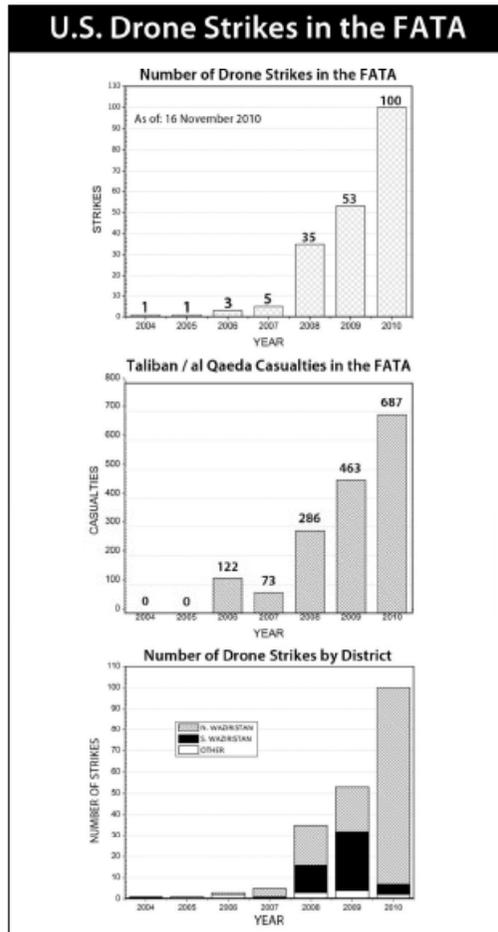


Figure 4. Results of the U.S.-led Drone-Strike Campaign in Western Pakistan as of 16 November 2010.
Source: Roggio and Mayer 2010a

The strikes have been concentrated in Northern Waziristan and have been remarkably successful. Intelligence sources indicate that the missile strikes have killed 12 senior *al-Qaeda* leaders, which represents more than half of the CIA's high value target list. Furthermore, survivors have been forced to operate more cautiously, forced to divert energy from planning attacks, and discouraged from using favored communications such as cell and satellite phones. Finally, since the drone-strikes require important human intelligence to target leaders and bases, they have fostered a debilitating sense of mistrust among various militant cells (Mayer 2009).

Intelligence reports also indicate another important outcome of the drone campaign: it is driving some insurgents from their key haven in North Waziristan into other tribal districts, where they are laying the groundwork for a new base of operations (Wright and Owais 2010). According to Pakistani officials and local tribal leaders, militants are now moving to the semiautonomous tribal regions of Kurram and Orakzai. This is important because Kurram (the "parrot's beak") juts into Afghanistan and includes a key transit point to Afghanistan's Paktika province (Figure 3). However, the Pakistani government has thus far been reluctant to accept U.S. plans to expand the drone war into these areas. It is believed that the Pakistanis have given tacit approval to U.S. strikes in North and South Waziristan despite public announcements to the contrary (Associated Press 2010). As indicated in Figure 5, militant influence is expanding within western Pakistan. However, the militants are fleeing into regions where Pakistan's army, which refused to chase them down in their haven in North Waziristan, is already deployed in large numbers and perhaps in a position to fight. The Pakistani army has been on the offensive in Kurram and Orakzai, and it has said it is moving to reassert control in the two tribal agencies (Wright and Owais 2010).



Figure 5. Areas of Taliban Control in Western Pakistan.

Source: Roggio and Mayer 2010b. Cartography by the author

Although the use of economic and diplomatic protocols have worked to solve effective sovereignty issues in the past – most notably in Latin America – these aspects of diplomacy do not appear to be a viable option in the FATA (Manwaring 2002; Talbot 2002; Isacson et al. 2004; Bajoria

2007). The Pakistani government has tried to work out a series of truces and aid accords with the *Taliban* since 2004. In every instance, the agreements have fallen apart, or have been simply renounced by *Taliban* leaders once used to provide cover for a new offensive of their own (Bajoria 2007). It is clear that the *Taliban* and *al-Qaeda* intend to use a perversion of Shari'a as a pretext for prosecuting a reign of terror and to justify their goals. They will continue to plan global jihad, kill with impunity, and labor to establish a parallel government in the FATA to serve their violent purposes (Sappenfield 2008; White House 2009). Furthermore, the *Taliban* will not rest until they topple the Pakistani government and turn it into a fundamentalist state (Cordesman 2009). Experts agree that the area must be pacified by military force *combined* with political agreements to solve the regions complex issues (Bajoria 2007).

Summary and Conclusions

Western Pakistan is not the sole dangerous ungoverned hotspot in the war on terror and certainly, state-centric threats such as North Korea continue to strongly influence the national security calculus. It's just that the FATA represents the most problematical and perhaps most dangerous hotspot. The critical challenge in the Afghan-Pakistan theater is that the war that actually exists is not the one that the U.S. and NATO want to fight, or are even willing to now accept as reality. Strategic policy decisions indicate that the U.S. is replicating the same errors that were made in the assessments of the conflict in Iraq. The U.S. views the conflict in Afghanistan and western Pakistan as one of nation building and counterinsurgency. What U.S. leadership does not seem to grasp, or is simply unwilling to yet accept, is that the struggle for Afghanistan and the tribal lands of Pakistan is in many ways a conventional war of attrition, which the *Taliban* can win by controlling the weakly governed space and the populations that live there. The *Taliban* is seeking to deny the Pakistani government con-

trol over this territory and will not rest until dominance is achieved and they have developed a solid base from which to topple the central government. The war in the FATA is also an ethnic struggle that is inextricably linked to the Pashtu population, and the *Taliban* and other violent non-state actors in the region have proven to be adept at using latent ethnic divisions to their benefit.

The creditable and demonstrated threat emanating from the FATA region should foster a stronger American-Pakistani relationship; however, this it remains a paradox. Both states recognize the central importance of the cooperation needed to attain national objectives and establish regional stability, yet, our strategic alliance in the war on terror is mired in mutual distrust and suspicion. Pakistan is essential to U.S. national and global security goals of defeating terrorism and stabilizing Afghanistan. Clearly, as the world's second largest Muslim state—and a nuclear power—Pakistan has a central role to play in countering violent extremism and addressing issues of international peacekeeping, and improving relations between the West and the Islamic world. Thus, Pakistan truly straddles a geo-political fault line, and for its part has a moral imperative as a global citizen to assist the international community in its efforts to contain rising militancy in its tribal regions. Notwithstanding the fact that the FATA has been the springboard for a number of terror attacks worldwide, the Pakistani government has proved to be unresponsive and seemingly disinterested in eliminating this threat. Given that there is strong evidence indicating that their intelligence agency is actively supporting various terror networks, their credibility and reliability as an ally in the war on terror, not to mention their adherence to the rule of global law, must be questioned. Thus, it appears that the U.S. drone attacks into the FATA are consistent with the standards and doctrines of international law: i.e., there is no reasonable alternative, they are proportional, and they are a military necessity because they promote self-defense. However, in order to succeed in the GWOT, the U.S. must also deal with the roots of terror and not simply rely on

spectacular military operations and other high-profile actions. Thus, military and civilian leaders within the DoD and other government agencies must develop plans to contend with ungoverned spaces by understanding their functional classification and by using non-military options where appropriate and thus, avoid situations becoming crises.

Irrespective of passive and diplomatic means of improving the level of governance, the U.S. and the West must accept that in the end, they must fight and destroy the *Taliban* and *al-Qaeda*. Because they are violent non-state actors, we have no reasonable expectation that we can rely on formerly accepted diplomatic protocols. Furthermore, they have renounced all attempts to negotiate. The plain truth is that we have to subdue the *Taliban* because in practice, they are inextricably linked to *al-Qaeda*. By allowing the *Taliban* to expand their control in the FATA we will only broaden the opportunities for *al-Qaeda* to exploit this sanctuary, provide them with additional security, and ultimately give them the time and strategic space to fully reconstitute and project their influence and violence around the world.

Thus, understanding the geography of and dynamics within the FATA is essential to interpreting linkages between ungoverned space and effective sovereignty, and the future of regional and global security. It is clear that the *Taliban* and *al-Qaeda* must be defeated militarily before any diplomatic efforts will succeed because, to date, they have shunned or abrogated all serious diplomatic efforts. Recent military operations have demonstrated that U.S., NATO, and Pakistani forces can win virtually any serious open battle with the *Taliban* and *al-Qaeda*; however, events have also demonstrated that tactical victories alone cannot win the war on either side of the Afghan-Pakistan border. It is also becoming clear, as was the case in Vietnam, that tactical military victories will be for the most part irrelevant unless the Afghan and Pakistani governments can create competent governance and assert effective sovereignty on both sides of this contested border, but especially in the FATA.

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Radicalism and Education in Pakistan

Jon P. Dorschner and Thomas Sherlock

Introduction

The focus of this chapter is the system of education in Pakistan and its relationship to sectarian violence and political instability. The first part examines the role of madrassas, or religious schools, in fomenting extremism. It challenges the conventional wisdom that madrassas are an increasingly important component of Pakistani education and that madrassas as a whole support violent jihadist attitudes. While madrassas are a significant presence in certain areas of Pakistan, most notably among the Pathans in the Khyber Pakhtunkhwa Province (formerly the Northwest Frontier Province), they are a relatively minor element of the Pakistani educational system as a whole. Although the conservative orthodoxy of most madrassas contributes to the sectarian intolerance and social discrimination which have long marred Pakistani politics and society, only a small fraction of these schools are committed to promoting jihad.

The second part of the paper examines a more potent threat within the educational system of Pakistan—that of the public schools. State schools remain an important source of attitudes that support intolerance and sectarian violence. This destructive culture is nurtured by the extensive unemployment and underemployment that confronts the vast majority of new graduates of Pakistani secondary schools and universities. The paper concludes with a brief discussion of how Pakistani public policy might alleviate these dangerous trends.

The Madrassa in Pakistani History and Politics

The events of September 11, 2001 focused global attention on Pakistan. The 9/11 attacks were directed from the volatile Afghanistan/Pakistan border region by the Al Qaeda

Organization, which was hosted and protected by Afghanistan's Taliban government. *Talib*, an Arabic word meaning "a person in need of something," is used throughout the Muslim world to refer to a student, specifically a student in a madrassa. The word *Taliban* denotes the plural. Madrassas are defined as schools of Muslim education that teach law, religious sciences, the Quran, and the regular sciences (Coffin and Stacey 2006). The Taliban originated in madrassas set up in Pakistan and Afghanistan to educate children of refugees fleeing the Afghan uprising against the Soviet occupation which began in 1979.

Spurred by the U.S.-led invasion of 2001, violent unrest in Afghanistan has increasingly spread across the border into Pakistan. In a variant of blowback, the Pakistani Taliban emerged out of the Afghan Taliban, originally sponsored by the Interservices Intelligence (ISI), the Pakistan Army's intelligence agency. ISI conceived of the Taliban as a client organization that would ensure Pakistan's Eastern frontier by keeping India out of the region. Instead, the Afghan Taliban launched Pakistani Taliban groups against the government of Pakistan, hoping to establish the same Islamic Emirate in Pakistan that existed in Afghanistan prior to 2001. American popular media often depict the conflict raging in Afghanistan and Pakistan as a struggle between "fundamentalist" Muslims, who are inherently anti-American and anti-Western, and Western-oriented governments. The role of the ISI and other Pakistani government agencies in fostering supposedly Islamic insurgencies for their own political ends has clouded the issue. Although Pakistan's madrassas are often portrayed as schools for terrorism, in reality conditions are more complex.

Islam is not a monolith, but is divided into many often-competing and hostile sects. This is especially true in South Asia, where Islam is not indigenous to the region. Various strains of Islam were introduced into the subcontinent and then mixed with regional faiths to create new and different belief systems. Before the introduction of Islam, most South Asians were Hindu, although many embraced the

Hindu offshoot of Buddhism. This was especially true in the region that became the modern states of Pakistan and Afghanistan.

The agents who introduced Islam to South Asia were primarily merchants, sailors, soldiers and religious mendicants. Although Hindu nationalists and others with an anti-Islamic agenda are fond of describing how Islam was “spread by the sword” in the subcontinent, modern scholarship largely dismisses this portrayal. An emerging consensus maintains that such large numbers of South Asian Hindus could not have been coerced into converting to Islam. Rather, Islam became attractive to converts because its principal proponent was not the soldier, but rather the Sufi saint (Gilmartin 2000, Metcalf 2009).

A Sufi is defined as a Muslim who follows a mystical orientation of Islam, one who seeks direct experience of Allah and whose principal cultural and philosophical influences come primarily from Iran. Emerging first in Iran, Sufi Islam has had a profound impact on South Asians generally and South Asian Muslims (both Sunni and Shia) in particular. Being mystical in approach, Sufi Islam stresses tolerance, non-violence, and openness. Sufism and Sufis generally do not discriminate between religious sects or competing religions, but adopt a humanistic approach that views all human beings as children of Allah.

Sufism, with its Persian orientation, reflects the Sunni/Shia divide within Islam and the contrasting civilizations of the Arabs and the Persians (Iranians). There are four principal groups of Muslims in the subcontinent: Shias (divided into their own subsects), and the three Sunni sects of Barelvi, Deobandi, and Wahhabi Islam. The major schism is between the Sunnis and the Shias. In Pakistan, Shias have become objects of persecution and attacks from more extremist members of the Sunni majority, and have increasingly concentrated on defending their communities and religious identities.

Barelvi Islam is a unique South Asian variant of Islam that emerged from the interaction of Sufism imported

from Iran, indigenous folk religions, and Hindu practices of South Asia's then primarily peasant population. The Barelvi School was founded in 1904 by a Sufi master, Imam Ahmad Reza (d. 1921) at Barelvi in northern India. Barelvi Islam was a response to the great ferment that South Asian Islam was undergoing during the early twentieth century in reaction to the challenge posed by British colonialism (Bowker 1997).

Concerned by what he perceived to be the moral decline of South Asian Muslims, Imam Reza preached that Muslims could rejuvenate themselves and their religion by interpreting Islamic teachings from the perspective of Sufi mystics. His philosophy found ready acceptance among South Asian populations since it reflected ideas admired by most of the Muslim population and also by the Hindu majority. Barelvi Islam remains the most popular form of Islam in South Asia, with over 200 million followers. Although a large number of South Asian Muslims do not formally align themselves with the Barelvi sect, it represents the most common form of Islamic practice in the subcontinent.

Barelvi Islam's Sufi orientation is repugnant to the competing Deobandi and Wahhabi sects, which obtain their inspiration from Saudi Arabia and denounce Sufism as heresy. As a result, Barelvi institutions (including madrassas) are usually denied funding from Saudi Arabian and other Arab donors. By contrast, the more doctrinaire and conservative Deobandi and Wahhabi sects often receive lavish financial support for their mosques and madrassas. The government of Pakistan also does not support the Barelvi sect, choosing instead to extend its patronage to the Deobandis and Wahhabis.

Sociologically, Barelvi Islam is the home of Pakistan's poor and uneducated masses, and rival sects often deride its followers as superstitious and backward. Barelvi tolerance is reflected in its overlap with Hindu practice, and Hindus and other non-Muslims openly worship at Barelvi shrines, which are open to all castes, sects, and religions.

Throughout much of Pakistan and in large areas of India, the focal points of Muslim life are Sufi saints and their tombs (mazar). Devotees from all faiths and sects go to mazars for the blessing of the interred saint and to strengthen their love of Allah in the hope of ultimately transcending human suffering and uniting with God (Walsh 10 September 2007, Walsh 4 October 2007).

The Deobandi sect, like its Barelvi counterpart, is an indigenous South Asian creation. Deobandis have attracted international attention because of their connection to the Afghan (and now Pakistani) Taliban. The Taliban were originally a group of Deobandi madrassa students who gathered around the one-eyed warrior, Mullah Mohammad Omar, who was determined to rid his country of the rapacious warlords and criminals ravaging Afghanistan after the 1989 withdrawal of the Soviet Army. A large impetus for the Taliban movement was the unique style of Islam taught by Mullah Omar and his compatriots in the madrassas under the Deobandi sect. This sect originated in colonial India prior to its partition into India and Pakistan. Like the Barelvi sect, it was an outgrowth of the confrontation between India's Islamic civilization and British colonial rule. Both sects argued that South Asian Muslims needed to engage in reform, but ultimately took different approaches. Barelvi Islam was inclusive and inward-looking, while Deobandi Islam was exclusionary and outward looking.

The Deobandi sect was founded in 1867 by Maulana Mohammad Qasim Nanautavi and Maulana Rasheed Ahmed Gangohi in the town of Deoband, approximately 100 miles northwest of Delhi in the Indian state of Uttar Pradesh. Both men were *maulvis* or religious preachers, well-schooled in Islam and the Muslim tradition. They devised a unique Islamic orientation and founded a madrassa in Deoband to propagate their views.

As with other Muslim leaders, these scholars were preoccupied with what they viewed as the corrupting influence of Western civilization as epitomized by British colo-

nial rule. They also viewed the position of India's Muslims as a minority in a Hindu-majority society as intolerable. By the mid 1860s India's Muslims, constituting 10-20 percent of the Indian population, had lost their status as cultural and political elites which they had enjoyed prior to the British conquest. Now supplanted by the Hindu majority, orthodox Sunni Muslims viewed Hinduism as a religion and civilization antithetical to Islam, particularly because most Hindus were polytheistic and used images in worship.

For most Muslims, the Semitic, biblically-based, monotheistic religion of the Christian British rulers was far closer to Islam. Yet their lack of religious affinity to the colonial rulers did not prevent Hindus from adopting Western education and the English language to gain positions of power within the colonial administration and economy, leaving Muslims clinging to the past because they largely rejected these pathways to advancement.

The two maulvis preached that Indian Muslims could reclaim their former greatness by rejecting westernization and "purifying" their faith by discarding supposedly un-Islamic accretions. They called on their followers to differentiate themselves from "non-believers" by reemphasizing the models established in the Quran and the customary practices of the Prophet Mohammed (globalsecurity.org 2010). The Deobandis also adopted many ideas from the Wahhabi sect of Saudi Arabia. Like the Wahhabis, the Deobandis implored Muslims to adopt an egalitarian ethos and emulate the Prophet Muhammad. To them, Islamic identity was primary, while national identity was secondary. They viewed British colonial rule as a grave threat to Islam and espoused "jihad" or holy war to win independence. Because of their objection to secular education, they established madrassas throughout Northern India, including the territories that are now part of Pakistan (Roy 1990).

Prior to the 1979 Soviet invasion of Afghanistan, the Deobandi madrassas in Pakistan did not attract much attention. But as Afghan resistance to the Soviet occupation increased, masses of refugees fled into Pakistan, and

the Deobandis accepted many of these Afghans into their Pakistani madrassas. At about the same time, Deobandi influence received an important boost from Muhammad zia ul Haq, who came to power in a 1977 military coup and soon emerged as a strong proponent of the Deobandis, extending government patronage to the sect. As a result, the Deobandis and the Pakistani government cooperated to support the anti-Soviet jihad in Afghanistan. As a devout conservative Muslim sympathetic to the doctrinaire Islam practiced in Saudi Arabia, Haq wanted to guide the masses of Pakistan away from Barelvi and Sufi influences. He opened the way for the Deobandis to receive both Saudi and Pakistan government money and patronage, and significantly increased their political and cultural influence in Pakistan.

As already noted, the third Sunni sect in Pakistan follows *Wahhabism*, which is not indigenous to South Asia but an import from Saudi Arabia. Like its South Asian counterparts, Wahhabism originated as a reform movement. Wahhabism was founded by Muhammad ibn Abd al-Wahhab (1703-1791) who taught that Islam had been corrupted by spurious accretions. He called for a purification of Sunni Islam that included ending the practice of veneration of saints and what he viewed as ostentation in worship (*Columbia Encyclopedia* 2008). After he was driven from Medina for these radical views, Muhammad ibn Abd al-Wahab converted the Saud tribe, which then waged war on its neighbors and by 1811 had conquered all of Arabia except for Yemen, only to be driven back into the desert by an Ottoman/Egyptian alliance in 1818. The Saud family would not complete their conquest of Arabia until 1922. In 1932, the Wahhabis established the modern state of Saudi Arabia while serving as the religious inspiration of the Deobandi movement.

Osama bin Ladin as a Saudi Muslim grew up within Wahhabi Islam. He was further influenced by a subset of Wahhabi ideas called *Salafism*. This school of Islam originated with the Egyptian religious reformer Sayyid

Qutb (1906-1966). Like many other fundamentalists, Qutb viewed the West and its culture as the greatest threat to Islam and advocated the establishment of an Islamic state (caliphate) based on Muslim law (sharia) as a protective shield. These ideas served as the ideological foundation for bin Laden's position that Westerners violate the honor of Muslims, humiliate them, and seek to possess their lands. Bin Laden shares the Salafist belief that Muslims must therefore fight against the West in a jihad (holy war) (*International Encyclopedia of the Social Sciences* 2008).

Wahhabi Islam was a minor sect in Pakistan and South Asia until the Soviet invasion of Afghanistan in 1979, which led Pakistan, Saudi Arabia, and the U.S. to support an Afghan Mujahidin jihad dedicated to expelling the Red Army. The war brought Saudi money, intelligence officers, clerics, and volunteers of diverse backgrounds to Pakistan and Afghanistan. According to Robert Oakley, then U.S. Ambassador to Pakistan, the Saudis "continued to push the Wahhabi version of Islam into Afghanistan and Pakistan, and built madrassas and mosques in places like Pakistan's Federally Administered Tribal Areas and North West Frontier Province" (Jones 2009, 48).

Reaping the Whirlwind: State Support for Radical Islam

The conflict in Afghanistan represented a perfect trifecta that encouraged the growth of Wahhabi and Deobandi madrassas in Pakistan, thereby increasing their political and social influence. The government of Zia ul Haq was already sympathetic to Islamic education, the Saudis were intimately involved in the anti-Soviet Jihad, and Afghan refugees provided a ready pool of dedicated recruits. Pakistan's own public education system was particularly anemic, leaving a vacuum that the madrassas tried to fill. Deobandi and Wahhabi madrassas also used economic inducements to attract students from poor families. More often than not, the targeted families were of Bareilvi back-

ground and little interested in Wahhabi/Deobandi thinking. However, some families enrolled their sons in conservative Islamist madrassas since they could not afford to educate them elsewhere. Many of these madrassas also offered the inducement of free room and board, relieving poor Pakistanis and Afghan refugees of the burden of clothing and feeding their many children.

The young men educated in these institutions often provided the foot soldiers for jihad, not only in Afghanistan, but also in Kashmir to fight against India and later in Pakistan itself. The Soviet occupation of Afghanistan and the resulting war papered over many of the basic differences and conflicts between Barelvi Muslims and their Deobandi and Wahhabi cousins. But even at the height of the war with the Soviet Union, the austere Wahhabi organizations received Saudi and Pakistani patronage and weapons, while the more moderate groups were often starved of resources. Although the Muslims fighting the jihad against the Soviet Union were outwardly united, tensions became increasingly apparent over time.¹

The final withdrawal of Soviet troops from Afghanistan in February 1989 sent the country into a tailspin for several years. Anarchy was finally overcome with the emergence of the Taliban and the establishment in 1996 of its repressive rule over the country, which included the provision of safe haven for Al-Qaeda. In the aftermath of the Al-Qaeda attacks on the World Trade Center and Pentagon, the Taliban was overthrown by the U.S.-led invasion of Afghanistan in late 2001, but was able to re-group over the following years into an effective insurgency rooted in ethnically Pashtun regions.

As for Pakistan, Salafist and Wahhabi extremism has been the cause of growing domestic instability. In a por-

1 While serving in the U.S. Embassy in Islamabad at this time Jon Dorschner received reports that Saudi volunteers were killed by local Afghans after they entered an Afghan cemetery and desecrated the gravestones. The Arabs viewed the Afghan practice of decorating graves as heresy. This was only one instance of a cultural clash between South Asian Muslims and Arabs.

tent of the gathering storm, in July 2007 the government of Pakistan lay siege to the Lal Masjid mosque and the Jamia Hafsa madrassa compound in Islamabad after Islamic militants from these institutions escalated attacks on government installations and private citizens whom they accused of violating Islamic law. Scores of militants were killed when the government ordered an assault on the mosque.

An even more dangerous threat emerged at this time in Pakistan's border regions. The violence unleashed on Pakistan by its own Taliban, which was galvanized by the U.S.-led invasions of Afghanistan and Iraq, has led to potentially dire consequences. By mid-2010, the Tehrik-i-Taliban Pakistan [TTP], a loose coalition of militant organizations, had seized large sections of the Pashtun tribal belt, including large swaths of the Federally Administered Tribal Areas [FATA] as well as territory within Khyber Pakhtunkhwa (the former North-West Frontier Province), and was advancing on Islamabad, the capital. This extraordinary challenge alarmed the West, particularly the United States, which placed renewed pressure on Pakistan's government to respond forcefully. Washington's efforts compelled the reluctant government in Islamabad to marshal more forces against the extremists. Leading Pakistani officials admitted that radical Islamic groups, which were fostered by the state over previous decades as weapons in its anti-India strategy, had slipped their leash and were now embedded in Pakistan, including Punjab, the nation's most populist province. This fact was graphically demonstrated in mid-2010 when two terror attacks against mosques in Lahore killed more than 80 people. Terrorist attacks by the TTP have continued sporadically in Pakistan ever since.

Pushing Back Radical Islam?

The Pakistani government was slow to respond to this growing danger due in large part to its obsessive perception that India is the primary threat to Pakistan. Pakistani public opinion was similarly slow to react. In polls conducted in 2007, only one-third of the respondents believed that "the activities of the Taliban and religious militants"

would pose a “critical threat” over the next decade. However, by May 2009 fully 81 percent of respondents identified militant Islam as a “critical threat” (Fair 2009, 43-44). Other polls reveal the shifting attitudes of Pakistanis on the question of Islamic radicalism. In a 2004 poll conducted by the Pew Foundation, 41 percent of the respondents believed that suicide bombings and other forms of violence against civilians were a justified form of defending Islam against its enemies. However, by 2008 this figure dipped below 9 percent. Similarly, the number of those who believed that violence in defense of Islam was rarely or never justified rose from 43 percent of respondents in 2002 to 91 percent in 2008 (Fair 2009).

This significant reaction to domestic terrorism and political instability in Pakistan is bolstered by the values of Pakistan’s large Barelvi Muslim population, which rejects religious extremism. Public support for peace deals with the militants – which had been widespread prior to 2009 – now declined significantly. Popular approval of government military action rose proportionately after Pakistan’s Islamic radicals refused to confine themselves to the border territories and began launching almost daily attacks against Pakistani civilians, government officials, policemen, and soldiers, including in the Punjab and in Islamabad, the national capital.

The Pakistan Army has also demonstrated greater resolve to take on Pakistan’s home-grown Taliban. The Pakistan Army’s Inter-Services Intelligence (ISI) produced an internal report in 2010 that concludes the threats to Pakistan’s security in the near term will come from Islamic militants, not India, Pakistan’s traditional enemy (Wright and Gorman 2010). This assessment should come as no surprise, for the Pakistani Taliban has gone outside the dominant norms of its society, embracing values largely foreign to Pakistan. Perhaps most important, the Pakistani regime understands that the extremism it has nurtured over the years now threatens its very survival.

The change in popular and official attitudes toward

radical Islam is reflected in Pakistan's three strains of Islam and in their competing madrassas. The Deobandi sect has moved to distance itself from the more extreme elements of the Taliban and the other jihadi groups that have appeared in Pakistan. As Fareed Zakaria points out, "the Darul Uloom Deoband movement in India, home to the original radicalism that influenced Al-Qaeda, has inveighed against suicide bombing since 2008." Zakaria notes that while the Deobandis have "not become pro-American or liberal...they have become anti-jihadist" (Zakaria 2010). Many Deobandi madrassas, following their leading clerics, have renounced terrorism, suicide bombing, and the more extreme strains of Wahhabism. The leaders of the Karachi madrassa of Jamia Binoria, one of Pakistan's leading Deobandi schools, now insist that they want nothing to do with the Taliban, who they regard as "barbaric extremists" (Constable 2010). The director of Jamia Binoria, Mufti Muhammad Naeem, showed off the school's computer lab to visitors and emphasized that many female students attended the madrassa.

In an attempt to build on moderate religious traditions in Pakistan, local officials have provided funding to madrassas such as Jamia Binoria and have also registered the 2,000 madrassas in the region of Karachi. Efforts by the government in Islamabad over the last decade to regulate madrassas nationwide and supervise their curriculum had been half-hearted and ineffective. Yet recent official steps in Karachi demonstrate a strong desire to finally rein in madrassas which have provoked sectarian violence in the past (International Crisis Group 2007). These reforms stand a reasonable chance of success. As Pamela Constable observes "...although numerous [radicalized] Deobandi mosques and seminaries [still] operate in Pashtun enclaves, moderate versions of Islam, including Sufi mysticism, are more deeply rooted among Karachi residents" (Constable 2010).

Growing moderation among the Deobandis in Pakistan has reached across the border and influenced trends

within the Afghan Taliban itself, leading knowledgeable observers to speculate that the movement is splitting into Deobandi-influenced and Wahhabi-influenced factions. As Taliban casualties mount in the war with Afghan and NATO forces, friction is increasing between the Arab Wahhabis and their Afghan and Pakistani supporters on one side, and the more moderate Muslims within the Taliban on the other side. Sources within Pakistan and Afghanistan confirm that “the Taliban are in a fierce internal debate about whether to negotiate for peace or fight on” (Gall and Mekhennet 2010).

In this fluid religious and political environment, it is becoming clear that just as madrassas have been used to promote violence and jihad, they can be used to advance positive values and national integration. The madrassas of the Deobandis and other Muslim groups that have renounced terrorism exemplify this capacity for reform and perhaps reconciliation.

Public and Private Education in Pakistan

Although the de-radicalization of some militant madrassas in Pakistan is a welcome development, radical madrassas are a relatively small part of the problem in which education supports sectarian violence and intolerance. Recent research suggests that madrassa students and graduates comprise only a minority of suicide terrorists in Pakistani and international radical organizations. Other misperceptions should be challenged. According to reliable data, about 1 percent of children in Pakistan’s four main provinces who were enrolled in primary school in 2005 attended madrassas. This number rises to 7 percent in some parts of the Pashto-speaking belt (Fair 2006, 4).

In Pakistan, the majority of full-time students attend public or state schools (nearly 73 percent), while a significant minority is enrolled in nonreligious private schools (26 percent) (Fair 2008, 29). Although the vast majority of Pakistan’s nonreligious private schools cater to middle-

and lower middle class families who see instruction in the English language as a stepping stone to economic advancement, there have always been expensive private schools for the political, economic, and military elites of Pakistan. Much of the curriculum used in this subset of English medium schools is often imported from the U.K. or the U.S.

The assumption that madrassas are a haven for Pakistan's poor should also be qualified. The socio-economic profile of madrasa students is quite similar to that of their peers in public schools, except that madrassas as a whole actually enroll more students from higher-income households. About 75 percent of families with at least one child enrolled in a madrasa also use other types of schools (public or private) for their other children. This data suggests that most families are not guided by religion when they choose madrasa education for a child.

Although free room and board attract some students to madrassas, economic considerations also motivate most families to avoid madrassas if possible and send their sons to public or secular private schools. Madrassas, which traditionally have educated the next generation of maulvis (who are typically employed in local mosques), are not reliable paths to upward social mobility. The market for maulvis, who are usually poorly paid, is already saturated in Pakistan, and it is common knowledge that madrasa graduates seeking employment in other sectors have even greater difficulty finding a job than their counterparts from other schools.

Although madrassas do not play as significant a role in promoting terrorism as many observers in the West assume, they do provide recruits for suicide attacks, particularly from schools in the tribal areas which support strikes across the border into Afghanistan (U.N. Assistance Mission in Afghanistan 2007; Fair 2008). While the contribution of madrassas to Islamic militancy and terrorism has been heavily emphasized in western media, secular, public education also poses significant threats to Pakistan's stability and the prospects for liberal governance. Survey

data indicate that significant levels of intolerance and extremism are present in Pakistan's public schools – less than in madrassas but significantly more than in non-religious private schools. In an important survey (Rahman 2003), respondents were asked whether Pakistan should “take Kashmir away from India by open war.” While 59.86 percent of madrassa students supported warfare, 39.56 percent of public school students offered the same opinion. Only 25.86 percent of the respondents at private English schools supported violence as a solution to the problem of Kashmir. Important attitudinal differences among schools were also evident on fundamental social issues. Students were asked whether Pakistan should “give equal rights to men and women as in Western countries.” Just over 75 percent (75.22) of students at public schools agreed while 90.52 percent of the students at private schools supported the statement that Pakistanis should support gender equality. Private school students were also more likely to support equality for Pakistan's minority groups.

While Pakistan's Urdu medium (public) schools and English medium (private) schools generally use the same government-approved textbooks and employ similar curricula, the language of instruction itself may help explain differences in the survey responses of the two groups. A Pakistani student literate in English is exposed to a broader range of instructional materials, including books from the West, than a student educated solely in Urdu. Similarly, a student fluent in English has access to English language programming (television, internet, and radio) from a variety of domestic and foreign sources. The few exclusive English-language schools for the children of the elite offer even greater exposure to foreign curricula and materials. These important differences in the breadth and quality of the educational experience in Pakistan help to determine whether a student is tolerant or sectarian in his/her worldview.

An important source of the problematic attitudes of many Pakistani students is the course of instruction at

public schools. Until recently, the government of Pakistan failed to seriously consider revising curricula which have promoted distorted views of Pakistan as well as hatred and fear of foreign states, particularly India. Courses in *Islamiyat* (Islamic Studies) have for decades presented Pakistan's history in highly tendentious and illiberal ways (Dorschner and Sherlock 2007).² In his study *The Murder of History*, K. K. Aziz, the Pakistani historian, persuasively argues that what is taught as history is actually propaganda that distorts or fabricates historical events in order to bolster the power of ruling elites:

I am convinced that most of the ills from which the country has suffered in the past and is still suffering have their root cause in the textbooks in use. The failure of democracy, the long spells of military dictatorship, corruption, moral laxity, deterioration in character, decline in moral values, sense of irresponsibility, terrorism, sectarian strife, inefficiency, cynicism, indifference to what the future holds for us—all this is the bitter harvest from the seeds we use in the cultivation of the minds of the young (Aziz 1993, 242-243).

Pakistan's textbooks advance what may be called "negative nationalism": a doctrine that seeks to instill national pride by elevating one's own group while vilifying the "Other." Although this approach may succeed initially in uniting a group by providing them with a national identity, over the long term it is likely to tear apart the fabric of society by instilling hatred, intolerance, and bigotry. Designed to bolster a fragile new state of multiple and often competing ethnic, regional, and religious groups, negative nationalism in Pakistan comprises the following tenets:

2 This section draws on Jon Dorschner and Thomas Sherlock, "The Role of History Textbooks in Shaping Collective Identities in India and Pakistan," in Elizabeth Cole, ed., *Teaching the Violent Past. History Education and Reconciliation* (Lanham, MD: Rowman and Littlefield, 2007), pp. 275-316.

Islam has brought “higher” civilization to the subcontinent.

- Islam is qualitatively superior to Hinduism.
- Islam is qualitatively superior to Christianity and the Western culture of the British imperialists and their successor, the United States.
- India is a perpetual enemy of Pakistan and is dedicated to its destruction.
- Bangladesh (formerly East Pakistan) seceded from Pakistan as a result of Hindu/Indian aggression.

A review of Pakistani textbooks in the Urdu language, beginning with the first grade and extending through secondary school, demonstrates how these negative nationalist ideas are transmitted. A Pakistani second-grade textbook states: “Pandit Nehru said that after independence there will be a government of the Hindus in India” (Board of Senior General Knowledge Teachers n.d., p.4). The intent of the statement is to convince students that the Congress Party of India was a Hindu party that sought to establish India as a Hindu state in which Muslims would suffer discrimination. In fact, Nehru was dedicated to founding a secular state with a civic culture that treated Muslims as full citizens.

A fourth-grade textbook provides the following distorted perspective: “The Muslims treated the non-Muslims very well. Yet the non-Muslims nursed in their hearts an enmity against the Muslims. When the British invaded the region the non-Muslims sided with them and against the Muslims. [With this Hindu support]... the British conquered the whole country” (Hashmi n.d., 16). The narrative that non-Muslims supported the British conquest of South Asia and that Muslims were the only community to fight against British imperialism is an inaccurate but emotionally powerful indictment of Hindus.

A fifth-grade textbook describes the bloody secession of East Pakistan in 1971 in the following manner: “India

engineered riots in East Pakistan through its agents and then invaded it from all four sides” (Rauf et al. n.d., 11). Although Indian forces did support the breakaway region, the textbook ignores the long-standing conflict between the Bengalis and West Pakistanis over civil and political rights that fueled the secessionist movement in Bengal. Reducing this complex historical reality to the single dimension of Indian interference in Pakistan’s internal affairs, the excerpt demonstrates how Urdu-language textbooks often foster enmity between Indians and Pakistanis and between Muslims and Hindus.

In Pakistan, English-medium schools are considered more “elite” than schools that teach in Urdu. Nevertheless, most of these private schools employ much of the curriculum of the public sector, exposing students to similar strains of negative nationalism.³ For example, *Social Studies for Class 8*, a product of the Textbook Board of Punjab, is representative of texts for students in elementary and secondary school (Shamim and Ahmed 2002). The book praises the role of Muslim rulers in pre-British India while denigrating or ignoring Hindu and Sikh rulers. Every pre-Islamic state and ruler is lumped together in one damning account: “ruthless, strong dictators usurped power and ruled people mercilessly. When they conquered a territory, they massacred thousands of innocent people, destroyed cities and looted property” (88). But Islamist tenets were a source of principled opposition, offering an alternative and just “concept of rule or government” (89). The textbook maintains that during British colonialism of the twentieth century, India’s Hindus “had never forgiven the Muslims for having ruled India for centuries. Therefore, both communities [British and Hindu] conspired against the Muslims to turn them into a poor, helpless and ineffective minority.” In order to institutionalize Muslim subservience, “Hindus . . . in connivance with the British rulers formed a

3 Exclusive English medium schools that educate the children of Pakistani elites do not conform to this assessment. They import their curricula from abroad and use imported textbooks largely free of bias.

political party called the Indian National Congress which aimed at sharing power with the British in ruling India” (74).

Other examples of derogatory references to Hindus and Indian leaders include the following:

- “Hindus were not prepared to tolerate any . . . step which benefited Muslims.” (75).
- “The era of Congress rule proved very detriment[al] to the Muslim cause. Urdu was replaced by Hindi. The doors of government service were closed on Muslims and they were disgraced and humiliated in many ways. The Hindus even interfered in Muslim religious ceremonies. Their [Muslim] property was looted, their houses set on fire, and [they] were massacred at many places. Thus, the ignoble behavior of the Hindus forced the Muslims to rally round the Muslim League Flag” (82).

The inflammatory narratives of school textbooks demonstrate that the educational policies of the government are an important source of the religious extremism that now threatens the state of Pakistan itself. Pervez Hoodbhoy, the Pakistani scholar, observed that the “greatest threat to Pakistan’s future may be its abysmal education system. Pakistani schools—and not just madrassas—are churning out fiery zealots, fueled with a passion for jihad and martyrdom.” (Hoodbhoy 2004). According to Hoodbhoy, Islamic fundamentalists place relentless pressure on the government to remove school textbooks “that do not include Quranic verses on jihad” (Hoodbhoy 2004). Given the content of its curriculum, it is not surprising that Pakistan has failed to develop a national identity based on civic dialogue and cooperation – a crucial obligation of an effective, professional educational system. The fragility of the Pakistani state is underlined by the British Council study in which three-quarters of the respondents identified themselves as Muslim, while only 1 in 7 viewed themselves as Pakistani (British Council 2009).

The Educational System as a Fundamental Risk Factor

Although religious chauvinism in the school curriculum encourages intolerance and radicalism in Pakistan, the failure of the state to ensure minimal educational standards also increases social and political instability. Pakistan's population has grown by almost 50 percent in the past 20 years, a rate twice that of the world average. This dramatic youth bulge represents an enormous challenge for Pakistan. Recent polls (2009) by the British Council reveal that Pakistan's youth (for the age range of 18-29) are increasingly despondent about their future. Only half of those polled felt they had sufficient skills to survive in the current job market, and 70 percent said they were worse off now than last year in economic terms. Only 1 in 10 expressed confidence in the government and, not surprisingly, the overwhelming majority felt that the country was moving in the wrong direction (British Council 2009).

Much of the despair of Pakistan's youth can be traced to the failure of the educational system as a whole. Education at the primary and secondary levels should impart requisite skills as well as political virtues, including a national identity built on tolerance and civic engagement. Yet surveys reveal that the quality of much of Pakistani education is so poor that large numbers of students cannot perform even basic operations in letters or numbers after several years in school.

Equally troubling is the fact that millions of Pakistanis are deprived of any education at all. The limits on access to education are well-documented, most recently in studies by C. Christine Fair, the World Bank, and the Brookings Institution. Pakistan's primary enrollment rate, as a percentage of the population aged 5-9, has been variously estimated at between 59 percent and 72 percent, while secondary school enrollment, as a percentage of the population aged 10-14, plummets to approximately 28 percent

(Fair 2008, 28). According to studies by the World Bank and by the Center for Universal Education at Brookings (World Bank 2010; Winthrop and Graff 2010), 54 percent of Pakistani adults are literate; only 22 percent of girls complete primary school; and only 30 percent of all Pakistani children receive any secondary school education. In comparative terms, Pakistan is near the bottom among all states in terms of secondary school male enrollment: Pakistan's rate of 37 percent compares with a world average of 60 percent (Winthrop and Graff 2010, 25). Only 19 percent of Pakistan's youth (male and female combined) attend upper secondary schools (World Bank 2010). Rebecca Winthrop, the primary author of the Brookings study, argues that the dire condition of Pakistani education — particularly its failures in enrollment and attainment — significantly increases the prospects for militancy and sectarian violence.

Despite these daunting problems, the condition of Pakistani education is not entirely bleak. The de-radicalization of some prominent Deobandi madrassas discussed earlier provides reason for hope. So too does the rapid growth of common, as opposed to elite, private schools in Pakistan. This diffuse societal movement has created an increasingly viable alternative to state and religious schools. Non-religious private schools now enroll over 30 percent of the total number of Pakistani students (Andrabi, Das, Fair, and Khwaja 2009).

According to a recent comprehensive study, private schools in Pakistan outperform government schools at all income levels, delivering better results at lower cost. The schools are able to rely on educated young women with local roots “who are willing to work for low pay....private schools are one of the largest sources of regular, salaried employment for Pakistan's women” (Andrabi, Das, Fair, and Khwaja 2009). The new private schools also use compensatory incentives for teachers to boost their performance beyond that of their government counterparts. They are usually not affiliated with religious organizations, strengthening secularism and the appeal of moderate Is-

lam. Although these schools often adopt curricula similar to those in government schools, they place greater emphasis on instruction in the English language which further empowers their students.

Conclusion

The stability of Pakistan is of vital importance to the security of the international community. Pakistan is now the second largest largest Muslim population most populated Muslim country in the world and it will be the largest by 2050. The country has the fastest growing nuclear arsenal on earth, at a time when it suffers from an increasingly brittle state due to ineffective government, conflictual civil-military relations and violent religious radicalism. Anti-Americanism is an important part of this volatile mix. In a Gallup poll commissioned by Al Jazeera in 2009, 59% percent of the respondents in Pakistan identified the United States—a long-standing donor—as the biggest threat to Pakistan (Al Jazeera 2009). In other polls, 62 percent of the students in Pakistan’s elite private universities believed that the U.S. represented the gravest danger to Pakistan (IAOJ 2010).

The renewed commitment of international donors, including the United States, to increase funding for education in Pakistan will hopefully work to reduce widespread anti-Americanism. Washington has pledged almost \$335 million to Pakistani education for fiscal year 2010. Of even greater importance was the decision of the Pakistani government, as outlined in the Pakistan National Education Policy for 2009, to increase investment in education from 2 to 7 percent of gross national product. The report by the Ministry of Education, which provided a frank assessment of the state of education in Pakistan, refused to blame external factors, e.g., foreign threats or pressures, for the failures of the government:

Access to educational opportunities remains low and the quality of education is poor, not only in relation to Pakistan's own aspirations but also in international comparisons with the reference countries....Pakistan's performance is weak on the health- and education-related elements of competitiveness, when compared with its major competitors like India, China, Bangladesh, Sri Lanka and Malaysia. On the Education Development Index, [this "index" is footnoted in the original report as Human Development Report 2007/2008, UNDP, 2007], which combines all educational access measures, Pakistan lies at the bottom with Bangladesh and is considerably lower than Sri Lanka....(Ministry of Education 2009, 7).

It is difficult to say whether Pakistan's government will deliver on its latest pledge to improve the education system. The dismal record of the past sixty years is not encouraging. Nevertheless, the government may now be sufficiently concerned about its own survival and that of the state itself to finally act decisively. One can also hope that the government will be inspired by the energy and commitment of the Pakistani people to improve education through their own efforts, as witnessed by the burgeoning non-religious private school sector.

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Forging the New Pakistan: The Nationalistic and Geopolitical Movement of the Pakistani Capital to Islamabad

Richard L. Wolfel

The partition of the Indian subcontinent in 1947 created a series of boundary disputes; one of the most notable was in the Kashmir region. The Kashmir region was predominately Muslim, but lacked a large population base and a developed economic infrastructure. When the ruler of Kashmir refused to join Pakistan, in 1947, war erupted. First, Pakistan launched a military campaign. The Indian Army responded by driving Pakistani forces from the region. The result of these conflicts in 1947 and 1948 was a region predominately controlled by India. This left Pakistan with a diminished claim on the region, in terms of boots on the ground and in the eyes of the international community. As a result, the Pakistanis built a forward capital at Islamabad, near Kashmir in an effort to focus attention on their geopolitical claim on Kashmir and move the capital from the colonial center of Karachi. A forward capital is a city that is built in a contested region by a country to stake a claim to the contested region or in an effort to focus growth on a certain, underdeveloped region of a country. From a nationalistic perspective, this move had two ramifications. First, the movement of the capital has acted as a motivating force for Pakistanis to move to the eastern regions of the country. Second, the movement of the capital demonstrates the Pakistanis' desire for panopticism, which can be explained using Foucault's (1980) theory of the prison. In this theory, Foucault emphasized that prisons are designed in an effort to promote maximum surveillance of the prisoners. An interesting parallel exists in Pakistan. The Pakistani government and president Ayub Khan may have moved the capital near the Kashmir region in an effort to "watch" the Indian state and make a geopolitical claim on the disputed Kashmir region.

Creation of Capital Cities

The location of a capital city is an important geographical issue. This becomes especially crucial when a decision is made to move the capital city. Several countries have made the decision to either move the capital city to an existing city or to construct a new city entirely. Some examples of cities that have been built to serve as capital cities include: Washington, D.C., Ottawa, New Delhi, Brasilia, and Canberra. The decision to move, or build, a capital city is not simple. Many constraints can influence the site selection process of a new capital city. Leslie King provides a review of examples of regional planning that demonstrate the relevance of the geographic principle of central place theory to this question. Central place theory emphasizes that urban spaces are spread out evenly across the landscape in a geometrically organized and predictable pattern in which cities are organized based on the range of goods and services located in that city. In other words, smaller cities are more frequent and more concentrated than larger cities. King emphasizes that a "well-developed, hierarchical central place system is in some sense an efficient arrangement that is likely to have a positive or beneficial effect upon the economic development of the region in question" (King 1984, 72). In a central place framework, it is assumed that the geometric, spatial pattern of a region, one that ignores all social and political aspects of the region, is one of the most important factors in determining the location of a city. Such an approach is overly simplistic and fails to address the underlying social, economic and political factors that influence the development of a region. In the case of Pakistan, the demographic and cultural geographies of the country are major influences on its development. The importance of such factors is lost in central place models.

Bruce Ryan provides a different type of comprehensive review of the site selection process for a capital city in his analysis of the historical geography of Canberra. His approach emphasizes the social and political concerns that

are essential to understanding the site selection process of locating a capital city. In his study, Ryan lists three conclusions that are important to understanding the decisions for locating a capital city:

1. Federal nations typically choose to build a capital city that is distinct and removed from the capital cities of existing states or provinces, largely to negate the unfair influence of any hitherto dominant states or provinces.
2. There is a tendency to build federal capital cities in well-defendable locations.
3. A nation's (state's)¹ decision to designate, or create, a federal capital city inevitably proves to be an enterprise "not lightly undertaken" (Ryan 1996, 149).

Along with these general observations, several conclusions have been suggested from studies of the movement of specific capital cities. The movement of Brazil's capital from Sao Paulo to Brasilia was motivated by the lack of development of the interior and the imbalance of the population within the country. With 80 percent of the population located within 200 miles of the Atlantic Ocean at the time of the decision to relocate the capital, the move to Brasilia can be seen as an effort to improve the population imbalance of the country (Shoumatoff 1980). The goal here was to create a growth pole, to move people and resources to the interior of Brazil, away from the coast.

Another motive that is prevalent in the decision to relocate a capital city is a historical imperative or historical motivation. The movement of the Pakistani capital was motivated by a link to Islamic history (Nilsson 1973). This tie to history is also seen in the return of Germany's capital city to Berlin. While the decision to relocate the capital cities in Brazil and Pakistan were efforts to separate the present from their colonial histories, the movement of the German capital back to Berlin will link it to historical events

1. The inclusion of "state" in parenthesis is a personal decision to clarify the usage of the terms "nation" and "state."

that occurred in that city. Both the critics and supporters of the movement to Berlin point to linkages to the past in their arguments (Haussermann and Strom 1994). Capital cities are icons that help with the rewriting of the history of a country. The relocation of a capital city can embrace, reconstitute or disown the history of a country.

Capital cities also provide another source of identity for a nation. George Balcome (1963) emphasizes that one of the most important facts about Brasilia is that it is uniquely Brazilian. Alex Shoumatoff (1980, 208) stresses that the "capital belongs to the nation." The linkage between capital cities and nationalism is important. Capital cities are a tangible source of pride and identification for the nation, the group of people who share a common identity.

The creation of a new capital city as discussed previously is motivated by a need to increase the economic development of a state. J. A. Hardoy (1964) sees the building of Brasilia as a method of creating a force to promote the more equitable distribution of wealth within the country. This need for equitable development also motivated the movement of the capital of Malawi to Lilongwe. Moving the capital to the north was seen as an effort to stimulate development in that region (Richards 1974). By moving the government and population into underdeveloped regions, the leadership hopes to promote equitable development in the country.

Finally, the political will of the leadership is often cited as an important motivation for the movement of the capital, as seen in Brazil, where President Kubitschek is identified as an important motivation for the development of Brasilia (Evenson 1973), and in Malawi, where President Banda's desire to move the capital is seen as an important motive (Richards 1974). The same strong will is also visible in Kazakhstan, where Nazarbayev has stressed the need to move the capital to the north (Wolfel 2002). This shows that along with all the rational arguments that are brought to bear on the movement of a capital city, sometimes the explanation is as simple as the strong will of the leader-

ship as a key motivating force for the decision. Each of these elements, with some slight modification, is important to understanding the site selection process in establishing Islamabad as the capital of Pakistan. Along with these issues, the geopolitics of the partition of the Indian Subcontinent was important in the selection of Islamabad as the new capital. Islamabad's site is essential in understanding its selection.

Capital Cities as Icons of National Identity

Place is an important source of identity for nations. Brian Graham (1998, 130) emphasizes that nations depend on "the notion of exclusivity concerning sovereign rights over and access to territory." This conclusion is echoed by Prys Gruffudd (1995) in his analysis of nation building in Wales. Gruffudd sees nationalism as a method of creating unique territory for a group of people. Thus territory is given uniqueness by the nation through a series of subjective decisions designed to separate the territory from surrounding regions. Anthony D. Smith also emphasizes the importance of territory to national development.

According to Smith (1991, 65), "The homeland is not just the setting of the national drama, but a major protagonist, and its natural features take on historical significance for the people." This dualistic nature of homeland is emphasized by Benito Giordano (2000) in his study of Padanian nationalism. He stresses that an identification with territory is essential to the success of northern Italian nationalism. As a result, the Lega Nord political party has endeavored vigorously to create a unique geography for the region, tied to a history that promotes regional secession and the economic dominance of northern Italy. For a nation to develop, it is essential that it be linked to a defined and unique territory.

Challenges over territory are also an essential expression of sovereignty for a nation or state. Kemp and Ben-Eliezer emphasize this conclusion. The conflict over the

settlement at Taba on the Israeli-Egyptian border is seen as an opportunity for a country to “demonstrate their sovereignty by symbolic modes and through status politics” (2000, 319). Territorial symbolism can strongly influence the formation of nations within a region.

In Pakistan, the movement of the capital city is an example of a symbolic action to promote sovereignty within a region of the country. The movement of the capital into a contentious border region sends a strong message to other actors in the region, both inside and outside of Pakistan, that this area is and ought to be part of the Pakistani state and nation. The movement of the capital city also has sent a symbolic message of separating the colonial past of the British Empire, associated with Karachi, and creating a capital that is uniquely Pakistani. Therefore, the movement of the capital city sends a message to the people of the region and their supporters that Pakistan will maintain control of the Kashmir region.

Development of Islamabad

Upon independence, Karachi was established as the capital of Pakistan. However, by the late 1950s, the decision was made to move the capital to a new site, away from Karachi and closer to the disputed region of Kashmir. This was accomplished under the watch of President Ayub Khan, who came to power in 1958 as a result of a bloodless military coup. In an effort to more evenly distribute resources and development, Ayub selected the location and hired Kostantinos Doxiadis, a Greek architect, to lay out the design of the city, which was gridded in a triangular shape, with the apex oriented towards the Margalla Hills. Doxiadis’ designs allowed for gradual expansion and the use of geometric principles and created a forward looking, modernist view of architecture that allowed Islamabad to represent the new Pakistan, separate from the colonial influences of Karachi. The movement of the government functions to Islamabad was completed in 1960 and the city was designated the capital of Pakistan.

Reasons for the Movement of the Capital

Several reasons have been presented for the movement to Islamabad. Doxiadis (2005), the lead architect for the building of Islamabad, presents several of them in an interview that was published in *Ekistics*. The key issue early on was that Pakistan did not have a city designed to be a capital at independence (Doxiadis 2005). Delhi had been the traditional capital for the Indian Subcontinent. This created a problem as Karachi, the initial Pakistani capital, had been built during the British Empire as a major commercial center. Karachi was severely “overcongested” (Doxiadis 2005, 114) by the time of Pakistani independence and adding the functions of a capital city would exacerbate the problem. If Karachi was to be used as the capital, the cost of acquiring land would have been a substantial hurdle to completing the project in a timely manner as the government would have to provide compensation for people to move from desired tracts of land. The government would also have to develop and execute a plan to relocate people displaced from the construction. As a result, if they went to a non-developed area, land would be substantially less expensive and readily available.

A second argument to move the capital was the ethnic dimension of the population. Regionalism, or the strong and competing influence of various regions throughout the country, was identified as a problem in Pakistan (Doxiadis 2005). The goal was to have a national capital that was multi ethnic. When designing Islamabad, Doxiadis (2005) went as far as suggesting to attempt to control the ethnic makeup of the city to correspond to the ratio of nationalities at the state level. He made a strong statement that a capital city’s inhabitants “should not belong to only one social group...but should belong to as many groups as possible” (Doxiadis 2005, 114). Therefore, an existing city would not be a good fit as capital of Pakistan because the major cities are situated in one region of the country and national politics would be potentially influenced by

the local population. In order to avoid the capital being dominated by one group, a new city would need to be developed. Such considerations of regional influence are not unique to the movement of the Pakistani capital, but can be seen in decisions to move capitals in Australia (Ryan 1996) and Kazakhstan (Wolfel 2002).

A third reason for the movement of the capital was that the built environment in existing cities was quite old, and symbolically, these cities tend to represent the colonial past of a country. According to Doxiadis (2005, 115), “existing cities are old cities and thus...do not represent the future but the past.” Both the physical and social infrastructure of existing cities is rooted in their histories and can be seen in their buildings and monuments. As a result, in many circumstances a newly independent country desires the development of a new capital city to look to the future, especially when there is a desire to break with a colonial past. This was seen in Brasilia and Astana (Wolfel 2002), two examples of a desire to break with the colonial past and chart a new course. Symbolically and empirically, the new capital demonstrates the need to shed the past. New designs and new monuments showed the reorientation of history away from the colonial past to the independent future. As in other countries, this was a major influence in Pakistan. Karachi was seen as a colonial city, while Islamabad was a blank slate on which the history of a new country would be written.

A fourth reason for the movement to Islamabad was the situational characteristics of the Islamabad site. Islamabad is located on the Grand Trunk Road of the Indian Subcontinent. According to Doxiadis (2005), most of the capitals of the region—Teheran, Kabul, Peshawar, Lahore and Delhi—were along this road. If Pakistan was to be a great nation and a major influence in the region, it would need a capital with access to the Grand Trunk Road, if not for accessibility alone, then also for the prestige. The great civilizations of the region had their capitals along this road and so, then, must Pakistan.

Several site characteristics also influenced the selection of the location of the new capital. The Potwar Plateau, upon which Islamabad is set, is at the crossroads of two major highways in the region: the Grand Trunk Road and another, route A2, running into the mountains. It also has a favorable climate, identified by Doxiadis (2005, 117) as the "best climate."

Finally, Doxiadis identified the proximity to Rawalpindi as important to the success of Islamabad. The two cities would develop together, in what Doxiadis called a "two-nuclei dynapolis" (Doxiadis 2005, 121). Doxiadis (1960) defines a dynapolis as a city that grows in all dimensions (economic, political, social, etc...). Rawalpindi, as an existing urban center, provided the needed infrastructure as Islamabad developed. As time has passed, and the two cities have grown together, they now form a megalopolis and provide complementary roles to each other.

Another reason for the movement of the capital was that Rawalpindi was the headquarters of the Pakistani Army, a strong power source for the president at the time, Ayub Khan, and throughout the history of Pakistan. The military was Khan's power base as he led the coup that brought him to power, and it continues to be the seminal influence on Pakistani politics today. Also, as mentioned by Botka (1995), Khan saw the building of Islamabad as his contribution to the history of Pakistan. This desire to contribute to history should not be overlooked in studies of capital cities. This was seen in Malawi, Brazil and Kazakhstan (Wolfel 2002) as a key influence on the selection and development of capital cities.

Another major reason, and perhaps the most prominent, for the movement of the capital to Islamabad was an effort to make a geopolitical statement in regards to the conflict over Kashmir. In his discussion of "Complete and Austere Institutions," Foucault emphasized that the prison is "the place of observation of punished individuals" (Foucault 1984, 216). This emphasis on observation has been identified as a major influence on the architecture of the

prison. According to Foucault, the prison was designed with a “central point from which a permanent gaze may control prisoners and staff” (Foucault 1984, 217). The result of this design was the semi-circular or star-shaped prison and an emphasis on the central surveillance point of the system. This was emphasized in Foucault’s citation of the French Minister of the Interior in 1841: “The central inspection hall is the pivot point of the system. Without a central point of inspection, surveillance ceases to be guaranteed, continuous and general” (Foucault 1984, 217). In order for surveillance to succeed, it must be continuous and in close proximity. Therefore, in order for Pakistan to keep control of its population, especially a subsection of the population that is geographically concentrated, has lost political power during the most recent era and does not share an identity with the country’s leadership, it is necessary to maintain continual surveillance, and in close proximity.

Such a situation exists in Kashmir. Upon the conclusion of British rule in the Indian subcontinent, each of the princes of local states was given the option to join India or Pakistan. In Kashmir, being a largely Muslim region, Pakistan expected the leader of Kashmir, the Maharaja Hari Singh, to opt for membership in Pakistan. When he hesitated, Pakistan sent forces into Kashmir to conduct a guerilla war to influence the decision. When the leader appealed for help to the British, the British agreed to help under the condition that Kashmir joins India. Once the Maharaja agreed, Indian troops entered and drove the Pakistani sponsored troops from most of the country.

In 1948, the UN brokered a ceasefire that split the region. With no final resolution, conflict between Pakistan and India continued in the region, with major military conflicts in 1965 and 1999. This was layered with India’s conflict with China in the region. The result is the division of the Kashmir region among the three states, with India controlling central and southern portions, Pakistan controlling the northwest and China controlling the northeast.

The result of this era of persistent conflict has left the Pakistanis with a vision of their territorial identity that is

not congruent with the facts on the ground. The territorial identity of the Pakistani nation includes Kashmir, at least from the Pakistani perspective. With the failure of the military campaign, Pakistan has moved its capital city into close proximity of the disputed region in an effort to make a more legitimate claim. While this motive is not explicitly defined by the Pakistani leadership, history is full of examples where capital cities have been moved by geopolitical motives (Wolfel 2002).

Conclusion

The movement of capital cities is not a simple, haphazard exercise. Much thought and planning goes into the decision and the execution of the movement. The capital represents the power and identity of a nation and a state. As a result, the movement of the capital is a process that is tied to geopolitical motives and power relationships. In the case of Pakistan, the Kashmir region is hotly contested among three major powers. By moving their capital into an adjacent region, the Pakistanis are making both a claim for Kashmir and positioning themselves to provide constant surveillance in the region. As can be seen in several other examples, forward capitals send a strong geopolitical message about aspirations and perceived territorial ownership.

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Pakistan's Human and Economic Development

Clarence J. Bouchat

Introduction

In 1947 the great jewel of the British Empire fractured into the states of India and Pakistan. Although split along divisive religious lines, millennia of shared history and commerce bequeathed to both countries similar levels of economic, political, and social development. Beyond their religious differences, they long shared a cultural tradition, a predominately agricultural economy, and a similar heritage of political and administrative rule (Sims 1993). During its early years, though, Pakistan's free enterprise system created an export-led economy that during the 1960s was dubbed the "Pakistani miracle," surpassing India's import-substitution-led growth, serving as a model for South Korean and Indonesian planners, and exceeding the exports of Thailand, Malaysia, and Singapore combined (Cohen 2004; Harrison *et al.* 1999; Weinbaum 1999; Etienne 2002b, 164). From 1980 to 1988 the World Bank credited Pakistan with the world's fourth fastest growing economy (Kukreja 2003). Such is not the case today, however. Pakistan's subsequent erratic economic course and high population growth rate produced a meager \$950 Gross National Income (GNI) per capita in 2008 compared to Indonesia earning \$2010, Malaysia \$7250, South Korea \$21,570, and Singapore \$37,650. Even rival India topped them with a GNI per capita of \$1080 (World Bank 2010). Although the difference in economic standing with India is not great, other important measures of development including education, health, fertility, equality, and freedom confirm, as will be seen, Pakistan's negative change of fortune. Why has one of Asia's best regarded states with such early promise fared so poorly compared to states that were once worse positioned? The explanation for these differences in development between Pakistan and the rest of its

region helps to explain the challenges faced by Pakistanis today.

Economic activities are one of the most central of all human endeavors. They are what satisfy the basic human physical needs of food, shelter, protection, and health, and enable higher order human undertakings including cultural and political activities. Distinguished as one of the world's oldest cradles of civilization and ancient innovator in agriculture and commerce, today's Pakistan has lagged behind other countries in its region. To better understand the economic and political problems in Pakistan, this chapter describes its human development by comparing its traits with the rest of South Asia in terms of economic, demographic, and social measurements. Given their even start but subsequently different economic approaches, comparing Pakistan and India is particularly instructive in explaining the differences in their current circumstances. Both have progressed economically since independence, each approximately quadrupling its GNI per capita (Husain 1997; Haq 2010) and reducing the amount of absolute poverty, but India today is better positioned for future growth than is Pakistan (Husain 2009). In this chapter, the causes and potential obstacles that slow Pakistan's economic and political development are evaluated, and areas to concentrate upon are identified. Economic and human development is the foundation upon which future Pakistani security, stability, and standards of living improvements depend, and Pakistan's size, strategic location, and fragile circumstances make these important to the rest of the world.

Measuring Pakistan's Economic Development

To understand the developmental status of Pakistan, it is necessary to resort to statistics describing economic, demographic, and social conditions. Such statistics are widely used in the media and academia to illustrate points, but are often misunderstood. How useful are such data and what does it relate to the reader? The opening example in

this chapter, comparing the economic standing of Pakistan and other countries, is a case in point. Is GNI a fair way to make such economic comparisons? If so, what does it mean and can it explain the causes of poverty and underdevelopment? Economic size and growth are not the same as economic development, although each suffers in South Asia. The term 'development' is used in a broad sense as the "progressive improvement of the human condition in both material and nonmaterial ways" (Clawson *et al.* 2007, 20). As is the case with Pakistan, economic growth may occur without sufficiently improving human, political, or physical well-being. Economic development, however, is closely associated with human development, and together they lay a foundation for a society to sustainably boost itself through health, education, decent standard of living, and expanding freedom (UN 2010a). The measures examined in this chapter to better understand Pakistan's development level include GNI, Gross Domestic Product (GDP), Purchasing Power Parity (PPP) adjustments, the Human Development Index (HDI) and its health and education components, political measures such as freedom and equality, and other economic and demographic indicators that may prove useful to planners and implementers of policy to better understand and improve conditions encountered in South Asia. These concepts should put Pakistan's economic, political, and social development into perspective.

Gross National Income and Product Measures

By any measure of national income, Pakistan's economy does not fare well when compared to the rest of the world. An economy is defined as "production, development, and management of [the] material wealth...system of a country or region" (Morris 1976, 413). Based upon this definition an economy is measured as the aggregate production, development, and management of wealth over a specific time period for a defined area. If such a summation is done for the total value of goods and services produced over the period of a year for a designated state or region, that mea-

sure is known as the Gross National Product (GNP) or GNI (Getis 2006).¹ This measure quantifies all the value-added goods and services declared through reported currency exchange, both domestic and foreign, originating from one state (Getis 2006). Typically such measures are based on a standard currency like the U.S. dollar, requiring conversion rates and estimates, and thereby inducing some degree of error. Since large states with large populations are expected to produce more goods and services, GNP compares economic size and relative contribution of countries to the global economy. For example, Pakistan's population ranked 6th largest in the world in 2009, but its economy only ranked 45th with \$173 billion (World Bank 2010). Total GNI or GNP by itself is not a ready indicator of the wealth or development status of a country. To meaningfully compare the development status among states, GNP per capita must be used. The numbers cited in the Pakistan comparison at the beginning of this chapter were adjusted in this way to enable per person comparisons among the states. Since Independence, Pakistan's economic output per capita quadrupled (Husain 1997; Zaidi 2009), but present-day Pakistan's total population expanded nearly six-fold from 31 million in 1947 to 166 million in 2008 (Mahsud-Dornan 2007; World Bank 2010). Although Pakistan's economy expanded substantially, its benefits were spread over a population that also grew rapidly (Etienne 2002b). The doubling of national income per capita that occurred during Pakistan's first fifty years only matched the doubling achieved by other low income areas of the world in the forty years from 1960 to 2000 (Husain 1997; Feleke and Picard 2007). For this reason Pakistan still rates on par with low-ranking South Asia, and below Sub-Saharan Africa in 2008 GNI per capita, a relatively poor showing (World Bank 2010).

1 There is a slight difference between Gross National Product (GNP) and GNI, but for the purposes of this study that difference is insignificant.

Gross Domestic Product Measure

Although GNI per capita is a commonly used gauge of the aggregate economic activities of a country, it has drawbacks that makes Pakistan's economic progress, although substandard, appear worse than it is. GNP, for instance, includes the net return of investments made overseas, and infers increased wealth for an investing rather than producing state. To make the distinction between value-added production 'within' a country rather than 'by' a country, Gross Domestic Product (GDP) is more often used than GNP for comparisons (Rubenstein 2008). Otherwise, GDP measures total market value as does GNP, and both use per capita measurements. Among South Asian states, use of GDP bolsters economic development indicators since they are more likely recipients of overseas investment than originators (kleptocrats excluded), so return for investments from abroad are credited to the local economies. However, Pakistan benefits less since it has historically garnered lower amounts of direct commercial investment, as opposed to much more foreign aid given for political and humanitarian reasons (CIA 2010a). An additional adjustment used to correct flaws in national income measurements is to weight GNP or GDP to reduce the fluctuations induced by currency exchange or price distortions, a process known as purchasing power parity (PPP). PPP attempts to measure the domestic purchasing power capability in local currency giving a more genuine evaluation of a society's standard of living (UNDP 2007). "It is based on the idea that identical baskets of traded goods should cost the same" (Getis 2006, 225), and, if they do not, the difference should be used to adjust the national income measures. PPP measurements reduce the error that transitory U.S. dollar exchange rate spikes induce in skewing the perception of economic development and standard of living, and account for the difficulty in obtaining common basic necessities for living. Using the GDP PPP usually increases the amount of economic production per person thereby reducing the perception of poverty suffered when compared to unadjusted figures.

The differences in measuring economic development in terms of per capita GNI, GDP, and GDP PPP are apparent in Table 1. The GDP PPP usually shows that the citizens of developing states have more purchasing power than GNI or GDP may indicate—often making the PPP measure an equalizing indicator. Although Pakistan’s GDP PPP certainly indicates improved prospects for its citizens, relative to other South Asian states it lost ground, and equals that of the low-income-state world average of \$2,531 (UNDP 2007). Pakistan’s very high population growth rates (compared to even India) depressed its long-term GDP per capita annual growth rates to 2.6 percent, and explains in part the paradox of Pakistan’s substantial long-term economic expansion, but chronic underdevelopment (LOC 2005; Husain 1997). By these standards of per capita economic measure, Pakistan lags the rest of the world.

Even GDP PPP includes flaws that skew the measure of an economy. For instance, income measures in all countries fail to incorporate non-marketed activities such as parenting, maintaining one’s own dwelling, and non-profit work which add worth to a society, if not wealth. Measuring national income requires that goods or services gain value in the process, and be declared so that they can be officially counted. Thus eligible production may go unreported when transacted through traditional barter or purposely concealed to avoid taxes or government oversight, common practices in Pakistan. This informal sector of the economy may include 30 percent of Pakistan’s goods and services, and 70 percent of its work force (LOC 2010). Also because of the accounting definition, decades of overseas remittances by Pakistani workers abroad have increased the amount of capital available for investment in Pakistan (Harrison *et al.* 1999; Kukreja 2003), but are not included in national income since they are monetary transfers and not direct investment. Pakistan has traditionally benefited more than most states from such transfers, but its GDP does not directly show it. Also unreported are illegal activities like smuggling and narcotics production. Understandably

statistics for this black market sector varies much, but the World Bank and Pakistan's *The Nation* newspaper estimated that as much as 20 percent of the economy in 1973 was "black", or unregulated, growing to 50 to 300 percent by the end of the twentieth century, thriving on the instability in Afghanistan (Etienne 2002b, 179; Siddiq 2007; Kekreja 2003). This underground economy represents a huge cost to Pakistan in terms of diverted assets and talent, lost tax revenue, and encouragement of other forms of crime and corruption. Economic wealth under the shadowy control of a self-protecting "new social strata in society – that of narco barons or drug lords...fuelled speculation in real estate, [took] vast chunks of the transport business, enlarged the illicit arms market, [and] greatly disrupted normal trading practices..." (Kekreja 2003, 210). Together these unreported activities significantly increase the size of Pakistan's economy, and their indirect influence helps to explain Pakistan's annual economic growth rate of 5 percent since 1947, matching the world average from 1980 to 2000 (Hussain 2009; Collier 2006). Pakistan's economy has overcome demographic boom, corruption, poor governance, foreign sanctions, civil strife, outside threats, high levels of inflation, and severe earthquakes and flooding (Price *et al.* 2010) to more than double during the decade of 2000, although indications are it is in another slide today (Haq 2010). Per capita GNI and GDP are important indicators of development for a country, but for Pakistan they are unreliable and conflicting, officially showing substantial overall growth with low per capita income. However, GNI, GDP and their like are not the only development indicators by which to measure a country, nor may they be the most revealing for Pakistan.

Country	Gross National Income	Gross Domestic Product (Official)	Gross Domestic Product (PPP)	GDP PPP World Rank
Bangladesh	520	551	1420	140
India	1,080	1,134	3,275	112
Pakistan	950	981	2,625	118
Sri Lanka	1,780	2,068	4,778	95
UK	46,150	35,156	36,496	14
USA	48,190	46,436	46,436	5

Table 1. Comparison of Economic Indicators.

Source: World Bank, “Key Development Data and Statistics,” 2010. (2009 data , GNI is 2008).

Note: all figures in U.S. dollars and are per capita data

Measuring Pakistan’s Human Development

Using economic instruments like GNI or GDP PPP to gauge human development does not adequately describe a country’s progress. These instruments analyze only one facet, and not a very accurate one, in the case of Pakistan. Not all societies favor material wealth or define it the same way, which may make them seem less developed by Western standards than they actually are (Clawson *et al.* 2007). General economic growth is also not necessarily shared equally within a society. In Pakistan economic growth has tended to mainly strengthen the elite, while other aspects of human development have lagged considerably for most Pakistanis (Kukreja 2003; Blood 1994). For that reason additional social and demographic measures give a more nuanced understanding of a country’s circumstances. However, the other human development indicators bode worse for Pakistan’s future than do economic indicators alone (Etienne 2002a), demonstrating how economic growth and human development are imperfectly harnessed together (UN 2010a).

Health and Education Measures

Education and health care are two social measures crucial to the development of a vibrant economy. Both are indicators of economic development since the amount of resources allocated depends in part on the wealth of a society, and dedicating such resources is an investment in future economic and human well being. The health of a people can be measured through expenditures on medical care as a percentage of national wealth, proportion of people to doctors or nurses, or even by calories and protein received in an average daily diet. Such social indicators of development, however, are better analyzed through related demographic statistics, focusing on the results and not the inputs of health care. For example, a long average life span is an agglomerate gauge of the strength of a country's health care, food supply, sanitation, and public assistance support. The difference in life expectancy between developed countries and underdeveloped countries shows people living significantly longer in wealthier societies, which is a reflection of their social resources and organization. Life expectancy is one of Pakistan's relative success stories at 66.2 years in 2009 compared to the 1960 expected age of 43.1 years or 58.3 in 1992 (Blood 1994). It also exceeds that of South Asia's average at 64.1 (Table 2), but is below the world average of 67.5 (UN 2009). The infant mortality rate (IMR), the number of babies that do not survive their first year per 1000 live births, is a common health standard in which Pakistan fares less well. Infant mortality is based more on medical practices like immunizations, parental knowledge, and ability to combat common forms of illness, malnutrition, and diarrhea, so this measure is somewhat less dependent on wealth and more on community organization and education. Pakistan has shown steady progress from 162 infant deaths in 1960 down to 99 in 1992, in part due to improved health care like a successful infant inoculation program that raised the rate of immunizations from 5 percent in 1981 to 97 percent by 1990 (Weiss 1999; Blood 1994). The IMR continued to decline slowly to 65 in-

fant deaths per 1000 births in 2008, but that relatively high level ranks it in the strata of lesser developed countries, and worse than South Asia's average of 60 or the world at 52 (CIA 2010a; Rubenstein 2008; UN 2007/8). Improvements are slow due to chronic low levels of nutrition, sanitation, access to medical care for women, and health care infrastructure especially in rural areas (Harrison *et al.* 1999 LOC 2005). Pakistan has chronically underfunded state spending on health (Weiss 1999; Synnott 2010), and thus has a mixed but slowly improving record of human development.

Country	Life Expectancy (years)	Infant Mortality Rate (per 1000)	Adult Literacy Rate (percent)	Gross Enrolment Rate (percent)
Bangladesh	65.70	52.40	53.50	52.10
India	63.40	49.13	66.00	61.00
Pakistan	66.20	65.32	54.20	39.30
Sri Lanka	74.00	18.14	90.80	69.70
UK	79.30	4.69	99.00	89.20
USA	79.10	6.14	99.00	92.40

Table 2. Comparison of Development Using Demographic and Social Indicators.

Sources: UN Development Programme (UNDP), *Human Development Report 2009* (2007 data), except Infant Mortality Rate: CIA, *The 2010 World Fact Book* (2010 estimated data)

A healthy work force is not sufficient, however, to develop an economy. The work force must also be skilled and literate to be productive, thus two important measures of social development are the quantity and quality of education. Quality of education can be measured by the literacy rate: the percentage of adults who can read and write a simple statement in their own language (Rubenstein 2008). Developed countries boast a literacy rate above 98 percent, while Pakistan's rate was as low as 21 percent in 1970 and

slowly climbed to 36 percent by 1992 (Blood 1994). In 2008 Pakistan's literacy rose to 54 percent, on par with Bangladesh but below India's rate and that of Sub-Saharan Africa's 59 percent literacy (UN 2009; UN 2007/8) suggesting that half of Pakistan's population is unable to learn high order skills. Quantity of schooling may be measured by the total number of years of education expected for a child when enrolled in school because even in mediocre schools the longer a student attends the more likely he or she is to learn. To measure quantity of education the United Nations uses the Gross Enrolment Ratio (GER), which is the ratio of all students in primary, secondary, and tertiary (college) levels of schooling compared to the population of eligible school age students expressed as a percentage (UN 2010b). This statistic shows how many eligible students actually attend school and can be a predictor of future literacy. Table 2 reveals that Pakistan's children today have a low enrollment rate at 39 percent, although an improvement from 24 percent in 1990 and 19 percent in 1980 (Blood 1994). Primary education in Pakistan is supposed to be free and compulsory, and public education is designed for 12 years of schooling (LOC 2005), but the system is not backed with adequate funding to produce productive citizens for today's economic needs (Weinbaum 1999; Kukreja 2003; Cohen 2004). To fill this gap the government in 1982 encouraged religious schools to educate lower-income students, and with support from Saudi Arabia and the Gulf States, *madrasas* expanded from 900 in 1971 to 8,000 official schools and an estimated 25,000 unregistered ones (Jaffrelet 2002; Synnott 2009a). The narrow curriculum of *madrasas*, however, is ill-suited to Pakistan's drive for development. On the other extreme Pakistan's military and its elites have established impressive English-language private schools and universities, but which cater to only a small privileged segment of the population (Siddiq 2007). The government of Pakistan's Planning Commission recognizes, "Education is an indispensable ingredient of development and a fundamental right of every individual" (Weiss 1999, 137), but low achievement in education remains the norm for most

children due to inadequate investment in human capital (Harrison *et al.* 1999; Cohen 2004). Together, literacy rates and GER constitute what the UN refers to as the Education Index and are important indicators of a population's ability to participate in advanced economic activities and its potential to improve human and economic conditions. These indicators bode ominously for Pakistan's future.

Urbanization and Total Fertility Rate Measures

Two measures of development that combine social and demographic characteristics are urbanization and total fertility rate (TFR). Urbanization is the total population of a region living in a city or its immediate surroundings. Economically, cities typically represent a dense pool of laborers needed by industry, and allow specialization in banking, medicine, stock trading, and other hallmarks of an advanced services economy. From 18 percent in 1951 to 36 percent, Pakistan has the highest urbanization today in South Asia (Table 3), and the region's highest growth over the past 60 years (CIA 2010a; Etienne 2002a).

Country	Urbanization (percent)	Urbanization Rate (percent)	Total Fertility Rate	Human Development Index (Ranking)
Bangladesh	27.00	3.50	2.65	.543 (146)
India	29.00	2.40	2.65	.612 (134)
Pakistan	36.00	3.00	3.28	.572 (141)
Sri Lanka	15.00	0.50	1.96	.759 (102)
UK	90.00	0.50	1.92	.947 (21)
USA	82.00	1.30	2.06	.956 (13)

Table 3. Comparison of Development Using Other Demographic and Social Indicators.

Sources: Urbanization and TFR data from Central Intelligence Agency, *The 2010 World Fact Book*, and HDI from UN Development Programme, *Human Development Report 2009* (data for 2007)

Note: Urban rates for India and UK are 2008 data, and urbanization rates are 2005-2010 data

The best example of this urbanization trend is sprawling Karachi, a megacity with 13 million people and ranked 10th in the world, having “absorbed tens of thousands of [refugee] *muhajirs* following independence in 1947, [growing] nearly two and one-half times from 1941 to 1951, and nearly doubled again in the following decade” (CIA 2010b; Blood 1994, 96). Urbanization has not resulted in high rates of industrialization in Pakistan, though, which account for only a quarter of GDP and a fifth of labor; nor has industrial growth kept pace with the expanding urban population (CIA 2010a). At 3 percent growth rate, Pakistan’s cities will continue to grow rapidly from today’s 66 million, although below the rate of 5 percent occurring during the 1950s and 1960s (CIA 2010a; Blood 1994).

High growth rates are also indicated by Pakistan’s TFR, which is the number of children the average woman in a country will bear during her life time. A rate of 2.1 children is considered a long term zero population growth rate, while more than that is a growing population and a high number an indicator of a less developed country. Pakistan’s TFR in 2009 was 3.28, significantly higher than the other major states of South Asia, but down from a remarkable 6.2 as recently as 1990 (CIA 2010a; Blood 1994). As a result, Pakistan’s population has exploded, tripling in its first fifty years and continuing at a high but slowly diminishing rate since 2000 (Harrison *et al.* 1999; CIA 2010a). The large number of babies born are an indicator that agriculture is a mainstay of Pakistan’s labor force (43 percent), that Pakistan has a low standard of health care since many children do not survive, that it provides a low level of health and social services making children act as old age insurance, and that large families are a cultural preference. The negative aspects of large families are that they require an economy to grow faster than the rate of young adults entering the work force or face social unrest. High urbanization reinforces a low TFR, since city dwellers rarely have the room or economic incentive to have large families. Social and demographic traits often are the foundation upon which a modern economy is built, and are therefore excel-

lent indicators to supplement economic measures of development. Since health, education, and urbanization require community resources and organization, they are also signs of how much wealth and ability a community has to fulfill these aspirations.

Human Development Index

Since 1990 the United Nations has published the Human Development Index (HDI) as a shorthand single aggregate measure of human development to facilitate chronological and lateral comparisons. The HDI includes the economic measure of GDP PPP per capita to determine standard of living; a social measure using the Educational Index including both GER and literacy rates; and a demographic dimension for health in the form of life expectancy.² Combined, these provide a broader index ranging from a value of 1 (best score) to 0 (dismal) to show human and economic development levels. The HDI's importance stems from "a fundamental axiom...[that] people who receive a solid, viable education and are in good health are then able to both interpret and synthesize issues for themselves, as well as act upon their knowledge in a range of circumstances (e.g. employment, health care, participating in democracy)" (Weiss 1999, 137). Thus the HDI as a measure is both an indicator of development and how its parts contribute towards development. Due to poor health and education indicators, Pakistan ranked low in the world in 2007 with an HDI closer to Bangladesh than India (Table 3).

2 In 2010 The United Nations Development Programme changed its formula for calculating the HDI. Measures of a long and healthy life, knowledge and education, and standard of living are still the categories covered, but only the life expectancy component remains unchanged. The education index now includes a combination of mean years of schooling and expected years of schooling, and standard of living employs GNI PPP per capita. Under the new method Pakistan's HDI is .490 and 125th in the world (of 169 countries rated), at the bottom of the medium human development category and below the South Asia average of .516 (United Nations 2010c). The new process skews comparisons with previous years, so this chapter uses the previous method as explained in the body of this chapter during this transition period.

Although Bangladesh's GDP per capita is much less than Pakistan's, Bangladesh's other indicators are near even or better because it spends a higher percentage of its income on development (Tosheeb 2010). Typically, higher GDP boosts health and education outcomes. In the case of Pakistan, however, GDP was the one relatively strong indicator which grew steadily through the 2000s (albeit it has stagnated in the past couple of years) (Tosheeb 2010); but this did not translate into improved per capita spending on education and health or balanced expenditures by geographic region and social class (Kukreja 2003). The low education rate and rapidly growing population also reduces the likelihood of the economy growing significantly, putting Pakistan at a disadvantage in scientific research and technological development compared to states like India (Haq 2010). Although often cited for its broadness, even the HDI has limitations since it includes just a few important measures of the many available, and thus still gives a less than comprehensive picture. The UNDP's 2007/8 *Human Development Report* judged its own HDI measure stating:

It does not, for example, include important indicators such as gender or income inequality and more difficult to measure indicators like respect for human rights and political freedoms. What it does provide is a broadened prism for viewing human progress and the complex relationship between income and well being (UN 2007/8).

Because it accounts for at least one significant economic, social, and demographic measure, the HDI is a better balanced, although still limited, single indication of economic and human development levels, and using this measure Pakistan rates low in its region and the world.

Measuring Other Development Indicators in Pakistan

Gender Measures

To gain a deeper understanding of the economic and human development of a state, additional indexes may be used to compensate for the acknowledged weaknesses in

the HDI. The Gender Development Index (GDI), which compares the level of human development between women and men, is one such method using the same criteria found in the HDI accounting for gender inequality. For example, female literacy in Bangladesh stands at 82 literate females for every 100 literate males; but there are only 58 literate females per 100 males in Pakistan, lowering Pakistan's GDI even though overall literacy is around 54 percent in both countries (UN 2009). Pakistan's female literacy has slowly improved, however, from 45 women to 100 men in 1992, when only 22 percent of women were literate (Blood 1994). The GER parallels this gender inequality with 44 percent of Pakistan's boys enrolled in school, but only 34 percent of girls, a significantly higher imbalance than in the other major states of South Asia (UN 2009). Not empowering the female half of the population retards overall growth potential since not all available human resources are used to greatest effect. Such education differences result from both a fiscal allocation restraint where limited available resources are expended mainly on males, and a cultural cause in a society where a girl's safety, and hence her honor, is the primary concern for parents³ (Blood 1994). Lower levels of education result directly in lower earned income for females too. In Pakistan, women earn only 18 percent of what men do, nearly twice the difference found in India, the next lowest country in South Asia in terms of

3 In Pakistani culture, a girl's virginity or a women's sexual fidelity in marriage is of great concern in maintaining the honor of her family, and her desirability in marriage. If a women's sexual purity is in doubt, even if her whereabouts cannot be accounted for by a trusted male family member, then shame may be brought onto the family. (Proving a crime like rape was committed could alleviate the shame, but under Sharia law the standards of evidence in a rape case against a man are very high, so the case is difficult to prove.) This is so important in some families that "honor killings" may occur, where a girl or women suspected of tarnishing the family honor may be killed to remove the shame. Therefore even seemingly routine activities like sending a girl to school is fraught with difficulties unless precautions and firm arrangements are made to ensure her "safety." Once measures are in place, however, Pakistani parents have been supportive of sending girls to school.

female to male equality in earned income (Table 4). In 2008 only 20 percent of women worked outside the home compared to 82 percent for men, and in some rural areas it is as low as 3 percent (Price *et al.* 2010). Traditionally women working outside the home have been a mark of shame for families, so women have been restricted to menial tasks or had their involvement in family earnings go underreported (Blood 1994). Lack of education and cultural mores also reduce women's chances of holding elected or appointed positions in Pakistan, which chronically ranks among the worst in the world in this category (Weiss 1999; UN 2009), despite a few notable exceptions from the elite like former Prime Minister Benazir Bhutto. Only in life expectancy do Pakistani females fare better than their male counterparts among the development measures, but this is also true everywhere in the world where rudimentary modern medical care and public health are practiced – although in Pakistan that difference is least pronounced indicating that women's health is a lower priority. Since 1995, when UNDP first began compiling gender statistics, Pakistan's GDI has improved from 0.360 to 0.563, ranking relatively steady at 124 of 182 countries through that period (UN 1995; UN 2009). Such a low relative GDI indicates how Pakistan has yet to achieve the dream of its founder, Muhammad Ali Jinnah, who declared that “no nation can rise to the height of glory unless your women are side by side with you” (Blood 1994, 120). Women's empowerment, especially through their education, is a crucial step in correcting Pakistan's problems (Harrison *et al.* 1999).

Country	Female Earned Income (U.S. \$)	Male Earned Income (U.S. \$)	Female Life Expectancy (years)	Male Life Expectancy (years)	Female Literacy (percent)	Male Literacy (percent)	Gender Development Index (Ranking)
Bangladesh	830.00	1,623.00	66.7	64.7	48.0	58.7	.536 (123)
India	1,304.00	4,102.00	64.9	62.0	54.5	76.9	.594 (114)
Pakistan	760.00	4,135.00	66.5	65.9	39.6	67.7	.532 (124)
Sri Lanka	3,064.00	5,450.00	77.9	70.3	89.1	92.7	.756 (83)
UK	28,412.00	42,133.00	81.5	77.1	99.0	99.0	.943 (17)
USA	33,996.00	56,536.00	81.3	76.7	99.0	99.0	.942 (19)

Table 4. Comparison of Development Measures in the Gender Development Index.

Source: UN Development Programme, *Human Development Report 2009* (2007 data).

Note: Literacy data for Bangladesh and Sri Lanka from 2001, U.S. and UK from 2003, Pakistan 2005

Corruption, Inequality, and Freedom Measures

Better perspective beyond the HDI may also be gained about a society by examining corruption, inequality, and human freedom because each is important to economic development, political stability, and quality of life. Since the non-governmental organization (NGO) Transparency International (TI) began issuing its index of corruption perception (Table 5) in the mid-1990s, Pakistan has ranked poorly, earning only 2.3 (zero is most corrupt on a scale of 10), and standing at 134 out of 180 countries in 2010 (Cohen 2004; TI 2010). Corruption covers a variety of concerns for citizens including government acquisition, elections, monopolies, trading practices, privatization, land reform, and accountability of officials. The impact of corruption is manifold. In 2007 the World Bank and the Planning Commission of Pakistan reported that corruption cost the government 150 billion rupees (approximately \$2 billion) in acquisitions alone, and corruption in the private sector was nearly as bad (TI 2010). In 2003 with 12 percent of China's population and 8 percent of its aggregate GDP PPP, Pakistan only

attracted 1 percent of China's foreign direct investment due to the disincentives posed by relatively greater corruption and political instability (LOC 2005). Related to corruption, "an economy of wastage" drags on Pakistan through "mis-managed allocation of public funds due to political and administrative weakness...political opportunism...tax fraud, smuggling, [and] non-collection of taxes" (Etienne 2002b, 179). Corruption and the perception of favoritism for the rich and powerful arouse resentment among the third of Pakistan's population that is impoverished because many of the rich gained their wealth through "dubious means" (Jaffrelot 2002, 258). From 2000 to 2008 Pakistan's economy grew steadily and may have reduced the number of people living in absolute poverty, but growth did not balance the chronic unequal distribution of wealth.⁴ Such inequality stems from traditional agricultural client-patron relationships in Pakistani culture, and was reinforced during the British Raj through a paternalistic government (Sims 1993; Cohen 2004). Early governments "pampered, protected, and mollycoddled" new entrepreneurs to the point that in 1968 Pakistan's chief economist identified 22 families that owned 66 percent of the entire economy (Kukreja 2003, 88; Cohen 2004). Although the socialist government of Zulifkar Ali Bhutto that followed broke the domination of these families, income and power inequalities remained largely untouched (Husain 2009; Cohen 2004), proving that "socialism could be as corrupt as capitalism" (Etienne 2002b, 165). President Pervez Musharraf claimed to fight

4 Data on poverty and income inequality in Pakistan contains errors and is inconsistent. Official government and international figures show that poverty is falling, while other sources find it increasing. The condition of the economy seems to impact the number of Pakistanis living in absolute poverty (a relatively small jump across the poverty line of \$1.00 earned daily using PPP (\$1.25 daily after 2008)) even while more reliable long term trends show that a growing economy has hardly changed socio-economic inequality (Price *et al.* 2010; Synnott 2009a). Chronic, endemic corruption and politicization have made many doubt official figures, another casualty of corruption.

corruption, but made little progress, and was replaced by Asif Ali Zardari (TI 2010), notoriously known as “Mr. 10%” for widely reported but contested claims of skimming and corruption. Corruption and inequality have been implacable throughout Pakistan’s history which has chronically “sapped economic vitality” (Harrison *et al.* 1999, 8). This may be attributable to Pakistanis’ preference for family, personal interest, and status over the public good, meaning political clout, connections, and wealth hold sway (Blood 1994). Thus Pakistan ranks low in the perception of corruption and inequality within its population.

Country	Corruption Perceptions Index (10=cleanest)	Corruption Perceptions rank	Political Rights / Civil Rights (7=not free)	Freedom Index
Bangladesh	2.4	134	3 / 4	Partly Free
India	3.3	87	2 / 3	Free
Pakistan	2.3	143	4 / 5	Partly Free
Sri Lanka	3.2	91	4 / 4	Partly Free
UK	7.6	20	1 / 1	Free
USA	7.1	22	1 / 1	Free

Table 5. Freedom and Corruption Measures.

Sources: Corruption data from Transparency International, *Corruption Perceptions Index 2010*, and Political Rights/Civil Liberties and Freedom Index from Freedom House, *Freedom in World*, 2010

Attempts to better balance the HDI using more subjective factors, such as political freedom have created measures like the UNDP’s Human Freedom Index (HFI). First tabulated in 1991 to address the lack of human rights when measuring development through the HDI, the UNDP concluded there was a high correlation between human development and human freedom (Lewis 1991). Some political freedoms may directly contribute to economic development including property rights (Cowin 1992), such that political freedom bolsters human development and hu-

man development reinforces political freedom. However, the UNDP HFI is no longer tabulated, probably because it proved to be too politically contentious. In its place the NGO Freedom House has offered a similar index on a 1 to 7 scale to measure political rights and civil liberties (where 1 is free and 7 is not free). In 2010 Pakistan was classified as partially free (Table 5), with political and civil rights ranked worst of the major South Asian countries (Freedom House 2010). From 1974 to 2004 Pakistan was considered partially free for 21 years with 9 as not free, behind both India and Bangladesh for that period (Cohen 2004). In its early years, "ordinary citizens were denied a role in public policy making" so badly that Bangladesh felt compelled to sever itself from Pakistan in the 1971 "civil war". A chronic form of feudal politics by entrenched elites, and episodes of martial law have also contributed to Pakistan's poor ratings (Harrison *et al.* 1999, 4). The Human Rights Commission of Pakistan highlighted women as particular targets of abuse along with poor peasants, and ethnic and religious minorities (Cohen 2004; Harrison *et al.* 1999). Much of this abuse comes from the self interest of Pakistan's elites and military at the expense of its people. For example, the book *Military Inc.* outlines numerous examples of huge military-only holdings that dominate Pakistan's economy "preying" on private corporations, reinforcing "feudal authoritarianism," generating "crony capitalism" and corruption, and encouraging the military to participate in politics to protect its corporate economic interests (Siddiq 2007, 3, 12, 17, 140). The Pakistani military's semi-independent financial state leaves it politically dominating, with four military regimes ruling for over half of its first 65 years, and distorts Pakistan's free market economy. Pakistan earned its partially free rating, however, because some sectors of society do not acquiesce to authoritarian rule. Pakistan's strengths include a mostly "free and outspoken" press, a feisty if not quite-independent federal legal system, a national legislature with seats reserved for women (17 percent) and minorities (3 percent), and an improving if not fully free and

fair election system (Harrison *et al.* 1999, 4; Freedom House 2010). Dr Isarat Husain, a Pakistani and former Director of Poverty and Social Policy at the World Bank, believes that “the failure of governance and the consistent domination of political power and the state apparatus by a narrowly based elite seeking to advance its private and parochial interests lay at the heart of the problem in Pakistan” (Husain 2009, 16). Factors such as corruption, income distribution, and human freedom play an important role in the economic development and human well-being of South Asia, and are areas where Pakistan needs to improve.

Economic Productivity Measures

The economic, social, and demographic characteristics introduced so far are just a few of many ways of gaining a more holistic view of a country’s development. This chapter ends by considering some final economic contributions to Pakistan’s economy and well being. One such factor is productivity, defined as the value of a particular product or service compared to the amount of labor needed to produce it. Developed countries’ workers have access to tools and capabilities through capital that make their work more productive, and generate more wealth and well being than underdeveloped countries’ workers, who rely on less efficient human and animal power (Rubenstein 2008). One characteristic of productivity tracked by the UNDP is electricity consumption per capita which tells how much power is used to run tools and equipment at work and home. Pakistan’s 564 kilowatt-hours trail the South Asian average of 628 kilowatt-hours per capita electrical consumption (Table 6), and is well behind overall per capita energy consumption of industrializing economies like Thailand and Malaysia (UN 2007/8; Haq 2010). Although Pakistan’s electricity usage increased by 60 percent between 1990 and 2005, that did not keep pace with its population growth. Pakistan’s low per capita usage is explained by its electrification coverage of only 54 percent of its population, leaving 71 million outside of the grid (UN 2007/8). Where electricity is available demand has grown, but inadequate power sup-

plies, poor maintenance, and little investment in infrastructure over the long term have resulted in endemic power shortages “aggravating already high levels of unemployment and increasingly stoking demonstrations and other signs of political instability” (Etienne 2002b; Synnott 2009a; Hathaway 2010, 22). According to the Asian Development Bank, Pakistan’s lack of investment in electrical infrastructure and resulting power shortages retards its GDP growth rate by 2 to 3 percent annually (Tosheeb 2010). Consumer goods such as appliances, transportation, computers, and phones are essential to a modern economy since they allow access to jobs, services, and information. Consumption of such goods is a result of high economic development, but they in turn promote even higher levels of development through their increased efficiency and availability of more workers. Pakistan’s telecommunications infrastructure has fared better than its electrical infrastructure through privatization and commercial investment that has overcome periodic government restraints (LOC 2005). The Musharraf regime also assisted with reduced media censorship leading to greater internet access, and initiatives such as a free national digital library and high speed internet for universities are improving digital access and productivity (Synnott 2009a; Haq 2010). Investing in telecommunications access also indicates a societal proclivity for embracing change, which is another prerequisite for advancing economically along Western norms. Pakistan’s rapid urbanization reinforces a digital lifestyle, and accounts for Pakistan’s remarkable growth to 90 million active mobile phone subscribers in 2009, and South Asia’s highest mobile phone penetration rate at 55 percent (from just 8 percent in 2005) (Zaidi 2009; UN 2007/8). The cities are also where nearly all of Pakistan’s economic growth has occurred, “driven by industries and sectors that require smart, young, global knowledge employees” (Zaidi 2009, 41). “This growth is both the reason and expression of an expanding middle class in Pakistan” (Chandran 2008, 1), and is a hopeful sign that Pakistan’s economy can grow and thereby enhance its economic and human development.

Country	Electricity Consumption per Capita (kilowatt hrs)	Mobile and Fixed-Phone Subscriptions (per 100)	Internet Users (per 100)
Bangladesh	154	29	0.3
India	618	34	4.5
Pakistan	564	56	11.1
Sri Lanka	420	72	5.8
UK	6756	180	76.0
USA	14,240	140	75.9

Table 6. Comparison of Development Using Consumption Indicators.

Sources: Electricity: UN Development Programme, *Human Development Reports, 2007/8* (2004 data), and Phone and Internet: UN Development Programme, *Human Development Reports, 2010* (2008 data)

Economic Measures Summary

Since their independence in 1947 and 1948, Pakistan and the Republic of Korea have been burdened with many of the same development challenges but have experienced very different outcomes. They shared a parallel legacy of colonial rule, a rural economic base, violent beginnings, and authoritarian military regimes. Both also endure existential threats from hostile neighbors, few natural resources, and bouts of strong internal dissent and instability. During the 1960s Pakistan was a model of development for South Korea, but by 2008 South Korea's total GNI was 6 times larger than Pakistan's \$158 billion, and 3 times greater when comparing the more favorable aggregate GDP PPP despite Pakistan having 3.5 times the population size and

10 times the arable land⁵ (World Bank 2010). This chapter identifies some of the problems in Pakistan's economy and society that account for this disparity, and concludes now by briefly proposing actions needed by Pakistan's government and the international community to overcome them.

The two most prominent needs are to enhance literacy through greater access to education that teaches the skills required in a modern economy, and to reduce the high population growth rate which diluted the impact of Pakistan's solid 5 percent annual economic growth over the past 65 years. Also needed is more equity for the powerless especially in vital areas like real land reform, access to justice, fair elections, and reigning in corruption (Husain 1997; CIA 2010a; Synnott 2009a; Harrison *et al.* 1999; Synnott 2009b). To fix these problems requires much greater investment in social capital by Pakistan than has occurred, but to do so means addressing the government's two largest fiscal outlays: high defense expenditures and mounting foreign debt (Kukreja 2003). Coming to terms with hostilities with India is one way to reduce both costs, and also to improve economic prospects through increased trade with a neighbor which is a rising economic powerhouse (Etienne 2002b).

5 Although some may argue that greater US investment in the Republic of Korea (ROK) is a key difference, Pakistan has also benefitted from a substantial amount of American largesse with much less effect. In part this may be because American support to the ROK has been more consistent, but the ROK governments (both military and democratically elected civilian) have used foreign aid and internal resources much better than Pakistan's military and civilian governments to benefit its people and grow its economy. The ROK has also been plagued with corruption, and internal and external strife, but its core Confucian values stressing education and mutual obligations between rulers and citizens helped the ROK surge ahead in terms of development as opposed to Pakistan. The ROK's favorable proximity to the economic powerhouses of Japan and China has also helped, which is why improved political and economic ties with rising India is vital to improving Pakistan's standard of living and economic growth in the future.

The United States can also help as a long term, and more consistent supporter of Pakistan through continuing education reform and health care improvements (Shapiro and Fair 2009; Schaffer and Cohen 2009). However, far more U.S. aid has gone to Pakistan's military to win its support with \$12.6 billion from 2002 to 2010, than to economic and social programs at \$3.2 billion (Fair 2009; Synnott 2009b). To better balance the situation, \$7.5 billion for non-military aid was authorized in 2009 by the U.S. Congress, although still "supply-driven aid" in which the United States reflexively spends money on a problem rather than long term, accountable programs (Synnott 2010; Fair 2009, 153). Instead of relying only on dispensing foreign aid, the United States and European Union could also open their markets to Pakistani textiles, the major export industry, to stimulate the economy and wean Pakistan's development away from subsidies (Synnott 2010). Pakistan and the international community can leverage the country's strengths to return it once more to a model of development with a few key, if difficult, improvements.

Economic growth is not necessarily about gaining more or better material possessions, desirable as this may be in reducing poverty. Economic growth is just as concerned with the intelligent sustainable growth that also ensures demographic and societal development with it. The World Bank emphasizes:

Development is about improving the quality of people's lives, expanding their ability to shape their own futures. This generally calls for higher per capita income, but it involves much more. It involves more equitable education and job opportunities. Greater gender equality. Better health and nutrition. A cleaner, more sustainable natural environment. A more impartial judicial and legal system. Broader civil and political freedoms. A richer cultured life (World Bank 2006, 23).

Development encompasses more than just economic improvement; it is also composed of social and demographic advances, political freedoms, economic opportunity, and

even perhaps a sense of collective contentment. Development therefore requires both material wealth and non-material enhancement because they reinforce one another in bettering society. When gauging improvement, development measures have their limitations in that each only partly describes this complex relationship. For a rounded understanding of development, different perspectives are needed including economic measures such as a country's GNI per capita, GDP PPP, income equality, and consumption of goods; social measures including GER, literacy, urbanization, gender equality, perception of corruption, and political rights; and the demographic characteristics of life expectancy, IMR, and TFR among others. For ease of use, these measures can be grouped into a single indicator, such as the HDI or GDI, but even those do not explain fully the situation unless considered with other trends. In many of these markers Pakistan presents a picture of low economic and human development in both absolute terms and relative to other similarly situated states. Pakistan's HDI of .490 in 2010 lags behind the HDI global average of .624, and South Asia's average of .516, placing just above the UN Human Development Report's Low Human Development category (UN 2010c). Since 2000 when Pakistan pledged to promote development, freedom, and peace through the United Nations Millennium Development Goals, it has advanced but still lags in over half of the indicators chosen to measure progress. Pakistan will probably not meet its objectives by 2015 to halve poverty within its ranks due to a combination of poor governance, global economic recession, internal instability, and the earthquake of 2005 and flooding of 2010, according to the 2010 *Pakistan Millennium Development Goals Report* ("Achieving MDGs" 2010). The models and assistance needed for economic, social, and demographic development are available if the Pakistanis can set their fundamentals in order. India and South Korea's more durable successes point the way for Pakistan to follow a more secular, civilian controlled, equitable, and human development focused approach to its future. With these adjustments, Pakistan may yet reach its potential as a stable developed country.

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Pakistan's Struggling Tourism Industry: Inconsistency, Infrastructure, and Image

Chris Fuhriman

*Jin e La'ore Nai Vekhya oh Jamiya Nai.
If you haven't seen Lahore, you haven't lived.
—old Punjabi saying*

2007 was supposed to be the year of new beginnings for Pakistan's tourism industry. Despite the devastation of the Kashmir earthquake in 2005 and increasing terrorist activity in the northeast, a record number of foreign tourists spent their time and money in Pakistan in 2006. According to the Ministry of Interior and the State Bank of Pakistan, 898,400 tourists entered Pakistan through its ports of debarkation in 2006, and spent more than \$260 million (US dollars) in country during their visits (Government of Pakistan 2010). Bolstered by the impressive statistics, the Ministry of Tourism declared 2007 "Visit Pakistan Year," and the Minister for Tourism, Ms. Nilofar Bakhtiar, announced a robust calendar of events aimed at attracting foreign tourists throughout the year. Prime Minister Shaukat Aziz declared that "...the government is determined to leverage the country's vast potential of tourism" (*Balochistan Times* 2007). He also challenged the Ministry of Tourism to attract one million foreign visitors by the end of Visit Pakistan Year (*ibid.*). National expectations for growth in the tourism industry were high. One year later the disappointing statistics revealed that the number of visitors—839,500—was lower than previous year, although the tourists spent \$16 million more in 2007 than in 2006 (Government of Pakistan 2010).

With all of its breathtaking natural beauty, cultural and religious treasures, and shared borders with the two most populous countries in the world (which could provide potential tourists), Pakistan has all the raw materials for a vibrant tourism economy. Yet, the Ministry of Tour-

ism has been unable to develop a self-sustaining industry, and international tourists are choosing other destinations. The question is, “why not Pakistan?” At first glance the obvious answer would seem to be widespread violence and terrorism. The US Department of State reported that more than 200 terrorist attacks occurred in Pakistan in 2009, killing an estimated 970 people (2009). However, other countries with violence problems seem to have no trouble attracting tourists. For example, Israel brought in 2,321,000 foreign tourists in 2009, and Mexico welcomed 21,500,000 foreign guests, earning a worldwide top ten ranking in international tourist arrivals (UNWTO 2010). While militancy and extremism are certainly huge detriments to Pakistan’s tourism industry, they alone cannot fully explain the nature of Pakistan’s difficulty in attracting foreign visitors. This chapter explores three interrelated issues that Pakistan must address to revitalize its tourism industry: inconsistency in the government’s approach to tourism, infrastructure challenges, and a negative country image abroad.

Inconsistency

The first major obstacle to developing Pakistan’s tourism industry is the government’s inconsistent implementation and oversight of its own policies. One need look no further than the brief history of the Ministry of Tourism to see a somewhat disorganized effort to define which government agency has stewardship over the country’s tourism industry. Pakistan became a member of the International Union of Official Travel Organizations (now World Tourism Organization) in September 1949. At that time, however, there was no Ministry of Tourism in Karachi (until 1960, the capital). The Pakistani government relegated the responsibilities and oversight of the tourism industry to the Ministry of Railways, which directed the country’s tourism affairs until 1956. In September of that year, the government shifted the administrative control of tourism

from the Ministry of Railways to the Ministry of Communications and Transport. From 1957 to 1959, a group of ministry planners prepared a long-term framework for the establishment of a national tourism organization. This new government entity would consist of a central department located in Karachi and the following regional offices in locations in East and West Pakistan: Dhaka (in East Pakistan, which became Bangladesh after 1971), Lahore, Peshawar, and Rawalpindi (Ministry of Tourism 2010; Black 2003). The new strategy also called for smaller district offices in Chittagong (Bangladesh), Abbottabad, Murree, Quetta, and Saidu Sharif.

As the details of the national tourism organization were taking shape within the ministry, Pakistan's volatile political situation spiraled out of control. In a desperate attempt to preserve his power, President Iksander Mirza declared a state of martial law on October 7, 1958 – barely a decade after gaining independence from India and the British Raj. Three weeks later, General Muhammad Ayub Khan overthrew Mirza in a coup d'état (Wynbrandt 2009). Ayub Khan's military government re-commissioned the national tourism organization as the Bureau of Tourism in 1960, and moved it from the Ministry of Communications and Transport to the Ministry of Commerce – its third ministry in eleven years (Ministry of Tourism 2010).

The next decade was no less turbulent for the Bureau of Tourism. One year after transferring to the Ministry of Commerce, the bureau was promoted to its own department within the ministry, but this elevated administrative status was short-lived. In 1964 the Department of Tourism became the Department of Civil Aviation and Tourism. Another structural reorganization of the Ministry of Commerce occurred four years later in 1968, when the Department of Tourism realigned under the stewardship of the newly-formed Aviation Division. Just 17 months later, the government adopted a drastically different approach to tourism – the creation of a public limited company to manage the country's tourism industry. The Pakistan Tourism

Development Corporation was established in March 1970, and it quickly assumed all of the commercial and promotional functions of the Department of Tourism. This full-scale transfer of duties out of the department left very little work within the ministry. As a result, the government abolished the Department of Tourism in November 1970. One day later the remnants of the old department became the Tourism Cell of Aviation and the Tourism Division (*ibid.*).

In short, over the course of the first two decades of its existence Pakistan's tourism program bounced among ministries and divisions, never finding a permanent home within the federal government. Clearly the political turmoil and civil unrest during this time played a key role in destabilizing the government's internal structure and hierarchy. Frequent power shifts between military and civilian rule led to changes of the various ministries' responsibilities in each successive regime's vision for the future. Through all the inconsistency however, each new government had two things in common. First, there was no actionable plan for the country's tourism sector and second, there was little interest in exploiting Pakistan's potential for developing an economically viable tourism industry.

The 1970s brought more uncertainty as the Bengali population of East Pakistan grew tired of Islamabad's West Pakistan-centric policy. Amid more civil strife, the election of 1970 was delayed due to a massive cyclone which smashed into East Pakistan causing widespread destruction and loss of life. "Then, entirely dissatisfied with West Pakistan's relief efforts, the Bengalis swept the Awami League to victory, a pivotal event because the proposed system of 'one person one vote' would give the more populous east a majority in the National Assembly" (Weightman 2006, 134). General Yahya Khan and West Pakistan's majority party leader, Zulfikar Ali Bhutto, refused to recognize the results of the election. This was the last straw for East Pakistan. As Hilary Synnott explains:

An ensuing civil war between the East and West wings of the country, 1,000 miles apart from each other, escalated into a war with India as well, and finished with the spectacular defeat of Pakistan's army, the secession of East Pakistan and the creation of Bangladesh. The Pakistan founded by Jinnah had lost a sixth of its land mass and more than half of its population. It had lasted only 24 years (Synnott 2009, 20).

When the dust settled, the old Tourism Division became the Ministry of Minority and Religious Affairs and Tourism in 1972. Bhutto's new government, however, did not emphasize tourism in its economic strategy. Amid an increasing national budget deficit and high inflation rates, the tourism division's inter-ministry migration continued (Wynbrandt 2009). In 1976 it returned to the Ministry of Commerce, where it stayed briefly until the establishment of the Ministry of Culture, Sports, Tourism and Archaeology in 1977. For the next two decades, the tourism sector fell under the administrative control of the same ministry, but it continued to move from one division to the next.

Throughout these years, tourism received varying degrees of support and emphasis from the incumbent regime, and as a result, it failed to achieve permanent status in any ministry or division (Ministry of Tourism 2010). In 1996, the Ministry of Culture, Sports, Tourism and Archaeology reorganized as the Ministry of Culture, Sports, Tourism and Youth Affairs. Four years later the ministry added minorities' affairs to its realm of responsibilities, becoming the Ministry of Minorities, Culture, Sports, Tourism and Youth Affairs. Thus, over the course of fifty years, Pakistan's tourism division had been grouped with railways, aviation, communication and transport, commerce, minorities, religion, culture, sports, youth activities, and archaeology. Although each of these other divisions is arguably related to tourism (although intra-Pakistan minorities and youth activities are a bit of a stretch), none was a good match in terms of garnering government priority for development. The lack of emphasis and constant restructuring indicate

Pakistan had no concrete vision for tourism, and consequently passed it from ministry to ministry (or division to division).

Recently, however, Pakistan has taken a step in a different direction. For the first time in Pakistan's history, the tourism division became its own ministry in September 2004—this time with no strange bedfellows. With this new status, the Ministry of Tourism defined its functions and duties at the national level:

1. Promotion and development of tourism in Pakistan
2. Pakistan National Tourism Council
3. Publicity and establishment of tourist centers in Pakistan and abroad
4. Establishment of tourism information centers for the guidance of domestic and foreign tourists in Pakistan
5. Development of tourist facilities in areas with tourist potential where [the] private sector is shy to invest
6. Pakistan Tourism Development Corporation
7. International organizations and agreements relating to tourism.
8. Tourism and hotel training institutes
9. Facilitation of travel in Pakistan for tourists
10. Training and research in tourism in Pakistan and abroad
Control and regulation of tourist industries and allied service (2010)

With a clear roadmap for the future and a new status as a full ministry, tourism finally seemed poised to reach its potential in Pakistan. The early indicators following the establishment of the Ministry of Tourism were good.

Foreign tourist arrivals in Pakistan increased by more than 150,000 in 2005 and by an additional 100,000 in 2006 (Figure 1). Earnings from foreign tourists also increased, giving a much-needed boost to Pakistan's economy (Figure 2). In the first five years of the ministry's existence, Pakistan has averaged nearly 850,000 foreign tourists annually, compared to 540,000 in the previous five years (2000-2004). Yet, to date, Pakistan has not reached their goal of one million foreign tourist arrivals, and inconsistency is still part of the problem.

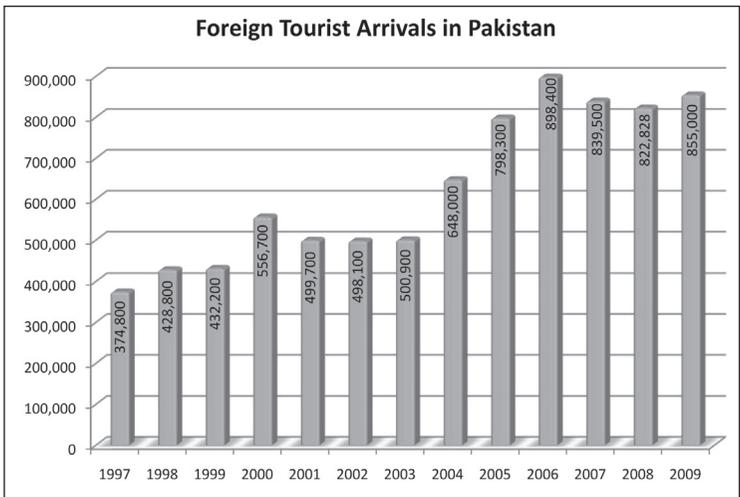


Figure 1. Foreign tourist arrivals in Pakistan from 1997 to 2009.

Source (data only): Government of Pakistan and UNWTO

Despite (finally) creating the autonomous Ministry of Tourism, Islamabad continues to send mixed messages about the future of tourism in Pakistan. On September 27, 2010 Pakistan's president, Asif Ali Zardari, proclaimed, "On the World Tourism Day being observed today, let us reiterate our resolve to promote tourism in the country on the one hand, and share its benefits with the world on the other" (APP 2010a). At the same event Prime Minister

Syed Yusuf Raza Gilani added, “We are celebrating World Tourism Day at a time when the need for enhanced interaction and engagement among people and nations could not be greater” (APP 2010b). These statements, reaching out to the world via tourism, indicate a welcoming, open, and engaging attitude toward foreign tourists. Yet, Maulana Atta-ur-Rehman, Pakistan’s Minister for Tourism, seems to have a very different opinion about bringing in guests who have different standards of morality and diverse religious views. One example of the minister’s approach to tourism lies in the interpretation of one of Pakistan’s national laws: the consumption of alcohol.



Figure 2. Earnings from foreign tourism in Pakistan from 1997 to 2009.

Source (data only): Government of Pakistan and UNWTO

In 1979 the government began an Islamic reform of the legal system. One of the ordinances that took effect was the Prohibition Ordinance, which “established criminal penalties for the possession of alcohol and prohibited drugs” (Kennedy 1990, 70). Since then, Pakistan has tolerated the (controlled) use of alcohol by foreign visitors and

non-Muslims. Anyone who wishes to consume alcohol in Pakistan, however, must purchase a liquor permit for a small fee (Singh *et al.* 2008). But Maulana Atta-ur-Rehman has taken a conservative stand on Pakistan's laws, insisting that Islam's moral code (including alcohol prohibition) be extended to visitors of Pakistan regardless of religious affiliation (Roy 2009). Although the Minister for Tourism's personal view is not currently being enforced, it may dissuade many potential tourists from choosing Pakistan as their vacation destination, and certainly is not in keeping with Zardari's and Gilani's vision of a more welcoming, open Pakistan. Philosophical differences between Pakistan's executive leadership and the Ministry of Tourism do not end with alcohol. Maulana Atta-ur-Rehman also appears to have taken the complete opposite stance on terrorism. Speaking at an event in northwestern Pakistan in November 2010, he referred to the Taliban as "true followers of Islamic ideology" (Swami 2011). During the same speech he also stated that the United States of America is "the biggest terrorist in the world" (*Times* 2010, 42). These hardly seem like statements from the leader of a tourism industry that seeks to attract foreign visitors, and could well benefit from the large potential U.S. tourist market. The ministry's own statistical reports consistently list the US in the top five tourist generating countries. In Pakistan's largest tourism year to date (2006), the United Kingdom topped the list, followed by the United States, Afghanistan, India and China (Government of Pakistan 2007). Atta-ur-Rehman's anti-US rhetoric does little to attract more tourists or support his ministry's goal to advance tourism in Pakistan. Rather, it serves to underscore Islamabad's need to address the chronic inconsistency in its tourism development scheme.

Infrastructure

Prime Minister Gilani's 2010 World Tourism Day remarks included an assurance that Pakistan is committed to be-

coming the great tourist destination it once was. Said Gilani, "We have rich culture and civilization that dates back to [the] Indus Valley Civilization blended with rich Islamic heritage" (APP 2010b). While it certainly has a variety of cultural, historical, religious, and natural tourist attractions, what Pakistan does not possess is the infrastructure necessary to accommodate a large volume of tourists. The World Economic Forum's *Travel and Tourism Competitiveness Report* highlights these deficiencies. This report, published annually since 2007, "aims to measure the factors and policies that make it attractive to develop the [travel and tourism] sector in different countries" (Blanke and Chiesa 2009). The travel and tourism competitiveness index (TTCI) is divided into three sub-indexes (regulatory framework; business environment and infrastructure; and human, cultural, and natural resources) which are further divided into pillars of travel and tourism (T&T) competitiveness (Figure 3). Each pillar is comprised of a number of variables based on hard data obtained from public sources, international organizations, and travel and tourism institutions; and on survey data obtained from CEOs and business leaders in all surveyed countries (ibid.). The end result is a composite T&T competitiveness score which corresponds to an overall rank for each country surveyed.

The 2009 report included an analysis of 133 countries. Pakistan was ranked 113 out of 133.

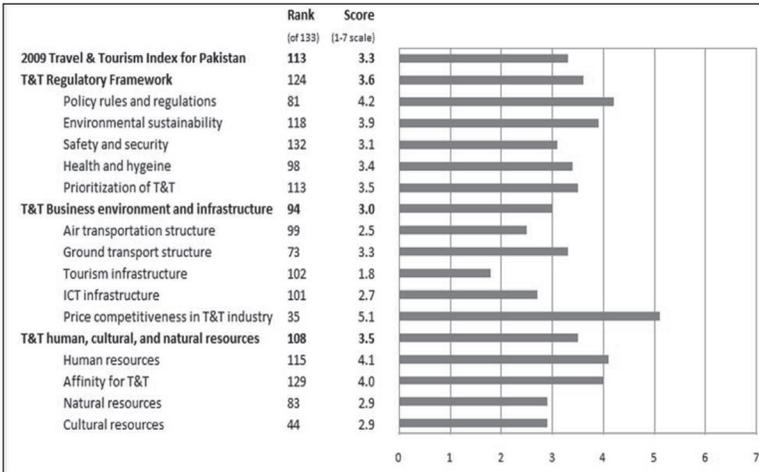


Figure 3. Travel and tourism competitiveness sub-indexes (bold) and their corresponding pillars.

Source (data): World Economic Forum (2009)

Only Nepal and Bangladesh had a lower rank in the Asia region, and 15 of the other countries comprising the bottom 20 are in sub-Saharan Africa (ibid.). While Pakistan’s overall rank is telling in and of itself, it is useful to examine the details of the T&T pillars to quantify why the country’s tourism industry still has room for much improvement.

Pakistan’s lowest score (not rank) in the report came in the “tourism infrastructure” pillar (Figure 3). This pillar measures three indicators: hotel rooms, presence of major rental car companies, and number of ATMs accepting Visa cards. The hotel rooms score is based on the number of hotel rooms per 100 people in the country. Pakistan’s rank for this indicator was 119 (out of 133). In other words, only 14 countries had fewer hotel rooms per 100 people than Pakistan. Already at a competitive disadvantage, Pakistan’s hotel industry suffered a major setback during the floods of July 2010. In the Swat Valley alone, 107 hotels were destroyed and hundreds more were damaged by the flood waters (*International News* 2011). With a vested interest in

a stable Pakistan, the United States recognized the need (and opportunity) to help rebuild the collapsing tourism industry—especially in the Swat region where militants destroyed 60 hotels before the floods. As part of the larger USAID Swat Economic Recovery Program, the United States agreed to provide \$5.2 million in grants to hoteliers and fish farmers in Swat Valley. By the end of 2012, 320 hotels and 31 trout farms will receive an average of \$15,000 per business (US Department of State 2010). Even with this influx of foreign money, the number of hotel rooms will not return to their pre-flood levels until at least 2012. Unless the federal and/or regional governments place more emphasis, and consequently more money, on (re)building the tourism infrastructure, Pakistan will continue to occupy the bottom of the TTCI in that pillar.

Pakistan is also at a competitive disadvantage (rank of 73) in the second indicator of the tourism infrastructure—the presence of major rental car companies. This indicator measures the availability of seven major companies: Avis, Budget, Europcar, Hertz, National Car Rental, Sixt, and Thrifty. Of the seven companies, only Avis and Hertz offer car rentals in Pakistan (2011). Any improvement in this variable would certainly need to occur either in conjunction with, or after improvements are made to Pakistan's ground transport infrastructure, which ranks 73rd on the TTCI. Pakistan is currently constructing a national motorway system to supplement the existing national highway system (TDCP 2011). These and other ground transport projects are at serious risk, however. With flood damages to the road infrastructure exceeding \$210 million, Pakistan is struggling to pay for repairs on existing infrastructure, let alone fund new construction projects (Rahman 2010). It seems unlikely that Pakistan will be able to create a demand for more rental car companies as long as the road system and ground transport network lag behind more competitive tourist destinations.

On one hand, the flood tragedy may present the Ministry of Tourism with a unique opportunity to develop a

larger tourist market for the Karakorum Highway. A joint project between Pakistan and China from 1965 to 1986, the Karakoram Highway stretches more than 800 kilometers and climbs to an elevation of nearly 5,000 meters (Weightman 2006). It is the (only) gateway to Pakistan's tourist destinations in Gilgit-Balitistan, where many foreign tourists go for trekking or mountain climbing in the Karakoram Range. *The Guardian* listed the highway itself as one of Pakistan's top five places to see (Windsor 2006). As Pakistan continues to repair and rebuild in the aftermath of the floods, the Ministry of Tourism and the government of Pakistan could use this opportunity to carry out infrastructure improvements with tourism development in mind. Some considerations might include new tourist information centers at strategic locations along the route. A government-built tourist facility within driving distance to Nanga Parbat, the ninth highest mountain in the world, may attract a rental car company and a hotel company to expand business into the Karakoram. The natural resources are available in this area – the government simply needs to invest in improving the infrastructure, and then find an effective means to advertise its product. Perhaps in marketing Gilgit-Baltistan to foreign visitors, the current regime could borrow former President Musharraf's description of the Karakoram Highway. The slogan might read, "Come to Pakistan and drive through the heavens on the 'eighth wonder of the world' (Bajpai 2009, 88).

The final element of the TTCI's tourism infrastructure pillar is the availability of automated teller machines (ATM) which accept Visa cards. The score is based on the number of ATMs that accept Visa cards per million people. A query on Visa's website revealed that Karachi has 54 Visa-compatible ATMs (with a population of 13 million), Lahore has 60 Visa-compatible ATMs (8 million), and Islamabad has 61 Visa-compatible ATMs (1.2 million) (2011). The approximate total number of ATMs in Pakistan in 2009 was 4000 – a ratio of one ATM for every 42,500 people (M.

Khan 2010). By comparison, the approximate total number of ATMs in the United States in 2009 was 403,000—a ratio of one ATM for every 760 people (Gammon 2009). The approach for improving this metric should essentially be the same as the rental car company variable—increase the demand. As the Ministry of Tourism strives to develop new tourist facilities and information centers, it can ensure that ATMs are integrated into the plans for new construction or renovations.

Another TICI pillar that contributes to Pakistan's low overall ranking is air transport infrastructure. This pillar has seven variables, three of which are of particular concern for Pakistan. The first is departures per 1,000 population, the second is airport density and the third is international air transport network. The departures score is based on the total number of domestic and international take-offs per year for each registered air carrier (Blanke *et al.* 2009). To increase this score relatively quickly, Pakistan could appeal to domestic tourists to choose airplanes as their mode of travel. A well-researched advertising campaign from the Ministry of Tourism could increase the demand for domestic flights or even international flights from India or Iran. More flights over time would call for improvements in the next variable—airport density, which measures the number of airports per million population as well as the number of airports with at least one scheduled flight per million population. Already looking to the future, Islamabad expects to open its new state-of-the-art international airport in September 2011, and another major airport construction project is underway (although not without its challenges) in Gwadar (Hussain 2011).

A new world-class airport in Islamabad will boost the score of Pakistan's international air transport network as well. This variable measures airport connectivity with international destinations. With more and better airports, Pakistan could more effectively attract regional international tourists from India and China. Currently, the average number of foreign tourists from India is 70,000 per year. Twenty percent of those tourists come to visit Hindu

religious sites such as the Kali Mata temple in Umarnkot (Polanki 2008). Religious tourism is one niche that could pay large dividends in a relatively short amount of time. A carefully-placed regional airport or two combined with an innovative marketing plan would have the potential to lure millions of Indian tourists across the shared border. Whatever the approach, Pakistan needs to bolster its connectivity to the international air network by increasing the number of international flights and destinations.

Image

The fact that many foreigners have a negative perception of Pakistan as a tourist destination is not lost on Islamabad. In 2007 one government official remarked, "We have an image problem, yes, but doing nothing about it would not help [improve Pakistan's image]" (Montero 2007). In some ways, Pakistan is taking steps to soften its image abroad. In January 2011, Ambassador Umar Khan Alisherzai helped promote the release of a tourism book about Pakistan for Saudis, who have been traveling more and more to Pakistan in recent years. He highlighted Pakistan's "huge tourism potential, which includes diverse cultures, peoples and landscapes" and he "appealed to people not to be swayed by 'negative media reports and projections about Pakistan'" (G. Khan 2011). The government's collective effort to accentuate the positive was also evident in the Ministry of Tourism's attempt to re-brand Pakistan as a tourist destination, not a terrorist destination. As part of a tourism assessment project that spanned two years (2007-2008), the ministry surveyed foreign guests on their stay in Pakistan, hoping to glean useful feedback in improving Pakistan's tourist appeal. One of those surveys landed in the hands of Simon Robinson, a foreign correspondent (now senior editor) for *Time*. His response to one of the survey questions ("Would you please like to identify the problems you faced during the trip?") perfectly encapsulates Pakistan's image woes: "The problems I faced during my trip? Riot-

ing, looting, burning of shops and tires along roads, shooting, general chaos, mayhem, and insecurity – and a very bad stomach ailment” (2008).

The particular chaos that Robinson experienced was a response to the assassination of Benazir Bhutto, a leading contender to become prime minister (it would have been her third time) and an outspoken critic of Musharraf’s regime and al Qaeda (Masood 2007). Shortly after Bhutto was killed, an al Qaeda spokesman stated, “We terminated the most precious American asset which vowed to defeat [the] mujahedeen” (Shahzad 2007). Another high profile assassination has added to Pakistan’s violent reputation. On January 4, 2011, the governor of Punjab Province, Salmaan Taseer was shot 26 times with a sub-machine gun fired by one of his own security staff (BBC 2011). The assassin, Mumtaz Qadri, killed the governor for his stance on relaxing Pakistan’s blasphemy laws. Perhaps the most disturbing aspect of this type of violence is the response of the Pakistani people:

Qadri, who happily confessed to murdering the politician he was assigned to protect, has little chance of being convicted. Instead of suffering ostracism, he was greeted with handshakes and garlands by courthouse lawyers, who offered to defend him pro bono. The provincial court system, notorious for freeing radical Islamic leaders, is unlikely to condemn a national religious hero. “There is no justice in our country for the common man, but Qadri’s act against a blasphemer has made all Muslims feel stronger,” a shopkeeper in Rawalpindi told me. “They can punish him, but what will they do with a million Qadris who have been born now?” (Constable 2011) This lionization of extremism does little to entice foreign visitors to plan a trip to Pakistan. Rather, these attitudes coupled with Pakistan’s record of violence are the reasons the US Department of State is compelled to categorize Pakistan as dangerous and unstable (2010). At the beginning of 2011, Pakistan was one of 31 countries on the Department of State’s current travel warning list (ibid). Also of note, the TTCI measures

the attitude of a host country's population toward foreign visitors in its 12th pillar, affinity for travel and tourism. Not surprisingly, Pakistan ranked near the bottom of counties surveyed—127 out of 133. It is difficult to interpret this ranking as anything other than Pakistanis simply do not have a positive attitude toward foreign tourists (Blanke *et al.* 2009).

The US government and the World Economic Forum are not the only entities who view Pakistan as a dangerous, unwelcoming place. *Forbes* listed Pakistan as the fourth most dangerous country in the world in 2010. The *Forbes* list is based on the analysis of data provided by iJet (an American risk assessment company) and Control Risks (a British risk assessment company). The data consist of “crime rates, police protection, civil unrest, terrorism risk, kidnapping threat and geopolitical stability” (Olson 2010). According to the *Forbes* analysis, only Somalia (#3), Iraq (#2), and Afghanistan (#1) are more dangerous. *Travel + Leisure* magazine also listed Pakistan as one of the world's 15 most dangerous countries, but did not rank the countries on the list in any order (Orwall 2009). Although *Travel + Leisure* did not use (or did not disclose the use of) objective data in their rankings, this type of publication is useful in determining perceptions of tourist destinations.

These perceptions have become reality, especially for many companies which have attempted to operate in Pakistan's hostile business environment. In the TTCI's safety and security pillar, one of the measured variables is the business costs of terrorism. This metric is calculated based on survey data (the degree to which the threat of terrorism imposes significant costs on business), not actual monetary figures. Only three countries scored lower than Pakistan's 130 (also Pakistan's lowest total score for any metric in the entire TTCI). Pakistan will continue to find it difficult to attract significant numbers of foreign tourists when it cannot attract the businesses required for growth in the tourism industry.

As previously discussed, Pakistan needs more hotel rooms to become competitive. And yet, hotels are a very popular target for terrorists. Aside from the 60 hotels destroyed in attacks in the Swat Valley, militants targeted the Marriott Hotel in Islamabad on at least three separate occasions (*New York Times* 2008). The most devastating attack occurred in September 2008 when an explosives-laden truck carrying 660kg of ordnance rammed the security gate and detonated its payload. Fifty three people, including the Czech ambassador, were killed and 266 were wounded in the blast (Borka 2008). Speaking of al Qaeda and the Pakistani Taliban, one terrorism expert commented, "It seems that someone has a firm belief that hotels like the Marriott are serving as 'barracks' for Western diplomats and intel personnel, and they are gunning pretty hard for them" (*New York Times* 2008). It is hard to blame foreign tourists for choosing destinations other than Pakistan where hotels are always in the crosshairs of terrorists.

Quite frankly, Pakistan's negative image abroad is simple to quantify. The sheer volume of terror attacks, incidents of sectarian violence, and civil unrest is staggering. Despite eager government officials' pleas to overlook the dangers of visiting Pakistan, tourists will continue to view travel to the country as dangerous because of the threat of terrorism.

One need not labour [sic] the point that Islamic fundamentalism is incompatible with a pluralist, democratic, and human rights-friendly social and political order; further, that is violence-prone and can be used as an incentive to carry out terrorist activities. Unless Pakistan can bring it under control, there will be no return to normality, stability, and peace within Pakistan and indeed around it (Ahmed 2009, 176).

Conclusion

This chapter has demonstrated that Pakistan's challenges to sustain a vibrant, economically-viable tourism industry go far beyond its negative image abroad. The govern-

ment's (inconsistent) policies for tourism development and administration have been ignored, misplaced, or otherwise abandoned over the years. It is clear that Islamabad cannot decide between welcoming foreign visitors to Pakistan and openly lauding oppressive Islamic extremists as heroes. The government must realize it cannot embrace both tourists and terrorists – it must choose one or the other. Pakistan's indecision and ineffectiveness are further reflected in its underdeveloped tourism infrastructure. Far too little federal funding (only 2.3 percent of the GDP) is allocated for the development of tourism facilities, roads, airports, and hotels (Blanke *et al.* 2009). And finally, for Pakistan's reputation abroad to improve, it must take a firm stance against violence, which has become the norm in Pakistan. Islamabad's problems of inconsistent policy (with regard to both tourism and terrorism), poor tourism infrastructure, and tarnished image abroad are interrelated, complex, and multi-layered. There is no easy fix, but a commitment to democratic processes, and a clear vision for the development of the tourism infrastructure would be steps in a more peaceful, profitable direction.

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The Pakistan That I Know

Ethan Casey

Most American writing on Pakistan covers the country's geopolitical position, its role as a leading and problematic Muslim-majority nation, its status as a nuclear power, and what we presume—correctly enough—to be the relevance of these aspects of its identity to U.S. interests and policymaking. The reasons for this are obvious and understandable, but to me they've never been the most interesting or useful things to know about Pakistan. Maybe I'm a contrarian, but there are reasons I titled the first of my two books on the country *Alive and Well in Pakistan*.

American habits of mind, reflected in the culture of U.S. publishing, are exemplified by the New York literary agent who, when I told him I had published a book on Pakistan, asked: "What's your argument?" I was so nonplussed by the question that I could scarcely blurt out the answer: I'm not making an argument; I'm telling a story. If I have an argument, it's implicit. My books are first-person travel narratives, not only because that's the kind of book I'm able and willing to write, but also because that's the kind of book that rarely gets written about Pakistan, and one I feel the country needs and deserves. Even as enraged "beardies" (a term of opprobrium Pakistanis themselves use) shout in the streets and politicians alarm the world with their brinkmanship ("the comic opera of Pakistani politics," in author Raja Anwar's nice phrase), what about everything else that happens in Pakistan? "To a political journalist, a politicised country is thrilling," writes Emma Duncan in *Breaking the Curfew: A Political Journey through Pakistan* (1989), and

it's impossible—and would be perverse—to ignore politics when writing about Pakistan. But nor is it always necessary to attack the political story head-on. So I choose to write about everything else, and to let the politics seep in.

The Daily Telegraph's reviewer understood what I was attempting when he wrote that “[t]he author’s true journey is a search for common humanity,” and indeed travel writing that aspires to be both literary and topical is much more a British tradition than an American one. Britain used to rule much of the planet but does so no longer, and British writers, as inhabitants of a medium-sized country that no longer really matters very much, are at liberty to sally forth beyond their own shores equipped with both a sincere curiosity and a salutary humility. Americans burdened with worries about what American policy should be may feel constrained from cultivating such traits. That’s a shame, if we believe in the importance of educating and engaging not only what we call the policymaking elite but also the American public. As an American writer concerned with Pakistan, I take it as my task not only to listen thoughtfully and respectfully to Pakistanis, but to relay their stories and perspectives in ways that enhance the understanding and enlist the sympathy of mostly non-official Americans.

To be fair, the British publishing establishment is not immune from fickleness and myopia. I first pitched a book about Pakistan in 1999, to the London literary agent Gillon Aitken. “This is a cynical world, the more’s the pity,” he responded. “There are very few people in it, outside the subcontinent, who give a damn about Pakistan.” In retrospect, I wasn’t yet ready to write that book—which was just as well, because by 2003 a lot had changed. I arrived in La-

hore on September 11 of that year to spend a semester teaching journalism at the new Beaconhouse National University, determined to notice and record whatever happened to happen, and confident that the slice of history I stumbled across would say something true and interesting. I went into the reporting project that became *Alive and Well in Pakistan* with no governing theory or agenda, nor did I emerge with one. What I didn't want was to add to the perpetual torrent of mere commentary. I felt the most useful thing I could do was to dip my oar into the river of history, ride it downstream wherever it might lead, and record whatever I found significant as coherently as I could manage.

*

A question I'm asked often by friendly if bemused Pakistanis is, Why Pakistan? Why did I go there in the first place, and why do I keep going back? I've never found a satisfactory answer, and I usually respond by quoting John Lennon: "Life is what happens to you while you're busy making other plans." But hovering implicit behind the question is the history and atmosphere of mutual suspicion between Pakistan and the United States: Why *would* you come here? Why are you *really* here? I often find myself teasing this suspicion into the open, by joking: "Actually, I'm with the CIA." That line usually provokes nervous and/or rueful laughter, although in the wake of the Raymond Davis incident it's no longer so funny.

The truth is that I really am an unaffiliated private citizen who first went to Pakistan in 1995 out of personal curiosity and eagerness to learn (which should always be any journalist's motives) and a search for

adventure. My reason now for continuing to return, and for pursuing Urdu language study and a graduate degree in South Asian Studies at the University of Washington, is more considered: I feel a responsibility to continue bearing witness. I emphasize this because I don't think there are many Americans with the kind of innocently initiated and durably cultivated *personal* relationship with Pakistan that I enjoy, and the world would be a happier and safer place if there were.

What led me originally to Pakistan was my interest in Kashmir, and what led me first to Kashmir was a callow reverence for the writer V.S. Naipaul, whose first travel book on India, *An Area of Darkness* (1964), contains a long, exquisitely rendered section about a summer he spent living in Srinagar. Beyond literary tourism, my interest was piqued by the months-long standoff in 1993-94 between Indian soldiers surrounding the Hazratbal mosque near Srinagar and militants holed up inside with hostages, protecting what they believed to be a whisker from the Prophet Mohammed's beard. The status of Jammu & Kashmir State had been disputed between India and Pakistan since 1947, of course, and still is, and Kashmiris often say a plague on both their houses and correctly point out that they were promised a UN-supervised plebiscite, with independence as an option. But my own interest in Kashmir was contingent on the fact that the active uprising against Indian rule, which began in 1989-90, was heating up and gaining some international attention just as I was growing bored with my desk job in Bangkok and looking for what Graham Greene called a way of escape.

And my Kashmir adventure is what compelled me to visit Pakistan for the first time, in 1995, because I had come to see that there are three points of view on

the Kashmir dispute, and to feel that I could do justice to Pakistan's point of view only by going there. (And my own thin-skinned provincial's sense of grievance and injustice, imbibed from having grown up in Wisconsin, led me to feel that Pakistan's legitimate views and interests were not respected for two reasons that are not legitimate: because it's smaller than India, and because it's a Muslim country.) Then one thing led to another, as it always does in Pakistan, and I've been going back ever since.

The proximate occasion for my first visit was the newsworthy trial of two Pakistani Christians, including a 14-year-old boy, on trumped-up charges under Pakistan's highly controversial blasphemy law. I arrived in Lahore, overland from Amritsar via the Attari-Wagah border crossing, and witnessed a riot on my first morning in Pakistan. Then my editor at the *South China Morning Post*, the Hong Kong daily, became interested in the ethnic and sectarian violence in Karachi (because two U.S. Consulate employees had been killed during their morning commute), so I went to Karachi and, while there, interviewed Benazir Bhutto's estranged and embittered brother Murtaza (who died a year and a half later in a gun battle with Karachi police that many Pakistanis openly believe was ordered by Asif Ali Zardari, then Benazir's husband and now Pakistan's president). As I said, one thing always leads to another in Pakistan.

"What is your country?" is a question one hears often in the subcontinent.

"England," I said my first day in Karachi, when a well-dressed young man asked, as I sat on a curb minding my own business.

"Do you know about Karachi's situation?" he called to me, with evident concern.

"Yes, thank you," I said.

“Yet you are so confident.”

I didn't feel as confident as I may have looked. I walked over to him; we shook hands; he offered me a cigarette. I took one and told him my real nationality.

“You should never tell anyone here that you are from America,” he advised me gravely.

I asked him who was to blame for the unrelenting shootings and mosque bombings. Most Karachiites, he said, blamed America, India, and the Jews. People in Pakistan admired Germany, by the way, because it was a powerful country, a rich and efficient country. And besides, he added with a chuckle, “They killed the Jews!”

I must have looked shocked, because he quickly added, “Oh! You are not a Jew, are you?”

“No, I'm not.”

He was relieved. “If you were a Jew I would not have said that. Because we have to be hospitable to our guests.”

I asked what solution he saw for Karachi.

“Some kind of revolution,” he said, half-heartedly. “Some kind of new gummint. Perhaps.”

“New national government?”

“Yes. But then we will have to watch what that new gummint does.”

That brief encounter encapsulates a distinctly Pakistani blend of confusion, vulnerable humanity, Islamic hospitality, paranoia, frustration, idealism, and resignation. I've been having similar conversations ever since. Characteristically, Pakistanis reserve their greatest ire for themselves. Where did they go wrong? Why oh why have they failed to live up to the national ideal—which is, after all (isn't it?), to be Islamic in the best and most rigorous sense, since otherwise the country has no reason to exist? During my action-packed

first two months in Pakistan, I conceived a genuine liking for this improbable, hyper-political country that wears its many grave problems on its national sleeve. "Pakistan's strange origins have given it a tendency to national self-analysis which initially attracted me to the place," writes Emma Duncan. "A country based on an idea has an ideal, however confused that may be; at least, different people in it will have some sort of ideal that the place is supposed to be living up to." As an American, I appreciated the pathos of a country trying, and usually failing, to live up to an ideal.

And a perpetually politicized Islamic country was a canary in the mineshaft, at a time when many were beginning to see Islam as the next global menace. Pakistan has been a crucible for my education ever since 1995, for exactly that reason. And in Pakistan, political speech and posturing are usually framed in terms of more-Islamic-than-thou; politicians and political writers sometimes cite, literally, chapter and verse of the Quran to refute each other. After my first visit to Pakistan, I began to see Islam as a complicated grid of religious traditions and political, moral, and social ideas, contingent on their history and sometimes only obscurely related to each other. How this is anything but strictly analogous to Christianity, or Indian secularism, or "the American way of life," I failed and still fail to see.

My methodology is simply to show up and to listen, in a spirit similar to Paul Theroux, who advocates (and practices) travel writing that is "prescient without making predictions" and argues: "I have always felt that the truth is prophetic, and that if you describe what you see and give it life with your imagination, then what you write ought to have lasting value, no matter what the mood of your prose" (Theroux 2000).

I would add that listening implies respect, and respect implies difference and distance: that is, it's not necessary to agree with everyone you meet in order to enjoy shared humanity and even friendship. So, for example, one day in September 2003 I showed up at a Pepsi Cup one-day cricket match between Pakistan and South Africa at Lahore's Gaddafi Stadium. I was the only foreigner in the all-male general enclosure, i.e. the cheap seats. As I climbed the concrete steps, several groups good-naturedly vied for me to sit with them. As the coin was being flipped to decide which team would bat first, a bearded man to my left remarked: "Pakistani batsmen are not good chasers. It is a very tender matter what you decide to do. If you decide to bat first and you lose, they will say you were foolish."

South Africa won the toss and opted to bowl first.

"But if Pakistan are not good chasers, South Africa should bat first," I objected.

"But there is the dew problem," he explained patiently. "In day-and-night matches, there is too much dew, and it is difficult to hold the ball in your hand."

His name was Mohammed Faisal, and he was a teacher of English and mathematics in a village near Gujranwalla, about 100 kilometers from Lahore. He was young, in his twenties. He had arrived that morning with twenty or so of his friends in the bed of a Toyota pickup, and this was his first visit to a proper cricket stadium. He wore a clean *shalwar kameez* and spoke English slowly but correctly. He might have been any of numerous severe-looking beardies one passed daily in the street.

"Pakistan!" shouted someone in the crowd.

"Zindabad!" shouted the entire enclosure as one. Long live Pakistan!

“Pakistan!”

“Zindabad!”

“Pakistan!”

“Zindabad!”

“Who’s going to win?”

“Pakistan will win!”

“Allah-u-akbar!”

God is great! Long live Pakistan!

“The behavior of the spectators is the same in America?” Mohammed Faisal asked me. “The raising of the slogans?”

“Oh, yes,” I said.

“Pakistan nation is very lazy,” he lamented. “Therefore they can afford these day-long matches, five-day tests.”

A clean-shaven, jolly young fellow sat on my other side, a Pathan named Naeem Khan. He came from the same district as the great cricketer turned ineffectual politician Imran Khan, and he liked him. “He speak about politicians, what they do wrong,” he said. “Do you belong to intelligence?”

“No, I don’t belong to intelligence.”

“Because you are writing down each and every thing we say.”

“It is a very childish question,” said Mohammed Faisal sternly.

A batsman made out by hitting a ball backwards that was caught by the wicketkeeper.

“It is a game of patience,” said Mohammed Faisal. “If you want to make runs, you have to stay in. That ball was wide. He should have left it.”

At the end of the long, hot day – Pakistan won, 267 runs to 225 – I said to him: “Maybe I will come to your village sometime, if that’s all right.”

“Yes, of course,” he said. “We would be hon-

ored. You're not afraid of coming to a village where almost everyone is Muslim?"

"No, I'm not afraid," I said. "Should I be?"

The men around us thought this was really funny.

Mohammed Faisal put his hand on his heart and said: "It was you who made our journey memorable. At first I didn't know what you would speak to us. I was a bit shy. But you speak to us very nicely. In my village I have no one I can speak English with."

"Do you have email?" I asked.

"No. We don't have that facility. Only phone. We will meet again, *inshallah*."

On my way out of the stadium, a high-spirited young man shouted at me: "You are South African?"

"No, American," I shouted back.

He glared at me challengingly and demanded: "Pakistani terrorists?"

"Pakistani good cricketers," I replied.

"Your president say Pakistani terrorists."

"He's not my president. I don't like him."

"You don't like Bush?"

"No."

"Very good!" he cried joyfully. "I f**k for Bush!"

That semester spent living in Lahore was a gratifying respite from the rootless life of a foreign correspondent, and an opportunity to get to know Pakistan and Pakistanis in a way I hadn't been able to do before. When I entered the classroom for the first time, I had trouble pronouncing names. Five months later, I knew each of my students as an individual and could articulate how he or she had grown. One was a tall, effervescent young woman named Sadaf Daha. Sadaf was a U.S. citizen, born in 1980 in Connecticut, where her father had been doing his medical residency. Because

the U.S. didn't allow dual citizenship she was not also a Pakistani citizen, even though she had grown up in Pakistan. In February 2003, she had been deported from Pakistan.

"For me it was like the end of the world, like I wouldn't get to see anybody ever again," she told me.

She had flown on Emirates Airlines from Boston to Lahore, via London and Dubai. She had expected to get a visa on arrival in Lahore, as used to be possible for Americans. "They gave it in the newspaper that if you're an American living in Pakistan, you don't need a visa," she explained. "The guy at Heathrow Airport, he said, 'You can go. You're not going to have any problem.'"

The immigration officials at Lahore, all men, had grabbed her arm and made her mother remain on the other side of a glass wall, and they had forced her to board a plane back to Dubai. "It was the Eid holidays, so nothing could be done," she said. In Dubai, she was not allowed to leave the airport. "They didn't give me a hotel room or anything," she said. "They're supposed to, but they didn't. There was this lady who took care of me. She was a total stranger. She arranged money for me, which my father sent."

Months later, Sadaf was still indignant. "Okay, even if I was deported because I didn't have a visa, they didn't have the right to harass me. Especially in Pakistan, where they're not even supposed to touch women. It messed me up for quite some time. It made me feel insecure, just the thought that I couldn't do anything about it."

I asked why she thought they had treated her so harshly.

“He said, ‘If one of us had gone to the U.S., this is what the *goras* [whites] would have done to us. So this is revenge.’ I said, ‘So do it to them, not to one of your own!’”

*

Sadaf was a scion of a community I’ve come to know well over the years since, and that I see as potentially playing an important positive role in several societies: the internationalized professional and corporate Pakistani elite.¹ Her cry to the immigration officer is replete with ironies and contradictions, because both “they” and “we” urgently need to begin acknowledging that we are they, and vice versa.

After returning to live in the United States in 2006, I began being invited to speak at fundraisers for non-profit groups founded and funded by the Pakistani-American immigrant community. This enriching experience, which continues, is helping me see not only Pakistan but America in a new way. For example, the efforts of young members of the Islamic Association of Greater Detroit who planned a fundraiser in January 2010 moved me so much that I included in my speech this line: “We all know that America is a nation of immigrants. As an American whose ancestors came here in the 19th century from Ireland and Germany and France, I want to thank you for contributing not only your talents and material resources, but also your impressive children to help build a new, improved America in the 21st century.” And the com-

1. See my October 2010 article “Muslims in America: Time for a Movement?” and the comments on it: <http://www.ethancasey.com/2010/10/muslims-in-america-time-for-a-movement/>.

munity's middle-aged generation—the parents of those wonderful young Michiganders, and others like them from coast to coast—are on the front lines of the dysfunctional American health-care system, because many of them are physicians. One of them might well be your physician.²

Like any immigrant community, Pakistanis in the U.S. are concerned about and involved with their home country, and their motives are the usual human mix of genuine altruism, guilt, ego, competitiveness, patriotism, envy, religion, and enlightened self-interest (Najam 2006). There is nothing unusual in what they do or why, and this in itself is something other Americans need to know. A related point is that, admirable and even Nobel-worthy though Greg Mortenson (founder of the Central Asia Institute [www.ikat.org] and subject of the mega-bestseller *Three Cups of Tea*) certainly is, he is far from the only American doing crucially important work in education and health care in Pakistan. Most of the others are less well known because, frankly, they're brown and have Muslim names.

One of these is my friend Dr. Shahnaz Khan, who is a board member of the Chicago-based Human De-

2. The Association of Physicians of Pakistani Descent of North America (APPNA) holds its convention in a different American city every year at the end of June. The APPNA convention is an important annual occasion both professionally and socially. It attracts as many as 5000 people and has the effect of turning a five-star hotel, for example the Marriott Wardman Park just off Connecticut Avenue in northwest Washington, DC in 2008, into a miniature province of Pakistan for four days. It is an exhausting but fascinating experience. The APPNA convention in Orlando in 2007 hosted Hillary Clinton and Greg Mortenson as featured speakers. See www.appna.org.

velopment Foundation (www.hdf.com).³ Shahnaz is a family practitioner who has since 1983 lived and raised two daughters with her cardiologist husband in central Florida, between Tampa and Orlando. She has a beautiful garden; I've been her house guest. When I saw her in Lahore while researching my follow-up to *Alive and Well in Pakistan*, she showed me around an HDF-funded school and health facility, and I took the opportunity to ask about her life and work in Florida. "How do patients relate to you as a Pakistani?" I asked.

"I have no problem, really no problem at all," she said. "Even after 9/11 and all of this negative publicity." (Shahnaz's experience is fortunate, but not necessarily representative. Other Pakistani-American friends have told me appalling stories, which they often prefer to share only privately.) "It becomes personal. They know my mother lives alone, so they're always asking about her. They knew when my father passed away. They actually tell me they think of me when they listen to the news. In fact, a lot of them probably didn't know I was from Pakistan before 9/11, or didn't even care. They say, 'Be careful, Dr. Khan. Come back safely. Don't get lost, don't get hurt.' It's a good feeling, a lot of goodwill. A mother and daughter came to me, and they told me that they have this circle of prayer. And I don't know how churches work, that's my ignorance. But they told me that who-

3. Other Pakistani-American-led nonprofits working in Pakistan include The Citizens Foundation (www.tcf.org), Developments in Literacy (www.dil.org), Zindagi Trust (www.zindagitrust.org), and SHINE Humanity (www.shinehumanity.org). I am a board member of SHINE Humanity, founded by Todd Shea (see footnote 4). I am constantly urging my friends in all these organizations to engage more assertively with mainstream America. But it works both ways: Pakistani-Americans often are understandably timid, and mainstream America also should engage with them.

ever gets put on the circle of prayer gets prayed for.”

I asked for her thoughts on the American health care crisis.

“What I’m seeing now [March 2009] is a reflection of the economy,” she said. “A lot of people losing their jobs, in the past one year. How people are coping with that is, they’re postponing anything that is not an emergency. People are shopping around for cheaper sources for medication. If they don’t have the money to pay the premium, what are they going to do? The past year or so, this big change has occurred. I had a patient whose wife came to me and said her husband was really depressed. He was a builder, and he had built five houses to sell, and he couldn’t sell them.”

*

In April 2009, on the way to the airport in Karachi at the end of my six-week trip, I told a young Pakistani named Zaka Shafiq about the book I planned to write.

“It’ll be out of date by the time it’s published,” he said, indisputably.

Hence my book’s title, *Overtaken By Events: A Pakistan Road Trip* (2010). As Emma Duncan put it many years and events ago, “Nothing is settled in Pakistan. ... Because the plot has yet to be resolved, the audience stays interested. Every small event may hold the key to the denouement.” And sure enough, by the summer of 2009 Pakistan was enduring a fresh crisis. I spent a week in California in early July that year with Todd Shea, a loud, burly middle-aged guy from Maryland whose promising career as a singer-songwriter was derailed by 9/11, and who has done emergency-relief and public-health work in Pakistan since the October 8, 2005 earthquake there that killed

nearly 80,000 people.⁴ With Todd what you see is what you get, and one thing you get is a righteous, unsparring, unblushingly American prophetic voice. I heard that voice loud and clear as we drove together from San Jose to Fish Camp just outside Yosemite National Park, where people Todd knew from Fresno hold an annual Islamic summer camp for their kids. At the time, Todd had just spent several weeks bringing relief to some of the nearly three million civilians displaced by fighting between the Pakistan Army and the Taliban in northwest Pakistan's Swat valley. I asked him about the situation.

"It's not good," he said. "The monsoon rain season, people are not going back to their homes, they've been living in [other] people's homes for upwards of six-seven weeks, and in camps, and these places are not getting medical services. When they get back, their crops are going to be destroyed by the fighting. We're finding places that we're the first to give them medical supplies, and we're only a small team. Obviously, there should be a coordinated effort. We're trying to do what we can to survey the area by way of visiting areas that haven't gotten enough aid. There's places that haven't gotten any help, medically at least, and it's ridiculous and it's a shame and it's a travesty."

Todd claims that when it comes to Pakistan, the American public hears "2 percent of the story 100 percent of the time." He wants "to continue educating the American public, and to be an example. Right now many people's reality is rooted in misconceptions on all sides, and that's a dangerous place to be. And some-

4. See Ethan Casey, "Pakistan-based 'Go-to Guy for Disaster Relief' Visits UW," and the articles and videos linked from the bottom of the page: <http://jsis.washington.edu/soasia/wsar2010/sheavisit.shtml>.

body somewhere has to take initiative in presenting information that people need to have in order to have a better understanding. In this case, educating Americans about the reality on the ground in Pakistan, the history that they don't understand, our culpability, and our need to do something about it." He laments especially the U.S. failure to remain engaged in Pakistan and Afghanistan after our successful proxy war against the Soviet Union in the 1980s:

If U.S. leaders had treated them as important in a human way, then society in Pakistan and Afghanistan would be far further along today, because we would have helped them avoid all the things that are happening now. If you remember, at the time, we were loved. Both countries were in such a state of need, and then we just left. 'We got rid of our big enemy, let's get outta here,' and boy, wasn't that a strategic error. When the [Berlin] Wall came down and we were waving flags and saying, 'America, America,' why weren't we waving Pakistani flags? I remember seeing the Wall come down and all that, and I don't remember hearing anything about Pakistan (personal interview, July 2009).⁵

*

I returned again to Pakistan for three weeks in February-March 2011. The trip's main purpose was to witness the aftermath and human cost of the severe flooding of summer 2010, and its result will be a chap-

5. A more complete version of this conversation will be included in my book *Bearing the Bruise: A Lifetime in Haiti*; for publication details see www.ethancasey.com. Todd spent six weeks on the ground in Haiti immediately after the January 12, 2010 earthquake, working with mostly Pakistani-American physicians who volunteered through the Islamic Medical Association of North America (www.imana.org).

ter titled "After the Flood," to be added to the next printing of *Overtaken By Events*. As ever with Pakistan, I feel an urgency to document the ground-level moment, before the moment changes. Let others recommend and craft policy; my hope is that my reporting will help enhance their understanding and wisdom as they do so.

Photographer Pete Sabo and I visited three flood-affected areas: the Swat valley, the agricultural breadbasket of the central Punjab along the Indus River, and an area dominated by the Baloch ethnic minority in the far southwestern corner of Punjab province. In the Punjab, we found brick-and-mud villages only just starting to be rebuilt, mostly by the devastated local people themselves, and heard complaints of incomplete and feckless responses by the provincial and national governments, and of international NGOs obtusely continuing to give food aid, when what people now needed urgently was paid employment helping rebuild the damaged dykes, to control the coming monsoon season's anticipated flooding. As in post-earthquake Haiti (which I visited in August-September 2010), there was a depressing sense that no one in particular was in charge and that there was no overall plan.

Pete and I were given the rare opportunity and privilege of spending four days on the ground in Swat with Brig. (ret.) Azam Effendi, who is both a career Army man and a Swati landowner. The effects of the flooding in Swat were all too shockingly visible; literally all the topsoil in the middle of the valley seemed to have been swept away in the early days of the flood, as the swollen Swat River hurtled down from the mountains, leaving only exposed glacial rocks. "This was a very beautiful valley," Brigadier Effendi told us, "but now half of it has been washed away. You

wouldn't see this white patch. Those white patches are just stones; it was all washed away. And if you look to your right, all this was underwater. You see the sand? All these orchards were washed away, destroyed. The river was full of trees and logs by the thousands."

Swat is also visibly a place under military occupation. Seeing it brought me full circle back to Srinagar in the mid-1990s, with the apparent difference that the Pakistan Army in Swat seems intent on cultivating stability and calm, unlike (to put it mildly) the Indian Army in Kashmir. Relations between the Pakistan Army and the local people in Swat could be described as guardedly amicable. "People joined with the Taliban [before 2009] to fight with the state," a young imam told me.

But when they took power, they started killing the local people. Then the local people switched sides and began killing the Taliban. That led to the elimination and the downfall of the Taliban, because they lost the public support. The Taliban had a certain amount of rule in this area, but when they started doing wrong things, they lost their power. If the Army starts misbehaving, they will also repent and suffer, and they will also face a bad day.

The assassinations in early 2011 of Punjab governor Salmaan Taseer and the Christian government minister Shahzad Bhatti have further poisoned the now chronically parlous atmosphere in Pakistan, and the badly mishandled uproar over the killings by the CIA agent (or whatever he is) Raymond Davis has only deepened the average Pakistani's mistrust of America and Americans. In the wake of the floods and a turbulent decade on other fronts, Pakistan's widely disliked government, its largely respected but sometimes heavy-handed and duplicitous military, and the U.S.

confront both a moral obligation and a historic opportunity to do what Pakistan's elites and self-styled benefactors have never really wanted to do, ever since the halfhearted and failed attempts at land reform way back in the 1950s. I've learned to be wary of the endless parlor game of predicting doom for Pakistan – it's still around, after all, and Pakistanis deserve our respect and admiration for having achieved, against long odds, a measure of durable nationhood. But Todd Shea's words to me in 2009, when I asked him about U.S. aid to Pakistan, do ring true:

It's very simple. If these things line the pockets of ministers and feudal landlords and the elite, if the masses don't benefit, there's a danger of revolution-type magnitude. And if that happens, the feudals are likely to lose everything. People will partner with extremists, because extremists are giving aid in areas where none of the above are present. The feudals should give half their land to the people that have been living on it all these years. Isn't it time? Give them hope, for God's sake.

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"On a scale of one to ten of the toughest and most complex policy challenges facing the U.S. anywhere in the world, Pakistan is a fifteen."

- Karl Inderfurth, Elliott School of International Affairs at George Washington University, former U.S. Assistant Secretary of State for South Asian Affairs

"Pakistan is where every global issue that matters to Americans most in the 21st century comes together in an extraordinary and combustible way."

- Bruce Riedel, Senior Fellow of Foreign Policy, Saban Center for Middle East Policy, Brookings Institution

Written by West Point geography faculty along with contributing scholars and policy makers, *Understanding Pakistan Through Human and Environmental Systems* begins to address the complexity and importance of Pakistan as both a positive and negative influence on stability in the south and central Asian regions. The authors deliver systematic analyses through discussions of environmental, historical, demographic, cultural, political and economic factors that have affected the development and course of Pakistan and relationships with its neighbors. The book provides a broad treatment of some critical geographically-based issues, and helps explain why Pakistan is a source of contemplation and concern today. With contributions by *Washington Post* foreign correspondent Pamela Constable and travel journalist Ethan Casey, *Understanding Pakistan* also offers fresh viewpoints which serve to broaden its aggregate perspective. This book is a key introduction and source of detailed inquiry that will help strategists, policy developers, and leaders make informed decisions about this complex and critical ally.

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